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Exploring the Changing Face of School Inspections

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Abstract

Background: A number of countries have had school inspection for many years. The origins of these systems date back to the nineteenth century when mass public schooling was introduced, and education and other emerging public services were required to comply with centrally mandated rules and programmes. In contrast, many countries across the world have only introduced school inspection over recent decades as the perceived importance of educational quality as a driver of economic competitiveness has become influential in state policy. International bodies such as the OECD and, in particular, comparative evaluations of education systems such as PISA have led to a constant stream of interventions and reforms designed to deliver higher student performance outcomes. These factors have driven the growth of inspection.

Purpose of Study: The purpose of this study is to provide an analysis of the factors that have led to the rapid rise of inspection as a school governance mechanism. It goes on to examine how developing conceptualisations of the ways in which inspection can be employed to achieve the range of outcomes with which it is tasked are leading to an evolving toolkit of inspection approaches and models. A number of these are examined in detail with a view not only to description but in terms of whether some of the demands that they place on schools are, in fact, realistic in practice.

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Sources of Evidence: This study used document analysis of policy documents and existing research to deconstruct factors relating to the changing face of school inspection since the late 1990's.

Main Argument: Formal processes of school inspection have become virtually universal. It is also argued that inspection, as it is now widely understood and practiced, has moved quite far from its historical roots and purposes. Inspection is now a complex component of wider modern concepts of public sector management and governance including quality, improvement, accountability, transparency and cost effectiveness.

Conclusions: Historically inspection was largely about compliance with rules and to an extent to judge the work of individual teachers. Now, at least, in theory, it is as much concerned with creating a regulatory framework within which schools as organisations can enjoy greater autonomy while simultaneously being held responsible for student performance outcomes.

Keywords: school inspection, accountability, school self-evaluation, governance, school development

Introduction and background

A number of countries, particularly England, Ireland and the Netherlands, have had school inspection for many years. The origins of these systems date back to the nineteenth century when mass public schooling was introduced, and education and other emerging public services were required to comply with centrally mandated rules and programmes. In contrast, many countries across the world have only introduced school inspection over recent decades as the perceived importance of educational quality as a driver of economic competitiveness has become influential in state policy. International bodies such as the OECD and, in particular, comparative evaluations of education systems such as PISA have led to a constant stream of interventions and reforms designed to deliver higher student performance outcomes. These factors have driven the growth of inspection.

Somewhat paradoxically, while many of these reforms have sought to decentralise autonomy and responsibility to local bodies or individual schools and teachers, this policy direction has also led to a perceived need for greater accountability to counterbalance the increased autonomy given to schools. As a result, formal processes of school inspection have become virtually universal, a remarkable development in a short space of time. However, it is argued in this paper that inspection, as it is now widely understood and practiced, has moved quite far from its historical roots and purposes. Inspection is now a complex component of wider modern concepts of public sector management and governance including quality, improvement, accountability, transparency and cost effectiveness. In fact, it is suggested here that school inspection is an interesting example of the ways in which changing political theories of governance impact on the management and delivery of public services. Historically inspection was largely about compliance with rules and to an extent to judge the work of individual teachers. Now, at least, in theory, it is as much concerned with creating

a regulatory framework within which schools as organisations can enjoy greater autonomy while simultaneously being held responsible for student performance outcomes.

At first it seemed that new theories of public sector governance such as 'new public management' (NPM) were primarily driven by lack of trust in autonomous professionals and the desire to impose accountability through inspection, sanctions and rewards. However, since NPM theory is also concerned with reducing state bureaucracy, decentralisation and privatisation of services, consumer and 'stakeholder' voice and choice, and improvement by both regulation and competition; external monitoring systems such as inspection are serving several ends. Accountability remains central, but the improvement of organisational performance to the extent that the organisation can be trusted to be more autonomous is also a key goal. In this conception, inspection becomes a lever or mechanism not only to judge schools but to improve them to a satisfactory level and then leave in place processes through which they can monitor and maintain the required standards. Thus, current conceptualisations of inspection suggest that Inspection models need to be adapted as education accountability systems mature. Schools and their stakeholders develop evaluation literacy and innovation capacity to improve education on their own and thus have less need of being driven by top-down inspections and reform initiatives (see, for example, Barber, 2004). In consequence school inspection theory and practice is in a constant state of flux.

Reflecting this wider concept of inspection, the paper will explore how inspection models and types have changed over recent years (e.g. from full to proportional inspections, from checking compliance to evaluating the educational practices and output of schools and from external monitoring to increased emphasis on school self-evaluation to enable schools to respond to, or support changes in national education systems and educational reforms). The paper begins by placing school inspection in the context of 'reform' of public sector governance. It examines some of the factors that have led to the rapid rise of inspection as a school governance mechanism. It goes on to suggest that developing conceptualisations of the ways in which inspection can be employed to achieve the range of outcomes with which it is tasked are leading to an evolving toolkit of inspection approaches and models. A number of these are examined in detail with a view not only to description but in terms of whether some of the demands that they place on schools are, in fact, realistic in practice.

Method

Research Design

Document analysis was used as the research method for this study. According to Bowen (2009), document analysis can be utilized as a stand-alone method and can serve varying purposes such as providing background information and historical understandings. It can also be used for the purpose of 'tracking change and development, and verification of findings from other sources' (30). Atkinson and Coffey (2009) also states that 'we have to approach documents for what they are and what they are used to accomplish' (79). In this study document analysis was used to deconstruct factors relating to the changing face of school inspection.

Research Sample

This study included an analysis of 621 documents on school inspection policy and practice in Europe and elsewhere. To ensure authenticity and reliability of data and to form overarching themes for the analysis; inclusion of documents was initially limited to peer-reviewed literature on school inspection that has been published since the 1990's. However, to triangulate results and to form an overall interpretation of the study, the inclusion of documents was also extended to official government policies and publications produced by international organizations.

Research Instrument and Procedure

Documents were initially selected based on the author's prior knowledge of the field. Following on from this, key terms were identified for the search strategy. Using these terms, databases were searched for relevant literature. The initial search resulted in the collation of approximately 800 articles. Based on the inclusion criteria, all articles were read to determine if they would be included in the analysis of which, approximately 179 articles were excluded from the final analysis.

Data Analysis

Thematic analysis was used to identify patterns (Bowen, 2009) emerging in the literature. Within this, all documents were coded using a data extraction form. This involved the production of a summary outline detailing the purpose, method, conclusion and key themes emerging for each document contained in the sample. This process of analysis allowed the researchers to form an overall interpretation of the study.

Inspection and the discourse of public sector reform

The roots of all inspection systems, whether in health care, education or other public services, are primarily consistent with Bentham's assertion that 'the more strictly we are watched, the better we behave' (as cited in Etzioni, 2010: 393). As Donaldson (2013: 9), in reference to Sparrow (2008), affirms, 'inspection concerns itself, either implicitly or explicitly, with requiring deliverers of services or citizens themselves to conform to certain expectations'. The importance of such inspection systems also has been expressed as 'a greater commitment to values' (Mackiney and Howard 1998: 471) and 'the legal obligation to respect the legitimate interests of others affected by decisions, programs, and interventions' (Considine 2002: 21).

A number of researchers (see, for example, McNamara & O'Hara 2008a; Ball 2012; Beckmann, Cooper, & Hill 2009) also share the view that certain formerly private-sector concepts have gained prominence in the discourse about the management of public services in recent decades. These include accountability, benchmarking, deregulation, decentralisation, value for money, quality assurance, risk-based analysis, targets and so forth. The lexicon of school inspection policy and practice certainly illustrates this trend. Indeed, Lindberg's (2013) stylised timeline of accountability serves as a useful means of summarising the new public management reform initiatives that can be found in most public services.

P must first transfer decision-making power over a particular D to A. Then A acts in this capacity and P can thereafter require A to

provide information and justification for these actions; and if A fails to do so, P can apply sanctions. (Lindberg 2013: 212)

In terms of decision-making power being transferred from government P to organisation A (decentralisation), Ball (2003) draws this conclusion:

Thus, the reforms are presented as giving 'managers and organizations greater freedom in operational decisions and remove unnecessary constraints in financial and human resource management' (OECD 1995: 29). However, it is misguided to see these reform processes as simply a strategy of deregulation; rather, they are processes of re-regulation. It is not a matter of the state abandoning its controls. Instead, it is the establishment of a new form of control, what Du Gay (1996) calls 'controlled de-control'; it is, in fact, a new kind of state. (Ball 2003: 217)

The government, or the agencies working on behalf of the government (inspectorate), then require the organisation to provide, in accordance with externally devised self-evaluation frameworks, information about the quality of services it provides and the justification for its actions. If the organisation fails to do so, the government has the right to sanction or remedy these actions in order to maintain and improve the quality of services provided (sanctions). This process, in short, is accountability, decentralisation and 'new inspection'.

Indeed, it is evident that since the turn of the last century, the development of school inspection theory reflects the same patterns of internationally mandated public sector compliance. This is true in most countries and regions and also in other publicly-funded bodies, such as the health care sector and prison services. Shewbridge et al (2014) affirm the following: 'A key recommendation coming out of the OECD Reviews of Evaluation and Assessment in Education is to situate school system evaluation in the broader context of public sector performance requirements' (164).

Furthermore, the ever-growing influence of organisations such as the World Bank, UNESCO and the OECD has also had a profound impact on school evaluation and inspection, 'As "lower" levels of education policy-making are being overlaid by a "higher level" of international policy-making, causing profound changes in education policy introduced in any locality' (Thompson and Cook 2014: 702). This change has resulted in most established (England and the Netherlands) and newly-formed inspectorates (Chile and Germany) aligning with a much broader global public policy reform agenda that captures new public management theories and international organisations' approval for normative international public sector educational performance. Shewbridge et al (2014: 164) point out the following:

When Ministries and other bodies with specific responsibilities for system evaluation need to show accountability for their performance, this stimulates demand for procedures to monitor progress in the school system and, where necessary, to establish adequate systems to collect evidence on progress. This is particularly the case in systems where high-level targets are set by the government related to productivity, competition or general economic and social improvement.

Similarly, Santiago (2013a: 35) is also of the view that:

Evaluation and assessment have become increasingly important as a result of greater levels of school devolution; a stronger role for market-type mechanisms in education; the emergence of new public management; the growing imperative of an efficient use of public resources; the need to focus on 'quality for all' and the rising importance of education in a global world'.

Specifically, with respect to the influence of public sector reform on present-day school inspection, Karsten (1999: 309) asserts that NPM philosophies eventually became embedded in the Dutch education sector during this period:

The central idea was the desire to reduce government bureaucracy, increasing autonomy for schools to regulate themselves. In the backwash of these plans for administrative changes it was often argued that the parents should be more involved, particularly with the choice of school and that there should be more competition.

Indeed, Van Bruggen (2010a: 22) made the following statement in the Standing International Conference of Inspectorates (SICI) profiles of inspectorates in Europe:

As has been said: "education is too important to leave it to teachers only..." The same accountability is asked from other public services like hospitals, libraries, local and national administrations, etc. In many countries, public evaluation of these public services has become commonplace in the last two decades.

However, although new public management can be seen as the catalyst for a significant change in school inspection policy and practice, it also should be recognised that there are other factors at play in driving change in this area at national and regional level. These factors include the length of time that each inspectorate has existed; the political agenda of governments; the strategic influence of organisations, such as the OECD and SICI; and the local evaluative infrastructures and support (for example, school self-evaluation capacity, data warehouses, etc.). On the other hand, a very different perspective on the rise and function of inspection is offered by Donaldson (2013: 8), who argues that:

inspection is often associated in the public mind with a rather narrow set of activities which involve notions of compliance and audit. In fact, it is a very plastic concept which takes and has taken many forms and which can serve many different purposes.

The author goes on to provide a list of potential contributions that school inspection can make to education policy and practice: 'enforcer, assurer, mitigator of risk, catalyst, knowledge broker, capacity builder, partnership builder, agenda setter, and preserver/creator of the space for innovation' (Donaldson 2013: 8).

The variety of roles and purposes which inspection can fulfil means that the particular emphasis given to it depends enormously on contexts both political and educational. In practice for example, Dederling and Müller (2011) comparing school inspection in the federal states of Germany, with the United Kingdom and the Netherlands affirm that in all of the federal states of Germany; 'quality development' is a priority of school inspection. In comparison, the authors go on to state that school

inspection in the United Kingdom and the Netherlands focuses on the public accountability of schools and teachers through various mechanisms, such as the publication of school inspection reports. 'The school inspection thus leverages pressure onto a school to improve its quality in order to acquire clients, thus triggering the schools to enter into competition' (Dedering & Müller 2011: 307). In the case of the federal states of Germany, however, the publication of inspection reports is left to the discretion of each school: 'Hence, there is no increased competition among schools. Rather, the school inspection provides the schools with information they can use to optimize their governance processes which they previously lacked' (ibid).

Indeed, the varying purposes of inspection policy and practice found in countries like the Netherlands and Germany parallels Landwehrs (2011) study on the potential effects of school inspection where school inspection may not only be used 'for the purpose of traditional school accountability but rather, within a complex network of educational discourse. The potential effects of school inspection may also be for the purpose of 'gaining knowledge', 'school development' and 'enforcing standards' (as cited in Gaertner et al 2013: 491).

In summary, many scholars in the field see recent developments as constituting a fundamental paradigm shift in school inspection to a conception that has now become the conventional mode of thinking about inspection in most countries or regions. By way of explanation, Van Bruggen (2010b), refers to inspectorates in Europe: 'In the last 20 years or so, the roles and tasks of inspectorates of education have changed radically in most countries where inspection was already in existence since the early decades of the 19th century' (87). Indeed, Thomas (1998) refers to this period as 'the genesis of the New School inspection system', stating that it saw a significant change in school inspection policy and practice in England and elsewhere (see, for example, MacBeath 2006; McNamara and O'Hara 2008b; Hall and Noyes 2009). As Martin (2008) in reference to the evolution of school inspection in England puts it: 'while the HMI of the 1950s and 1960s had a role to promote and disseminate good practice and inform government about the quality of education, the role of Ofsted was to evaluate and challenge schools to improve and make public their judgements' (54). In the case of England, 'the key point of the new system was to be that all schools would be inspected within a short time scale, and then at regular intervals thereafter' (Thomas 1998: 42). Under the influence of 'New School inspection', almost all inspectorates, whether in Europe or elsewhere, have moved towards a model of what Van Bruggen (2010b) refers to as 'full', 'whole' or 'complete' modes of inspection.

New tools of inspection for a changing landscape

In this changed conception of inspection, the purpose of school inspection is not merely that of 'inspection for compliance'. Rather, inspection is conceptualised as a catalyst for continuous school improvement through a process of externally-regulated school self-governance. As the then Minister of State for school standards in England put it, 'when it comes to external evaluation, the key is to make the process of inspection as useful to schools as possible, supporting self-improvement where it is present, spurring it where it is not' (Miliband, 2004: 15). According to van Bruggen (2010b), 'the rationale behind the rapid growth of full inspections as an important instrument in national educational policy is that these conditions enable the inspections to work with two rather different educational governance philosophies'

(95). New school inspection is not merely about guaranteeing a minimum set of standards; it also hinges on the view that there is a continuous need for improvement regardless of the level of quality attained. Van Bruggen (2010b: 96) states:

The second educational governance philosophy is enacted where the government wants the “best possible” schools. This is the improvement push that inspections and all related work must give; not only for the schools with quality problems, but for all schools.

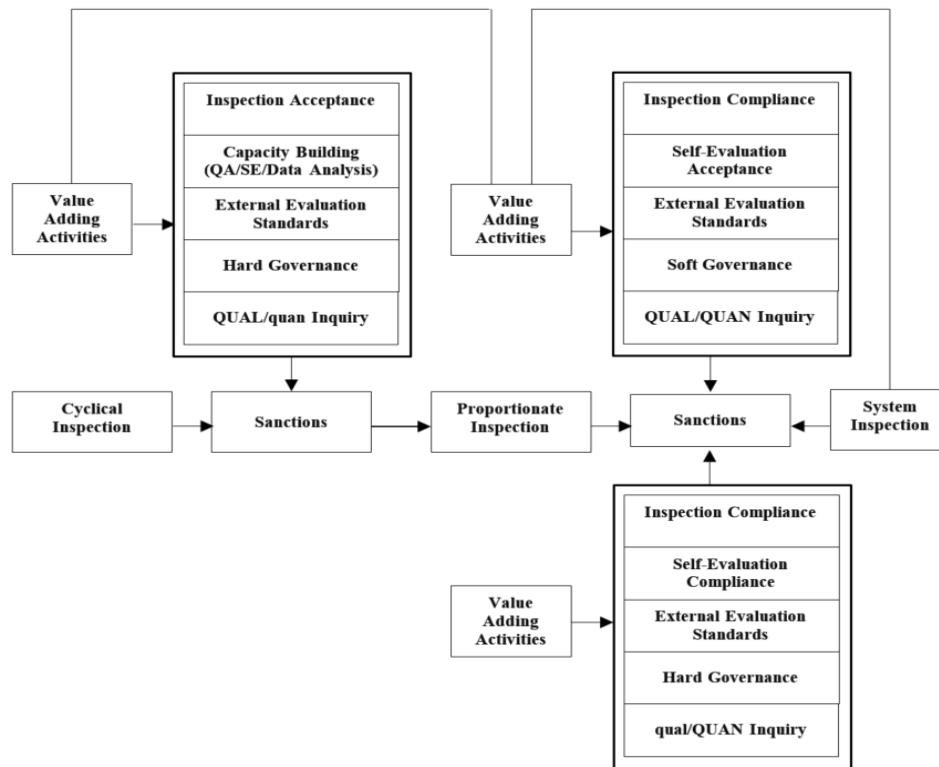
The introduction of regular whole school inspections has resulted in the initiation of other, related, evaluation activities: school self-evaluation; the increasing use of statistical conjectures of quality to inform inspection judgements; and, more recently, a move from cyclical to proportionate, risk-based inspection. There has also been an increasing production of system-wide thematic inspection reports in countries like Ireland.

As a result of what has now become the continuous improvement function of inspection, schools in most countries are inspected at regular intervals. Schools are evaluated through three inspection domains (cyclical, proportionate and collective system inspections) that consist of a series of overlapping evaluation activities, irrespective of the length of the various inspectorates' existence (Figure 1).

In addition, in this century there is also a discernible trend towards the use of shorter, risk-based inspections in many countries for a variety of reasons that include: the increasing use of quantitative data; the regulatory requirement for schools to carry out their own school evaluations in accordance with an externally mandated framework of quality indicators (e.g. England and Ireland); and the financial burden associated with school inspections.

We have argued to this point that inspection has become part of the educational landscape in very many countries either as a reformed version of previous iterations or in many cases a new feature of educational governance. We have also suggested that while inspection may certainly be seen as a tool for achieving compliance, ensuring accountability and assuring quality it is also perceived in most cases as having a developmental and improvement function and a role in equipping schools to analyse performance and drive change. This conceptualisation and the array of roles that flow from it clearly requires a varied set of approaches and tools to be employed by inspectorates and we turn now to some interesting developments in this regard.

Figure 1.
New school inspection domains. Source: The authors



From external monitoring to school self-evaluation

In the 1990's, there was a strong political agenda for decentralisation leading to the proliferation of regular whole school inspections. In the case of England, 'after a decade of antagonism between agencies of governments and schools' (Macbeath, 2006: 1), a new model of school evaluation, self-evaluation, began to take prominence. As Nevo (2010) states, 'parallel to the almost universal phenomenon of external school evaluation, many countries have more recently tended to apply newly developed evaluation methods at the school level in the form of internal evaluation or self-evaluation' (781). Further, MacNamara & Nayir (2014), in reference to the self-evaluation research of MacBeath (1999; 2008; 2009) affirm: '... even he could hardly have foreseen the current popularity of self-evaluation as a key element of the inspection regime in so many countries' (51). Indeed, with the appeal of less centralised control and the prospect of increased cooperation between schools and the inspectorate, a dual system of internal/external quality assurance began to emerge and is now being used in most OECD countries. For example, in their discussion of the emergence of school self-evaluation in England, Hall and Noyes (2009) state, 'in the late 1990s, in response to widespread distress and frustration amongst teachers, the National Union of Teachers (NUT) commissioned work on school self-evaluation' (850).

Self-evaluation also was appealing in that evaluation would no longer consist of command and control accountability mechanisms via the Inspectorate. The foundation of the new relationship between state and school was to be based on the concept of 'intelligent accountability' and was perceived by some (Nevo 2002) as being able to counteract the inherent limitations present in both systems of evaluation if used in isolation. For school self-evaluation, Huber (2011) makes the following statement in reference to school governance in Switzerland: 'through this process, so-called 'blind spots' may be uncovered that a school was unable to identify by means of an internal evaluation' (473). For school inspection:

The participants in school self-evaluations are usually more familiar with the specific nature of the local school context and communicate better with the (local) school community. By focusing attention on additional data which reveal the unique character of particular schools, they can broaden the focus of external evaluations. (van Hoof & van Petegen 2007: 106)

In other words, school self-evaluation and school inspection could be mutually beneficial to serving the school accountability agenda on the one hand and school improvement agenda on the other (see, for example, Nevo 2002; 2010). It also must be noted, however, that the rapid promotion of school self-evaluation also occurred at a time when more responsibility (in the form of decentralisation) was deemed necessary to be transferred to the school and away from the state. This is based on the view that: 'decentralization with appropriate accountability systems and teacher quality are essential elements of any strategy to improve quality of school education' (World Bank 2007: ii). As Gordon and Whitty (1997) put it, 'the single largest change in schooling under the neoliberal project has been the push towards the atomisation of the control of schools' (456).

However, while appeals for school self-evaluation grew, and governments rigorously promoted the concept of decentralised school autonomy, extensive debate surrounded schools being allowed to take more responsibility for their own evaluations. Indeed, to this day, there remains much concern about finding the correct balance between school self-evaluation and inspection (see, for sample, MacBeath 2006; Van Amelsvoort & Janssens 2008; MacBeath 2010; Nevo 2010; Brown 2013; Simons 2013). With the new relationship between state and school, a dichotomy of concerns emerged among inspectorates regarding the effective deployment of self-evaluation. Concerns among inspectorates relating to how best to combine school inspection and self-evaluation centred on the importance of maintaining the accountability function of inspection while simultaneously allowing schools to form their own evaluative judgments regarding the quality of education provided. The varying views on how best to form an amalgam between school self-evaluation and inspection, tended to reverberate within Alvik's (1996) typology of three distinct models of decentralised evaluation: 'parallel' ('often disconnected' (Durrant & Holden 2005: 110)), 'sequential' ('in which external bodies follow on from a school's own evaluation and use that as the focus of their quality assurance system' (Cambridge & Carthew 2007: 289)) and 'co-operative' evaluation ('The two parties discuss and negotiate the process and different interests and viewpoints are taken into account simultaneously' (MacBeath 2005: 85)).

Some countries such as New Zealand tend to operate within a collaborative model of school evaluation. As Nusche et al (2012) point out, 'New Zealand's approach is

collaborative in the sense that both parties attempt to work together to agree on a rounded picture of the school in which there is mutual recognition of its strengths and consensus on areas for development' (95). However, in the case of European inspectorates, Ferrer (2010) states that the 'modalities of such combinations did vary from one country to another, but in general terms there was an explicit interest in sequential models' (128). MacBeath, in reference to inspectorates in Europe, affirms:

In Europe, the Standing International Conference on Inspection (SICI) has for a number of years argued for a 'sequential' approach (Alvik, 1996) in which the school's own self-evaluation provides the focus and centrepiece for external review and in which initiative lies with school leaders to place self-evaluation at the heart of school and classroom practice. (2008a: 386)

As the Chief Inspector of Ireland put it, 'Our ultimate goal is for schools to conduct their own evaluations transparently and accurately and for inspectors to visit these schools to evaluate the school's own self-evaluation' (Hislop 2012). However, cognisant of the view that 'the languages interweave, like shoals of fish, their boundaries indistinct and their participants seemingly inhabitants of more than one grouping' (Barnett 1994: 166); the foundations for the new relationship between state and school also paralleled the development of inspectorate-devised self-evaluation guidelines and report templates that would subsequently be used by schools and evaluated by inspectors. The logic of this mode of evaluation can be described by means of Macbeath's use of Perkins' (2003) metaphor of 'taming the wild' and 'wilding the tame'. On the one hand, there is a need for schools to demonstrate elements of externally created evaluative best practices where 'the wild is tamed by clear targets, predetermined outcomes and focusing of teachers' attention on templates of good practice' (MacBeath 2012: 131). On the other hand, however, "wilding of the tame" suggests recognition of domestication and a conscious attempt to loosen the ties that bind teachers to mandated practice. This is explicitly stated in relation to the process of learning to jump through the hoops before 'going wild' (ibid). In practice, an inspector participant in Brown (2013) when referring to inspectorate devised guidelines to support school self-evaluation in Northern Ireland provides logic for this mode of evaluation.

We provide Together Towards Improvement, which is a framework of quality indicators and questions and descriptors, and many schools wish to use it, but my view would be, and I think that would be the inspector's views, it's not compulsory to use it...What we expect is that schools are engaging in self-evaluation, and if they have developed other tools, then we're very interested to know what those tools are. We want to know how effective they are in giving insight. We'll tell other schools about them...unashamedly...but we would always say to that, with Together Towards Improvement, if you want to add other criteria and questions to it, to reflect the reality of your school because every school is different, then you should do that, if you want to modify it, as long as you're not taking away from it. (170)

Indeed, when referring to schools being explicitly driven by external mandates, MacBeath (2008b) earlier cautioned that 'schools that play safe, driven by external mandates set tight parameters around what can be said and what can be heard. Such

schools are antithetical to the notion of a learning organization which, by definition, is always challenging its own premises and ways of being' (145). This perspective resonates with McNamara & Nayir (2014) who add, 'One thing all the literature in the field stresses, however, is that school self-evaluation will not just happen because it is mandated in policy documents' (53). This may also be the case when policy documents and instruments are transposed from one country to the next. As an inspector participant in Grek (2014: 55) puts it:

I've just been to Mexico. I was part of an OECD group looking at the evaluation of the system in Mexico. What they did was to take materials from Scotland and translated them into Spanish and suggested that all schools do that. What happened? Nothing really. Any system has to be supported not just by printed material but face to face discussion and good examples.

Nonetheless, almost all countries in the world where school inspection exists now have in place a set of inspectorate devised school self-evaluation instruments that schools are required or strongly recommended to use. In the case of Malaysia, for example, schools are required to use an evaluation instrument called 'Standard Quality of Education Malaysia' (SQEM). According to Hamzah & Tahir (2013: 55):

The evaluation has to be based from an abundance of data, for example, the students' academic results in both schools and public examinations, students' performance in co-curricular activities and also the quality of teaching and learning. All these must be documented for the verification of the Schools Inspectorates.

Comparing the evaluation of Chinese calligraphy to that of school appraisal in Shanghai, Tan (2013) highlights what has now become common evaluation practice in almost every country where school inspection exists: 'Like Chinese calligraphy, school appraisal involves the schools showcasing their subjective characteristics within the rules set by the Shanghai authorities' (99). It is apparent that the logic of this framework is the avoidance of unregulated governance by schools. Donaldson (2013: 11) provides a plausible explanation for this value-adding activity:

The powerful relationship between external and internal evaluation is central to stimulating improvement. Each can make a particular contribution, but the synergies arising from the combination of the two can bring particular benefits. Inspectorates are increasingly emphasising the importance of effective self-evaluation as a driver of improvement. But self-evaluation can become self-delusion or worse and must operate within a framework of accountability which both encourages its rigour and validates its authenticity.

In consequence, from the initial act of full inspection, through a series of elaborate value adding activities such as the decentralisation of externally mandated mechanisms for self-evaluation, almost all established inspectorates (England, Ireland and the Netherlands); what a Swedish inspector participant in Grek et al refers to as 'First-generation inspectorates' (2013: 498) tended to be positioned within a cyclical model of evaluation where schools were inspected over a set period using various mechanisms to ascertain the quality of education provided. This format also has been adopted by newly-established inspectorates. However, the value placed on repeated

whole school cyclical inspections has been questioned, as pointed out by Van Bruggen (2010b: 109):

But a repeated inspection of the same 'superficial' character – and certainly if this comes only after five or six years – does not bring much new knowledge. This is, of course, for many inspectorates a budgetary problem: not having sufficient staff and money. But this is not the only cause: many influential bodies (political parties, teacher union executives and universities) find it dangerous to build too powerful an inspectorate that has too large an influence on schools, and one that is going to dictate what 'the best quality' is in terms of quality statements and indicators.

Accordingly, in this century, there also has been movement away from cyclical inspections and a move towards shorter, more focused, risk-based and system-wide thematic inspections in some countries (in particular for those countries that have completed a full set of system-wide inspections). This change has occurred in parallel to inspectorates' increasing use of quantitative data to form value judgements regarding the quality of education provided in schools; in consequence, it also is used as a significant determinant to ascertain the frequency of school inspections. The following section will provide specific examples from various European inspectorates and analyse the logic propelling this upward trend.

From cyclical to risk-based inspections

In this and the latter parts of the last century, established inspectorates, such as England, Ireland, and the Netherlands, tended to be inspected through a process of regular whole school inspections. This trend occurred in tandem with the development of externally devised school self-evaluation guidelines where schools in almost all countries where inspection exists (e.g. Korea, Malaysia, and Singapore) were obliged or strongly advised to operate within an externally mandated self-evaluation framework of quality indicators. Within this framework, school self-evaluation reports, normally consisting of a 3-year cycle for improvement, are validated either through cyclical (for example, the Czech Republic and the Styrian Inspectorate) or proportional/risk-based inspections (for example, Ireland, Northern Ireland, Flemish Community of Belgium, the Netherlands, New Zealand and Scotland). In many ways, the case of Shanghai's school evaluation policy and practice sums up what is common inspection practice in most countries:

Under the appraisal system, every school is required to formulate a 3-year development plan that comes with a yearly implementation plan...The Shanghai Municipal People's Government Educational Supervisory office will then conduct an on-site inspection, and the supervisory experts will cast votes on whether the plan passes inspection. (Tan 2013: 101)

As previously stated, there recently has been an upward trend towards proportionate or risk-based inspections, the frequency of which is based on inspection value judgements relating to deviant cases identified as being outside of acceptable school practice. These value judgements include, but are not limited to, an examination of school self-evaluation reports and school development plans; on-site observations of the quality of teaching and learning; and the change capacity of schools coupled with various desk checking exercises, such as an analysis of externally devised

examination results. Other countries, such as the Netherlands and Sweden, also use value judgements, such as the media, in order to ascertain the component of risk associated with the quality of education provided. Plausible explanations as to the varying use of cyclical and proportionate-based models among countries include the collective school self-evaluation capacity of each country, local evaluative infrastructures and support (Self-evaluation guidelines, data warehouses, etc.), and also the length of time that each inspectorate has been in existence. For example, 'MacBeath et al. assert that it is England and The Netherlands that have the most developed external evaluation systems' (Whitby 2010: 10). In consequence, inspectorates of this type (Australia, England, and Northern Ireland) have the required infrastructure to initiate risk-based and system-wide inspections.

For those countries that have not undergone a full round of country-wide inspections and/or have limited access to system-wide school performance assessment data, inspectorates tend to operate within the domain of repetitive cyclical inspections. In the case of the Czech Republic, for example, Strakovaa & Simonová (2013: 477) state:

Assessment and evaluation in the Czech education system have been repeatedly highlighted as a weak point of the country's education policy... In 1996, an OECD review team made specific recommendations related to the development of student assessment at the end of compulsory and upper secondary education (OECD, 1996); however, the system of assessment and evaluation has not yet been established.

The move towards risk-based inspection also can be seen in more recently established inspectorates, such as Sweden. Initially, with the division of the National Agency for Education (NAE) into two distinct agencies in 2003, all schools were to be inspected over a six-year period. However, with the rebranding of the Swedish inspectorate in 2008, there also has been a move towards proportionate inspections: 'Overall, the development has been regarded as implying a 'harder 'inspection, focusing only on deviances' (Ronnberg et al 2013: 180). Indeed, the upward trend towards risk-based inspections appears to be commonplace in almost all continents. In the case of Australia, for example, Santiago et al (2011) affirm that 'there does appear to be a move towards a risk-based determination, using available data to allocate schools to categories of risk which in turn determine the frequency, depth and degree of externality of reviews' (109). For those systems that have gone through a process of cyclical school inspections, there also has been a tendency to move towards targeted risk-based inspections for a variety of reasons. Worryingly, full inspections were abandoned altogether in the case of Estonia during the initial phase of whole school inspection in this country. Van Bruggen (2010b: 110) states:

Estonia's inspectorate is very clear about this political choice: after a couple of years of full inspections, it could not be demonstrated that all schools were better, and so the full inspections were abolished and only in high-risk cases is there a general inspection (conducted by a small national inspectorate), apart from the thematic inspections.

In many ways, the case of Estonia's move away from cyclical inspections is similar to that of other countries such as Ireland, where initially, all schools were inspected over a set period of time that normally consisted of a week's duration. However, this

mode of evaluation was abandoned in 2011 and replaced with risk-based inspections using various modes of judgement to target deviant cases falling outside the realm of acceptable quality indicators. The Chief Inspector of Ireland put it this way:

We have abandoned the traditional cyclical approach to planning the inspection programme and instead, we use a range of criteria to decide where inspections should take place. These criteria include information from previous inspections, from State Examinations and from the Schools Division of the Department, in addition to consideration of the length of time since the previous inspection. (Hislop 2012)

Many established inspectorates have followed suit after going through the process of whole school inspection, including England and Northern Ireland.

Justifying the movement towards proportionate inspections seems to be common for governments who are of the view that inspection resources could be better used elsewhere, such as carrying out more system-wide thematic inspections. Also, due to the change capacity of some schools, there is less of a need to inspect schools that are able to carry out their own evaluations compared to those that are not. Ehren et al (2013:15) provide further reasoning on the trend towards risk-based inspections in Europe:

Differentiated school inspections are generally implemented to increase the efficiency of school inspections by targeting inspection resources to potentially weak schools. Also, the increasing scale and professionalism of some schools allow for differentiated inspections when Inspectorates of Education can use results of self-evaluations to target inspection visits and potential areas for improvement. Both types of school inspections are, however, also often used as parallel methods by the same Inspectorate of Education.

There are more obvious reasons for the trend towards risk-based inspections, however. Risk based inspections are also aligned with inspectorate reforms in other publicly funded services. For example, Davis & Martin (2008a:16) make the following observation relating to the English governments concerns relating to the cost of inspecting public services as well as, 'the administrative burdens' placed on service providers.

The government at first turned a 'blind eye' to the mounting concerns about the cost of inspection and the administrative burdens that it placed on schools, NHS trusts, police services, councils and other local service providers. But from around 2004 onwards inspectorates came under pressure to reduce their running costs and co-ordinate their hitherto largely separate activities. They responded with promises of more 'proportionate' or 'risk-based' approaches...

In the case of school inspection, there is a need to reduce the high costs attached to school inspection practice. For example, Ehren et al (2011) studying the impact of school inspection in eight European countries (Austria, Czech Republic, England, Ireland, Netherlands, Norway and Sweden) state that 'annually an average amount of 68.559.103 euros is spent on inspecting schools in every country in this project'. In practice, Van Bruggens (2010b) avowal relating to issues associated with repeated

cyclical inspections, coupled with the financial burden to the exchequer, resonates with Simons (2013) observation on the promotion of Self-Evaluation in England and Ireland.

It is perhaps worth noting in relation to this initiative and that of Ofsted in England, that the promotion of school self-evaluation systems in both countries may have something to do with the economic downturn and the realization that an external inspection system of a week-long duration of all schools in the country, even if only once every four to five years, is too costly to sustain. (Simons 2013: 10).

However, concerns relating to the move from cyclical to targeted risk-based inspections also have been expressed. For example, Perry (2013) in reference to the move from cyclical to risk-based inspections in Northern Ireland, highlights a number of issues raised by the Teaching Council of Northern Ireland: 'The General Teaching Council for Northern Ireland (GTCNI) has recently highlighted concerns around this risk-based approach, suggesting that this may have a "potentially in-built socio-economic bias", and noting an "excessive reliance" on quantitative data and examination outcomes' (11). Indeed, initial concerns seem to be justified when it comes to the potential for more intense inspections to be carried out without taking into account the overwhelming effect of social deprivation on student learning outcomes. According to Leithwood et al:

Best estimates suggest that everything schools do within their walls accounts for 20 percent of the variation in students' achievement is based on what happens in schools (Creemer and Reetzigt, 1996) - the maximum difference a school can make because external factors are so powerfully stacked for some schools against others. (2010: 249)

In many ways, GTCNI concerns relating to the move towards risk-based data driven inspections without taking into account the context in which schools operate resonates with Perryman's (2006) observations of school inspections in England and Wales: 'The inspection system in England and Wales seems to pathologize the 'sick' school, without taking into account the society in which it is positioned' (151).

More recently, in order to rectify anomalies that could unintentionally target schools that have no control of contextual factors that inhibit learning outcomes, there has been considerable government interest in the use of value-added statistical conjectures of quality. Such measures could level the playing field between socio-economic school types by quantifying the varying contexts in which schools operate.

None the less, the interchangeable use of value-added measures can be seen in many countries inspection frameworks, such as England, Canada and Ireland. For example, in Canada, the Literacy and Numeracy Secretariat of the Ontario Ministry of Education developed a benchmarking module, called 'Schools Like Ours'. Its purpose is to find 'similar schools to any selected school using any combination of the school demographics, program information, and performance indicators by province, region, or board.' (Department of Education Ontario 2007: 4). Indeed, large scale organisations often use extensive single method quantitative studies to influence decision making in a country (see, for example, PISA 2009; OECD 2012). For instance, Santiago, in reference to the Danish Education system, states:

The first results of PISA published in December 2001 jolted Denmark and its education community. They provided evidence that one of the most expensive education systems in the world was performing at a level that, when compared to the outcomes observed in other OECD countries, was only average. (2013b: 44)

Further, it would be reasonable to suggest that the persistent drive to focus heavily on this single method of enquiry is problematic, especially when value-added measures are used for punitive purposes, such as the deployment of scarce resources and the attrition of teacher credibility. This perspective resonates with Simons (2004) who states:

Government seeks a closer relationship with the research and evaluation community and a more prescriptive role in determining the 'what' and the 'how' of policy-related inquiry. It is the 'how' – the methodology – that is problematic. Simplicity and certainty are what governments seek. Complexity and uncertainty are what we habitually deliver. (410)

Certainly, the trend towards value-added indicators has been questioned for various reasons, such as the accuracy of results being used to make judgements about school practice. Nonetheless, Scheerens, Glas, & Thomas (2003) assert that although the calculation of a school's effect on student performance is a complex process due to the wide variety of factors that inhibit student progress. However, they also state that '...the more information it is possible to have about individual students, sub-groups of students, and all students in a school as well as comparative data across a whole population (or representative sample) of schools, the more reliable and informative any subsequent analysis is likely to be' (Scheerens, Glas, & Thomas, 2003: ch.13.3, para.1). On the other hand, it seems that almost all inspectorates quite naturally agree that forming judgements using only quantitative conjectures of quality is inadequate. As an inspector participant in Brown (2013) puts it, 'I mean, if inspection is only data-driven, just send me the details by email, and I'll write you the report by e-mail' (127). Still, it is apparent that without the use of school and system-wide school performance data, the trend towards risk-based and system-wide inspections is limited. This issue is undoubtedly a key element of the variable rate of inspection change in countries, and it is this issue that forms the next part of the study.

From valued to value added

Many view the need for value for money indicators as being part of the modernisation of all public service entities. For example, Santiago (2013b), referring to Ireland's OECD country background report on Evaluation and Assessment (2012), states: 'The value for money imperative has been a fundamental part of public service modernisation, and this has given an additional importance to evaluation and assessment in the educational context' (47). Indeed, the increasing use of complex data sets as a means of judging the component of risk attached to the quality of education provided in schools has become common place for almost all countries that have moved towards risk-based and system-wide inspections. Moreover, against a backdrop of increasing school transparency and the deployment of publicly available school league tables by governments; the increasing use of value-added measures by schools may also be attributed to the need for schools to justify the quality of education provided within their contextual constraints. For example, Coe & Vischer (2013), in

reference to Murdoch and Coe (1997), state that there is evidence to suggest that the rapid use of value-added assessment by schools in England was spurred on by the belief that the publicly available statistical conjectures of school quality deployed by the English government (in the form of school leagues tables) was unfair for a variety of reasons. These reasons include, for example, the fact that such performance indicators are unable to highlight students' achievement before entering the school. In consequence, '...perceptions of the public judgements of their effectiveness...were often a factor in their choice to implement a confidential value added school monitoring system. The published school performance information included average raw achievement of a school's students which did not adjust for relevant features of the student intake' (xiii). Indeed, with the initiation of whole school regular inspections; as schools have developed their capacity to carry out their own evaluations, so too have established inspectorates when reference to the use of value-added measures are concerned. As an interview participant referring to England in Ozga (2012) states: 'Because we have all this Key Stage Data and because it is longitudinal, we are practically, without boasting, we are probably the leading administration in the world as far as value-added measures and schooling are concerned' (447).

Through the encouragement of international organisations, such as the OECD, many governments now have developed (or in the case of Ireland, are in the process of developing) complex data sets in the form of 'value added' indicators that can be used as part of the inspectorates' risk-based assessment process. In discussing the Netherlands, Shewbridge et al (2014) state, 'Similar to the free school meal bands in Northern Ireland, student achievement data are classified into separate performance bands on the basis of level of disadvantage (mainly using parental educational level). In this way, the risk assessment takes account of school context' (147). The use of value-added models is not limited to European countries, however. In the case of North America, for example, value-added models are used to ascertain the impact that individual schools and teachers have on the quality of education provided. According to the American Statistical Association (ASA), 'many states and school districts have adopted Value-Added Models (VAMs) as part of educational accountability systems. The goal of these models, which are also referred to as Value-Added Assessment (VAA) Models, is to estimate effects of individual teachers or schools on student achievement while accounting for differences in student background' (2014: 1).

As alluded to earlier, the promotion of value added indicators within school inspection frameworks is also centred on the recognition that, the component of error attached to using such indicators is reduced when using value-added indicators. This assumption holds true when compared to methods comparing a school's performance to the average raw score for a population. Therefore, these measures should be welcomed and encouraged. Value-added indicators also may be viewed as a method for the re-regulation of teachers and schools, a concept that resonates with Ball (2003) who states, 'Within this ensemble, teachers are represented and encouraged to think about themselves as individuals who calculate about themselves, 'add value' to themselves, improve their productivity, strive for excellence and live an existence of calculation' (217). Regarding the OECD's Review of Evaluation and Assessment of Portugal, Donaldson et al (2012) state that there is a greater degree of uncertainty relating to the value that schools add to student learning in countries such as Portugal, which, at the time of writing, compare externally devised school test-based scores against the total population of schools.

Another difficulty concerns the comparison of student outcomes across schools. The average results of national examinations (both in the 9th Grade and secondary education and, as of 2011/12, in the 6th Grade) at the school level are publicly disclosed with no account for the socioeconomic context of each school (or the characteristics of schools' student population). This can considerably distort considerations about the effectiveness of each school as average results do not reflect the value added by schools to student results. (132)

Ironically, adding trepidation to issues surrounding the use of value-added indicators, Donaldson et al (2012) further state, 'It is important to note that value-added models are still under development, and therefore, they are prone to error' (189). This caution regarding value-added indicators and their use as measures of teacher and school performance has been affirmed by the ASA (2014), who state, 'A VAM score may provide teachers and administrators with information on their students' performance and identify areas where improvement is needed, but it does not provide information on how to improve the teaching' (7). Yet, despite almost every inspectorate in the world stating that one of the key functions of school inspection is to ensure that a schools own evaluation results are both valid and reliable; quite paradoxically some inspectorates are now using comparative value added measures to ascertain the quality of teaching provided in comparison to, for example, schools of a similar socio economic grouping, for instance. The logic of introducing value-added indicators as value judgements within school inspectorate frameworks and ascertaining the component of risk across all school types is further described by an inspector in Brown (2013):

The other element that is vitally important is to know that there is the value added standard as well as the actual standard. So, if I am teaching in a [Name of non-disadvantaged area] and all of my students come in at X level, am I really adding value even if 90% of them go to third-level institutions? Is it my doing as a school, or is it that they would reach that anyway because of a whole lot of other factors? So, I think that value added is one thing that you have to take into account, and then the other thing is that the national norms, but the national norms on a contextual basis. So, there are all those skills and systems that need to be put in place. (189)

None the less, for all its perceived benefits and connotations of quality in school inspection policy and practice, the use of value-added data presents a dilemma to most countries and will continue to do so in the future. However, given the ever-increasing need to introduce value-added data to formulate inspection judgements, the following supposition by O'Neill (2011) on the potential misuse of data in education is compelling:

Every time you use a measure of pupil attainment for some extraneous purpose you risk creating a perverse incentive. So every time you find yourself doing that or participating in a system that requires you to do that, ask what incentive is this creating? Whom is it damaging? Pupils, head teachers, schools, employers and I think that would be a very useful first step.

Discussion and Conclusion

In this century, changes in inspection policy and practice in all public services have been brought about as a direct result of a closer alignment with new public management philosophies. As a result, inspections tend to operate within the two school governance philosophies as described by Van Bruggen, namely accountability and continuous improvement. (2010b). Within the framework of this 'new school inspection', inspection tends to operate as either cyclical or targeted risk-based. However, for a variety of reasons such as the high costs accrued from carrying out repeated cyclical inspections, there has been a significant trend towards risk-based inspection models in most countries. In either case, the current iteration of inspection in action consists of a series of overlapping activities including the increasing use of assessment data coupled with an analysis of a schools own internal evaluations. While it can be argued that these developments as described above have resulted in more flexible inspection better designed to achieve a variety of very different objectives, these methods and models also pose significant challenges.

These challenges include, but are not limited to: (i) the capacity of schools to carry out their own evaluations; (ii) the levels of trust and respect between schools and the inspectorate; (iii) the level of inspection power or influence deemed necessary to bring about school improvement; and (iv) how inspectorates can move towards a model of risk based inspections while at the same time, ensuring that all schools who receive, at least, a satisfactory inspection continue with their school improvement agenda. Solving these concerns relates to the pursuit of a workable, integrated inspection system as envisaged by Barber and Mourshed (2009) who state: 'if the challenge of the 1980s was describing what effective schools are, of the 1990s, how to make schools more effective and of the 2000s, describing what effective systems are, then the pressing question for the 2010s is how to make systems more effective' (7).

What does appear to be as certain as it is possible to be about any educational matter is that inspection in whatever evolving form is likely to be a feature of the global landscape of schooling for the long term. Speaking of the UK but surely more widely applicable is the observation of Davis & Martins (2008b)

Whatever the future holds, it is clear that a combination of tighter resources and rising expectations on the part of both the public and politicians will continue to drive demands for better, more personalised, more responsive, more efficient, and more cost effective public services. This may throw some of the tensions between national and local priorities into even sharper relief. But the inspectorates have demonstrated a remarkable capacity to adapt and respond to changing government priorities, and in our view the smart money is on continued refining and fine tuning of inspection of public services, rather than its wholesale abandonment. (150)

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The Communication Barriers between Teachers and Parents in Primary Schools‡

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Abstract

Problem Statement: In educational institutions, the effectiveness of communication between teachers and parents, in terms of student achievement and attendance, has a great importance. Parent-teacher communication provides multi-faceted benefits to teachers, the school, and parents as well. However, various obstacles hinder the realization of effective parent-teacher communication in school settings.

Purpose of Study: The main purpose of this study is to determine the communication barriers between parents and teachers, based on the views of primary school teachers. This study is seen as important since it addresses the barriers in communication, which is seen as vital for achieving educational aims effectively. Effective communication provides achievement and improvement by providing support to parents, students, teachers, and schools and promoting appropriate environments.

Method: This research is a survey type descriptive study. Due to the stratified and random type sample formation, 850 teachers were considered to be taken into the research sample; however, 514 of the distributed questionnaires were found valid. The data collection tool used

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was a four-dimensional scale developed by the researchers themselves. In the analysis of the data, parametric and non-parametric tests were used.

Findings: The findings revealed that teachers experienced “individual” barriers at a “general” level, but other “socio-cultural,” “accessibility,” and “field and status” related barriers at were experienced at the “very rare” level without any significant differences considering the gender and branches of the teachers. However, novice teachers (5 years and less work experience) stated significantly the most individual barriers and the most barriers related to the other dimensions as well.

Results and Suggestions: The results obtained in this study show the same major communication preventive issues between teachers and parents documented in the literature. Thus, results such as physical distance, socio-cultural differences (language, dress, values), meeting with parents only when money is required, parents’ lack of trust in teachers and their unwillingness for cooperation, parents’ financial problems and lack of interest about informing parents of school-related issues, inappropriate schedule of school activities, teachers’ misbehaviors, parents’ education level, parents’ mistrust in teachers and managers, and the like also confirm the situation represented in previous research. It was recommended that school managers and teachers adopt an open-door policy for parents; and the schools should take the initiative of realizing collaborative efforts among the school staff, parents, and other relevant institutions in order to eliminate communication barriers. The training of the school administrators, teachers, and families about gaining effective communication skills that will contribute to student achievement should be emphasized.

Keywords: Schools, teachers, parents, effective communication, communication barriers.

Introduction

In fulfilling an efficient education in education organizations, communication not only among the school managers, teachers, and students, but also with students’ parents bears a great importance. Especially communication between teachers and parents regarding students’ performance in the class bears vital importance in better understanding students’ problems, increasing parents’ support in education, performing effective counselling and guidance, and ultimately increasing students’ motivation and success.

The existing parent-teacher communication studies generally approach the issue from two aspects. The first covers teacher-parent relations and contributions of parents to school communities and organizational activities, whereas the second one covers studies about parents’ support of students’ academic development (Rogers et al., 2009). Consequently, teacher-parent relations bear an increasing importance for

improving schools as learning communities and for students' growth through meeting their needs and expectations (Olcer & Kocer, 2015; Schussler, 2003). The US National School Public Relations Association (NSPRA) reports numerous study results that have indicated the important roles of school-parent-environment cooperation in promoting school success and student growth (NSPRA, 2006).

However, healthy communication between teachers and parents is not always possible, and numerous barriers on various levels can negatively affect the communication process. These barriers can arise in connection with school resources, teachers' professional development levels, family, and environmental features. It is not always possible to mention regular and efficient communication between school management and structures, such as parent-teacher association and school protection association, that are formed with the purpose of improving school-parent cooperation (Aslan, 1984; Aytac, 2000; Gungor & Tasdan, 2016; Ozel, Bayindir & Ozel, 2014). School managements remain incapable of understanding the importance of communication between teachers-parents and school-parents and developing efficient strategies in improving this communication (NSPRA, 2006). On the other hand, most teachers cannot improve themselves without the knowledge and skills that are needed in establishing an efficient communication with parents (Lawrence-Lightfoot, 2004).

The main purpose of this study is to determine the communication barriers between the parents and teachers based on the views of primary school teachers. This study is seen as important since it addresses the barriers in communication, which is seen as vital for achieving educational aims effectively. Effective communication provides achievement and improvement by providing support to parents, students, teachers, and schools and promoting appropriate environments.

Teacher-Parent Communication

The most common definition of communication is sharing emotions, thoughts, knowledge, news, and skills, or in other words, the process of creating common ground in the sense of emotions, thoughts, and manners among individuals (Karaca, 2016; Sever, 1998). Interpersonal communication is intentionally or unintentionally affecting others by transmitting and receiving messages (Korkut, 2000).

Due to the raised awareness of the importance of parent-school cooperation in achieving effective education, the number of studies encouraging parents to play more active roles in school activities is increasing. A school-parent association is deemed indispensable to school organizations for the realization of effective education that will foster student performance (Acikalin & Turan, 2015; Ozyurek, 1983; Sisman & Turan, 2004). By means of communication, mutual trust between the school and parents develops (Saritas, 2005), and mutual support towards encouraging student learning increases (Celik, 2005).

A trust-based communication that can be established between teachers and parents bears great importance from the aspect of determining problems, finding ways to deal with them, and providing students with help on their way to learning.

Particularly at pre-school, elementary, and secondary school levels, communication between teachers and parents assures the realization of issues such as informing, enlightening, and training parents with the purpose of increasing student success. Additionally, the efficiency of communication between teachers and parents contributes to the schools by improving school and district relations, utilizing environmental sources, and developing programs complying with environmental conditions by securing parents' integration into the school.

Schools that are organic parts of the society have a natural advantage in terms of interacting with parents. For example, schools are in a position to host or facilitate the organization of seminars for parents that range from child development to stress management. Moreover, schools can help form support groups in meeting the various needs of parents (Molland, 2004), can help parents to develop relationships with the needed institutions, can encourage the parents to participate in school projects, and can pioneer establishing a mechanism to promote counseling and guidance programs (Graham-Clay, 2005).

Barriers in Teacher-Parent Communication and Ways to Deal with Them

Establishing healthy communication that makes life meaningful and forms social life is not always possible due to "communication barriers." In our schools, there are numerous barriers that prevent the establishment of efficient communication between teachers and parents. These barriers can generally be categorized as physical, technical, psychological, or social and organizational (Sabuncuoglu & Gumus, 2008). Hoover-Dempsey et al. (2002) categorize communication barriers in schools as either school related and parent related. School-related obstacles are described as the inability to provide communication support, lack of system knowledge, and failure to develop alternative strategies. Parent-related ones are described as family status, pragmatic concerns (such as non-flexibility of parents' work hours, etc.), and psychological barriers (negative experiences about schools etc.). Bursalioglu (2008) states that numerous barriers within or outside of the organization can make the communication process harder, and sometimes it may even stop it. The study describes these barriers as psychological, semantic, status-related, protection-related, field-related, hierarchical, narcotizing, and restraining barriers. Tutar (2009) categorizes factors that prevent the effective communication as personal, language and expression difficulties, listening and perception inefficiencies, lack of knowledge, sexual and cultural differences, misconception, and psychological barriers.

Parents and school principals usually report lack of time as the most important communication barrier. However, studies reveal that lack of planning towards establishing cooperation and lack of developing a mutual understanding are the most important communication barriers. In addition to that, some sort of feelings related to previous negative experiences, religious and cultural differences, transportation problems, and the incompetency and inefficiency of school members may affect school-parent relations negatively (NSPRA, 2006).

Cultural differences can create communication barriers if the teachers reflect their own cultural perspectives while interacting with the parents from a different language and culture (Colombo, 2004). In order to deal with this potential miscommunication, teachers should begin a quest for knowledge to help them understand their students' parents' language and cultural differences (Lai & Ishiyama, 2004). Along with gaining knowledge of cultural features, trying to understand cultural differences and values seems to be important from the aspect of dealing with communication barriers (Karadeniz, 2015; Kasahara & Turnbull, 2005).

Negative school experiences of parents can also constitute a barrier in their communication with teachers. Schools should be able to provide guidance service to help parents to manage these kinds of psychological problems (Finders & Lewis, 1994; Hartman & Chesley, 1998). This guidance service should encourage the parents to seek help and get information related to the issues they worry about, to understand the improvement level of the class, to grasp the teachers' approach to education, and to learn how to behave under what conditions. Providing the parents with this kind of knowledge can create dual effects by decreasing parents' negative thoughts about school on one hand and increasing their interest in the school on the other (Graham-Clay, 2005).

Economy-related issues and time constraints are seen among the elements that hinder effective communication. It is reported that especially working parents do not have enough time to cooperate with school. Besides, since most of the school-parent meetings converted into money demanded places, most of the parents from poor economic conditions refrain from attending these meetings (Finders & Lewis, 1994; Seyfullahogullari, 2012; Terek et al., 2015). To cope with this, teachers can conduct surveys to determine the work schedules of the parents at the beginning of the school year; they can even inform parents about how and when they can communicate with teachers. A study should be conducted on how the communication hours can be made flexible to enable parents to attend the school or class meetings (Molland, 2004).

Also, lack of technology can limit communication opportunities. The new technologies that provide convenience, efficiency, and effectiveness in knowledge transfer have an important force in the development of parent-teacher communication (Zieger & Tan, 2012). However, teachers shouldn't think that all parents have access to such technology, and so, they should investigate whether they can benefit from the new technology. On the other hand, most teachers and parents are still unable to make use of technology efficiently, and they give weight to traditional paper-and-pencil-based communication (Graham-Clay, 2005).

Using technical terminology in communication with parents at the school level seems to pose a general communication barrier. Teachers should observe their own speech and make sure that they omit educational jargon from written communications. If it is a must to use technical terms, the meaning of them must be explained. Messages that are given to the parents in face-to-face communication

should not be above the parents' understanding capacity (Williams & Cartledge, 1997).

As a result, efficient communication is necessary for creating school-parent cooperation and increasing parent contribution. Teachers should not only be skilled in the art of teaching, but also should improve their knowledge and skills towards efficient communication with the parent community. There are numerous communication means that teachers can benefit from, such as internet technology, private interviews, conferences, group meetings, and the like. Teachers should strive to develop communication strategies, new cooperative communication methods should be established, and these efforts should reflect a planned approach (Graham-Clay, 2005).

Caspe (2003) argues that teacher training and professional development programs must actively support improvement of teachers' communication skills. Implicit in the wish for improving teacher-parent communication is the expectation that parent attendance will contribute to the improvement of student success and realization of an efficient education (Tschannen-Moran, 2001; Virginia Department of Education, 2002). Studies about strengthening teacher-parent communication show that it can increase students' success in school and prevent the occurrence of disciplinary problems in the school as well (Aslanargun, 2007).

Purpose of Study

The purpose of this study is to determine the communication barriers between parents and teachers based on the views of primary school teachers in terms of various variables.

Method

Research Model

The research is a survey type descriptive study. Descriptive studies aim to explain the interaction between situations by regarding their relation with previous events and conditions (Kaptan, 1998). In this context, it was tried in this study to describe the factors that prevent teacher-parent communication.

Research Sample

The space of the study consisted of 3,968 teachers who worked at 317 elementary schools within the boundaries of Elazig city during 2011-2012 academic year. The sample size was calculated as 350 with a reliability level of 95% based on Cochran's (1962) formula. A total of 15 schools were chosen randomly, with three schools from each of the five education districts in Elazig city center. In addition, a total of six schools—two randomly chosen schools from each randomly chosen three central towns—from the central town set were included in the sample. Thus, questionnaires were distributed to a total of 806 teachers from 21 elementary schools. 514 of the returned questionnaires that were filled properly were taken into consideration by the study (Table 1).

Table 1.*The Schools Included in the Sample and the Numbers of Returned Questionnaires*

	<i>Primary Schools</i>	<i>Number of Teachers</i>	<i>Number of Returned Questionnaires</i>
<i>School Districts</i>	Salim Hazardagli	64	25
	Bahcelievler Bahcelievler	65	42
	24 Kasim	10	11
	Vali Lutfullah Bilgin	48	30
	Firat Yahya Kemal Beyatli	36	23
	Gonul Ihsan Tangulu	45	39
	Murat	51	20
	Harput Dumlupinar	23	15
	Elazig	50	38
	Sair Hayri	45	19
	Hazar Selcuklular	28	15
	Yucel	45	41
	Dogukent	68	38
	Karsiyaka Kaya Karakaya	30	25
<i>Chosen Central Towns</i>	60. Yil	69	31
	Kovancilar Kovancilar	37	27
	Kovancilar Eti Holding	33	21
	Palu Palu YIBO	15	10
	Palu Yavuz Selim	17	14
	Karakocan Karakocan Nuri Özaltin	24	15
	Karakocan Cengiz Topel	23	15
Total	21	806	514

The distribution of the teachers according to their genders indicates that 42.2% of the sample are female teachers and 57.8% are male. Regarding the branch variables, 77.4% of the teachers are in social sciences, 14.8% are in physical sciences, and 7.8% are in arts/special talents. By work year variable, 56.8% of teachers have "5 or fewer years," 37% have "6-15 years," and 6.2% have "6 and more years" (Table 2).

Table 2.*Demographic Qualifications of Teachers Who Participated in the Study*

<i>Demographic Qualifications</i>	<i>Groups</i>	<i>N</i>	<i>%</i>
<i>Gender</i>	Female	217	42.2
	Male	297	57.8
	<i>Total</i>	514	100
<i>Branch</i>	Social sciences	398	77.4
	Physical Sciences	76	14.8
	Fine arts/Special talent	40	7.8
	<i>Total</i>	514	100
<i>Work Years in School</i>	5 years and less	292	56.8
	6-15 years	190	37.0
	16 years and more	32	6.2
	<i>Total</i>	514	100

Research Instrument and Procedure

With the purpose of determining the issues that prevent teacher-parent communication, the "Communication Barriers Assessment Scale" was developed by the researchers. In the development process, 27 items were initially generated, accompanied by a literature review and expert opinions. In order to assess the reliability and validity of the instrument, a pilot application was done, and the opinions of randomly selected 152 teachers were asked. An exploratory factor analysis was applied to the instrument. During the principal component analysis, six items were excluded since their factor loads were found to be below .40 or because they took place in two factors with close loads with a rate difference under .10. At the end of varimax rotated analyses, 21 items were gathered under four factors with an eigenvalue over 1.00. These factors were labeled "personal" (items 1, 2, 3, 5, 6, 7, 12), "socio-cultural" (items 4, 8, 9, 10), "accessibility" (items 12, 14, 15, 18, 19) and "field and status" barriers (items 13, 16, 17, 20, 21) according to the meanings of the items grouped under each factor. In this pilot study, Cronbach's alpha reliability coefficient for the whole scale was calculated as .78. This is regarded as sufficient since .70 is considered the limit value to test reliability (Buyukozturk, 2012). Reliability coefficients for sub-dimensions were .82 for personal barriers, .71 for socio-cultural barriers, .74 for accessibility barriers, and .70 for field and status barriers.

The Likert type scale contains five options namely "always," "generally," "sometimes," "rarely," and "never," to be scored as 5, 4, 3, 2, 1 for the items that have

negative connotations, and the reverse scoring for the positive ones. On the basis of these dimensions, the responses of the subjects were computed regarding the mean ranks as $\bar{x} \geq 4.20$ always, $4.19 \geq \bar{x} \geq 3.40$ generally, $3.39 \geq \bar{x} \geq 2.60$ sometimes, $2.59 \geq \bar{x} \geq 1.80$ rarely, and $\bar{x} \leq 1.79$ never.

Data Analysis

Data obtained from research were first entered to SPSS (Statistical Package for the Social Sciences) package software, and the demographical features of the sample group were analyzed by means of this software. Pursuant to the results of Kolmogorov-Smirnov Z test for normal distribution, the Levene test for the homogeneity of the scale, independent t test for gender variable, ANOVA for branch variable, Kruskal-Wallis H test for work years of the subjects at schools, and the Least Significant Difference (LSD) test and Mann-Whitney U test for assessing the meaningful differences were computed.

Results

On the basis of the teachers' opinions and with the purpose of determining the preventive factors for the realization of efficient communication between teachers and parents, the obtained findings are interpreted below.

Results and Interpretations Related to Gender Variable

Pursuant to the independent sample's t test, there is no significant difference between female ($\bar{x}_A = 3.68$) and male teachers' ($\bar{x}_B = 3.62$) [$t_{(512)} = 1.29$, $p > .05$] views regarding "personal" barriers (parents' prejudices towards school, illiteracy of parents, concern about hearing negative comments about children, parents' problems with school management, and so on). This finding indicates that, although female teachers have encountered more personal barriers, male and female teachers are exposed to a similar number of personal obstacles at the "generally" level. Other "socio-cultural" barriers (parents' religious affinity, poor socio-economic conditions, low level of education, parents' tendency to find their children very successful); "accessibility" barriers (not stating the needs and opinions openly, not paying attention to the teacher, inaccessibility of parents when they are needed, insufficient amount of time devoted to the parents, not talking easily with the parents about their children at any time); and "field and status"-related barriers (distance of residential address of the parents, the lack of appropriate spaces in the school to talk with parents, social status differences between teachers and parents, working at the same school with some parents, and so on) have been experienced at the "rarely" level without any significant difference (Table 3).

Table 3.*Data Distribution According to Gender Variable on the Basis of Dimensions*

<i>Dimensions</i>	<i>Groups</i>	<i>N</i>	\bar{X}	<i>S</i>	<i>sd</i>	<i>t</i>	<i>p</i>
<i>Personal Barriers</i>	A) Female	217	3.68	.60	512	1.29	.20
	B) Male	297	3.62	.60			
	Total	514					
<i>Socio-Cultural Barriers</i>	A) Female	217	2.31	.63	512	-.77	.44
	B) Male	297	2.36	.67			
	Total	514					
<i>Accessibility Barriers</i>	A) Female	217	2.08	.56	512	-1.21	.22
	B) Male	297	2.13	.50			
	Total	514					
<i>Field and Status Barriers</i>	A) Female	217	2.43	.48	512	-.87	.38
	B) Male	297	2.47	.56			
	Total	514					

*p<.05

Results and Interpretation Regarding Branch Variable

Pursuant to the "socio-cultural" barriers dimension, the analysis of the data indicated significant differences among the opinions of teachers from three different branches related to barriers in teacher-parent communication [$F_{(2-511)} = 3.25$, $p < 0.05$]. The Least Significant Difference test revealed the difference between social sciences and physical sciences and between physical science and fine arts/special talent branches. Accordingly, it is observed that teachers of fine arts/special talent branches ($\bar{x}_C = 2.56$) have encountered barriers based on socio-cultural reasons more when compared to teachers of social sciences ($\bar{x}_A = 2.33$) and physical sciences ($\bar{x}_B = 2.24$); however, it is understood that all sample groups have encountered barriers at the "rarely" level (Table 4).

In the dimensions of "personal," "accessibility," and "field and status" related barriers, no statistically significant difference is observed between teacher opinions ($p > .05$). Personal barriers have been experienced at the "generally" level; "accessibility" and "field and status" related barriers have been encountered at the "rarely" level (Table 4).

Table 4.*Data Distribution According to Branches Variable on the Basis of Dimensions*

<i>Dimensions</i>	<i>Groups</i>	<i>N</i>	\bar{X}	Source of Variance	Sum of Squares	SD	Mean Square	<i>F</i>	<i>p</i>	Significant Difference (LSD)
<i>Personal Barriers</i>	A) Social Sciences	398	3.62	Between Groups	2.071	2	1.036	2.90	.06	
	B) Physical Sciences	76	3.67	Within Groups	182.794	511	.358			
	C) Fine Arts/Special Talent	40	3.85							
	Total	514	3.65							
<i>Socio-Cultural Barriers</i>	A) Social Sciences	398	2.33	Between Groups	2.754	2	1.377	3.25	.04*	A-C B-C
	B) Physical Sciences	76	2.24	Within Groups	216.288	511	.423			
	C) Fine Arts/Special Talent	40	2.56							
	Total	514	2.34							
<i>Accessibility Barriers</i>	A) Social Sciences	398	2.09	Between Groups	1.377	2	.689	2.51	.08	
	B) Physical Sciences	76	2.23	Within Groups	140.358	511	.275			
	C) Fine Arts/Special Talent	40	2.12							
	Total	514	2.11							
<i>Field and Status Barriers</i>	A) Social Sciences	398	2.45	Between Groups	.406	2	.203	.72	.49	
	B) Physical Sciences	76	2.45	Within Groups	143.454	511	.281			
	C) Fine Arts/Special Talent	40	2.55							
	Total	514	2.45							

* $p < .05$ *Results and Interpretation Regarding Work Year Variable*

The analysis of the data revealed that teachers' opinions relating to "personal" barriers differed significantly by their work years in school [$\chi^2_{(2)} = 19.318$, $p < 0.05$]. As a result of multiple comparisons that were performed through a Mann-Whitney U test, this difference seems to occur in groups that have "5 years and less" and "6-15

years" of work in the school. This finding shows that teachers' years of work in the school have an impact on the rate of their encountering personal barriers. When the mean rank of the groups is regarded, it is seen that the "5 years and less" work year group encounters the most barriers, and it is followed by "6-15 years" and "16 years and more" groups respectively.

It is understood that there is no significant difference related to other "socio-cultural," "accessibility," and "field and status" related barriers. However, it is seen that teachers with "5 years and less" work years have encountered socio-cultural barriers at the highest level; this is followed by teachers with "16 years and more" and "6-15 years" of work experience. Further, teachers with "16 years and more" of work experience have encountered accessibility barriers the most, and it is followed by teachers with "5 years and less" and "6-15 years" work year experience. Related to "field and status" barriers, it is seen that teachers with "5 years and less" work experience have encountered the most barriers, followed by teachers who have "6-15 years" and "16 years and more" work experience (Table 5).

Table 5.

Data Distribution According to Work Year Variable on the Basis of Dimensions

<i>Dimensions</i>	<i>Work Experience</i>	<i>N</i>	<i>Mean Rank</i>	<i>sd</i>	χ^2	<i>P</i>	<i>Significant difference (Mann Whitney U)</i>
<i>Personal Barriers</i>	A) 5 years and less	292	282.14				A-B
	B) 6-15 years	190	221.97	2	19.318	.00*	
	C) 16 years and more	32	243.61				
	Total	514					
<i>Socio-Cultural Barriers</i>	A) 5 years and less	292	264.63				
	B) 6-15 years	190	241.61	2	4.162	.13	
	C) 16 years and more	32	286.80				
	Total	514					
<i>Accessibility Barriers</i>	A) 5 years and less	292	267.87				
	B) 6-15 years	190	239.38	2	4.555	.10	
	C) 16 years and more	32	270.45				
	Total	514					
<i>Field and Status Barriers</i>	A) 5 years and less	292	265.30				
	B) 6-15 years	190	247.25	2	1.894	.39	
	C) 16 years and more	32	247.17				
	Total	514					

*p<.05

Discussion and Conclusion

This study tried to determine the barriers to effective communication between teachers and parents on the basis of teacher opinions. The results considering the independent variables as gender, branch, and work years of teachers in the school can be summarized as follows:

Results obtained related to gender variable reveal that personal barriers are encountered at the “generally” level; socio-cultural, accessibility, and field and status related barriers are encountered at the “rarely” level. Compared to male teachers, female teachers seem to witness personal barriers more. Celik’s (2005) result that female teachers experience more problems in school-parent communication supports the results of this research. On the other hand, the research results of Cengil (2016), Cevis (2002), and Kenanoglu (2004) indicate no significant difference between teachers’ opinions by gender related to problems in school-parent relations.

As the branch variable is regarded, it is understood that teachers from all branches (social sciences, physical sciences, and fine arts/special talents) encounter personal barriers at the “generally” level and the other socio-cultural, accessibility, field and status related barriers at the “rarely” level. However, it is understood that teachers from fine arts/special talent branches encounter socio-cultural related barriers more significantly than the other branch teachers. In Celik’s (2005) study, it is concluded that teachers who graduated from other branches, but work as class teachers experience more problems than other teachers.

The results related to work years in the school indicate that teachers with “5 years and less” work experience encounter personal barriers the most, and the teachers who have “16 years and more” and “6-15 year” of work experience follow them. Likewise, teachers with “5 years and less” experience encounter socio-cultural and field and status based barriers more than the other branch teachers. However, teachers with “16 years and more” work year experience encounter accessibility related barriers the most. It is understood that the least experienced teachers encounter almost all kind of barriers – mainly personal barriers – more than the more experienced ones. This situation indicates that novice teachers are not able to develop sufficient knowledge and skills in communication. Research shows that the greatest problems that novice teachers face are related to communication with parents as well (NSPRA, 2006).

The results obtained in this study are the same major communication preventive issues between teachers and parents found in the literature. Thus, the results such as physical distance, socio cultural differences (language, dressing, values) (Sisman & Turan, 2004); meeting with parents only when money is required (Kocak, 1991); parents’ lack of trust in teachers and their unwillingness to cooperate (Celik, 2005); parents’ financial problems and lack of interest in informing parents of school-related issues (Ceylan & Akar, 2010); inappropriate schedule of school activities (Basaran & Koc, 2001); teachers’ misbehaviors (Ogan, 2000; Yılmaztekin, 2015); parents’ education level, parents’ mistrust in teachers and managers (Porsuk, 2010), and the like also confirm the findings of that research.

Recommendations

School managers and teachers should have knowledge about the socio-economic and cultural structure of parents' environments in order to increase communication with them. Besides, school managers and teachers should develop an open-door policy for parents and the parents should be encouraged to visit the school as much as possible. Thus, while parent support can be obtained more easily on one hand, the cooperation opportunities will be created on the other to improve the students in all aspects.

Schools should plan parents' meeting at the beginning of the instructional year, announce the meeting schedule and agenda to parents, and secure a suitable place, time, and environment for meetings.

In this study, personal barriers were mentioned at the "generally" level. In order to eliminate personal barriers, prejudices towards the school and teachers should be eliminated, and a relationship that is based on mutual trust and tolerance should be developed.

In establishing communication with parents who do not have the ability to speak Turkish well, the assistance of other school members should be obtained, in case the class teacher is incapable of understanding them. The meeting time with parents should be arranged pursuant to parents' availability and should be used efficiently.

In order to eliminate communication barriers that art/special talent branches teachers encounter, the importance of these branches for personal development should be explained well, and psychological consultancy and guidance should be obtained on this subject. The assistance of experienced teachers to the novice teachers should be ensured in establishing a good communication between parents and teachers. Besides traditional communication methods such as face-to-face and written communication, electronic communication (mobile phones, social network, and computer environment) should be utilized efficiently as well.

Under the leadership of the National Education Ministry and universities, various informative and educational programs with the goal of improving teacher-parent communication should be organized.

In order to perform teacher-parent communication efficiently and develop a sustainable cooperation, a schoolwide mechanism should be built where preventive factors to efficient communication are identified and ways to overcome them are sought systematically.

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İlköğretim Okullarında Öğretmen-Veli İletişiminde Karşılaşılan Engeller

Atıf:

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Özet

Problem Durumu: Eğitim kurumlarında etkili eğitimin gerçekleştirilmesinde okullardaki yönetici, öğretmen ve öğrenciler yanında öğrenci velileriyle kurulan iletişim büyük önem taşır. Özellikle sınıf içindeki öğrenci performansına ilişkin öğretmen ve veliler arasında kurulan iletişim öğrenci sorunlarının daha iyi anlaşılması, velilerin eğitime olan desteklerinin artırılması, etkili yönlendirme ve rehberlik yapılması ve nihayet öğrenci güdülenmesinin ve başarısının artırılmasında yaşamsal önem taşır. Etkili iletişim, güçlü okul-aile işbirliğini yaratmak ve veli katılımını artırmak için gereklidir. Öğretmen sadece öğretme sanatında beceri sahibi olmamalı, aynı zamanda kendi veli topluluğuyla etkili iletişime yönelik bilgi ve becerisini de geliştirmelidir. Öğretmenlerin yararlanabileceği internet teknolojisi, velilerle özel görüşmeler/konferanslar ve okul ile ev iletişimine yönelik birçok iletişim olanağı vardır. Öğretmenler, velilerle iletişim kurmak için, iletişim stratejilerini ve işbirlikli yeni iletişim yöntemlerini kullanma konusunda çaba sarfetmeli ve bu çabalar planlı bir yaklaşımı yansıtmalıdır.

Araştırmanın Amacı: Bu araştırmanın temel amacı, ilköğretim okullarında öğretmen ve veli arasında etkili iletişime engel oluşturan unsurları öğretmen görüşlerinden yola çıkarak belirlemeye çalışmaktır.

Araştırmanın Yöntemi: Araştırma tarama türünde betimsel bir çalışmadır. Araştırmanın evrenini, 2011-2012 eğitim-öğretim yılında, Elazığ ili sınırları içinde bulunan 317 ilköğretim okulunda görev yapan 3,968 öğretmen oluşturmaktadır. Elazığ il merkezindeki beş eğitim bölgesinin her birinden tesadüfi örnekleme yöntemiyle 3'er okul olmak üzere, toplam 15 okul seçilmiştir. Merkez ilçeler kümesinden rastgele seçilen üç ilçenin her birinden 2'şer okul olmak üzere 6 okul ayrıca araştırma kapsamına dâhil edilmiştir. Böylece, toplam 21 ilköğretim okulu ve bu okullarda görev yapan toplam 806 öğretmene ölçek dağıtılmış, bu ölçeklerden uygun şekilde doldurularak dönenlerin sayısı 514 olarak tespit edilmiştir. Öğretmen-veli iletişimine engel olan unsurları saptamak amacıyla araştırmacılar tarafından geliştirilen "İletişim Engellerini Belirleme Ölçeği" kullanılmıştır. Ölçek geliştirilirken literatür ve uzman görüşleri eşliğinde, önce 27 adet madde geliştirilmiştir. Geçerlik ve güvenilirliği tespit etmek amacıyla ölçek bir pilot uygulamaya tabi tutulmuş ve yansız olarak seçilen 152 öğretmenin görüşleri alınmıştır. Yapılan faktör analizinde 6 maddenin faktör yükü düşük çıktığından bu maddeler ölçeğe dahil edilmemiştir. Faktör analizi sonucunda, dört faktör altında toplanan 21 madde, maddelerin taşıdığı anlamlar dikkate alınarak, "kişisel" (1-2-3-5-6-7-12 no'lu maddeler), "sosyo-kültürel" (4-8-9-10 no'lu maddeler), "ulaşılabilirlik" (13-16-17-20-21 no'lu maddeler), "alan ve statü" (14-18-19-22-23 no'lu maddeler) engelleri şeklinde isimlendirilmiştir. Ölçeğin tamamı için Cronbach Alfa güvenilirlik katsayısı .78 olarak bulunmuştur. Çalışmadan elde edilen veriler SPSS paket programı aracılığı ile analiz edilmiştir. Verilerin analizinde kullanılacak istatistiksel yöntemleri belirlemek amacıyla normal dağılıma uygunluk analizinde Kolmogrov-Smirnov Z sınaması, verilerin homojenlik durumunu tespit etmek için de Levene sınaması kullanılmıştır. Bu sınamaların sonuçlarına göre, cinsiyet değişkeninde Independent Sample t test; branş değişkeninde Varyans Analizi (ANOVA); ve görev yapılan okuldaki çalışma süresi değişkenine yönelik Kruskal-Wallis test ve anlamlı farklılığın hangi denek grupları arasında gerçekleştiğini belirleyebilmek için Least Significant Difference (LSD) test ve Mann-Whitney U sınaması ile çoklu karşılaştırmalar yapılmıştır.

Araştırmanın Bulguları: Cinsiyet değişkenine ilişkin olarak ulaşılan bulgular, kişisel engellerle "genellikle" düzeyinde; sosyo-kültürel, ulaşılabilirlik, alan ve statüden kaynaklanan engellerle ise "çok nadir" düzeyinde karşılaşıldığını göstermektedir. Kadın öğretmenler, kişisel engellere daha çok tanık olurken, erkek öğretmenler sosyo-kültürel, ulaşılabilirlik, alan ve statüden kaynaklanan engellerle daha çok karşılaşmaktadırlar. Branş değişkeni dikkate alındığında, tüm branşlardaki (sosyal bilimler, fen bilimleri ve güzel sanatlar/özel yetenek) öğretmenlerin, kişisel engellerle "genellikle" düzeyinde; sosyo-kültürel, ulaşılabilirlik, alan ve statüden kaynaklı engellerle ise "çok nadir" düzeyinde karşılaştığı anlaşılmaktadır. Öğretmenlerin görev yaptıkları okuldaki çalışma süreleri değişkenine ilişkin ulaşılan bulgular, kişisel engellerle en yüksek düzeyde "5 yıl ve daha az" çalışma süresine sahip öğretmenlerin karşılaştığını, bunu "16 yıl ve üzeri" ve "6-15 yıl" çalışma

süresine sahip öğretmenlerin izlediğini göstermektedir. Sosyo-kültürel kaynaklı engeller ile alan ve statüden kaynaklanan engellerle çalışma süresi "5 yıl ve daha az" olan grup daha çok karşılaşırken, ulaşılabilirlikle ilişkili engellerle çalışma süresi "16 yıl ve üzeri" grubun daha çok karşılaştığı anlaşılmıştır.

Araştırmanın Sonuç ve Önerileri: Öğretmen-veli iletişimini etkili şekilde gerçekleştirmek ve sürdürülebilir bir işbirliğini geliştirmek için, etkili iletişime engel olan unsurları tanımlayacak ve sistematik olarak irdelenecek okul çapında bir mekanizmanın oluşturulması gerekir. Öğretmen-veli iletişimde karşılaşılan engeller, öğretmen-veli arasındaki anlayışın geliştirilmesi ve işbirliğine yönelik alternatiflerin oluşturulması için bir fırsat olarak ele alınmalıdır. Öğretmen-veli iletişiminin etkili şekilde gerçekleştirilmesi isteğinin temelinde, veli katılımının çocuğun başarısının artmasına ve etkili eğitimin gerçekleştirilmesine yapacağı katkı beklentisi vardır. Bu çalışmada da, öğretmen ve veli arasında etkili iletişime engel oluşturan unsurlar öğretmen görüşlerinden yola çıkarak belirlenmeye çalışılmıştır. Araştırmada belirlenen boyutlar temelinde ulaşılan sonuçlar, alan yazın çalışmalarında da öğretmen ve veli arasındaki etkili iletişimi engelleyen temel unsurlar olarak ortaya çıkmaktadır. Nitekim, fiziksel uzaklık, sosyo-kültürel farklılıklar (dil, giyim, değer); velilerle sadece para söz konusu olduğunda görüşülmesi; velilerde öğretmenlere karşı güven eksikliğinin olması ve velilerin işbirliğine açık olmaması; velilerin ekonomik sorunları ve velilerin okul işleyişi konusunda yeterli düzeyde bilgilendirilmemesi; okuldaki etkinliklerin zamanı; öğretmenlerin olumsuz tavırları ve velinin kendi öğrenciliğini anımsamak istememesi; velilerin eğitim düzeyi, velilerin öğretmen ve yöneticilere karşı güven duymamaları gibi sonuçlar bu durumu teyit etmektedir. Elde edilen bu sonuçlardan yola çıkarak şu önerilere yer verilebilir: Okul yönetimi ve öğretmenler, ailelerle iletişimi artırabilmek için, ailelerin yaşadığı çevrenin sosyo-ekonomik ve kültürel yapısı hakkında bilgi sahibi olmalıdır. Okul yönetimi ve öğretmenler, velilere karşı açık kapı politikası oluşturmalı, velilerin okula gelmeleri cesaretlendirilmelidir. Böylelikle, bir yandan veli desteği daha kolay elde edilirken, diğer yandan öğrencilerin her yönden gelişmesi yönünde işbirliği fırsatları yaratılacaktır.

Anahtar Kelimeler: Okul, öğretmen, veli, etkili iletişim, iletişim engelleri.

How Do Students Prove Their Learning and Teachers Their Teaching? Do Teachers Make a Difference?

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Abstract

Problem Statement: Gaining reasoning skills in early years affects the formal proving skills in the following years, thus it is quite significant. The acquiring of this skill is only possible with the approaches that the teachers used in the process. At this point, the problem to be researched in terms of making proofs is seen in how middle school students prove a mathematical expression; what kinds of reasoning and proof types they use in this process; how the teachers of these students prove the same expression; and how they reflect it to their instruction.

Purpose of the Study: The purpose of this study is to investigate the middle school students' and their teachers' reasoning types and proof methods while proving a mathematical expression.

Method: A basic qualitative research design was conducted to investigate the research problems. Participants in this study were two middle school mathematics teachers who have different professional experiences, and 18 students from 6th, 7th and 8th grades. A clinical interview technique was used to collect data and the interviews were video recorded. A thematic analysis method was used to analyze the data.

Findings and Results: The middle school students tried to decide on the argument by following specific cases in order to verify a mathematical expression, and in this context they performed several actions, such as pattern recognition, seeking the relationship between two variables, and making conjectures. They have performed three types of actions, namely verification, explanation and abstraction during the proving of a mathematical expression. Moreover, they have provided some arguments which were not accepted as proof, by offering experimental, intuitive or

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illogical justification. On the other hand, it has been observed that the middle school mathematic teachers thought in the same way that their students thought while proving a given mathematical expression.

Discussion, Conclusion and Recommendations: As a result of this study, it has been found that students had difficulties in proving mathematical statements; they preferred to use experimental proofs and mostly adapted an inductive approach. On the other hand, the proving tendency of the teachers was mostly at a verification and explanation level; they have a similar structure of thinking with their students in the process of proving mathematical expressions. Reasoning and proof should be the fundamental aspects of mathematics teaching, should play a significant role in mathematical contents without taking it independently, and should be developed in the earlier years. In addition, to what extent mathematics textbooks and mathematics curriculum in each grade level support the reasoning and proof standards should be investigated.

Keywords: Mathematics education; generalization; making conjecture; reasoning and proof.

Introduction

Proof as fundamental to mathematical understanding is needed for the construction and transmission of mathematical information. At the same time, it is an important tool in learning mathematics, as well. Hence, proof is an important concept in the way of mathematics and mathematics education. For this reason, in school mathematics, in the early years, it is suggested that the proof teaching should be disseminated in the mathematical experiences at the proper grade level of students (Healy & Hoyles, 2000; NCTM, 2000; Yackel & Hanna, 2003). However, it is a fact that the focus of mathematics lessons in primary school is arithmetical concepts, equations and algorithms; on the other hand, in the middle school; the teaching of proof is mostly found in geometry lessons (Ball, Hoyles, Jahnke, & Movshovitz-Hadar, 2002). This quick transition to proof is indicated as the possible reason that students experience many difficulties during the making of proof (Healy & Hoyles, 2000).

The studies revealed that all students from elementary school to the higher education have difficulties in reasoning and proving exercises. Most of these studies showed that students tended to exemplify and verify (Harel & Sowder, 1998; Knuth, Slaughter, Chooppin, & Sutherland, 2002; Stylianides & Stylianides, 2009; Aylar, 2014, Uygan, Tanisli, & Kose, 2014; Stylianou, Blanton, & Rotou, 2015; Guler & Ekmekci, 2016), and they mostly preferred inductive reasoning (Harel, 2001). On the other hand, as pointed out by Knuth and Sutherland (2004), and Reid and Knipping (2010), many students thought that verifying with an example was enough to prove a statement. Hence, the process of the development of proof is handled from the beginning of the elementary school to high school and students are required to see proof as a fundamental element in the learning of mathematics. Furthermore, proof should have a place in the process of teaching mathematics in the natural flow; it should be placed

as not handling an independent subject area in the mathematical content of center (NCTM, 2000). In this process, the teachers play a big role. However, the studies performed with the teachers who play a significant role in this state of the students showed similar results. The researches revealed that teachers were experiencing difficulties in writing proof (Jones, 2000; Knuth, 2002; Iskenderoglu & Baki, 2011) and they had similar thinking structures with their students in the process of proving mathematical expression. On the other hand, it has been found that the opinions, beliefs, and knowledge of the teachers also affected their students' proof performance (Knuth, 2002).

In Turkey in 2003 and in 2005, proof is emphasized in process standards in high school mathematics curricular programs where formal proof takes place. On the other hand, in other mathematics programs, the proof concept is not mentioned directly. However, proof is indirectly mentioned as a part of the ability to reason, making generalizations, making inference, defending, verifying a mathematical statement and constructing an argument (Ministry of National Education, 2013). Developing students' reasoning and supporting them to develop proof within their early years play an important role in formal proof development. In addition, the acquirement of this skill is only possible with the approaches that the teachers used in the process. Teachers should develop rich environments where how and why are discussed, which enhance thinking skills of the students, instead of offering pre-prepared solutions in the process of verification of a mathematical statement, which requires making a proof and expecting students to apply the same logic in similar situations. At this point, in Turkey, the problem to be researched in terms of making proof is seen as how middle school students prove a mathematical expression, what types of reasoning and proof that they use in this process, how the teachers of these students prove the same expression, and how they reflect it to their instruction.

Purpose of the Study

The purpose of this study is to investigate the middle school students' and their teachers' reasoning types and proof methods while proving a mathematical expression. For this purpose, the following questions were addressed:

1. What are the middle school students' types of reasoning and methods of proof while proving a mathematical expression?
2. What are the middle school mathematics teachers' types of reasoning and methods of proof while proving a mathematical expression?

This study is significant because it emphasizes how middle school students and teachers prove the mathematical expressions and the difficulties students have in writing proof, and stresses the role of teachers in the proving process by determining the relationship between teachers' and students' types of reasoning and methods of proof.

Theoretical Framework

Reasoning can be defined as the coordinated process of the evidences, beliefs and ideas resulting from the conclusion of what reality is (Leighton, 2003). From a different point of view, reasoning is a process of producing new knowledge from preliminary thoughts (Rips, 1994). In this paper, “reasoning” is simply considered to be the ways of thinking that were adopted to produce statements and in seeking the results.

There are various ways of thinking or types of reasoning while writing a mathematical argument. For example, Reid and Knipping (2010) defined reasoning types, such as induction, deduction, abduction, reasoning by analogy and others. An inductive reasoning occurs when an appropriate subset of an event is examined and proceeds to a generalized conclusion. Deductive reasoning is observed when the statements are correlated with the data by using one or more logical deduction rules, whereas analogic reasoning is observed if a statement is developed or revealed by considering the similarities between mathematical events. Finally, abductive reasoning typically occurs with the observations of a specific case and the discovery of an inference allowing the formation of a statement.

During the reasoning process, two types of actions occur, namely discovering and justifying. In the process of discovering, new knowledge is investigated and explained; whereas in the process of justifying, mathematical statements are verified or proven (Ball & Bass, 2003). New knowledge is investigated and explained within the reasoning aroused in the process of discovery, whereas mathematical statements are verified or proven by the reasoning aroused in the process of justification (Ball & Bass, 2003). The exploratory aspect of reasoning requires making generalization, which includes paying attention to the pattern and order, making conjecture and testing; whereas the defense of the reasoning requires explaining the meaning by developing arguments. Argument is a verification, which is a part of the reasoning that aims to self-persuade or persuade others (Bergqvist, Lithner, & Sumpter, 2006). However, not all but only some arguments can fulfill the standards of a proof. Therefore, the proof is usually the end product of the process and it can be supported by activities such as pattern recognition, making conjecture and arguments that are included in the process, but not in the scope of proof. Thus, both reasoning and proof require each other, as shown in Figure 1 (Stylianides, 2010).

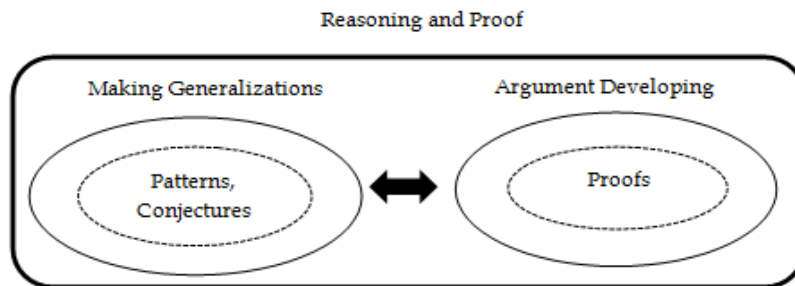


Figure 1. Generating and validating new knowledge in mathematics

Proof consists of the conjectures that use mathematical language and definitions, logical arguments that carefully express the premises, and the reasoning used to reach a valid conclusion. In other words, it can be defined as a valid argument against/for a mathematical statement (Stylianides, 2008). The term “valid argument” refers to the content that is agreed on by mathematicians. Within this paper, considering that the participants are at middle school level, it was expected that these students, who were supposed to have abstract thinking capability, should test their mathematical statements through various types of reasoning and proof, and express their statements using mathematical language.

On the other hand, during the recent discussions about the level of making proof at elementary and high school levels, the discussion of proof and verification came to the forefront and the difference between them has been revealed by emphasizing that the generalization tendency of early year students should not be accepted as proving (Stylianides & Stylianides, 2009). Sharing the same view, experimental verifications were not considered as proofs within this paper; it has been assumed that there are three stages of students’ proof, “verification” where they investigate the validity of their statements, “explanation” where they explain why their statement is true and “abstraction” where they follow the shortest path for their abstraction using mathematical language (Iskenderoglu & Baki, 2011).

Method

Research Design

A basic qualitative research design is particularly well suited to obtaining an in-depth understanding of effective educational processes (Merriam, 2009). Because the purpose is to obtain an in-depth understanding of the middle school students’ and their teachers’ reasoning types and proof methods, this research design was conducted to collect, analyze, and interpret data. In basic qualitative research design, questions, focus points and established relationships in the interviews, observations and document analysis are performed by depending on the theoretical framework of the study (Merriam, 2009).

Participants

The participants of this study, where a basic qualitative approach was adopted (Merriam, 2009), consisted of two middle school mathematic teachers and 18 students of these teachers attending 6th, 7th and 8th grades, three students from each grade. “Criteria sampling,” which is one of the purposive selection methods, was used to select the participants (Yildirim & Simsek, 2011), the seniority of the teachers (five years of experience and 30 years of experience) and students’ achievement levels (low, medium, high) were set as the criteria of the sample, based on volunteerism.

Research Instrument and Procedure

For the purposes of the study, the data was collected using clinical interviews. On account of the purpose of providing detailed knowledge and identifying thinking structure (Clement, 2000), clinical interview is used. Before the interviews, clinical interview questions, which consist of one open-ended question for each content domain, namely numbers and operations, geometry and measurement, and algebra, were prepared. The researcher and a field expert evaluated the interview questions and made necessary revisions. The pilot study of clinical interview questions was conducted with a similar group representing the participants. As shown in Figure 2, clinical interview questions were prepared considering the grade levels of students. These questions were also conducted to teachers, who were asked to prove them.

Data Analysis

The thematic analysis method that is widely used in qualitative research was used to analyze data (Liamputtong, 2009). Two experts independently defined first starting codes. The reliability of coding was calculated and the rate was found to be 90%. After the coding process, experts determined the themes and sub-themes together with a consensus on them. Based on the indicators of the process of reasoning and proving, the following themes emerged: *middle school students' process of reasoning and proving mathematical statements* and *middle school teachers' process of reasoning and proving mathematical statements*. It is determined that subthemes which belong to these themes are *making generalizations* and *evidences supporting mathematical statement*. All of these processes were analyzed in terms of *inductive, deductive, abductive, analogy* and *other* types of reasoning. Then the themes, which were defined and named in detail, were interpreted; the findings of the research were interpreted under these themes and presented with direct quotations from the dialogues.

Validity and Reliability

All research phases were reported in detail in order to ensure the validity and reliability of the research. The purposeful sampling method was used to select participants. While a data collection instrument was being prepared, the field experts evaluated the questions and the instrument was piloted with a similar group representing the participants. Data which were obtained was analyzed with the researcher and field expert. To calculate the inter-coder reliability rate, Miles and Hubermans' (1994) formula ($\text{reliability} = \frac{\text{number of agreements}}{\text{total number of agreements} + \text{(disagreements)}}$) was used. Obtained data were presented under the themes and subthemes in detail and the findings were supported with direct quotations without ruining originality.

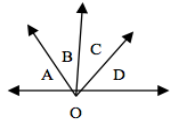
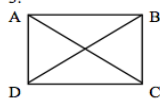
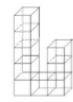
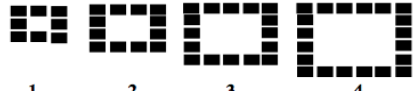
Number and Operations			
1. Prove that the sum of three consecutive numbers is divisible by 3. (Grade 6th, 7th, and 8th).			
Geometry and Measurement			
Geometry		Measurement	
2. Given the line l , $\angle A \cong \angle B$ ve $\angle C \cong \angle D$. Show that $m(\angle B) + m(\angle C) = 90^\circ$. (Grade 6th and 7th)		3.  <p>Show that the diagonals of a rectangle are congruent to each other. It means show that $AC = BD$. (Grade 8th)</p>	4. If the length of a rectangle is doubled, what will happen to its area? Show your work. (Grade 6th)
		5. Show that the area of a parallelogram is multiplication of its base and altitude. (Grade 7th)	 <p>6. Find the whole surface area formula of the geometrical object that is constructed by unit cubes. (Grade 8th)</p>
Algebra			
7.  <p>a) How many squares will be in the 6th step of the pattern? Explain. b) How many squares will be in the 24th step of the pattern? Explain. c) Write the pattern rule to calculate the number of squares in any number of steps? (Grade 6th, 7th, and 8th)</p>			

Figure 2. Clinical interview questions

Results

Middle School Students' Process of Reasoning and Proving Mathematical Statements

Making generalizations

The middle school students tried to solve the argument by following specific cases in order to verify a mathematical expression, and in this context they performed several actions, such as pattern recognition, seeking the relationship between two variables and making conjectures, as shown in Table 1.

Table 1.

Middle School Students' Processes of Generalizing Mathematical Expressions as Justification

				6.-7.-8 Grade Level		
Verification of the Hypothesis	Generalization	Pattern Recognition	Converting to an Arithmetic Pattern	Arithmetic	L(6), M(6), H(6)	
		Seeking the Relationship Between Two Variables	Recursive Functional Relationship	Arithmetic	L(6), M(6), H(6)	
	Type of Generalization		Proportional Relationship	Algebraic/ Visual		L(1), M(2), H(2)
				Arithmetic		L(3), M(1), H(2)

Table 1 Continue

		Random Example	Arithmetic	L(6), M(6), H(5)
		Specific Example	Arithmetic	L(2),H(1)
Making Conjectures		Mathematical Conjectures	Verbal/ Visual/ Arithmetic/ Algebraic	L(6), M(6), H(6)
		Prototype Shape	Visual	L(6), M(6), H(6)
		Trial/Error	Arithmetic/ Algebraic	L(6), M(6), H(6)
		Ratio/ Proportion	Arithmetic	L(6), M(6), H(6)
<i>Type of Reasoning</i>				
Abduction	Deduction	Analogy	Induction *From specific to general *Not specific, probable	Other Reasoning *Erroneous reasoning *Referring to an authority

After seeing the pattern question seen in Figure 3, the first action of all students, independent of their grade and achievement levels, was to convert the visual pattern to an arithmetic pattern, and then focus on the recursive relationship between two variables (obtaining the next term by adding a constant to the previous one). In this process, students generalized the relationship arithmetically by observing the constant difference between the terms of the pattern.

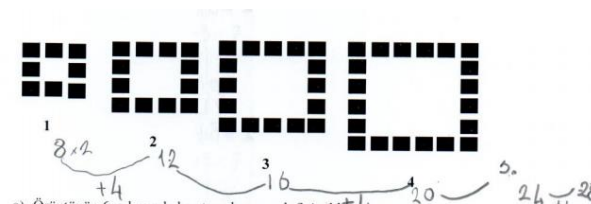
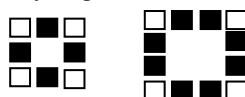


Figure 3. The approach of 6th grade students with medium achievement level

On the other hand, the functional relationship between two variables (the step number and the term), was only recognized by five students with medium and high achievement levels. For example, an 8th grade student with medium achievement level explained this relationship as “One is added to each (corner). In fact, the initial shape, in other words step zero is this (he formed the shape below). We take the corners as +4 ... I mean if $n=0$, we get +4 ... I mean step zero is +4... The first step $4+4$, second step $2.4+4$, and n^{th} step is $4n+4$ ”.

Results revealed that students achieved a visual and algebraic generalization using an inductive approach by analyzing the constant and changing terms in each step.



There are students who have reached the wrong conclusion by erroneous reasoning while searching for the relationship between two variables. In general, these students, who mostly had low and medium achievement levels, had difficulties in continuing the pattern to the 24th step because they have mainly focused on the recursive relationship. In this case, they tried to use the multiplicative relation between six and 24; and they incorrectly used proportional reasoning by attempting to apply a similar reasoning to the terms corresponding to these steps.

In the process of generalizing, middle school students have made verbal, arithmetic, visual and algebraic conjectures that were not proven yet. While making conjectures, they guessed that the given hypothesis might be true and they attempted to show their statements via exemplifying and testing and especially in geometry by trial/error, ratio and formulation based on the prototype shape, which was the concept with maximum examples.

Nearly all students who argued that *"The sum of three consecutive numbers is divisible by three"* attempted to verify this statement by giving random examples. Only three students with high and low achievement levels checked the validity of their conjectures by selecting particular cases. In this process, students used inductive, analogic, and abductive types of reasoning. In addition, it has been observed that some students have made erroneous reasoning or authoritative reasoning, such as teacher, textbook, which were considered as other reasoning. For example, a 6th grade student with a medium achievement level exhibited an inductive approach, *"First, I have to give some examples, my numbers are $4+5+6=15$, 15 is divisible by 3, $7+8+9=24$, is divisible by three, therefore the answer of this question is yes it is divisible"*, by forming a rule by considering some particular cases.

In addition to inductive reasoning, some students have been observed to make conjectures using an analogic approach by considering the similarities of two cases or using an abductive approach that is related to inductive and deductive reasoning, which is the observation of a specific case that leads to a familiar result. To give examples, *"...10, 12, 14 yes it can be divided. One of these is divisible by three. The others are complement of three. Their arithmetical mean is 12 ..."* (M_6) or *"I'll check if 12, 13, 14, are divisible by three. For example 12, $1+2=3$, it is divisible. 13, $1+3=4$, it isn't. 14, $1+4=5$, it cannot be divided. ... $3+4+5=12$, it is divisible"* (H_6).

In addition to students who make conjectures through exemplification, some students, especially those with low or medium achievement level, have given unsatisfactory answers, either erroneously or by trial/error, in the process of investigating the verification of their statements. For example, in the case of geometry questions, some students attempted to make conjectures using prototype shapes, or they referred to an authority to verify their statements.

The seventh grade student with medium achievement level attempted to obtain the general formula of the given pattern by trial/error, which is a deductive approach *"now, 8, 12, 16, 20 ... (he wrote the number of squares of each step), at the 6th step, first we can say $n+4$, no $n+4$ doesn't work ..."*. On the other hand, some of the students who focused on the difference between terms also investigated the rule of the pattern by

trial/error. First, they multiplied the common difference by n ($4n$), then they found the constant added to $4n$ using the number of the first step (8) and generated the rule of the pattern through an abductive approach. 10 students, who were experiencing medium or high achievement levels about the hypothesis in the areas of numbers and operations, algebra, geometry and learning to measure, have attempted to express their conjectures mathematically using verbal, arithmetic, visual and algebraic generalizations. In this process, they have used inductive, deductive and abductive types of reasoning. For example, a 7th grade student with medium achievement level mathematically expressed that "Based on the identical angles given on line l , the sum of two angles is 90 degree" as shown in Figure 4, by making algebraic generalizations with a deductive approach.

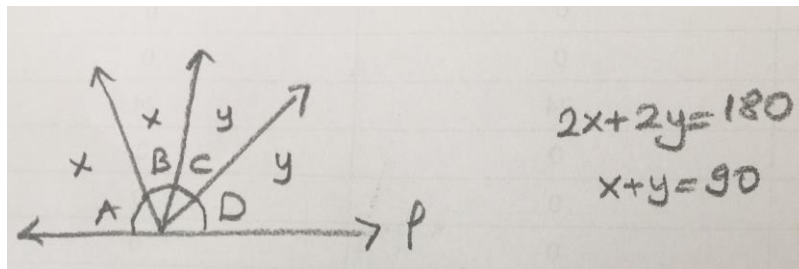


Figure 4. The approach of a 7th grade student with medium achievement level

Similarly, an 8th grade student with high achievement level explained his conjecture about "In a rectangle, the length of the diagonals are equal" verbally as "since long and short sides of a rectangle are equal ... I use Pythagoras. The square of this (DB - diagonal) is the square of (DC) plus the square of (BC); the square of this (AC - other diagonal) is the square of (AD) plus the square of (DC)."

Evidences supporting mathematical statement

As can be seen from Table 2, in the process of proving a mathematical expression, middle school students have performed three types of actions, namely verification, explanation and abstraction; moreover, they have formed some arguments, which were not accepted as proof, by offering experimental, intuitive or illogical justification.

During the proving, students with medium or high level of achievement have first investigated the verification of the hypothesis arithmetically, algebraically and geometrically/visually, and then explained why it is true, thus the reasoning types that they have selected and used in this process were deduction and abduction. Finally, they made the abstraction by using mathematical language and checking the conditions of the generalization through the shortest path. For example, in the geometry question displayed in Figure 2, a 6th grade student with a high achievement level has made a mathematically valid proof without using any arithmetical variable, in other words without using direct variables, to verify that the sum of B and C angles is 90 degrees through a deductive approach: "Since A is equal to B, and C is equal to D, and A, B, C, D is equal to 180, let's consider these two as a group (A and B), (C and D). We have two groups and if we divide 180 by two and we take one element from each group, they

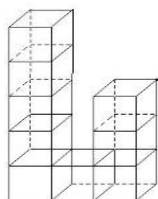
are 90. For example, let's say A is 50, B is also 50, their sum is 100, the others are 40, 40 from 80. The sum of 50 and 40 is 90. I mean, whatever we assign to A, it will be 90. Whatever."

On the other hand, six of the 7th and 8th grade students with medium and high achievement have made algebraic demonstration through a deductive approach by using variables, whereas five students have made geometrical and visual demonstration by using geometric shapes or visual representations and in this process they have made abstraction using mathematic language. An 8th grade student with a high achievement level has algebraically shown why three consecutive numbers are divisible by three, as displayed in Figure 5.

$$\frac{x+x+1+x+2}{3} = \frac{3x+3}{3} = \frac{\cancel{3}x}{\cancel{3}} + \frac{3}{3} = \cancel{x} + 1$$

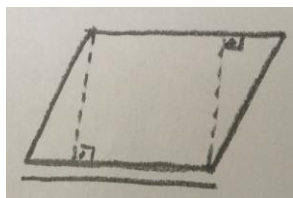
Figure 5. The approach of an 8th grade student with high achievement level

Similarly, for calculating the surface area of the geometric shape given below, an 8th grade student with medium achievement has first counted the unit cubes and overlapping surfaces, then he attempted to algebraically prove the surface area formula given for the shape.



The seventh grade student with medium achievement has demonstrated the formula of the area of parallelogram by using the area of rectangle through geometric proof as below:

M₇: ...This parallelogram (he sketched), I've got a right triangle when I drew the height like this. If I move this part there, this portion of the base (the base of the triangle) will move here, meaning that the base will not be changed. Then we get a rectangle. For the area, we will multiply the sides, and we will find the area of the rectangle. This is how this happens for the parallelogram.

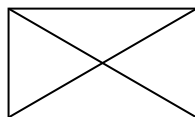


On the other hand, middle school students have had some arguments that could not be considered as proof. As can be seen from Table 2, these arguments were classified as experimental, intuitive and illogical justification. While performing a verification or explanation, students from all grade and achievement levels tended to apply exemplification or trial/error methods first; however, some students with low and medium achievement levels followed the wrong direction.

Table 2.
Middle School Students' Processes of Proving Mathematical Expressions as Justification

				6.-7.-8. Grade Level	
Justification of the Hypothesis	Evidences that Support Mathematical Statement	<i>Proving a Statement</i>	Arithmetic	M(2), H(2)	
		Verification, Explanation and Abstraction (Using Mathematic Language)	Type of Proof	Algebraic	M(3), H(3)
				Geometric Visual	M(3), H(2)
				Non-proof Argument	Experimental
		Trial/Error	L(2),M(2),H(2)		
		Ratio/Proportion	L(3),M(2),H(1)		
		Dynamic Thinking	M(1)		
			Intuitive	L(1), M(1)	
			Presenting Illogical Justification	L(6), M(2)	
		<i>Type of Reasoning</i>			
Deduction *Testing	Induction	Other Reasoning *Referring to an authority *Erroneous reasoning	Abduction		

To answer the question asking to prove that the diagonals of a rectangle are equal, two 8th grade students with low and medium achievement level acted intuitively and expressed it as: "... The length of the diagonals starts here (mutual corners). If we turn it and D replaces C and C replaces D, diagonals would be the same ... I mean D will replace C. I reverse it."



As can be seen from Table 2, in all grade levels, students with low achievement level have presented illogical justifications and they attempted to justify their answers by referring to an authority or in an erroneous manner.

Middle School Teachers' Process of Reasoning and Proving Mathematical Statements

Making generalizations

As shown in Table 3, it has been observed that the thinking structure of middle school mathematic teachers was similar to their students while proving a given mathematical expression. Teachers' acts of this process are pattern recognition, seeking the relationship between two variables and making conjectures. For example, to solve the pattern question, both teachers transformed the shape pattern into a numeric pattern without analyzing the shape and generalized the pattern to the next step through an inductive approach, by focusing on the difference between terms, in other words using the recursive relationship.

When teachers were asked to extend the pattern to the further steps (24th step); the junior teacher declared that he can extend the pattern by using a formula, "... I can find it by using a formula I mean I can find it by writing the formula of the pattern ... I'm trying to memorize the general formula ... we had such a formula ... $an = a_1 + (n-1).r$, a_1 is the first term; I put four as the common difference. If I take eight for a_1 and four for r , we find $8 + (1-1).4 = 8$ at the first step, $8 + (2-1).4 = 12$ at the second step. I can find 24th step using this ... $an = 8 + (24-1).4 = 8 + 23.4 = 8 + 92 = 100$ ", and he algebraically generalized the functional relationship between two variables through a deductive approach, by using arithmetic series rule. When the teacher was asked to analyze the shape, he could only generate the functional relationship visually after analyzing the structure of the shape through an inductive way.

The teacher with more professional experience has generalized the pattern by focusing on a recursive relationship to extend the pattern to further steps, thus he made a conjecture as below by using trial/error with an abductive approach:

Experienced Teacher (ET): ... for the rule of the pattern, we find the difference between them, $4n$ here. Now, at the first step, we have a total of eight squares, we write one for n , we get four, therefore I have to add four to obtain eight. For 24th step, we will write 24 for n . We find $4.24 + 4 = 100$.

Similarly, when this teacher was asked to analyze the structure of the shape, he examined the shape and generalized the functional relationship arithmetically by approaching the shape through an inductive approach: "In each step, here we have five (squares) at the third stage (upper side), then three, three (left and right sides). Let's think in this way. At the 3rd step, there are three squares in each side, whereas at the 4th step the number of squares is four. Four times four is 16, when we add corners it makes 20. At the 6th step there will be six inside. Six times four, 24, plus four from the corners, it makes 28." Both teachers have made mathematical algebraic conjectures with a deductive approach while generalizing the given mathematical explanations as seen in Table 3.

Table 3.
Middle School Mathematic Teachers' Processes of Generalizing Mathematical Expressions

				Professional Experience	
Justification of the Hypothesis	Pattern Recognition	Converting to an arithmetic pattern	Arithmetic	ET (Experienced Teacher)	
				LET (Less Experienced Teacher)	
	Seeking the Relationship Between Two Variables	Recursive Relationship	Arithmetic	ET, LET	
		Functional Relationship		Algebraic/ Visual/ Arithmetic	
		Mathematical Conjectures		Algebraic	
	Making Conjectures	Mathematical Conjectures	Algebraic	ET, LET	
		Random Example	Arithmetic	ET	
		Trial/Error	Arithmetic/ Algebraic	ET	
	<i>Type of Reasoning</i>				
	Deduction	Induction	Abduction	Other Reasoning	
	*From specific to general		*Erroneous reasoning		

However, less-experienced teachers made an erroneous reasoning while making conjectures about "The sum of three consecutive numbers is divisible by three" and he stated that the sum of all consecutive numbers, except -1, 0, +1, can be divided by three. On the other hand, the experienced teacher has tried to show his statements with inductive

and abductive approaches, such as giving examples, testing, and trial/error, and with various arithmetical and algebraic actions while making conjectures about some hypotheses.

Evidences supporting mathematical statements

In the process of proving a mathematical expression, middle school mathematic teachers have performed three types of actions, namely verification, explanation and abstraction; moreover, they have formed some arguments which were not accepted as proof (see Table 4). While proving, they have explained why the statement is true, and they have made abstraction by selecting algebraic, geometric and visual evidences and by using a deductive approach. Both teachers gave similar answers to the questions in the areas of numbers and operations, geometry and learning to measure and they have proven their statements by using mathematic language.

Table 4.
Middle School Mathematic Teachers' Processes of Proving Mathematical Expressions

Evidences that Support Mathematical	<i>Proving a Statement</i>			Professional Experience
	Verification, Explanation and Abstraction (Using Mathematic Language)	<i>Type of Proof</i>	Algebraic/ Geometric/ Visual	ET (Experienced Teacher) LET (Less Experienced Teacher)
Evidences that Support Mathematical	<i>Non-proof Argument</i>	Experimental	Trial/Error Dynamic Thinking	ET ET, LET
			Verification by Example	LET
<i>Type of Reasoning</i>				
	Deduction	Abduction	Other Reasoning	
	*Testing		* Erroneous reasoning	

On the other hand, the less experienced teacher showed and explained the hypothesis, "If the sides of a rectangle are doubled, its area increases by four times" algebraically, with a deductive approach as follows: "The easiest way of proving it is drawing a rectangle (he drew one). Now, I do it or show it to my pupils with multiple variables. I'll call long side as a and short side as b . Thus, the area of the rectangle is $A=a \cdot b$. If I double both sides (he drew another rectangle) this side becomes $2a$, and this one becomes $2b$ and ... $A=2a \cdot 2b$... when I multiply it makes $4ab$. We have calculated the area of the first rectangle as ab , since the second one was found to be $4ab$, I did prove that its area was increased by four times. Whatever number we use for a and b , it will always be four times bigger. On the

other hand, the more experienced teacher explained the same hypothesis using “*the ratio of the areas of similar shapes is equal to the square of their similarity ratio;*” however, he showed its verification by assigning numbers. The verification and explanation of this teacher can be considered as an argument that is non-proof because the teacher did not completely use mathematic language while verifying the hypothesis. For instance; “... (he drew two rectangles with sides three, four and six, eight) *the ratio of the areas is equal to the square of their similarity ratio. Their similarity ratio is two; the square of two is four. Let’s call similar rectangles as A_1 and A_2 , $A_1/A_2=k^2$. We calculated A_1 as 48, and A_2 as 12, the ratio of these is four ... let’s find the similarity ratio, $8/4=2$, the square of two is equal to four.*”

Regarding the pattern question, the less experienced teacher has generalized the rule of the pattern by using the arithmetic series formula and then he has proven the validity of the rule visually; however, he tested both rules by assigning numbers to the variables. On the other hand, as explained in the generalization part, the experienced teacher has found the rule as $4n+4$ with an abductive approach by using the common difference between terms through trial/error, and he attempted to test the validity of the rule by assigning numbers and also by visually examining the shape and using the inference that he has revealed.

Finally, while verifying the hypothesis where the area of a parallelogram was questioned, both teachers attempted to show the area of the parallelogram experimentally, using the area of a rectangle (similar to some students).

Discussion and Conclusion

It has been observed that most of the students (regardless of the grade) had difficulties in determining the functional relationship between two variables (Zazkis & Liljedahl, 2002; Becker & Rivera, 2006). The few students who have identified a functional relationship were those of medium or high achievement levels. Even though teachers did not encounter similar problems, it has been noticed that their approaches were also similar to the ones of their students and seeking the functional relationship was not among their first choices within the process of generalization. Therefore, it can be said that the students’ tendency towards arithmetical generalization rather than algebraic and visual generalization may be a result of this fact.

At the same time, it has been observed that nearly all students have made illogical conjectures such as giving examples of trial/error, and these students are generally with low or medium achievement levels (Aylar, 2014). On the other hand, the presence of the students, who made mathematically meaningful conjectures and algebraic generalization, is also important. These students are generally from 7th and 8th grades, with medium and high achievement levels, which can be interpreted as reaching a generalized conclusion is apprehended with the increase of grade and achievement level (Knuth & Sutherland, 2004). Regarding the teachers, it has been observed that

while making conjectures, the first priority of the teacher with more professional experience was giving examples; thus the same tendency was observed in his students as well. Considering that proving is the next step in making conjecture, it can be said that this teacher believes that showing with an example is a valid proof and reflects this idea to his students as well.

It has been observed that in the process of generalization, teachers and students predominantly preferred inductive reasoning (Harel, 2001); however deductive, analogical and abductive types of reasoning were also chosen and used. There are, though, students making erroneous reasoning. It should be noted that students' ability to use inductive and deductive reasoning from an early age is especially important for the development of proving skills (NCTM, 2000).

Regarding proving related to supporting a mathematical statement, it has been observed that most of the students were not at the desired level in terms of verifying, explaining and abstracting the hypothesis (regardless of the grade); they were generally making verification based on experimental arguments, especially with the help of the examples; in this process, they have mostly used inductive or erroneous reasoning and sometimes they have referred to an authority for justification. There are many studies supporting this fact (Reid & Knipping, 2010; Stylianides & Stylianides, 2009; Knuth & Sutherland, 2004; Knuth, Slaughter, Chooppin, & Sutherland, 2002). Knuth et al. (2002) stated that students might have used experimental arguments as proofs because their teachers have directed them as they could use well-chosen examples for this purpose. Hence, the teacher with more professional experience has preferred to give examples while proving, which seems to have triggered this fact. On the other hand, it has been observed that students' achievement levels and their proving and reasoning skills are correlated (regardless of the grade). Students with high achievement level can make arithmetic, algebraic, geometric/visual proofs and they can think deductively. This result is similar to some research findings (Arslan, 2007).

Students have encountered difficulties in some areas, especially in algebra and geometry, even though their tendency to reach a generalization depends on their grade level, and they cannot carry out algebraic proofs. This fact can be one of the factors that affect their proving performance negatively. These outcomes are in line with the results of some studies (Aylar, 2014). In addition, students are unfamiliar with the terminology of proving, in other words, the use of mathematical language. Some of the reasons for this might be as follows: students don't know what it means to convince someone or how to do it; class discussion might be ignored or students might not be allowed to talk during the lessons. Therefore, it is evident that the approaches that teachers apply in the classroom influence the reasoning and proving skills of the students. Hence, the verification, explanation and abstractions of the students and teachers were similar and correlated, which is an indicator of this fact.

It has been observed that teachers' tendencies to make proofs was mostly at the level of verification and explanation. Thereby, it can be said that teachers are not at the

desired level in terms of verifying, explaining and abstracting the hypothesis (regardless of the experience) (Jones, 2000; Knuth, 2002; Iskenderoglu & Baki, 2011). It is known that teachers' views, beliefs and knowledge affect students' proving abilities (Knuth, 2002), which makes this result challenging.

As a result, it can be said that students encounter difficulties in proving mathematical statements. Since showing the verification of a mathematical proof using examples seems to be a valid proof for them, they prefer to use experimental evidences in this process. The reason leading to this situation is that teachers don't know what a proof means and what is needed to make a proof. Thereby, teachers tend to teach existing proofs instead of making them.

We presented a number of future research directions based on the results obtained from this research. Firstly, proof should be included within the natural flow of the mathematic teaching process and be placed at the center of the mathematical content without being considered a separate field. The proof activities can be used as a tool in all content domains; the purpose of proving and its significance for mathematics should be underlined. The importance of proof should be highlighted starting from the early years and experimental arguments should not be accepted as a proof at any grade level. In addition, we can explore how mathematics textbooks and education programs support the standards of reasoning and proving for each grade level. Moreover, considering that students predominantly tend to make inductive reasoning, they should be engaged in the activities requiring deductive reasoning. On the other hand, teachers should be involved in discussions where students' proofing skills are deeply discussed. In teacher education, the purpose of the proof and its mathematical significance should be explicitly emphasized; more importance should be assigned to the instruction of proof. A similar study examining teachers' and students' reasoning and proving tendencies in secondary education should be conducted.

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Öğrenciler Öğrendiklerini Öğretmenler Öğrettiklerini Nasıl Kanıtlar? : Öğretmen Bir Fark Yaratır mı?

Atıf:

- Tanisli, D. (2016). How do students prove their learning and teachers their teaching? Do teachers make a difference? *Eurasian Journal of Educational Research*, 66, 47-70, <http://dx.doi.org/10.14689/ejer.2016.66.3>

Özet

Problem Durumu: Erken yaşlardan itibaren muhakeme becerisinin kazanımı daha sonraki yıllarda formel anlamda kanıt yapma becerisini etkileyeceğinden oldukça önemlidir. Bu becerinin kazanımı süreçte ancak öğretmenlerin kullandıkları yaklaşımlar ile mümkündür. Öğretmenlerin kanıt yapmak için gerekli olan matematiksel bir iddiayı doğrulama ya da çürütme sürecinde yapılması gerekenleri hazır olarak sunmak ve bir başka durumda öğrencilerden de benzer mantığı uygulamalarını beklemek yerine öğrencilerin düşünme becerilerini geliştirecek, nasıl ve nedenin sorgulandığı, tartışıldığı zengin ortamlar hazırlamaları gereklidir. Bu noktada Türkiye’de öğretim programlarının yeniden yapılanması ile birlikte, ortaöğretim öncesi öğrencilerinin kanıt yapma bağlamında, matematiksel bir ifadeyi nasıl kanıtladıkları, bu süreçte hangi muhakeme ve kanıt türlerini kullandıkları, bu öğrencilerin öğretmenlerinin de aynı ifadeyi nasıl kanıtladıkları ve öğretimlerine nasıl yansıttıkları araştırılması gereken bir problem olarak görülmektedir.

Araştırmanın Amacı: Bu araştırmanın amacı, ortaokul öğrencilerinin ve öğretmenlerinin verilen matematiksel ifadelere ilişkin muhakeme etme ve kanıtlama süreçlerini belirlemektir. Araştırmanın, ortaokul düzeyinde öğrencilerin ve öğretmenlerinin kanıt yapma bağlamında matematiksel bir ifadeyi nasıl kanıtladıklarına, bu süreçte öğrencilerin yaşadıkları zorluklara aynı zamanda öğretmenlerin ve öğrencilerin muhakeme etme ve kanıtlama süreçleri aralarındaki

ilişkiyi belirleyerek öğretmenlerin de bu süreçteki rollerine dikkat çekme açısından önemli olduğu söylenebilir.

Araştırmanın Yöntemi: Bu çalışmada temel nitel araştırma yaklaşımı benimsenmiştir. Çalışmanın katılımcılarını farklı mesleki deneyimlere sahip 2 ortaokul matematik öğretmeni ile bu öğretmenlerin 6., 7., 8. sınıfına devam eden ve her sınıftan üç öğrenci olmak üzere toplam 18 öğrenciden oluşturmaktadır. Zengin bilgiye sahip olduğu düşünülen durumlar üzerinde çalışma olanağı verdiğinden, bu çalışmada amaçlı örnekleme yöntemi çeşitlerinden 'ölçüt örnekleme' kullanılmıştır. Öğretmenlerin çalışma süreleri (5 yıl ile 30 yıl), öğrencilerin başarı düzeyleri (yüksek, orta, düşük) örnekleme ölçütü olarak belirlenmiş, gönüllülük esas alınmıştır.

Araştırma verilerinin toplanmasında nitel araştırma yöntemlerinden biri olan klinik görüşme tekniği kullanılmış ve görüşmeler video kameraya çekilmiştir. Verilerin analizinde tematik analiz yöntemi kullanılmıştır. Verilerin analizi yapılırken öncelikle başlangıç kodları iki alan uzmanı tarafından bağımsız şekilde belirlenmiş ve araştırmacılar bir araya gelerek belirlenen kodları karşılaştırmıştır. Kodlar konusunda görüş birliğine varıldıktan sonra temaların oluşturulması için araştırmacılar yeniden önce bağımsız sonra birlikte çalışarak temaların da tutarlı olmasını sağlamışlardır. Kodlar ve temaların oluşturulması sürecinde iki araştırmacı arasında görüş birliğine varılarak ana temalar ve alt temalar belirlenmiştir. Daha sonra ayrıntılı bir biçimde tanımlanan ve adlandırılan tema ve alt temalar yorumlanmıştır.

Araştırmanın Bulguları: Araştırmada ortaokul öğrencileri matematiksel bir ifadeyi doğrularken belli sayıdaki adımlardan hareketle iddia hakkında karar vermeye çalışmışlar ve bu bağlamda örüntü tanımlama, iki değişken arasındaki ilişkiyi arama ve varsayımda bulunma şeklinde eylemler gerçekleştirmişlerdir. Verilen matematiksel ifadeleri genelleme sürecinde ise henüz kanıtlanmamış aritmetiksel, sözel, görsel, cebirsel çeşitli varsayımlarda bulunmuşlardır. Varsayımda bulunurken verilen önermelerin doğru olabileceğini tahmin ederek, iddialarını örnek verme ve test etme, özellikle geometride kavramı temsil eden en fazla örnek olma özelliğine sahip prototip şekle dayalı olarak, deneme/yanılma, oran/orantı ve formüle etme gibi çeşitli eylemlerle göstermeye çalışmışlardır. Bu süreçte öğrenciler tümevarım, analogik, geri çıkarım muhakeme türlerini kullanmışlardır. Yanı sıra bazı öğrencilerin de hatalı ya da öğretmen, ders kitabı gibi bir otoriteyi referans göstererek muhakeme yoluna gittikleri gözlenmiştir. Matematiksel bir ifadenin kanıtlanması sürecinde ise öğrenciler doğrulama, açıklama ve soyutlama olmak üzere üç eylem gerçekleştirmişler yanı sıra deneysel, sezgisel ya da mantıklı olmayan gerekçeler sunarak kanıt kapsamına alınmayan argümanlar oluşturmuşlardır. Kanıtlama sırasında genel olarak da orta ve yüksek başarı düzeyine sahip öğrenciler öncelikle bir önermenin doğruluğunu aritmetik, cebirsel ve geometrik/görsel olarak araştırmışlar daha sonra neden doğru olduğunu açıklayarak bu süreçte genel olarak tümdengelim ve geri çıkarım muhakeme türlerini seçme ve kullanma eylemlerini gerçekleştirmişlerdir. Diğer taraftan matematiksel bir iddiayı kanıtlarken ortaokul öğrencilerinin kanıt olarak ele alınamayan argümanları da söz konusu olmuştur. Bu argümanlar deneysel, sezgisel

ve mantıklı olmayan gerekçeler şeklinde ele alınmıştır. Tüm sınıf ve başarı düzeyinden öğrencilerin doğrulama ve açıklama yaparken öncelikle ağırlıklı olarak örnek verme ya da deneme/yanılma yoluna gittikleri, yanı sıra genel olarak düşük ve orta başarı düzeyinden bazı öğrencilerin de doğrulama yaparken hatalı yol izledikleri görülmüştür. Özellikle tüm sınıf düzeylerinde düşük başarı düzeyine sahip öğrenciler kanıtlama yaparken mantıklı olmayan gerekçeler sunmuşlar ve bu süreçte hatalı ya da bir otoriteyi referans göstererek gerekçelerini savunmaya çalışmışlardır. Diğer taraftan ortaokul matematik öğretmenlerinin verilen matematiksel bir ifadeyi doğrularken öğrencileri ile benzer düşünme yapılarına sahip oldukları gözlenmiştir. Öğretmenler bu süreçte örüntü tanımlama, iki değişken arasındaki ilişkiyi arama ve varsayımda bulunma şeklinde eylemler gerçekleştirmişlerdir. Verilen tüm matematiksel ifadeleri genelleme sürecinde her iki öğretmen tümdengelim bir yaklaşımla cebirsel olarak matematiksel varsayımlarda bulunmuşlardır. Matematiksel bir ifadeyi kanıtlama sürecinde ise doğrulama, açıklama ve soyutlama olmak üzere üç eylem gerçekleştirmişler yanı sıra deneysel gerekçeler sunarak kanıt kapsamına alınmayan argümanlar da oluşturmuşlardır. Kanıtlama sırasında iddiaların neden doğru olduğunu açıklayarak cebirsel, geometrik ve görsel kanıt türlerini seçerek ve tümdengelim bir yaklaşım kullanarak soyutlama yapmışlardır. Ancak öğretmenlerin de deneyimleri fark etmeksizin matematiksel ifadeleri doğrulama, açıklama ve soyutlama boyutunda istenilen düzeyde olmadıkları söylenebilir.

Araştırmanın sonuçları ve öneriler: Araştırma sonucunda, öğrencilerin matematiksel bir iddiayı kanıtlarken zorlandıkları, süreçte deneysel kanıtları kullanmayı tercih ettikleri ve daha çok tümevarım yaklaşımını benimsedikleri görülmüştür. Diğer taraftan öğretmenlerin ise genel olarak kanıt yapma eğilimlerinin daha çok doğrulama ve açıklama düzeyinde yer aldığı ve matematiksel ifadeleri kanıtlama sürecinde öğrencileri ile benzer düşünme yapılarına sahip oldukları belirlenmiştir. Sonuç olarak, öğrenciler matematiksel bir iddiayı kanıtlarken zorlanmakta, süreçte deneysel delilleri ve deneysel kanıtları kullanmayı tercih etmektedirler. Çünkü matematiksel bir ifadenin doğruluğunu örnek kullanarak göstermek onlar için geçerli bir kanıt anlamına gelmektedir. Bu durum öğretmenlerin kanıtın ne anlama geldiğini, kanıt yapma için neye gereksinim olduğunu bilmemelerinin bir sonucudur. Dolayısıyla öğretmenler kanıt yapabilmeye değil, var olan kanıtları öğretmeye eğilimlidir.

Bu bağlamda araştırma sonuçlarına dayalı olarak şu öneriler getirilebilir. Öncelikle muhakeme ve kanıt matematik öğretiminin doğal akışı içine dâhil edilmelidir. Aynı bir konu alanı olarak ele alınmadan matematiksel içeriğin merkezine konulmalıdır. Aynı zamanda öğrencilere kanıt yapma etkinliklerinin her öğrenme alanında araç olarak kullanılabilmesi vurgulanmalı, kanıtın amacının ve matematik için önemini altı çizilmelidir. Öğrencilerin çoğunlukla tümevarım muhakemeyi kullanmaya eğilimli oldukları göz önüne alındığında ise, tümdengelim muhakemeyi gerektiren etkinliklerle çalışmaları sağlanmalıdır. Öte yandan deneysel argümanlar hiçbir sınıf seviyesinde kanıt olarak kabul edilmemelidir. Öğretmenlerin birincil kaynaklarının ders kitapları ve öğretim programları olduğu dikkate alındığında yapılacak

arařtırmalar baęlamında her sınıf düzeyi için matematik ders kitaplarının ve öğretim programlarının muhakeme ve kanıt standartlarını ne kadar destekledięi incelenebilir.

Anahtar Sözcükler: Matematik eğitimi, genelleme, varsayımda bulunma, muhakeme ve kanıt.

A Multivariate Examination of the Child-Abuse Potential of Parents with Children Aged 0-6

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Abstract

Problem Statement: Child abuse, defined by the World Health Organization as "intentional or unintentional behavior by adults, society, or a country with negative consequences for the health and physical development of the child," is a social problem frequently encountered in all cultures and societies. It is need to this study because of parents in an important role about child abuse.

Purpose of the Study: There are many studies on child abuse, and this article aims to contribute to the efforts of preventing such abuse by focusing on parents' abusive tendencies and examining the child abuse potential of parents using a number of variables.

Method: Parents with children ages birth to six who reside in the province of Duzce constitute the population of this study. The sample group of the study consists of a total of 158 parents with children ages 0 to 6 and residing in the city center of Duzce, 96 of them mothers and 62 fathers. The child-abuse potential of the parents is the dependent variable of the study, while socio-demographic characteristics of the families and the children are the independent variables. Data collection instruments of the study are the Parents and Children Demographic Characteristics Form developed by the researchers, and the Child Abuse Potential Inventory (CAPI) developed by Milner (1976) and adapted to Turkish by Omer & Sucuoglu (1994) with sufficient levels of reliability and validity.

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Findings and Results: It was found that child abuse potentials of the parents varied significantly by the number of residents in the house, by the place of residence, and by the income of the parents. Another finding was that the child-abuse potential of parents did not vary by gender and age.

Conclusion and Recommendations: This study found that as the number of children increases, so does the child-abuse potential of parents. Therefore, in training and consultation sessions on family planning, the issue should also be discussed from the perspective of child abuse.

Keywords: Children, child abuse, mother, father.

Introduction

Child abuse is a social problem frequently encountered in all cultures and societies. There are many studies on child abuse, and this article aims to contribute to the efforts of preventing such abuse by focusing on their mother and fathers' abusive tendencies and examining the child abuse potential of parents using a number of variables.

Child abuse is a serious problem with complex causes and tragic consequences, and with medical, legal, developmental, and psycho-social aspects (Powers, Fani, Cross, Ressler, Bradley, 2016; Kairys et al., 2002; Polar, 2002; Ziyalar, 1999). Understanding the factors leading to abuse and its consequences on child development is crucial for scholarship on human development (Yilmaz & Irmak, 2008). Parents, in particular, sometimes intentionally and sometimes without realizing, may engage in behavior such as violence or neglect that would have negative consequences for the development of their children. As a result, efforts to recognize, prevent, and respond to abuse and neglect are needed (Bahar, Savas, Bahar, 2009). According to this, it is aimed to explicate to children's parents about the dangers of abuse in the first place.

Background

A cursory look at the history of societies shows that maltreatment of children is a phenomenon as old as the history of humanity. It is known that in ancient times, many cultures treated children as property and subjected them to various forms of maltreatment. Examples included infanticide, the killing of children soon after they were born usually by their fathers, enslavement of children, sacrificial killing of children, and forced child slavery (Kozcu, 1991). In ancient Athens, the practice of infanticide persisted even in Aristotle's lifetime. In Rome, the power of the patriarch of the family to leave, desert, sell, punish, whip, and even kill his children was recognized by law (Akyuz, 2013). No other authority could interfere with the practice of this power (Karadeniz, 1974). In countries such as China, India, Mexico, and Peru,

throwing newborns into rivers was a common ritual of sacrifice. A doctor who lived in Ephesus in 2nd century A.D. recommended in his manuscript *Gynecology* that premature babies or babies born with deformities be killed (Kozcu, 1991).

Child abuse is defined in the literature as non-accidental behaviors that result in harm to the physical or mental health of children or prevent their cognitive, affective, social, or moral development (Gurkaynak & Gozutok, 1998; Kozcu, 1991; Lynch, 1991; Oral et al., 2001). Abuse may have religious, moral, technological, social, or cultural aspects, and factors related to the children themselves, their parents, or the socio-economic status of the family may, in isolation or in interaction with one another, facilitate abuse. Because child abuse usually remains hidden, but creates long-term, permanent, and multi-faceted problems for the victim and society, and because it is an insult to human dignity, a multi-disciplinary approach is required for the study of child abuse (Klassen, Chirico, Deborah, O'Leary, Cairney, Wade, 2016; Yalcin, 2011). Thus, over the past 30 years, researchers and practitioners have developed a better understanding of the effects of trauma (Hendricks, Conradi, & Wilson, 2011; Benedini, Fagan, Gibson, 2016). Owing to these complex and difficult to comprehend dimensions, child abuse examinations should proceed with usual methods.

Types of Child Abuse and Neglect

Abuse, which is a form of brazen and stark exploitation, has four dimensions: physical abuse, emotional abuse, sexual abuse, and abuse by neglect. These dimensions are presented below:

1. Physical abuse is the most common type of abuse and the easiest to detect. In a general sense, physical abuse can be defined as "non-accidental injury" in children, or "abuse that results in physical bodily harm such as fractures, burns, or cuts." The most common form of this abuse is the beating of children, and it also includes forms of punishment ranging from slapping a child in the face to the use of various objects to strike a child. Physical abuse is characterized by non-accidental injuries or bruises on children.

2. Emotional abuse does not involve concrete physical symptoms, as is usually the case in physical and sexual abuse, and may be perpetrated in isolation as well as accompanying other forms of abuse (Polat, 2007; Polat, 2002).

3. Sexual abuse is a complex phenomenon, and different considerations come into play from legal, social, or psychological perspectives. In addition, collecting information on sexual abuse is difficult because sexual advances to children are universally condemned as disgusting, filthy, evil, and forbidden (Gunce, 1991).

4. Child neglect is defined as “the failure of caregivers to carry out their responsibilities toward the child, and neglecting the physical or emotional needs of the child” (cited by Turk, 2010).

In contemporary society, children still lose their lives and are left disabled or malnourished due to lack of nutrition, care, or supervision. Some of them never receive a proper education. Some children are physically and emotionally bruised due to maltreatment by their parents or by the social institutions that are responsible for caring for them. Some children are subjected to sexual attacks by adults; others are forced to work in difficult conditions at a very early age; and some are even bought and sold as property (Gokler, 2006; Hillis, Mercy, Amobi, Kres, 2016). But in general, it is known that child abuse is mostly seen in children’s families.

Weltz, Armelia, Ford and Tennen (2016) stated in a study that 42.3% of the participants reported some level of physical abuse/family violence, 70.7% reported some level of physical and/or emotional neglect, 94% reported some level of emotional abuse, and 7.3% reported sexual abuse in their family. Similarly, many relationships remained significant, independent of the experience of other forms of child maltreatment and a family history of dysfunction (Taillieua, Brownridge, Sareen, Afifi, 2016).

Because child abuse can also take place within the family, this study aims to focus on abuse by parents and to raise societal awareness by shedding light on the issue. The research problem of this study allows the identification of the demographic variables that are associated with higher and lower levels of child-abuse potential among parents. The study, then, provides an assessment of the findings. The study’s sub-problems are determining this identification in terms of socio-demographic qualities.

Method

Research Design

The research design of this study is based on the use of a survey (Karasar, 2005). According to Karasar (2009), surveys are a research method that provides a description of a past or present phenomenon. In surveys, a description of the phenomena under study is provided. This study, which employs different variables, aims to describe the current child-abuse potential of parents.

Research Sample

For the purpose of representing the universe, the population of this study was parents with children ages 0-6 who resided in the city center of the province of Duzce during the spring semester of the 2014-2015 academic year. The sample group consisted of a total of 158 parents, 92 of them mothers and 66 of them fathers.

Research Instrument and Procedure

This study used the Parents and Children Demographic Characteristics Form developed by the researcher, and the Child Abuse Potential Inventory (CAPI). Detailed information about the data collection instruments used in the study is provided below.

Parents and Children Demographic Characteristics Form. The researcher created the Parents and Children Demographic Characteristics Form in order to collect data on the variables used in the study; it contained items on both parents and children. It asked questions on the age, gender, number of siblings, and place of residence of the children, and the age, gender, level of education, and socioeconomic status of the parents.

Child Abuse Potential Inventory (CAPI). The Child Abuse Potential Inventory (CAPI) was developed by Joel S. Milner (1976), who described it in "An Inventory for the Identification of Child Abusers," an article co-authored by Milner and Wimberley (1979). They developed CAPI as an assessment tool to be used by children's legal protection centers in their investigations and decisions. CAPI was first adapted for use in Turkey by Oner and Sucuoglu (1994). More than 700 articles and books were consulted in the development of CAPI, and it identified common traits shared by child abusers. Because child abuse is such a comprehensive concept and includes such a wide range of behavioral disorders, the inventory was narrowed down to be used only in physical abuse cases (Kutsal, 2004). CAPI consists of 160 questions designed to estimate family risk when there is a suspicion of physical child abuse. Countless validity and reliability studies were conducted on the psychometric qualities of CAPI (Kutsal, 2004; Milner, 1994; Oner & Sucuoglu, 1994; Pruit & Erickson, 1985; Robertson & Milner, 1985). CAPI was also administered to groups of teachers by Piskin (2003).

Data Analysis

Researchers informed participants of the purposes and significance of the study prior to collecting data. The results came from parents who volunteered to fill out the CAPI forms and resided in the province of Duzce. Researchers eliminated those forms that they observed were completed by parents without reading them, forms containing contradictory answers to similar questions, and forms that gave rise to suspicions about the responders' honesty (by providing nice and proper answers only) The Mann-Whitney U test and the Kruskal-Wallis H test were used for statistical analysis of the data.

Results

The average scores reported in Table 1 show that the differences between the abuse-potential scores of parents from different age groups are not statistically significant ($\chi^2 = .492$, $p > 0.05$). When the mean ranks of the abuse-potential scores of the parents from different age groups are examined, it can be seen that parents in the 36–45 age group have the highest scores ($X = 100.09$), followed by parents in the group age 45 and older ($X = 97.35$) and parents in the 26–35 group ($X = 96.62$). The lowest score intervals for abuse potential were recorded for parents in the 18–25 age group, which may be related to their status as new parents who are still in the process of adapting to their roles. The observation that the highest abuse-potential scores were received by parents in the 36–45 age group may be associated with the burdens of life and concerns about livelihood that are felt more intensely at this age.

Table 1.

Findings on the Abuse-Potential Scores of Parents by Age

Age	N	Mean Rank	sd	χ^2	p
18–25	58	97.35			
26–35	10	96.62			
36–45	11	100.09	3	.492	.596
Over 45	4	95.78			
Total	83				

$p > 0.05$

Table 2 shows that parents aged 45 or older received the lowest abuse-potential scores, which can be indicative of the older parents developing a mellower and more tolerant attitude based on their increasing age.

Data reported in Table 2 show that parents' abuse-potential scores do not vary significantly by gender ($U = 5081.00$; $p > 0.05$). Although the difference between fathers' and mothers' abuse-potential scores is not significant, fathers received slightly higher scores ($X = 98.05$) compared to mothers ($X = 96.87$).

Table 2.

Results of the Mann-Whitney U test Concerning the Differences in Abuse-Potential Scores of Parents by Gender

Gender	n	Mean Rank	Sum of Ranks	U	p
Female	53	96.59	9957.50		
Male	31	98.89	10587.40	5081.00	.485
Total	83				

$p > 0.05$

Results of the Kruskal-Wallis H test reported in Table 3 show that parents' abuse-potential scores vary significantly by the number of residents in the home ($\chi^2=7.112$, $p < 0.05$). The multiple comparison test conducted to identify which of the groups differ significantly from one another showed that parents with six or more residents in their houses had significantly higher abuse-potential scores ($X=125.61$) compared to parents with two to three residents in their home ($X=58.94$).

Parents living in houses with six or more residents received the highest scores for abuse potential ($X = 125.61$), followed by parents living in houses with four or five residents ($X = 97.85$), followed by parents living in houses with two to three residents ($X = 58.94$), who received the lowest abuse-potential scores.

Table 3.

Results of the Kruskal-Wallis H Test Concerning the Differences in Abuse-Potential Scores of Parents by the Number of Residents in the House

Number of Residents	n	Mean Ranks	sd	χ^2	p	Significant F
2-3	27	58.94				3
4-5	42	97.85				
6 and more	14	125.61	2	7.112	.028*	1
Total	83					(1-3)

* $p < 0.05$

Data reported in Table 4 show that the differences between the abuse-potential scores of parents with different places of residence are statistically significant ($\chi^2=11.026$, $p < 0.05$). Multiple comparison tests conducted to identify which of the groups differ significantly from one another showed that parents who spent most of their lives in small towns and villages had abuse-potential scores ($X = 114.03$) that were significantly higher than the abuse-potential scores of parents who spent most of their lives in metropolises ($X = 73.32$), in provinces ($X = 74.56$), and in districts ($X = 77.67$). This difference can be explained by the fact that parents living in small towns and villages adopt a more traditional approach to their childrearing.

Table 4.

Results of the Kruskal-Wallis H Test Concerning the Differences in Abuse-Potential Scores of Parents by Place of Residence

Place of Residence	N	Mean Ranks	sd	χ^2	p	Significant F.
Metropolis	5	73.32				
Province	13	74.56				
District	57	77.67	4	11.026	.003*	4
Town/Village	8	114.03				4
Total	83					(1-4)

* $p < 0.05$

Table 5 reports the abuse-potential scores of parents by socio-economic status. The data show that the differences between the abuse-potential scores of parents from different income groups are statistically significant ($p < 0.05$). The multiple comparison test showed that the abuse-potential scores of parents from low-income families ($X = 156.51$) are significantly higher compared to the abuse-potential scores of parents from lower-middle income families ($X = 98.46$), parents from upper-middle income families ($X = 94.67$), and parents from high-income families ($X = 88.34$).

Table 5.

Results of the Kruskal-Wallis H Test Concerning the Differences in Abuse-Potential Scores of Parents by Income

Monthly Income	n	Mean Ranks	d	χ^2	p	Significant F.
Minimum Wage or less (Low)	58	156.51				
1000-2500 TL (Lower-Middle)	17	98.46				1
2500-4000 TL (Upper-Middle)	4	94.67	3	9.817	.042*	1
4000 TL or more (High)	4	88.34				1
Total	83					(1 - 2,3,4)

* $p < 0.05$

Discussion and Conclusion

Although there are studies in the literature examining the child-abuse potential of parents, this study differs from them by focusing on the question of which demographic variables are associated with higher levels of abuse potential, which is an important factor to consider in preventing abuse.

Corby (2006) indicates that if it is determined which people are under risk, measures can be taken. While the priority is to prevent parents' child abuse and neglect tendency from occurring, it is equally significant to respond to those children and parents who have experienced child abuse and neglect when they were children.

The major finding of the study is that the child-abuse potential of parents does not vary significantly by age or gender, but varies significantly by the number of residents in the house, income, and place of residence.

Although the difference between the two scores is not statistically significant, it could be argued that the higher scores received by fathers compared to those received by mothers are indicative of the firm, authoritarian, and heavy-handed image associated with the role of father in the patriarchal structure of the Turkish family.

The observation that parents living in homes with six or more residents have higher abuse-potential scores compared to parents living in homes with two to three residents can be explained by the fact that as the number of children and family members increase, the amount of affection, attention, and interest parents can display toward their children decreases. Similarly as the number of family members increase, so do the number of responsibilities at home and burdens of life, which lead to higher levels of stress.

Other studies also find that an increase in the number of children in the family is accompanied by a parallel increase in the frequency of punishment and a decrease in the amount of love displayed, whereas child abuse is seen more frequently in one-child families compared to families with more children (Yalcin, 2011; Bilir et al., 1991; Guneyusu, 1982).

Similar to the findings of this study, Ozdemir (1989), Sozduyar (1989), and Tercan (1995) found that parents of low socio-economic status have higher levels of abuse potential, that the child-abuse potential of the parents declines as their socio-economic status improves, that behaviors of child abuse and neglect are more frequent among parents of low socio-economic status, and that the relationship between stress and tension on the one hand and child abuse on the other is stronger than the relationship between child abuse and socio-economic status.

The multiple comparison test showed that parents with six or more residents in their houses had significantly higher abuse-potential scores compared to parents with two to three residents in their home and that the abuse-potential scores of parents from low-income families are significantly higher compared to the abuse-potential scores of parents from lower-middle income families, parents from upper-middle income families, and parents from high-income families. Additionally, parents who spent most of their lives in small towns and villages had abuse-potential scores that were significantly higher than the abuse-potential scores of parents who

spent most of their lives in metropolises, provinces, and districts. All of these findings were also found in similar studies (Lang, Gartstein, Rodges & Lebeck, 2010; Machado et.al., 2007; Herrenkohl & Herrenkohl, 2007; Gratz & Chapman, 2007; UNICEF, 2006; Sicher, Lewis, Sargent, et al. 2000).

Socialist and Marxist approaches maintain that such social problems are the product of a capitalist economic system (Inci, 2010). Moreover, Icli (1992) indicates in his studies that not only the fact of abuse, but also all crimes increase as socio-economic state worsens and the more rural the area. Studies conducted in the world and in our country, economic conditions and factors are denied that led to criminal acts occurs by a lot of people among the other factors (Inci, 2010).

The following recommendations are made on the basis of all these findings:

It is imperative that a multidisciplinary approach be adopted for the identification and prevention of child abuse. In addition to measures taken and treatment efforts made in the post-abuse stage, attention needs to be paid to the factors leading to child abuse in the first place. These factors include: families with a large number of children, families of low socio-economic status, and families residing in small towns and villages. They should be the focus of educational efforts, and these families should be periodically monitored.

Felitti & Anda (2009) and Messman-Morre, Walsh, & DiLillo (2010) found some remarkable findings showing that victims of child sexual abuse also are at a higher risk for rape in adulthood, and the rate of risk increases according to the severity of the child sexual abuse experiences. It should be noted in this regard that child abuse causes more levels of child abuse to occur again.

The place where children are at most risk is at home with their families. Efforts to prevent child abuse should concentrate on families of low socio-economic status. Laskey & Hatton (2009) reported in their study that hard discipline methods lead to child abuse. Therefore, families should be educated on child psychology and behavior and should be trained in alternative disciplinary methods to avoid physical punishment. Since 61% of all deaths about children due to child abuse are preventable, families should be given legal briefings, and home visits should be expanded.

One study showed that children who experienced neglect were at an increased risk for diabetes and poorer lung functioning, while physical abuse was shown to increase the risk for diabetes and malnutrition (Widom, Czaja, Bentley, & Johnson, 2012). Similarly a longitudinal study found that children who experienced neglect had body mass indices that grew at significantly faster rates compared to children who had not experienced neglect (Shin & Miller, 2012). Thus, the authorities should absolutely follow children such as weakness.

This study found that as the number of children in a family increases, so does the child-abuse potential of the parents. Therefore, in training and consultation sessions on family planning, the issue should also be discussed from the perspective of child abuse. Parents should be taught that every child needs special care and attention, and it is the right of a child that these needs are met.

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0-6 Yaş Çocuklara Sahip Ebeveynlerin Çocuk İstismarı Potansiyellerinin Çeşitli Değişkenler Açısından İncelenmesi

Atıf:

Cetin, Z., & Ozozen-Danaci, M. (2016). A multivariate examination of the child-abuse potential of parents with children aged 0-6. *Eurasian Journal of Educational Research*, 66, 71-86, <http://dx.doi.org/10.14689/ejer.2016.66.4>

Özet

Problem Durumu: Çocuk istismarı karmaşık nedenleri ve trajik sonuçları olan, tıbbi, hukuki, gelişimsel ve psiko-sosyal kapsamlı ciddi bir sorundur (Polat, 2002; Ziyalar, 1999). İstismarın nedenlerinin ve gelişim üzerindeki etkilerinin anlaşılması insan gelişimi konusundaki bilgilerin kapsamı açısından önemlidir (Yılmaz, Irmak, 2008). Bu konuda özellikle aileler çocuk yetiştirme sürecinde bilerek ya da farkında olmadan çocuklarının gelişimini olumsuz yönde etkileyecek davranışlar gösterebilmektedirler. Bu nedenle istismar ve ihmalin tanınması, önlenmesi ve müdahalelerde bulunulması gerekmektedir (Bahar vd, 2009). Buna bağlı olarak da konuya ilişkin ilk etapta ailelerin irdelenmesi amaçlanmıştır. Bazı çocuklar, ana-babaları ya da bazı toplumsal kurumlar tarafından yapılan kötü muameleler sonucu, duygusal ve fiziksel açıdan örselenmektedir. Çocukların bazıları yetişkinlerin cinsel saldırılarına hedef olurken, bazıları da küçük yaşta ağır ve uygunsuz işlerde çalıştırılmakta, hatta bir mal gibi alınıp satılabilmektedir (Gökler, 2006). Ancak genel anlamda çocuk istismarına en çok aile içinde rastlandığı bilinmektedir.

Araştırmanın Amacı: Çocuk istismarı, her kültürde ve toplumda sık karşılaşılan bir sosyal problemdir. Uygulanmış çocuk istismarına yönelik birçok çalışmanın yapılmasından sonra bu araştırma, çocuk istismarının önlenmesine dikkat çekme durumunu ele alarak ebeveynlerin bu yöndeki eğilimlerinin ortaya çıkarılmasını öngören istismar potansiyeli ölçümlerinin çeşitli değişkenler açısından incelenmesi amacıyla yapılmıştır. Çocuk istismarının aile içerisinde de oluşabilmesi sebebiyle çocuğa her açıdan zarar verici ebeveyn tarafından uygulanan istismar olgusunun belirlenmesi konuyla ilgili toplumun aydınlatılması ve bilinçlendirilmesi amacıyla araştırma ebeveynlerin özellikle hangi demografik değişkenlere bağlı olarak istismar uygulama potansiyellerinin arttığı ve ya azaldığının tespit edilmesi ve bu durumların çocuk istismarı açısından değerlendirilmesi amacıyla planlanmıştır.

Araştırmanın Yöntemi: Araştırma tarama modeli ile gerçekleştirilmiştir. Araştırmanın evrenini, 2014-2015 öğretim yılı, bahar döneminde Düzce ili merkezinde ikamet eden ebeveynler ile bu ebeveynlerin 0-6 yaş çocukları oluşturmuştur. Düzce ili merkezinde ikamet eden 92 anne ve 66 baba olmak üzere toplam 158 ebeveyn çalışmanın

örneklemine oluşturmaktadır. Çalışmada, araştırmacı tarafından hazırlanmış olan Ebeveyn ve Çocuk Demografik Özellikler Formu ile Çocuk İstismarı Potansiyeli Envanteri (ÇİPE) kullanılmıştır. Ebeveyn ve Çocuk Demografik Özellikler Formu'nda çocukların yaş, cinsiyet, kardeş sayısı, ikamet yeri ile anne-babaların cinsiyet, yaş, eğitim düzeyi, sosyoekonomik düzeylerine ilişkin sorular yer almaktadır. (ÇİPE) ise Milner (1976), tarafından geliştirilmiş çocuk hukuku ve koruma merkezlerinde çeşitli incelemeler ve olgularla ilgili karar vermek amacıyla değerlendirme aracı olarak geliştirilen ÇİPE'nin Türkçe'ye uyarlaması ilk olarak Öner ve Sucuoğlu (1994) tarafından yapılmıştır. ÇİPE'nin psikometrik özellikleri üzerine sayısız geçerlik ve güvenilirlik çalışmaları yapılmıştır (Kutsal, 2004; Öner & Sucuoğlu, 1994; Milner, 1994; Robertson ve Milner, 1985; Pruit ve Erickson, 1985). Verilerin istatistiksel çözümlenmelerinde Mann Whitney U Testi ve Kruskal Wallis H Testi kullanılmıştır.

Araştırmanın Bulguları: Araştırmadan elde edilen verilere göre cinsiyet değişkenine ilişkin ebeveynlerin istismar ölçümleri arasında ve yaşlarına göre istismar ölçümleri arasında istatistiksel olarak anlamlı bir fark olmadığı görülmektedir. Ebeveynlerin yaşlarına göre istismar ölçümlerine ilişkin sıra ortalamalarına incelendiğinde 36-45 yaş arası ebeveynlerin istismar ölçümlerinin yüksek olduğu, bunu sırasıyla 45 üstü yaş ebeveynlerin ve 26-35 yaş arası ebeveynlerin istismar ölçümlerinin takip ettiği görülmektedir. İstismar potansiyeli ölçümlerinin en düşük puan aralığı 18-25 yaş arası ebeveynlere denk geldiği görülmektedir. Bu durum bu yaş aralığındaki anne babaların yeni birer ebeveyn oldukları için henüz adapte olma sürecinde olmaları ile ilişkili olabilir. İstismar ölümünün en yüksek görüldüğü 36-45 yaş ortalamaları için ise bu yaş grubunun yaşamsal ve geçim ile ilgili sıkıntılarının daha yoğun olması ile ilişkili olduğu düşünülmektedir. Tabloda en düşük İstismar potansiyeli ölçümlerinin 45 üstü ebeveynlerde olduğu görülmektedir. Bu durumun ise ileriki yaşlarda yer alana ebeveynlerin yaşla birlikte hoşgörülü ve ılımlı bir mizaca girmeleri ile ilişkili olduğu düşünülmektedir.

Çalışmada, ebeveynlerin evde yaşayan birey sayısına göre istismar ölçümleri arasında istatistiksel olarak anlamlı bir fark ($\chi^2=7.112$, $p < 0.05$) olduğu görülmektedir. Bu farkın hangi grup ya da gruplar arasında bulunduğunu belirlemek üzere yapılan çoklu karşılaştırma testi sonucuna göre ise evlerinde 6 ve üzeri birey ile yaşayan ebeveynlerin istismar ölçümlerinin ($X=125,61$) 2-3 birey ile yaşayan ($X=58,94$) ebeveynlerin istismar ölçümlerinden istatistiksel olarak anlamlı düzeyde yüksek olduğu görülmektedir. 6 ve üzeri birey ile birlikte yaşayan ebeveynlerin istismar puanlarının 2-3 birey ile yaşayan ebeveynlere oranla yüksek olmasına sebep olarak; çocuk sayısının ve aile üyelerinin arttıkça, anne ve babanın çocuklarına vereceği şevkat, hoşgörü ve ilginin azaldığı ve aile üyelerinin arttıkça evdeki sorumluluklarının ve yaşam görevlerinin artarak daha fazla streste buldukları düşünülmektedir. Veriler incelendiğinde, ebeveynlerin sosyo-ekonomik düzeylerine göre istismar potansiyeli ölçümleri arasında istatistiksel

olarak anlamlı bir fark ve ebeveynlerin ikamet ettikleri yerleşim birimlerine göre istismar potansiyeli ölçümleri arasında istatistiksel olarak anlamlı bir fark olduğu görülmektedir. Bu farkın hangi gruplar arasında olduğunu belirlemek amacıyla yapılan olan çoklu karşılaştırma testi sonucuna göre ise yaşamının çoğunu kasaba/köyde geçirmiş olan ebeveynlerin istismar ölçümlerinin yaşamının çoğunu büyük şehirde, şehirde, ilçede geçirmiş olan ebeveynlerin istismar potansiyeli ölçümlerinden istatistiksel olarak anlamlı düzeyde yüksek olduğu görülmektedir. Bu durumun kasaba/köy yerleşim alanlarında ikamet eden ebeveynlerin daha geleneksel bir yaklaşımla çocuk yetiştirmeleriyle alakalı olduğu söylenebilir.

Araştırmanın Sonuç ve Önerileri: Çalışma sonucunda ebeveynlerin yaş ve cinsiyet değişkenlerine ilişkin çocuk istismarı potansiyellerine yönelik anlamlı bir fark bulunmazken evde yaşayan birey sayısı, gelir durumu ve ikamet ettikleri yerleşim birimlerine göre çocuk istismarı potansiyelleri arasında anlamlı fark bulunduğu tespit edilmiştir. Evlerinde 6 ve üzeri birey ile yaşayan ebeveynlerin istismar ölçümlerinin 2-3 birey ile yaşayan ebeveynlerin istismar ölçümlerinden istatistiksel olarak anlamlı düzeyde yüksek olduğu ve ailesi alt sosyo-ekonomik düzeye sahip olan ebeveynlerin istismar ölçümlerinin ailesi orta sosyo-ekonomik düzeye sahip olan ebeveynlerin istismar potansiyeli ölçümlerinden istatistiksel olarak anlamlı düzeyde yüksek olduğu görülmektedir. Ayrıca yaşamının çoğunu kasaba/köyde geçirmiş olan ebeveynlerin istismar ölçümlerinin yaşamının çoğunu büyük şehirde, şehirde, ilçede geçirmiş olan ebeveynlerin istismar potansiyeli ölçümlerinden istatistiksel olarak anlamlı düzeyde yüksek olduğu görülmektedir. Elde edilen bu sonuçlara göre; çocuk istismarının tespit, tedavisinde multidisipliner yaklaşım esastır. Bu sebeple çocuk istismarı yaşandıktan sonra önlemler ve sağaltım yapılmasından ziyade öncelikle istismarın engellenmesi amacıyla bu ihtimali güçlendiren nedenler üzerinde durulmalı, çocuk veya üye sayısı fazla olan aileler, sosyo-ekonomik düzeyi düşük olan aileler, köy/kasaba gibi yerleşim yerlerinde ikamet eden aileler üzerinde bilgilendirmeler ve eğitimler yoğunlaştırılmalı, bu aileler belli periyotlarla izlemeye alınmalıdır.

Anahtar Kelimeler: Çocuk, kötüye kullanma, anne, baba.

Evaluation of Pre-Service Teachers' Opinions about Teaching Methods and Techniques Applied by Instructors

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Abstract

Problem Statement: Training qualified teachers depends on the quality of the trainers. From this point of view, the quality of teacher educators and their instruction in the classroom are important to train qualified teachers. This is because teachers tend to see teacher educators who have trained them as role models, and during their school years, they tend to reflect the applications of teacher educators on their educational practices. Studies have reported that there are similarities between the teaching techniques teachers use in their practices and those their instructors used during teacher training. Therefore, it is important to explore what teaching methods and techniques teacher educators use in their practices. The purpose of this study is to examine what kind of teaching methods and techniques teacher educators use in the course, Introduction to Educational Science, and to explore the reasons why they use those methods and techniques as well as their ways of creating an active learning process.

Purpose of the Study: The purpose of this study is to examine what kind of teaching methods and techniques teacher educators use in their course, Introduction to Educational Science, and to explore the reasons why they use those methods and techniques as well as their ways of creating an active learning process.

Method: One of the mixed model designs, consecutive sequence design, was applied. The data was collected by a questionnaire and semi-structured interview developed by the researcher. The data obtained from the questionnaire were analyzed by calculating arithmetic means and standard deviation; they were demonstrated in tables and interpreted. In order to better clarify the reasons behind the qualitative

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findings, quantitative data were collected and analyzed with content analysis.

Findings: Findings show that student teachers reported that their instructors mostly employ question-answer, discussion, lecturing, brainstorming, group work, and individual or group presentations in their practices. Student teachers also reported that their instructors rarely use student-centered teaching methods including dram, educational games, concept checking, dramatization, aquarium, speaking ring, storytelling, station, conceptual, caricature, and tour. Findings from interviews with instructors show that class size and the physical structure of the classroom force them to use more traditional teaching methods in their practice. Other reasons they used more traditional methods were: a) lack of pedagogical content knowledge, b) the ignorance of the lesson, and c) the perception that university level course are taught in traditional ways.

Conclusion and Recommendations: The research results showed that while teacher educators frequently use questioning and lecture techniques in their classrooms and they assign the students into groups or pairs and ask them to present what they learn from the groups, they rarely use other effective techniques such as concept controlling, educational games, drama, oral history, speech circle, writing story, or conceptual comics. Additionally, teacher educators contended that crowded classrooms, physical environments of classrooms, using traditional teaching methods, and not spending more time using active teaching methods negatively affect learning processes in classrooms. Considering the results of the research, it can be recommended that teacher educators attend courses related to effective use of active learning strategies in classrooms and get involved in professional development seminars concerning active learning strategies. Also, solving problems relevant to crowded classrooms, organizing an environment for active learning activities, and decreasing the number of courses teacher educators teach would make significant contributions to this process.

Keywords: Teacher education, classroom instruction, teacher, active learning.

Introduction

In order for instructors to have effective teaching characteristics, they are required to have not only such personal characteristics as being sincere, sensitive, tolerant, and indulgent of their students (Capel, Leaskand & Tourner, 1995; Stanton, 1985), but also teaching skills such as dominating classroom management, communicating effectively with students, developing teaching methods and

strategies appropriately in accordance with a specific subject and objectives of the subject, and using materials and instruments conveniently (Daviston, 1985). Instructors are also required to have information and experience about planning teaching activities, taking advantage of teaching technologies, and using and choosing the appropriate methods in teaching process (Aslantas, 2011).

Moreover, training qualified teachers depends on the characteristics of the instructors who train these teachers (Sen & Erisen, 2002). When analyzed from this point of view, both the quality of instructor and teaching service are quite important for training teachers. This is because teachers mostly perceive their instructors as role models and they reflect the applications followed by instructors in their own professional lives when they begin their professions. Similarly, in Gur's (1998) study it was determined that teaching methods and techniques applied by instructors working in universities were similar to those of teachers and pre-service teachers in schools. In addition, Gozutok (1988) expressed in her study that pre-service teachers were influenced greatly by the behaviors of their instructors and they tended to integrate the processes their instructors applied and reflect them in their professions. In this way, the role of instructor is not only transferring information, but also creating the most suitable environments and conditions to encourage students to learn (Modell, 1996). Moreover, Murat, Arslantas, and Ozgan (2006) showed in their study that very few students chose the questionnaire item stating, "instructors maintain the participation of all the students," which means that students did not consider that their instructors used effective teaching methods or strategies. Aksu, Civitci, and Duy (2008) obtained the findings in their study that instructors did not give enough time to attention-grabbing activities in their courses, and they used their tone of voice in a monotonous way.

While instructors are required to create appropriate physical environments and conditions for their students on the one hand, they are expected to apply active teaching methods in order for their students to learn effectively on the other hand since active teaching methods enable students to be more active in classrooms. In these classrooms, such active teaching methods and techniques as role-play, creative drama, group discussion, and brain-storming should be used. It is asserted that if instructors spend most of their times with teaching and learning activities prompting student's active participation in the course, students' academic achievement will absolutely increase (Stronge, 2007). That's why the learning environment enables students to engage in their own learning processes actively. It can be stated that if a student participated in the learning process actively, then he or she can develop an active learning approach. Students who just listen to what their instructors say are limited to the information given to them by their instructors (Carr, Jonassen, Litzinger, & Marra, 1998). In the studies conducted previously, it was decided that as students' participation increased, their levels of learning also increased (Burden & Byrd, 1994, as cited in Gozutok, 2004). In this context, it can be remarked that it is

quite important for pre-service teachers to be provided with learning experiences in which active teaching methods are applied because it seems to be difficult for pre-service teachers, who have no learning experiences of active learning or of putting active learning processes into practice in their classrooms (Tas, 2005). Active learning processes, in which effective methods based on student participation are applied, involve students taking the responsibility for their own learning, they engage in decision making, and they apply their cognitive skills in complex learning processes (Acikgoz, 2007).

According to Felder and Brent (1997), active learning is described as direct and active participation of students in the learning process. When the fact that effective learning can take place if students are engaged in the learning process and they learn by doing is taken into account, designing a learning environment in accordance with active learning processes requires applying the appropriate teaching methods and techniques. However, in a study by Bonwel and Eison (1991), it was determined that the learning environment was dominated in the classrooms in which traditional teaching methods were applied instead of using active teaching methods: instructors talked and students just listened to what they said. The study conducted by Demirel and Un (1987) indicates that 86% of instructors working in the universities mostly apply the direct expression method. Similarly, Gomleksiz's (1993) study expressed that instructors working in higher education institutions use the direct expression method most of the time in their courses. According to the study of Koseoglu (1994), students perceived their instructors as not being competent enough in managing the learning process. Sen and Erisen (2009) concluded in their study that according to the opinions of pre-service teachers, a small number of instructors applied teaching methods and techniques that were appropriate for the content of course and increased the persistency of learning.

When the fact that the achievement of educational institutions depends on the effectiveness of curricula is taken into account, for curricula to be actualized functionally, the role of teaching and learning activities cannot be contradictory. In this way, educational situations are the most important component of curricula, and teaching and learning activities take place in this dimension of the curricula (Demirel, 2009). Acquisition of specific behaviors by students takes shape in this phase. How teaching and learning processes will be formalized is dealt with in the educational situations dimension of curricula (Taspinar, 2010). One of the most important instruments for students to achieve the intended objectives is teaching method. In that sense, instructors' selection of methods and techniques in accordance with objectives and aims is quite important. Considering that training qualified teachers is directly associated with their qualified instructors and their effective learning process formation, it is rather significant to discover what kind of methods and techniques instructors apply in the learning process. Likewise, this study originates from the assumptions that the course Introduction to Educational Science

is the first course in pre-service teachers' pedagogical training, provides a basis for the educational enterprise, and that instructors are well-informed in terms of teaching methods and techniques as a result of their educational background in pedagogical formation. When all this information is taken into account, this study aims to find out what kind of methods and techniques instructors apply and how they form the learning process in the course of Introduction to Educational Science, determine the opinions of instructors about the reasons why they use those methods and techniques, and what their solution is to creating an active learning process. In accordance with these aims, the questions below are attempted to be answered in the study:

1. What kinds of teaching methods and techniques do instructors apply in the course Introduction to Educational Science and how often do they use them?
2. What are the opinions of the instructors carrying out the course Introduction to Educational Science about why instructors apply teacher-oriented methods?
3. What solutions are offered by the instructors for creating an active learning process?

Method

Research Design

Consecutive sequence design, a mixed model design, was applied in this study. In compliance with this approach, quantitative data were collected, and by analyzing these data it was determined which methods and techniques instructors mainly apply in the Introduction to Educational Science course. As a result of this analysis, it was determined that instructors mostly apply methods that do not enable students to actively participate in the learning process. In order to analyze the reasons for this situation in detail and offer solutions, face-to-face interviews with instructors were applied. Qualitative and quantitative data obtained from this study were interpreted together.

Research Sample

All the universities of Turkey were considered as the population for the quantitative part of this study. The research employed the convenient sampling technique, which is a qualitative sampling technique. In order to conduct the study, the related departments of all universities were negotiated, but the data were collected from a total of 1,480 first-year university students studying in the faculties of education at 13 universities from the seven regions of Turkey chosen based on their volunteering and convenience sampling. The descriptive statistics of universities and students are given in Table 1. However, for the qualitative part of this study, participants consisted of 14 instructors, including a professor, 6 associate professors, and 7 assistant professors working in the Division of Educational Sciences, Faculty of Education in Mugla Sitki Kocman University.

Table 1.*Descriptive Statistics of the Sample*

Universities	Gender				Total	
	Female		Male		<i>f</i>	%
	<i>f</i>	%	<i>f</i>	%		
1. Mehmet Akif Ersoy	113	72	43	28	156	10
2. Mugla	92	71	38	29	130	9
3. KATU	135	78	38	22	173	12
4. MKM	90	65	48	35	138	9
5. Sinop	33	66	17	34	50	3
6. Kastamonu	102	71	41	29	143	10
7. Amasya	78	70	34	30	112	8
8. Mersin	143	73	52	27	195	13
9. Ankara	82	59	58	41	140	9
10. Gazi	34	47	38	53	72	5
11. Trakya	34	69	15	31	49	3
12. Dicle	54	64	30	36	84	6
13. Erzurum	25	66	13	34	38	3
Total	1015	69	465	31	1480	100

Research Instrument

In order to collect the data, first of all literature was reviewed and items for the questionnaire were developed concerning the methods and techniques that can be applied by instructors in the learning process. Considering that first-year students might have problems understanding the names of methods and techniques, they were written together with their explanations in the questionnaire. For instance, as to define the aquarium technique, the statement, "Our instructor creates two circles, one within the other, in which discussions are made with students in the inner cycle, who are called debaters, and students in the outer circle are regarded as the audience" was preferred. Similarly, to define the creative drama method, the description, "Our instructors have us do improvisations and impersonations about specific subjects" was used. The questionnaire, including such expressions, was formalized after the items in the questionnaire receiving were reviewed by experts working in curriculum and instruction, testing and evaluation, and Turkish language fields. As a pilot study, the questionnaire consisting of 36 items to be applied to a total of 100 pre-service teachers studying in the Faculty of Education at Mugla Sitki Kocman University. After reviewing items in the questionnaire by taking the results of this application and experts' opinions into account, the final questionnaire was determined to include 30 items. The items of the questionnaire

can be answered between the ranges of “never” (1) and “always” (5). In order to better explain the quantitative data, a semi-structured interview form was prepared, experts’ opinions were consulted, and the form was finalized after a pilot study with three instructors.

Data Analysis

The quantitative data obtained from the questionnaire application were analyzed by calculating the arithmetic means and standard deviation; they were demonstrated in tables and interpreted. The qualitative data obtained from the 40-minute interviews with instructors were recorded by using a phonoscope. The recordings were listened to and transcribed attentively by the researcher. The data were interpreted after applying content analysis, and supported with direct quotations from the instructors.

Trustworthiness of the Findings Obtained from Qualitative Phase of the Research

Several strategies were employed to provide a trustworthy process of extracting qualitative data. One of them was member checking, in which the findings obtained from interviews were shown to the participants to get their feedback. This helped the researcher to improve the accuracy, credibility, validity, and transferability of the study. Another strategy was peer debriefing, which was employed by the researcher to ensure the validity of the information. The transcribed interviews were given to two expert researchers on qualitative research, and they were asked to analyse all the data all over again. Afterwards, the feedback from the experts was provided to enhance credibility and ensure validity. Also, some quoted words and phrases from the research participants were taken to support the researcher’s claims and comments on the data.

Results

According to the answers of first-year students studying in the faculties of education at different universities, descriptive statistics and arithmetic means of the rates of teaching methods and techniques instructors applied in the Introduction to Educational Science course are given in Table 2.

Table 2.

Teaching Methods and Techniques Instructors Applied in the Course Introduction to Educational Science

<i>Methods and Techniques</i>	\bar{X}	S
Question-and-Answer	4.49	0.74
Discussion	3.69	1.22
Expression	3.94	1.13
Brain-Storming	3.33	1.36
Group Work	3.19	1.24
Individual or Group Expression (Students)	2.99	1.39
Project	2.94	1.41
Case Study	2.75	1.39
Problem Solving	2.68	1.24
Concept Map	2.76	1.40
Buzz Groups	2.53	1.27
Observation	2.52	1.26
Six Hats	2.33	1.43
Panel	2.18	1.25
Fishbone	2.16	1.25
Demonstration	2.07	1.32
Snowball	2.06	1.32
Disputation	2.04	1.26
Developing Opinions	2.02	1.33
Creative Drama	1.93	1.21
Educational Games	1.85	1.27
Concept Control	1.76	1.15
Dramatization	1.76	1.17
Oral History	1.69	1.09
Aquarium	1.69	1.10
Talking Circle	1.67	1.15
Developing a Story	1.65	1.08
Station	1.59	1.07
Conceptual Caricature	1.56	1.00
Trip	1.37	0.90

According to Table 2, most of the pre-service teachers opined that their instructors used the methods and techniques of question-answer, discussion, expression, brain-storming, group work, and individual and group expression of a subject respectively. The other most outstanding finding according to Table 2 is that pre-service teachers remarked that their instructors rarely or never applied active teaching methods and techniques such as creative drama, educational games, concept control, dramatization, oral history, aquarium, talking circle, developing a story, station, conceptual caricature, or trip, all of which enable active learning and constructive approaches to take place in the learning environment.

It can be stated that instructors applied teacher-oriented methods, such as expression and question-answer, in their courses. Some of the instructors' opinions about why they applied these methods are given below:

P1(Participant 1): Instructors find applying traditional techniques, such as direct expression and question-and-answer, the easiest way to teach something. Moreover, in order for instructors to use active teaching methods, they are required not only to be aware of these methods, but also to have some specific preparations to apply them in their classes."

P2: "Instructors tend to endeavour more for academic development. They perceive that courses are just obligations, and they prefer conducting their courses in the easiest way, without special preparation or planning, which refers to the use of traditional teaching methods."

P3: "Classrooms are so crowded that they are not appropriate for applying active teaching methods and techniques. It is quite difficult for instructors to organize an active learning process in classes whose sizes are between 60 and 80 students."

P4: "When considering that the participants of this study are first-year students who do not have prior knowledge of Educational Sciences and that this course can be regarded as an introduction course for all the courses of educational sciences, instructors normally use presentation and direct expression methods to give information."

P9: "Instructors mostly apply what they have observed from their own teacher trainers or instructors."

When the opinions of instructors were investigated, they generally asserted that they mostly apply traditional teaching methods in the Introduction to Educational Science course because the classrooms were really crowded and the physical equipment and situation of classrooms prevents them from using active methods and techniques in their courses. Furthermore, instructors expressed that the other reasons why active methods are not applied in the classes are that as instructors they were not competent enough in such teaching methods and techniques. They tended to conduct their courses in the easiest way without paying enough attention to their courses, since they were similarly trained by their instructors who also applied traditional teaching methods and techniques. In other words, they might have developed a perception that university courses are conducted in such a traditional way, and they probably have also considered their teacher trainers as role models. In addition, it can be indicated that instructors are required to make some extra preparations and planning to apply active methods and techniques, and this process thereby necessitates instructors to exert a greater effort. That is why instructors asserted that teacher trainers who did not want to exert such a great effort preferred to apply question-and-answer and direct expression methods, which are brief and to

the point. Moreover, instructors figured out that instructors preferred to organize a learning process appropriate for the presentation strategy, as Introduction to Educational Science took place in the first-year curriculum, and the first-year students did not have prior knowledge of and preparedness for such a course. On the other hand, instructors regarded as important factors that the reason they did not apply active teaching methods and techniques in their courses was because they were not given teaching principles and methods courses at a sufficient level or in an applied way during their own undergraduate and postgraduate studies. Therefore, they might not know how to apply these methods and techniques in their classes. As a result of these opinions, instructors offered some suggestions on how to move the learning process away from the traditional structure, to apply active teaching methods and techniques in the courses, and to focus mainly on a student-centred learning environment. Some of these suggestions are given below.

P1: "Instructors are required to be aware of applying various active teaching methods. They are also acutely required to have in-service training to maintain this."

P3: "In order for instructors to apply active methods and techniques, classroom sizes should be reduced; and so as to use active teaching methods, appropriate environments should be created."

P10: "The course load of instructors should be reduced, and educational environments are required to become appropriate for applying active methods."

P11: "Physical instruments and situations of the faculties together with class sizes are required to bring active teaching methods and techniques in compliance."

P13: "All the instructors should take the teaching principles and methods course properly, especially in their postgraduate education. Also, courses and seminars should be organized for instructors concerning the teaching methods and techniques. They should have the opportunity to apply active teaching methods and techniques actively."

In the interviews conducted with instructors, it was stated that in order for active teaching methods and techniques to be applied in the courses, all the instructors were required to have teaching principles and methods courses, especially in their doctoral education, and these courses should take place in the teacher training curricula. Moreover, it was concluded that the teaching principles and methods courses should be given in an applied way. Furthermore, the instructors emphasized that an in-service training would enable them to experience how active teaching methods and techniques can be applied in the classrooms. Similarly, instructors opined that their course load and the content of teacher training curricula

should be reduced; physical equipment and the situation of the faculties of education and classroom size needed to be reorganized in order to enable instructors to apply active teaching methods and techniques. Instructors expressed that they should also be trained in an environment in which active teaching methods and techniques were applied in an effective way. As a reason for this situation, they stated that instructors probably have taken their own instructors as role models, which is an expected consequence of the environment in which they were trained.

Discussion and Conclusion

According to the results of this study, it was obtained that in the faculties of education that train teachers, the instructors, especially the ones giving courses such as Introduction to Educational Science, applied methods like expression and question-and-answer in their courses, and they distributed the topics to students to present in class either individually or in groups. Even though it is considered that students are actively engaged in the learning process through the methods of question-and-answer and discussion, information transfer and memorization of the information takes place in such a learning environment. Whereas the opportunity for students to construct information is not supported since the instructors are the main constructors of the learning process. While it has been stated in many studies that the expression method stands in first place in the preferences of instructors (Bonwel & Eison, 1991; Bozpolat, Ugurlu, Usta, & Simsek, 2016; Demirel & Un, 1987; Gomleksiz, 1993; Sen & Erisen, 2002), the application of the “question-and-answer and discussion” methods in this study might be considered important in terms of the student-centered learning process. Similarly, the brain-storming technique, one of the techniques used for improving the creativity of students, has been used frequently within this study, which is pretty significant for the active learning process. Student-centered methods and techniques—such as project, case study, problem solving, concept map, buzz group, observation, six hats thinking, panel, fishbone, demonstration, snowball, disputation—all of which enable students to participate in the learning process actively, are rarely used and are not enough for an effective learning process. Furthermore, shifting from teacher-oriented teaching into learner-centred teaching in faculties of education might be an important indicator of this study.

As a result of this study, another negative indicator, in terms of the effective learning process, is that instructors hardly ever or never apply active methods and techniques such as station, creative drama, educational games, concept control, dramatization, oral history, aquarium, talking circle, developing a story, station, conceptual caricature, and trip, which can be quite effective in the learning process. This result can be regarded as an indicator that the student-oriented process is not maintained in the course of Introduction to Educational Science in faculties of

education. When these results are taken into account, instructors not applying sufficient active teaching methods and techniques, which can be effective in the learning process, might affect students' academic achievement negatively as well as serve as a preventive factor to the later use of active teaching methods by pre-service teachers who take their instructors as role models and transfer what they have observed in their instructors' classes into their own. When investigated from this point of view, not applying active teaching methods and techniques in the learning process decreases the quality of pre-service teachers and can be considered as a preventer of pre-service teachers applying effective methods and demonstrating positive examples of active teaching methods in their classrooms.

The results of this study show similarity with other study results concerning traditional teaching results (Bonwel & Eison, 1991; Gomleksiz, 1993; Sen & Erisen, 2002). In Sahin's (2014) study, it was determined that instructors possessed a medium level of actualizing their professional competencies. In Demirel and Un's (1987) study, it was also revealed that 86% of pre-service teachers asserted that their instructors applied the expression method frequently. In Arslantas's (2011) study, it was determined that more than 55% of the students expressed that their instructors rarely used active teaching strategies, methods, and techniques. Likewise, Ozaydinlik, Kabaran, Gocen, and Altintas's (2014) study concluded that instructors exhibited the qualifications of teaching profession, including selection of teaching methods and techniques and effective implementation of these, at a medium level. In Aslantas's (2011) study, it was revealed that most of the instructors did not use teaching strategies, methods, and techniques at a sufficient level. In addition, it was asserted in Ilter's (2014) study that the instructors gave place to traditional methods in their courses. On the other hand, in Yalcin-Incik and Tanriseven's (2012) study, it was concluded that the instructors used both traditional and active teaching methods in their courses. However, in Cansaran's (2014) study, it was asserted that pre-service teachers found their instructors incompetent. In Sen and Erisen's (2012) study, pre-service teachers also found only a few of their instructors to be competent. These results coincide with the results of the present study.

Results obtained from the qualitative data of the study can be considered to be supportive for the quantitative data. Instructors stated that traditional methods were used in the course Introduction to Educational Science because the classrooms were so crowded, the physical structure of the classrooms did not provide space for activities involving active student participation, instructors design the teaching and learning process according to the traditional methods by which they were also trained, active teaching methods and techniques required specific effort and labor to be applied, traditional methods were easy to apply and the application of active teaching methods were insufficiently known by the instructors. This result can be considered explanatory to reveal what the results of the quantitative part of the study stemmed from.

When the quantitative and qualitative results are investigated together, it can clearly be conducted that instructors are quite far away from creating a student-oriented learning process. Instead, they organized the learning process based on traditional learning processes. From this point of view, it can be asserted that instructors can pose an obstacle in teacher training in the faculties of education; they can also create a negative role model for their students with their current applications and cause negative applications to be transferred in schools and classrooms. According to the interviews, in order to create a student-oriented learning process based on active teaching methods, instructors recommended that they should have in-service training, meetings, seminars, and conferences about active teaching methods and techniques; they should be given the opportunity to attend and follow different instructors' courses; the class sizes should be reduced; educational environments should be made conducive to active teaching methods; academics should take post-graduate pedagogical courses; the course load of instructors should be reduced; active methods should be applied in teacher training; and instructors should be given the opportunity to pursue education and training abroad. In the present research, pre-service teachers provided their views on teacher educators teaching the "Introduction to Educational Sciences" course. For future research, the scope of research can be extended and teacher educators teaching different courses can be included.

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Öğretmenler Tarafından Uygulanan Öğretim Yöntem ve Tekniklerine İlişkin Görüşlerinin Öğretmen Adaylarının Değerlendirilmesi

Atıf:

Aykac, N. (2016). Evaluation of pre-service teachers' opinions about the teaching methods and techniques applied by instructors. *Eurasian Journal of Educational Research*, 66, 87-104, <http://dx.doi.org/10.14689/ejer.2016.66.5>

Özet

Problem Durumu: Nitelikli öğretmenlerin yetiştirilebilmesi onları yetiştiren öğretim elemanlarının özelliklerine bağlı olduğu düşünülmektedir. Bu açıdan bakıldığında öğretmen yetiştiren kurumlardaki öğretim elemanlarının öğretmenlik niteliği ve verdiği öğretim hizmetinin niteliği etkili öğretmen yetiştirmesi açısından oldukça önemlidir. Çünkü öğretmenler kendilerini yetiştiren öğretim elemanlarını rol model olarak görmekte, mesleklerine başladıklarında da öğrencilik sürecinde öğretim elemanlarının uygulamalarını mesleki yaşamlarına yansıtabilmektedirler. Yapılan araştırmalarda da üniversite öğretim elemanlarının öğretim yöntemleri ve teknikleri ile okullardaki öğretmenlerin ve öğretmen adaylarının kullandıkları öğretim yöntem ve tekniklerinin benzer olduğunu saptamıştır. Nitelikli öğretmen yetiştirilmesi nitelikli öğretim elemanları ve onların etkili bir öğrenme sürecini biçimlendirmesi ile doğrudan ilişkili olduğu gerçeği göz önüne alındığında öğretim elemanlarının öğrenme sürecinde hangi yöntem ve teknikleri uyguladığının ortaya çıkarılması oldukça önemlidir.

Araştırmanın Amacı: Bu araştırma, öğretim elemanlarının Eğitim Bilimine Giriş dersinin öğretim sürecini nasıl biçimlendirdiklerini, hangi yöntem ve teknikleri kullandıklarını belirlemeyi, bu yöntem ve teknikleri kullanma nedenlerine ilişkin öğretim elemanlarının görüşlerini belirlemeyi ve aktif bir öğrenme sürecinin oluşturulmasına yönelik çözüm önerilerinin ortaya çıkarmayı amaçlamaktadır.

Araştırmanın Yöntemi: Araştırmada karma model desenlerinden ardışık sıralı desen kullanılmıştır. Bu yaklaşıma uygun olarak nicel veriler toplanmış ve analiz edilerek öğretim elemanlarının Eğitim Bilimine Giriş dersinde ağırlıklı olarak hangi yöntem ve teknikleri kullandıkları belirlenmiştir. Analiz sonucunda öğrencileri öğrenme sürecine aktif olarak katmayan yöntemlerin kullanıldığı belirlenmiştir. Bu durumun nedenlerinin ayrıntılı olarak belirlenmesi ve çözüm önerileri getirmeleri için öğretim elemanları ile yüz yüze görüşmeler yapılmıştır. Elde edilen nicel ve nitel veriler birlikte yorumlanmıştır. Araştırmada Türkiye’de yer alan bütün devlet üniversiteleri araştırmanın nicel kısmının evreni olarak kabul edilmiştir. Araştırma için bütün üniversitelerin ilgili bölümleriyle görüşülmüş ancak uygun örneklem yoluyla Türkiye’nin 7 farklı bölgesinden gönüllülük esasına göre seçilen 13 üniversitedeki eğitim fakültelerinde okuyan 1480 1. sınıf öğrencisinden veriler toplanmıştır. Araştırmanın nitel kısmının çalışma grubunu, Muğla Üniversitesi Eğitim Bilimleri bölümünde görev yapan 7 yardımcı doçent, 6 doçent ve 1 profesör olmak üzere

toplam 14 öğretim elemanı oluşturmuştur. Araştırmada verilerin toplanması için öncelikle alan yazın taranarak öğrenme sürecinde öğretim elemanlarının kullanabileceği yöntem ve tekniklere dayalı olarak anket maddeleri geliştirilmiştir. 36 maddeden oluşan anket Muğla Üniversitesi Eğitim Fakültesinde öğrenim gören 100 öğretmen adayına uygulanmıştır. Uygulama sonuçları ve uzman görüşleri dikkate alınarak anketteki maddeler yeniden gözden geçirilmiş ve anketin son hali 30 maddeden oluşmuştur. Anketteki maddeler (1) hiçbir zaman ve (5) her zaman aralığında yanıtlanmaktadır. Araştırmanın nicel bulgularının nedenlerinin daha iyi açıklanabilmesi için yarı yapılandırılmış görüşme formu hazırlanarak, uzman görüşleri alınmış ve 3 kişi ile yapılan deneme görüşmesinden sonra forma son hali verilmiştir. Araştırmada uygulanan ankette elde edilen nicel veriler analiz edilerek, aritmetik ortalamaları, standart sapmaları alınmış tablolar halinde sunulmuş ve yorumlanmıştır. Araştırmanın nitel verileri için Eğitim Bilimine Giriş dersini yürüten 14 öğretim elemanı ile yüz yüze görüşme yapılmıştır. Görüşmeler 2014-2015 eğitim öğretim yılı bahar döneminin sonunda yapılmış ve her bir görüşme yaklaşık 40 dakika sürmüştür. Görüşmeler ses kayıt cihazı yardımıyla kayıt altına alınmıştır. Kayıtlar araştırmacı tarafından dikkatlice dinlenilmiş ve yazıya aktarılmıştır. İçerik analizi kullanılarak çözümlenen veriler yorumlanmış ve doğrudan alıntılarla desteklenmiştir.

Araştırmanın Bulguları: Araştırmadan elde edilen bulgulara göre öğrenciler, öğretim elemanlarının çoğunlukla Eğitim Bilimine Giriş dersinde sırasıyla soru-cevap, tartışma, anlatım, beyin fırtınası, grup çalışması ve bireysel ve grup olarak konu anlatımına dayalı yöntem ve tekniklerini kullandıkları yönünde görüş belirtmişlerdir. Ayrıca öğrenciler öğretim elemanlarının, öğrenci merkezli bir öğrenme süreci açısından oldukça önemli olan aktif öğrenmeye ve yapılandırmacı bir yaklaşıma olanak sağlayan drama, eğitsel oyunlar, kavram kontrolü, dramatisasyon, sözlü tarih, akvaryum, konuşma halkası, öykü oluşturma, istasyon, kavramsal karikatür ve gezi gibi yöntem ve teknikleri nadiren ve hiçbir zaman aralığında kullandıkları yönünde görüş belirttikleri saptanmıştır. Öğretim elemanları ile yapılan görüşme sunucunda elde edilen bulgulara göre ise Eğitim Bilimine Giriş dersinde geleneksel yöntemlerin ağırlıklı olarak kullanılmasının, sınıfların kalabalık olması ve sınıfın fiziki donanımının bu yöntemleri uygulamaya olanak tanımamasından kaynaklandığını belirtmişlerdir. Öğretim elemanları aktif yöntemlerin kullanılmasına ilişkin olarak diğer nedenler olarak öğretim elemanlarının yöntem ve teknikler konusunda yeterli donanıma sahip olmamaları, derslerini önemsemeyip bir an önce kolay yoldan anlatıp dersi bitirme çabası için girdiklerini, öğretim elemanlarının da geleneksel yöntemlerle yetiştikleri için üniversitelerde derslerin bu şekilde işleneceği algısı oluşturdukları ve kendi hocalarını rol model aldıklarını belirtmişlerdir.

Araştırmanın Sonuçları ve Önerileri: Araştırma sonucunda öğretmen yetiştiren eğitim fakültelerinde Eğitim Bilimine Giriş dersini veren öğretim elemanlarının derslerinde çoğunlukla anlatım ve soru cevap yöntemlerini kullandıkları, ders konularını öğrencilere dağıtarak bireysel ya da grup olarak anlatım yaptırılmaları biçiminde ders işledikleri sonucuna ulaşılmıştır. Ayrıca öğretim elemanlarının, öğrenme sürecinde

oldukça etkili olabilecek istasyon, drama, eğitsel oyunlar, kavram kontrolü, dramatisasyon, sözlü tarih, akvaryum, konuşma halkası, öykü oluşturma, istasyon, kavramsal karikatür ve gezi gibi yöntem ve tekniklere nadiren ve hiçbir zaman aralığında kullandıkları görülmüştür.

Öğretim elamanları Eğitim Bilimine Giriş dersinde geleneksel yöntemlerin kullanılmasına neden olarak sınıfların kalabalık olması, fiziki yapının öğrenci katılımına olanak sağlayan etkinlikleri uygulamaya uygun olmaması, öğretim elemanlarının geleneksel yöntemlerle yetiştigi için öğrenme-öğretme sürecinin de o yönde biçimlendirmesi, aktif yöntemleri kullanmak için belirli bir çaba ve emek harcanmasının gerekli olması, geleneksel yöntemlerin uygulanmasının kolaylığı, aktif öğretim yöntemlerinin öğretim elemanlarınca yeterince bilinmemesi neden olarak göstermişlerdir. Eğitim fakültelerinde öğretim elamanlarının aktif bir öğrenme süreci oluşturabilmeleri için öğretim elamanlarının yüksek lisans ve doktora düzeyinde aktif öğretim yöntemlerini uygulamalı bir ders olarak almaları, örnek uygulamalara dayalı seminerler, kurslar ve atölye çalışmaları düzenlenmesi, sınıftaki öğrenci mevcudunun azaltılması, aktif yöntemlerin uygulanabilmesi için fiziki mekânlarını düzenlenmesi ve öğretim elamanlarının ders yüklerinin azaltılarak ders planlaması ve hazırlık sürecine daha fazla zaman ayırması sağlanabilir.

Anahtar Sözcükler: Öğretmen eğitimi, sınıf öğretimi, öğretmen.

Parent Involvement in Education in Terms of Their Socio-Economic Status

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Abstract

Problem Statement: Increasing the quality of education and educating well-qualified students is one of the most important objectives of formal education. Informal resources are as important as formal resources in improving this efficiency and productivity. In this respect, it can be said that family is the most important informal structure affecting the education of the child. In order to evaluate the involvement of family in education, various ways of categorizing have been implemented. One of these systems provides six categories in parental involvement, which are parenting, communicating, volunteering, learning at home, decision making and collaborating with the community. Whilst the meaning and significance of parental involvement is the starting point of this study, determining the level of involvement of the families in the educational activities at schools in terms of their socio-economic status is the main purpose of this study. Considering the fact that research on parental involvement in schools in terms of the socio-economic status of parents is scarce, the present study may serve as an important data source for researchers and policy makers in regard to comparing the effects of this involvement.

Purpose of the Study: The purpose of this study is to examine the viewpoints of administrators, teachers and parents on involvement of the families in the process of education in terms of socio-economic status in public and private primary and secondary schools.

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Method: Interview and document analysis methods, which are both qualitative research methods, were used in the study. The study group was 11 teachers, four administrators working at public and private primary and secondary schools in Mugla and six parents. The data were collected through semi-structured interview methods. In addition, the documents related to the involvement of parents to education were analysed – school newspapers, the announcements, news and the activities section of the schools' Web pages. In analysing the data collected in this study, the NVivo8 package program and the descriptive analysis technique were used. The findings are presented with a descriptive analysis method.

Findings: The results of the study indicate that parents from different socio-economic backgrounds do not have very different ideas about the process of involvement in the process of education. However, because school-family interaction in public schools and the trainings on parenting are not very systematic even if socio-economic status is high, the interaction is not at a desired level. The reasons parents communicate with the schools were found to be to evaluate student's academic success and personal development. Both in public and private schools, involvement of parents in the decisions was in the form of asking parents their ideas. It was found that parents having a good socio-economic status were more willing and active in the procedure of participating in the process of education.

Conclusion and Recommendations: In order to increase parent involvement in education, the guidance services at schools should be used more functionally. For example, needs analysis towards determining the needs of the parents and the students in their school life should be made, and based on the results of the analysis, programmes to support parent involvement in education should be prepared.

Keywords: family-school relationships, academic achievement, low-income, socio-economic rank.

Introduction

Involvement of parents in education is considered among the most important factors in increasing the efficiency and quality of education because both home and school environments affect a child's development. Therefore, it can be said that family is an important component of the school environment.

Researchers who realize that family is an important factor in the process of education conducted many scientific studies on this topic. One of the most outstanding studies among these researches is the one Coleman et al. carried out in 1966 (As cited in Tural, 2002). In their study, it was found that the family factor was as efficient as the school in student achievement. In addition to the aforementioned

study, there are many other studies on the significance and effect of family in the process of education. In the studies, it was found that parental involvement increased student's learning and academic success (Thompson et al. 1997; Eccles & Harold 1996; Lawson 2003; Jeynes 2015; Castro et al. 2015). In addition, there are studies stating that socio-economic levels of the families affect their involvement in education. According to these studies, the socio-economic levels of the families affect student enrolment in school, their involvement and academic success (Lindberg & Demircan 2013; Cooper et al 2009; Lee & Bowen 2006; Hair et al. 2015).

The concept of parental involvement is defined as a systematic approach which not only involves supporting and educating families and ensuring their participation in education, increasing children's educational and academic experiences, establishing, sustaining and improving the communication between students' homes and educational institutions, but also enriching the curriculum with the involvement and contribution of parents (Bower & Griffin 2011; Lindberg & Demircan 2013). Epstein (1995; 2008), who has been involved in many studies on the involvement of family in education and who has become an important name in this field, provides six categories in parental involvement, which are parenting, communicating, volunteering, learning at home, decision making and collaborating with community. Parenting involves the activities that help families in issues such as creating a warm home environment to increase school achievement of the student; and helping families in their responsibilities such as health, nutrition and education. Communication means two-way communication between home and school that enables the transfer of knowledge about the curriculum and the child. According to this, teachers and administrators provide knowledge to the parents about the progress of the student at school in a systematic way. Regular meetings at schools, sending forms to the homes, and informing parents through the internet or telephone could be counted among these activities. Volunteering means organizing and recruiting the parents to help and support the activities in the classroom or at school. Learning at home is to inform parents to help their children at home with doing their homework, course activities and plans; organizing seminars, conferences and reading activities for parents at school. Decision making could be defined as administrators and teachers enabling parents to participate in the decision-making process at school at the highest level. To do this, involving parents in the decisions made at school and improving the parents' ability to be representatives and leaders at the school is a responsibility of the administration and the teachers. Collaborating with community involves transferring the information on strengthening curriculum and the health and culture of the society with the help of the community. Consequently, students could carry out community service practices (such as recycling, drawing, music and drama, etc.). In addition, activities to be carried out in cooperation with alumni could be counted in this theme.

Whilst the meaning and significance of parental involvement is the starting point of this study, determining the level of involvement of the families in the educational activities at schools in terms of their socio-economic status is the main purpose. Whether there is a difference among involvement of parents in the process of

education in public and private schools is one of the areas that will be studied. Accordingly, the purpose of this study is to examine the viewpoints of administrators, teachers and parents on involvement of the families in educational processes in terms of socio-economic status in public and private primary and secondary schools. Based on this overall objective, answers to the following research questions are sought for:

- a) Parenting
- b) Communicating
- c) Volunteering
- d) Learning at home
- e) Decision making, and
- f) Collaborating with the society themes.

Method

Research Design

Phenomenological design, a qualitative research design that applies to the nature of the study, was used. In this design, the aim is to reveal and interpret individual perceptions or viewpoints towards a certain phenomenon (Patton, 2002; Yildirim & Simsek, 2008). The data collection techniques used in the study were document analysis and interview. In the study, the "involvement of parents in the process of education in terms of their socio-economic status" was examined via interviews and document analysis.

The e-newspapers, forums, news on the Web pages and announcements used in the study are documents. As for Krippendorff (2004), document analysis is a research method used to make valid and reliable inferences from the texts. The second data collection technique used in this study was interviewing. In phenomenology, the interviewing method is considered a useful method in terms of collecting precise and correct data on the research topic (Judd et al. 1991).

Research Sample

The study group in this research involved seven teachers, three administrators working at seven public primary and secondary schools in the Mentese district of Mugla and six parents whose children study in these schools; and four teachers, one administrator working at two private primary and secondary schools in Mugla province and three parents whose children study in these schools. The study group was determined through maximum variation sampling, one of the purposeful sampling methods. The aim of this is to create a relatively small sample. In addition, this sampling is used to find out whether there are common or shared phenomena and differences among varying cases and depending on variation, the aim is to reveal different dimensions of the problem (Yildirim & Simsek 2005). Purposeful sampling

was used to reach the teachers, administrators and parents in the study. The aim of using purposeful sampling (Yildirim & Simsek 2005; Aziz 2008) is to choose the individuals who would serve the research objectives in the most convenient way.

Research Instruments and Procedure

The data in the study were collected through semi-structured interviews and the document analysis method. Semi-structured interviews were administered in this study and in doing so, the aim was to collect detailed data on the involvement of parents in the education process within the scope of certain topics. To this end, semi-structured interview forms including six questions were developed for teachers, administrators and parents. Interview forms are among the data collection tools of the qualitative research. These forms are the best way we have of getting the meaning of how people understand reality, the meaning they attach to reality, and how they define and establish the reality (Punch 2005). The semi-structured interview forms were prepared based on the studies in the literature that define the involvement of parents in the education process and based on the factors that Epstein (1995) defined. The prepared questions were sent for expert opinion¹ and the final version of the form was prepared.

The interviews, which were carried out with administrators and teachers and which took almost 15-20 minutes each, were recorded.

In interpreting the opinions of the participants, their own statements/expressions were used. The documents analysed in this study were published on the Web pages of the private schools and on the Web pages of public schools which they are obliged to prepare as suggested by the Ministry of National Education, during the 2014-2015 academic year. Accordingly, while analysing the e-newspapers, forums, news and announcements on the Web pages, key words were listed and the collected data were analysed. While choosing the key words, Epstein's classification was employed and the collected data were used to support the interviews.

Table-1 shows the documents related to the involvement of parents in education. According to this, there are school newspapers (e-newspaper) in only three schools. The rest of the documents were taken from the announcements, news and activities section of the schools' Web pages.

Table 1.

Analysed Documents

Documents	Public schools	Private schools
School newspaper (e-newspaper)	2	1
Announcements	5	-
News	20	15
Activities ²	14	15

¹Prof. Dr. Yasemin Kepenekci; Assist. Prof. Dr. Burcu Senler; Assist. Prof. Dr. Nihan Demirkasimoglu; Assist. Prof. Dr. Funda Nayir; Assist. Prof. Dr. Ugur Akin; Assist. Prof. Dr. Cetin Erdogan

² Parent-teacher meetings, trips, charity sales, visits to the homes, sports activities etc.

Data Analysis

In analysing the data collected in this study, the NVivo8 package program and descriptive analysis technique were used. The main aim in descriptive analysis is to summarize and interpret the data based on pre-set themes (Yildirim and Simsek, 2008, 224). Based on the repetition of the answers in terms of their meaning, the themes were classified. The voice recordings from the semi-structured interviews were directly written down without making any changes and each interview was read and evaluated.

Based on the sub-objectives and Epstein's classification, the themes in this study are set as "parenting," "communicating," "volunteering," "learning at home," "decision making" and "collaborating with society." Using deductive methods, these themes were set at the beginning of the study, and sub-categories were set using an inductive method during the analyses.

Validity and Reliability

To ensure internal reliability in this study, the reliability between the coders of the pre-set themes were checked. Themes were separately coded by the researchers and the consistency of the coding was compared.

In topics where researchers were undecided, they discussed the topic and came to an agreement. While doing so, the topics in which the two researchers have a "consensus" and "dissensus" for the themes and categories were discussed and relevant changes were made. Later, to calculate the reliability, the reliability formula suggested by Miles and Huberman (1994) was used. And as a result, the reliability of the study was found to be 91,25 %. To ensure the reliability of the study, short and direct citations were included and without making any comment, the collected data were grouped and offered to the readers. Interpretations of the findings are given in the discussion section.

Results

Results on the Involvement of Parents in the Process of Education in Public and Private Schools based on the Opinions of Teachers, Administrators and Parents

In the study, participants were asked questions about what kinds of activities for parent involvement were employed in the process of education in the schools where teachers and administrators work and parents sent their children. The answers were analysed through Epstein's (1995) themes, which are parenting, communicating, volunteering, learning at home, decision making and collaborating with the society and are given below (Figure 1).

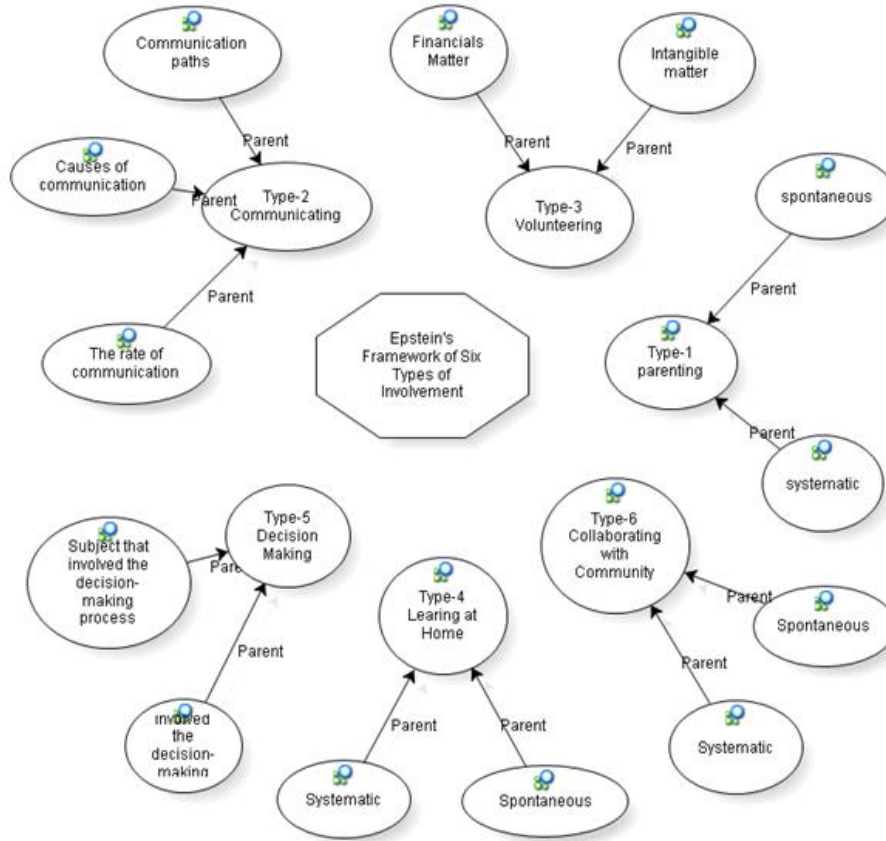


Figure 1. The Model formed by the researchers in the Nvivo Program

1. Theme: Parenting. When the participants’ opinions are analysed, it is understood that the activities that could be grouped under the parenting theme are done in a “systematic” way or “spontaneously.” What is meant by “systematic” activities is the *ad hoc* educational activities which are carried out by the guidance unit in the school—if there is one—or by the authorities sent by Directorates of National Education or Ministry of Family and Social Policies or by the public education units opened in the school building for the families.

As P3T³ stated: “As of the 1st semester, an activity under the parental school was organized. We provided parents with a training over 20 hours. And we also invited three experts who wrote a book on open guidance and organized seminars and sessions for the parents.” Private schools which are in the high socio-economic group prefer to invite

³ Note: Abbreviations in the study represent: T: Teacher in public schools; PT: Teacher in private schools; P: Parent in public school; PP: Parent in private schools; A: Administrator in public schools; PA: Administrator in Private Schools.

experts and offer seminars. (P3T, T7, T8, T10, P4A, A3, P1P, P3). What is meant by “spontaneous” activities are the one-time activities which are organized in the schools based on the needs of the teachers, administrators or parents. For example, T2 explains this as “...when we see a concern with the child, we warn the parents and talk to them about what we can do or what they can do.” (T2, A1, P2)

Both the systematic and spontaneous activities carried out in the schools seem to be related to physical and mental development rather than the personal care of the child. In this study, it was found that parents were mostly informed about what kind of problems they might face with their children throughout adolescence and how they can manage these problems. As P3 expressed: “They informed us about the early adolescence of the children. The seminar was about what families can do, what they should do, what kind of changes are seen a child goes through.” The main starting point of the activities is communication during adolescence (T2, P3).

Another finding related to the activities on parenting is that the factor that turned a spontaneous activity into a systematic one to which professionals attend is the presence of a guidance unit (T7, T8, T10). In other words, if there is no guidance service in the school, teachers only make one-on-one meetings with the parents. However; if there is a guidance service in the school, detailed and planned activities are offered. In this case, since financing activities in private schools is easier, it is obvious that they could find external professional support (P3T, P4A).

It was found that 15 documents analysed through the Web pages of the schools within the scope of the study contained information on parenting. Ten of these documents were activities carried out in private schools whilst the remaining five were activities carried out in the schools where the parents are from a high socio-economic status. Especially in two private schools where the data were collected, it was seen that there were parental trainings. In addition to that, it was also seen that there were interactive systems through which parents could access information about their child.

II. Theme: Communicating. The participants’ opinions on the communicating theme were categorized as “the rate of communication,” “communication paths,” and “causes of communication.”

In participant statements, there are expressions stating that there were regular meetings (for instance, at least twice a year, and once every month) for parents in all schools during the semester. Apart from that, as T8 stated: “parents could communicate with us when they feel they need to.” It was found that parents meet with teachers or school administrators apart from the meetings (T2, T8, T9, T11).

When the communication ways of the parents with the school are examined, the parents’ meetings stand out as the first path (T1, T2, P3T, P4T, P5T, T6, T9, T10, T11, P2, P3, P4, P5). In addition, as P3T stated: “we visit at least one parent each week;” teachers organize visits to the residences of the students to see their families and to closely study the home environment (T2, P3T, P4T, P5T, T6). In addition, it is understood from the statements of P3T, P5T, T6, T8, T9, T10 that using the advanced

technological means of telephone and the internet (SMS, Facebook, WhatsApp and such), the communication ways are diversified.

Finally, it is possible to say that the reasons that parents communicate are to evaluate the academic achievement of the student (T1, P4T, T10, A1) and for his/her personal development (T8) and for both evaluating the academic achievement of the student and his/her personal development (T2, P3T, P5T, T6, T7, T9, T11, A3, P3, P4, P5).

It was found that 20 documents analysed within the scope of the study included information on communication. Sixteen of the activities in these documents were activities that were carried out in private schools whilst the remaining four activities were those carried out in public school where the socio-economic status of the families was high. In one of the private schools where data was collected, it was seen that one of the best examples of school-parent communication was the student follow-up system. The parents have access to all information about the student on this system. In addition, it was seen that there was also a separate information system through which parents were given student reports every week.

III. Theme: Volunteering. The data collected within the scope of volunteering theme in the study were categorized as “financial matters” or “intangible matters.” What is meant with “financial matters” is direct financial support provided to the school or providing movable/immovable goods to the school. For instance, with such “Intangible matters” as constructing buildings (T2), supplying such equipment as scanners and stationary (T8), classroom motherhood (P3, P4), monetary aid (A3), what is meant is the activities and aids carried out to generate income for the school. For example, in all of the schools within the scope of the study, parents voluntarily work in such activities as charity sales, trips and theatre productions (T2, P4T, P5T, T6, T7, T8, T9, T10). Apart from what is mentioned above, it is seen that parents organized activities to meet with other parents (such as brunch) (T9), and delivered seminars depending on their occupation (P5T).

The findings collected from the interview are supported by the documents analysed within the scope of document analysis. All of the documents related to volunteering include the aids during such activities as charity sales and contests. In particular, it was seen that 14 of the news items in three e-newspapers were about the charity sales organized. It was seen that activities during such special days as Mother’s Day and the Day of the Elderly were organized and that parents voluntarily and actively work in those activities.

VI. Theme: Learning at home. It was found that participant opinions in the study focused on how parents were encouraged about learning at home and what kind of support was provided for parents on this issue. In other words, when teachers’, administrators’ and parents’ opinions were analysed, the learning at home theme was categorized as “systematic” and “spontaneous.”

The opinions analysed under the “systematic” category are in the form of informing parents by the guidance service of the school on how they can help their

children with their homework in a planned way and within the scope of a programme. This information providing is through the daily and weekly follow-up programme (P3T), homework programmes specially prepared by the school counsellor for each student, coaching system (A3) and through the guidance provided by the school counsellor to the teachers and the parents (P4A). However, it was determined that in some schools, because there were no guidance services or because the classroom teacher had close relations with the parents through meetings, the parents were also “spontaneously” informed by the teachers (T2, P5T, T6, T7, T10, A1, A2, P1P, P4, P5). What is meant by “spontaneous” here is that teachers or school administrators hold a face-to-face meeting with the parent and inform the parent on how the child should do his/her homework in an unsystematic and unplanned manner.

During the document analysis, under this category only five documents on activities to learn at home were found on the Web pages of two schools. Some of these documents were in the form of a summer homework workbook (from 5th to 7th grade), summer homework, and how to do homework at home (guidance service document) brochures. Of these two schools, one was a private school and the other was a public school.

V. Theme: Decision making. The categories of decision making were formed as “subjects in which parents are involved in the decision-making process” and “subjects in which parents are not involved in the decision-making process.” The statements of the participants indicate that parents participate in the activities to be organized at school (charity sales, trips) (T2, A1, P1P, P3), dressing (T8, P5, P6), and basic requirements at school (monetary and physical) (A1, A3, P1P, P3, P4, P5). In addition, parents believe that due to the hierarchical structure of the Turkish Educational System, their involvement is limited to only monetary contributions. We see criticism towards this structure in the statements of P1P and P3: “*Informing parents includes only the expenses*” and “*We are only involved in decisions about financial matters,*” respectively.

Parallel to the statements of the participants, no data were found in the documents analysed on the participation of parents in the decisions made at school. Finally, participants indicated that they participated in the decision-making process mostly through parent-teacher association meetings (T6, T8, T9, T10, T11, A3, P1P, P5). There are no documents found relevant to this category.

VI. Theme: Collaboration with community. Activities that could be included within the scope of collaboration with a community theme were grouped as “systematic” and “spontaneous” as in the parenting theme. When the “systematic” category is examined, it is seen that schools organize some activities or regularly share information about the activities that other institutions organize with the students and parents. For example, in T3T’s statement: “*We always organize annual summer camps. And parents are informed about these camps*” (P3T, P4T, T7, A3, P3). However, in the “spontaneous” category, schools share information on activities with students and parents in case they are informed of these activities. An example of this category is

P4A "We inform children about all the relevant activities that the municipality, social services or youth and sports directorate organize" (P5T, T6, T8, T9, T10, A1, P1P).

Of the three e-newspapers, five announcements, 35 news and 32 activities analysed within the scope of this study, it was seen that 10 of them included information on collaborating with community. Seven of these documents were activities carried out in private schools whilst the remaining three were activities carried out in the schools where the parents are from a high socio-economic status.

Discussion and Conclusions

Within the scope of the literature and based on the opinions of teachers and administrators working at public and private schools as well as the opinions of parents whose children study at these schools, this study aimed at explaining and interpreting the involvement of parents in education based on their socio-economic status.

While Epstein indicates that activities based on the responsibilities of parents could be organized within the scope of the parenting theme, it was found that in the schools in this study, activities related to the physical and mental development of children during adolescence were organized. The reason for this could be that the school management might be willing to find solutions to concrete problems. In addition, the findings in this study differ from the findings of Erdogan and Demirkasimoglu (2010). In the mentioned study, the activities within the scope of parenting were found to be related to health, first aid and dental health. The reason for that could be that the studies were carried out based on different approaches. On the other hand, it is possible to say that in public schools, even if the socio-economic status of the family is high, school-parent interaction is not that (informal) systematic or at the desired level, particularly in terms of parenting. In public schools, particularly in schools where the socio-economic status of the parents is not high, it is necessary to explain to parents how and why they should be involved in the process of education and to offer them opportunities for parent involvement. In addition, it was found that for the parenting category to be effective at the schools, the activities organized by the guidance service at the schools have a significant role. In their study, Camadan and Sezgin (2012) stated that the guidance services at schools organized some informative seminars for parents and these events had positive results.

Regarding the communicating theme, it was found that parents meet with teachers or school administrators regularly during the semester and whenever they need to. It can be said that this finding is similar to the findings of Erdogan and Demirkasimoglu (2010) in which they found that parents came to the school frequently or at certain intervals. On the other hand, it was found that in private schools, certain activities were organized to fill communication gaps and to explain to parents the importance of parental involvement (parenting education; home visits etc.), and that there were more activities towards increasing parent involvement. With awareness raising studies on this issue, parents from a low socio-economic

status could be supported to cooperate with the school. In their studies, Derrick-Lewis (2001); Epstein (2008); Hill (2009); Kotaman (2008); Singh et al. (1995); Wirthwein; McElvany and Steinmayr (2015) especially emphasize this point.

In this study, the reasons for parents to communicate with the schools were found as evaluating student's academic success and personal development and evaluating both student's personal development and academic success. Similarly, in their study, Erdogan and Demirkasimoglu (2010) concluded that the most frequent reason for parents to contact the school and the teachers was to learn the scores of the students and their success in the course.

Findings on the volunteering theme indicate that even families from low socio-economic status participate in voluntary activities that are particularly catered to supplying the requirements of the schools. This could be interpreted as the finding that people in Turkey attach importance to the schools and that the expectation from education is high. The findings in this study comply with the findings of Erdogan and Demirkasimoglu (2010) in terms of the fact that parents most often organize and attend charity sales.

Regarding the learning at home theme, Eccles and Harold (1996) assert that parent involvement reveals itself most in this category. And indeed, in their study, Derick-Lewis (2001) found that 93,5 % of the parents control whether their child did their homework or not, and 85,5% of the parents helped their children with their homework and tests. However, Eccles and Harold (1996) state that the parent involvement under this category is mostly through the efforts of the parents. According to them, both teachers and other school staff should encourage and support parents to collaborate as much as they can. In this study, it was determined that parents are informed by the guidance service of the schools on how they can help their children with their homework in a planned way and within the scope of a programme, but because some schools did not have guidance services or classroom teachers had closer relations with the parents through meetings, parents were also informed spontaneously by the teacher. However, it is understood from the data collected that schools are inadequately stating how they can help parents prepare an environment for learning at home and on how parents can help students' learning.

As Eccles and Harold (1996) indicate, additional education programmes intended for parents will not only help parents but also will equip parents with the self-confidence they need to help with their children's homework.

It is possible to say that in both public and private schools, participation in the decision-making process theme is not at a desired level due to the fact that parents are only involved when their opinion is asked for. It is seen that although people in education consider parents' involvement important, this involvement is only limited to such issues as charity sales, trips and dressing. Epstein (1995), on the other hand, exemplifies and explains decision making as parent leadership and participation in such issues as curriculum, security and staff. This difference revealed with the participant opinions is because parent involvement is not allowed due to the centralized structure of Turkey's educational system and the fact that schools are not

autonomous. The study conducted by Erdogan and Demirkasimoglu (2010) supports this view. In their study, it was indicated that participants did not have opportunities to participate in the process of education due to the centralized structure of the educational system and that parents were mostly invited to the schools for such reasons as providing supplies. In their study, Kartal (2008) found that, based on the legislation on education, the issues that parents have a say in are limited to committee jobs related to student quotas and transfers. This result indicates the hierarchical structure that schools have.

Finally, different from what Epstein (1995) meant with collaboration with community, it was found that participants consider this theme only as being involved in the activities to be carried out during the summer holidays. However, what Epstein meant with this theme is various activities carried out for the community. This result could be considered as a Turkey-specific result. Because whilst in Erdogan and Demirkasimoglu's (2010) study, activities towards collaborating with community are considered to include "earthquake drills, health scans, training and seminar supports from universities, free literacy courses for families, examination preparation courses, aids from municipalities and social welfare institutions for poor families," it was found that such practices were very limited and that collaboration with community cannot be established. In addition, parallel to the studies conducted (Cooper et al. 2009; Lee & Bowen 2006), it was found that in schools with high socio-economic status, parent involvement in the process of education was higher.

When the findings are considered, it is understood that there are differences in parent involvement in the educational process between public and private schools. Private schools organize more activities on the themes that determine parent involvement in education. The reason behind the fact that public schools organize fewer activities for parents compared to private schools could be that teachers and school management are required to spend more time and effort to involve parents in the process. Particularly, it was found that the parents of the students in private schools could communicate with the teachers more easily compared to the parents of the students in public schools. The reason behind this could be that in addition to the financial support from the government, parents in private schools pay for the educational activities these schools provide.

In order to increase parent involvement in education, the guidance services at schools should be used more functionally. For example, needs analysis towards determining the needs of the parents and the students in their school life should be made, and based on the results of the analysis, programmes to support parent involvement in education should be prepared. It is observed that there are deficiencies in the involvement of parents with socio-economic disadvantages in the process of education. It is believed that informative meetings to be organized for the parents of the students coming from such families should contribute to their involvement in education. In these meetings, parents should be informed of the importance of family in academic success with examples. In addition, to ensure more parental involvement in the decision-making process, school management should

encourage participation and carry out studies towards making decisions together with families.

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Sosyo-Ekonomik Durumları Bakımından Ailelerin Eğitime Katılımı

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Özet

Problem Durumu: Ailelerin eğitime katılımı, eğitimin niteliğini arttırmaya yönelik etkenler arasında en önemlilerinden biri olarak değerlendirilmektedir. Yapılan çalışmalarda aile katılımının çocuğun öğrenmesini ve akademik başarısını arttırdığı ortaya çıkmıştır. Türkiye’de 1739 sayılı Milli Eğitim Temel Kanunu’nun 16. maddesi ile okul aile işbirliğinin hayata geçirilmesi amaçlanmaktadır. Diğer bir ifadeyle ailelerin eğitim sürecine katılımı yasal olarak da desteklenmektedir. Aile katılımı, ailelerin desteklenmesi, eğitilmesi ve eğitime katılımlarının sağlanması; çocukların eğitsel ve akademik deneyimlerinin artırılması, evleri ile eğitim kurumları arasındaki iletişimin kurulması ve sürdürülmesi yoluyla geliştirilmesi yanında, eğitim programlarının ailelerin katılım ve katkıları ile zenginleştirilmesi gibi uygulamaları kapsayan sistematik bir yaklaşımdır. Bu katılımı etkileyen etkenlerden biri de ailelerin sosyo-ekonomik düzeyleridir. Yapılan çeşitli çalışmalarda ailelerin sosyo-ekonomik düzeyleri öğrencilerin okula kaydolmasını, katılımını, akademik başarısını etkilediği sonuçlarına ulaşılmıştır. Günümüzde ailenin eğitime katılımı konusunda pek çok araştırması bulunan ve önemli bir isim haline gelmiş Epstein aile katılımı konusunda “ebeveynlik”, “iletişim”, “gönüllülük”, “evde öğrenme”, “karar alma”, “toplumla işbirliği” olmak üzere 6 tema sunmaktadır. “Ebeveynlik”, ailenin öğrencinin okul başarısını teşvik etmek için sıcak ev ortamı oluşturmasında, öğrencinin öğrenim seviyesi ve yaşına uygun sağlık, beslenme ve eğitim gibi ailenin yükümlülükleri arasında bulunan konularda aileye yardımcı olmaya yönelik etkinlikleri kapsamaktadır. “İletişim”, ev ve okul arasında, okul programı ve çocuğun gelişimi hakkında bilgi akışına olanak tanıyan bir iletişimdir. Buna göre öğretmen ve yöneticiler velilere öğrencilerin okuldaki gelişimleri hakkında sistemli biçimde bilgi sunmalıdır. Okulda düzenli yapılan toplantılar, evlere formların yollanması, internet ya da telefon yoluyla velilerin bilgilendirilmesi bu etkinlikler

içerisinde sayılabilir. “Gönüllülük” ailelerin okuldaki veya sınıftaki etkinliklere destek ve yardımcı olmaları için organize olmaları ve istihdam edilmeleri olarak tanımlanabilir. “Evde öğrenme” velilerin öğrencilerin ödevlerine, ders etkinliklerine, planlarına evde nasıl yardım edeceği konusunda ailelere bilgi verilmesi, seminerler, konferanslar hazırlanması, okulda aile okuma etkinliklerinin düzenlenmesidir. “Karar alma” yönetici ve öğretmenlerin, velilerin okulda alınan kararlara en üst seviyede katılmasını sağlamaları şeklinde tanımlanabilir. Bunun için okulda alınan kararlara aileyi katmak, okulda velinin temsilci ve lider olmasını geliştirmek yönetimin ve öğretmenin görevidir. “Toplumla İşbirliği” bu kategori okul programlarının toplumun yardımı ile güçlendirilmesine ve toplumun sağlığı ve kültürünün güçlendirilmesine yönelik bilgilerin öğrencilere aktarılmasına işaret etmektedir. Bunun gerçekleşmesi için öğrenciler, veliler ve okul yönetimiyle birlikte topluma hizmet (örneğin geri dönüşüm, resim, müzik, drama, gibi etkinlikler) etkinlikleri yapabilirler. Ayrıca mezunların işbirliği ile etkinlikler yapılması da bu tema kapsamında yapılabilecekler arasında sayılmaktadır.

Araştırmanın Amacı: Ailenin katılımının anlamı ve önemi konusu bu çalışmanın hareket noktasını oluşturmakla birlikte, ailelerin sosyo-ekonomik durumları bakımından okullardaki eğitim faaliyetlerine katılımlarının düzeyinin saptanması bu çalışmanın temel amacıdır. Devlet okullarıyla özel okullar arasında ailenin eğitim sürecine katılımı arasında fark olup olmadığı da araştırılan konulardan biridir. Buna göre, araştırmanın amacı, kamu ve özel ilköğretim ve ortaokullarda ailelerin sosyo-ekonomik durumları bakımından eğitim sürecine katılımlarına ilişkin yönetici, öğretmen ve veli görüşlerinin neler olduğunun incelenmesidir. Bu genel amaç doğrultusunda şu soruya yanıt aranmıştır: Öğretmen, yönetici ve veli görüşlerine göre kamu okullarında ve özel okullarda ailenin eğitim sürecine katılımları ebeveynlik, iletişim, gönüllülük, evde öğrenme, karar alma, toplumla işbirliği temalarında nasıldır?

Araştırmanın Yöntemi. Araştırmada kullanılan veri toplama teknikleri doküman incelemesi ve görüşme yöntemidir. Çalışmada “sosyo-ekonomik durumları bakımından ailelerin eğitim sürecine katılımı” durumu, görüşme ve doküman incelemesi alt birimlerine ulaşılarak incelenmiştir. Araştırmada kullanılan e-gazeteler, forumlar, internet sitesinde yayımlanan haberler ve duyurular doküman niteliği taşımaktadır. Araştırmanın çalışma grubunun, Muğla Menteşe ilçesinden seçilen toplam 7 kamu ilköğretim ve ortaokulunda görev yapan 7 öğretmen, 3 yönetici ve bu okullarda çocukları öğrenim gören 6 veli ve Muğla İli sınırları içinde bulunan 2 özel ilköğretim ve ortaokulda görev yapan 4 öğretmen, 1 yönetici ve bu okullarda çocukları öğrenim gören 3 veliden oluşmaktadır. Araştırmada çalışma grubu, amaçlı örnekleme yöntemlerinden maksimum çeşitlilik örnekleme ile belirlenmiştir. Araştırmada elde edilen verilerinin çözümlenmesinde NVivo8 paket programı kullanılmış ve betimsel analiz tekniğinden yararlanılmıştır.

Araştırmanın Bulguları: Bulgular, betimsel analiz yaklaşımı ile sunulmuştur. Araştırma sonuçlarına göre farklı sosyo-ekonomik yapıdan gelen velilerin eğitim sürecine katılımı konusunda farklı görüşleri olmadığı sonucuna ulaşılmıştır. Bununla birlikte kamu okullarında ailelerin sosyo-ekonomik düzeyi yüksek olsa bile, okul aile

etkileşimi, özellikle ebeveynlik konusundaki eğitimlerin çok sistemli olmaması nedeniyle, istenilen düzeyde değildir. Velilerin okulla iletişim kurma nedenleri, öğrencinin akademik başarısını ve öğrencinin kişisel gelişimi değerlendirmek olarak belirlenmiştir. Hem kamu okullarında hem de özel okullarda, ailelerin kararlara katılımı ailelere sadece fikirlerinin sorulması şeklinde gerçekleştiği saptanmıştır. Özellikle sosyo-ekonomik durumu iyi olan velilerin eğitim sürecine katılım konusunda istekli ve aktif olduğu sonuçlarına ulaşılmıştır.

Araştırmanın Sonuçları ve Öneriler: Özel okullar, ailelerin eğitim sürecine katılımlarını belirleyen temalar ile ilgili daha fazla etkinlik yapmaktadırlar. Özellikle özel okulda eğitim alan çocukların velilerinin kamu okullarında eğitim alan çocukların velilerine kıyasla öğretmenleri ile daha kolay iletişime geçtikleri belirlenmiştir. Ailelerin eğitim sürecine katılımını arttırmak için okullarda bulunan rehberlik servislerinin daha işlevsel olarak kullanılması gerekmektedir. Örneğin aile ve öğrencilerin okul yaşantılarına ilişkin ihtiyaçlarını saptayıcı analizler yapılmalı, analiz sonuçlarına göre de özellikle ailelerin eğitim sürecine katılmalarını destekleyen programlar düzenlenmelidir. Sosyo-ekonomik açıdan dezavantajlı olan ailelerin eğitim sürecine katılımlarında eksiklikler olduğu gözlemlenmiştir. Bu ailelerden gelen öğrencilerin ailelerine eğitim sürecine katılım konusunda okul yönetiminin düzenleyeceği bilgilendirme toplantılarının ailelerin eğitim sürecine katılmaları konusunda katkı getireceği düşünülmektedir. Özellikle bu toplantılarda öğrencinin akademik başarısında ailenin önemi örneklerle açıklanarak anlatılmalıdır. Ayrıca, ailelerin kararlara katılımının daha fazla olabilmesi için okul yönetiminin katılımcılığı desteklemesi ve kararların veliler ile birlikte alınması için çalışmalar yapması gerekmektedir.

Anahtar Kelimeler: aile-okul ilişkileri, akademik başarı, düşük gelir, sosyo ekonomik düzey.

Views on Montessori Approach by Teachers Serving at Schools Applying the Montessori Approach

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Abstract

Problem Statement: Further studies on Montessori teachers are required on the grounds that the Montessori approach, which, having been applied throughout the world, holds an important place in the alternative education field. Yet it is novel for Turkey, and there are only a limited number of studies on Montessori teachers in Turkey.

Purpose of Study: The aim was to investigate views on the Montessori approach by the teachers who serve at the schools applying the Montessori approach.

Methods: Research data was collected by the basic qualitative research, one of the qualitative research methods. Descriptive analysis method was used in analysis of the qualitative data. Nine teachers serving at three different schools in Ankara province applying Montessori approach were interviewed.

Findings and Results: Eight main themes were determined upon data analysis; namely, education on Montessori approach, basic qualities required for teachers applying Montessori approach, adequacy of education on Montessori approach, in-service training on the challenges experienced by Montessori teachers, plans of teachers for self-

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development, following existing studies in Turkey on Montessori approach, views on studies on Montessori approach, and views on the criticisms towards Montessori approach.

Conclusions and Recommendations: All teachers confirmed that they internalized the approach upon training in line with Montessori philosophy. They emphasized that they received training covering all the educational fields, yet the implementation dimension was inadequate due to training without the involvement of children. Furthermore, they suggested that all the schools in Turkey were opened by commercial motives, and as such these schools failed to comply with the standards of the institutions providing education on the basis of Montessori approach. They asserted that all criticisms towards Montessori approach would be proved to be groundless upon implementation of the approach. It was seen that experienced supervisors, in-service training, and scientific studies on Montessori approach were required.

Keywords: Alternative education, Montessori approach, Montessori teacher, early childhood education

Introduction

There is a vast body of studies on early childhood education in developed and developing countries. Based on the results of the said studies, several education systems were developed with the purpose of providing quality care and education services beginning from children's birth (Morrow, 2007; Whitehead, 2010). The Montessori approach is one of the aforementioned educational systems. Having first been developed by Maria Montessori in 1907, the so-called Montessori approach has taken an important place in the field of alternative education and has been in many centers throughout the world (Lopata, Wallace, & Finn, 2005). The approach emerged in an attempt to improve the cognitive levels of underdeveloped children focusing on sensorial education and has ensured that children with special needs become more successful than normally developed children educated with other methods (Oguz & Koksal Akyol, 2006; Toran, 2011). Its subsequent implementation with normally developed children and positive advancements obtained therewith constituted the basis for its further development in becoming widespread (Follari, 2007). In that respect, the Montessori approach has been influential in practices of educators for more than a hundred years.

Teacher notion is not meant to describe that of a traditional teacher in the Montessori approach. According to the philosophical basis of the Montessori approach, teachers have to provide children with opportunities allowing them to self-develop their personalities (O'Neil, 1997; Torrence & Chattin-McNichols, 2004) and further the developmental potential of children to higher levels (Hedeem, 2005), which requires Montessori teachers to assume a guidance role.

In order for them to assume a guidance role in the development and education of children, Montessori teachers have to receive a quality educational program. There are activities as introduced by international organizations throughout the world involving Montessori teacher education programs. Some of those organizations engaged in these programs have been accredited by the "Montessori Accreditation Council for Teacher Education-MACTE" (MACTE, n.d.). Activities for Montessori teachers are not only limited to the teachers' education activities by the international organizations. In addition, there are scientific studies on Montessori teachers (Malm, 2004; Santiago 1999; Van Acker, 2013). It was found that there were two studies in Turkey on Montessori teachers. Gulkanat's (2015) study was conducted with teachers serving at preschool education institutions giving education based on Montessori approach. As a result of the study, it was suggested that the teachers who adopted the approach based on their own preference had internalized Montessori approach more compared to the teachers who applied the approach under the instruction of the organization they were serving at. Soydan (2013) interviewed Montessori teachers with the aim of investigating the strategies employed to stimulate the sense of wonder in children. It was concluded that precision observation, prepared environment, free options, special interest, polarization of interest-concentration, and sensitive-period principles were applied by the Montessori teachers to stimulate a sense of wonder in children. A review of literature regarding Montessori approach in Turkey proved that the first study was conducted by Oktay (1987). Further studies on Montessori teachers are required on the grounds that the Montessori approach is novel for Turkey, and there are only a limited number of studies on Montessori teachers in the country.

In light of all the above-stated conditions, the questions below were assessed based on teachers' views in the present study, which aimed to investigate views on Montessori approach by teachers serving at schools applying Montessori approach.

- How are the teachers educated in the Montessori approach in Turkey?
- How should Montessori education and teachers be according to the Montessori teachers?
- How are educational activities and applications of Montessori approach conducted in Turkey?

Method

Research Design

The basic qualitative research method, a qualitative research method, was used in the study. This method is the most commonly used qualitative research method in education, and it allows explanation and interpretation of a phenomenon by collecting observations, interviews, or document analyses (Merriam, 2009). The present study sought to understand the views on Montessori approach by the teachers serving at schools applying the approach in Turkey, based on data collected via interviews. Therefore, the basic qualitative research method was applied.

Research Sample

The study group is comprised of nine teachers serving at schools applying Montessori approach. Teachers were selected by purposive sampling. Purposive sampling allows in-depth investigation of situations with rich information (Patton, 1997). Teachers were enrolled in the study on the conditions that they served at schools applying the approach and that they were voluntarily participating. Entirely composed of female teachers, the participants were aged between 20 and 30 years (n=7) and 30 and 40 years (n=2); four participants served at the special daycare of the Ministry of Family and Social Policies.

It was seen that the teachers had graduated from license programs, associate degree programs, and high schools. Participants with a license degree graduated from child development (n=3), preschool teaching (n=1), psychological counseling and guidance (n=1), and social services (n=1) departments; participants with an associate degree graduated from child development (n=2) departments, and the participant with a high school degree graduated from a child development (n=1) department. Furthermore, three participants had completed master's degree.

The experiences of the participants with Montessori approach were three years (n=4), five years (n=2), ten years (n=1), and one year (n=1). Participants had attended symposia, congresses, or meetings on Montessori approach, namely the Symposium on Early Childhood Montessori Education Applications, 2014 (n=5), Emel Cakiroglu Wilbrandt's⁵ meetings and applications (n=4), and the Binbir Cicek Foundation Montessori Seminar (n=3). Moreover, the participants had read books, including Emel Cakiroglu Wilbrandt's books on Montessori approach (n=5), books authored by Maria Montessori (n=5), and Paul Polk Lillard's "Montessori from the Star" (n=1).

Research Instrument and Procedure

A semi-structured interview form was used in the study. Interviews in qualitative research can be made in structured, semi-structured, or unstructured ways (Punch, 2005). Relevant main titles were generated in developing the interview form, such as "basic qualities required for teachers applying Montessori approach," "adequacy of education on Montessori approach," "studies in Turkey on Montessori approach," and "criticisms towards the Montessori approach." The items included in the interview form were adjusted after the views of two academics and an educator

⁵ Emel Cakiroglu Wilbrandt: First received Montessori education at Ingolstadt Pedagogic Academy in 1992/1993. Attended a "Montessori Nursery School and School Education" postgraduate course in the scope of alternative educations at the Pedagogy Department of Eichstatt University and conducted research on Montessori school education. Acquired the Association Montessori Internationale (AMI) diploma at a seminar held by the International Montessori Institution at Munich Children's Center in 1994/1995. In 1995 was involved in activities in Istanbul, such as an inclusive nursery school and rehabilitation center for "Binbir Cicek Foundation for Children with Mental Disabilities," trainers' trainings, and use of Montessori education in individual inclusive programs. Received training on Montessori therapy from Lore Anderlik, one of the founders of Montessori therapy in Munich. Wrote "Art of Child Education by Maria Montessori Method" in 2009. Currently continues her activities and seminars.

serving in the field were collected. In its final form, the interview was composed of eight items covering personal information and six items regarding the approach.

Research data was collected during November and December in 2014, in Ankara. Official permissions were obtained from the authorities for data collection purposes before the interviews. Researchers visited the schools applying Montessori approach and briefed all the teachers in the said schools, upon which teachers, who volunteered to participate in the study were identified. In order to set aside disagreement, all interviews were made by the same researcher. Permission to use a voice recorder was obtained from all the participants to rule out incomplete or wrong data collection. Interviews were made in an appropriate and silent venue in the schools and lasted for 30-60 minutes.

Data Analysis

Voice recordings of the interviews were decoded by a researcher. All the interviews were then read by all the researchers. The word repeating technique was used for data analysis. Items that were included in the interview form were taken as a basis for determining the main themes. Furthermore, additional questions addressed by the participant or the researcher and the answers were also included in the titles. The analysis was based on eight themes, namely:

- Education on the Montessori approach;
- Basic qualities required for teachers applying the Montessori approach;
- Adequacy of education on the Montessori approach;
- In-service training towards the challenges as experienced by Montessori teachers;
- Plans of teachers for self-development;
- Following studies in Turkey on the Montessori approach;
- Views on studies on the Montessori approach; and
- Views on criticisms towards the Montessori approach.

Similar words and word groups were listed for each theme, original statements were noted, and the frequency of such statements was determined. All answers of the participants were included in the study, and all the data was used. As for the reliability of the research, the interviews were interdependently reviewed and coded by three researchers, and the codes were then reviewed by two specialists. The reliability of the coding was calculated using the "Reliability = (Agreement / Agreement + Disagreement) x 100" formulation by Miles and Huberman (1994) and found to be 93.8%. A study is considered reliable if such value is higher than 70% (Miles & Huberman, 1994). One-to-one citations were made from the participant views for the validity of the agreement. The participants were coded as MT1 (Montessori Teacher), MT2, MT3 . . . in order of interview time, and their views were included in the findings section.

Results

Views on Montessori approach by the teachers working at schools applying the approach were listed under subgroups, and the same views were expressed in common sentences. Teachers' views were both supportive of each other and contradictory, suggesting different perspectives.

Education on the Montessori approach. Education on Montessori approach was reviewed in two subtitles as theory and practice. More sub-themes were created for the practice section.

All teachers applying Montessori approach stated that they had training in the said approach. Teachers received training in the scope of a project (n=4), in groups at the organization they were serving (n=3), by attending Binbir Cicek Foundation's 150-hour certificate program (n=1), and at an education institution in the USA as accredited by AMS (n=1), and started to work in schools applying Montessori approach.

Topics of the teachers' theoretical education included the philosophy of Montessori approach (n=9), all branches such as Mathematics, Science etc. related to Montessori education (n=5), Montessori's life (n=2), classroom management in education based on Montessori approach (n=2), historical development of Montessori approach (n=1), and daily life in Montessori education (n=1).

Teachers practiced Montessori education by themselves in Montessori classes without children (n=2). The trainers introduced the Montessori materials (n=6), and the teachers proceeded step by step learning how to use the said materials (n=5). A teacher who studied in the USA said that she had a traineeship period of one year under a certified Montessori teacher and practiced for approximately 840 hours.

Basic qualities required for teachers applying Montessori approach. The teachers asserted that teachers giving or to give education based on Montessori approach should have a personal disposition for the approach (n=1), should be individuals who love, respect, and tolerate children (n=3), who refrain from providing children with correct/wrong feedback and warnings (n=3), and who guide children with an understanding of their potential (n=4). Again, it was stated in general that teachers giving education based on Montessori approach should be patient (n=5).

MT1 clarified being patient as: *"Teacher should act slower in activities. For instance, since I used to conduct an activity in a quick way, I occasionally experience difficulties in Montessori practices."*

MT3 emphasized that the teacher should be a good observer (n=4) and said, *"Unlike the traditional education understanding, the teacher should watch/see/assess what and how the children do things. In my education based on Montessori approach, I expect the child to realize his or her mistakes and make a diagnostic check. Montessori teachers should speak less and watch well."*

Furthermore, participants emphasized that a Montessori teacher should not have compulsory activities to implement (n=2) and like nature and animals (n=1).

Adequacy of education on the Montessori approach. When asked “Do you find your education on Montessori approach adequate?” the teachers replied No (n=2) and Yes (n=7). One of the teachers who found it inadequate (n=2) said that the teachers should improve themselves on a continuous basis, and the other said she failed to complete a part of Montessori materials.

Teachers who found the education adequate (n=7) said that they received a rather comprehensive education (n=2), the education was adequate in both theoretical and practical terms (n=2), and especially the work with Emel Cakiroglu Wilbrandt, who gave education on Montessori approach in Turkey, had created educational awareness (n=2). They added that the education was reinforced by practice (n=4), and they wanted to observe children when they were to use all the materials (n=2).

MT5 said, “*The practice was held in a milieu without children. My adequacy towards Montessori approach might be improved if the practice was held in a venue with children. Unfortunately, there is no opportunity in Turkey to have school observation.*”

The teachers underscored that they saw the adequacy of education in the classroom when they realized that they did not experience any difficulty in presenting and using the materials (n=3), and they referred to the notes they had taken during training in case they experience difficulties (n=2).

MT8 said that she realized the adequacy of her education when “*She implemented the same in her own life.*” MT3 emphasized that the education in Turkey was available for the 3–6 age group (n=3) and that “*I am curious about the 0–3 years age group education; I would like to receive education about the primary education implementation of the approach in the future.*”

In-service training towards the challenges as experienced by Montessori teachers. MT7, who received education in Montessori approach, emphasized that they had no in-service training (n=5) and that “*I wish there was somewhere I could receive (in-service training); I need supervision in certain fields, but there is no opportunity in Turkey in that regard. Currently I am rather engaged with consultancy.*”

Teachers, who confirmed that they had in-service training (n=4) said they have received such training from specialist teachers (n=3) and at symposia (n=3). The topics of in-service training included materials (n=2), children (n=2), budget (n=1), and practices in different institutions (n=1).

Plans of teachers for self-development. Teachers giving education according to Montessori approach stated that they wanted to receive education in foreign countries in the future (n=3), open their own schools (n=2), have a post-graduate degree in this field (n=2), and conduct observation at schools opened by specialists and experienced Montessori teachers (n=2).

MT1 disclosed her prospective plan, “*I also want to open a school of my own. Now, I want to make up for my educational deficiencies and open the school within two years.*”

MT3 said, “*I will visit the USA in June for a six-week training aimed at the 0–3 years age group.*”

Besides such plans, teachers wanted to become members of associations or groups (n=1), specialize in mathematics activities and cosmic education in Montessori education (n=1), and above all fully complete their education in Montessori approach (n=1). One teacher said she was content with following the new publications and videos on the activities and developments outside Turkey.

Following the studies in Turkey on the Montessori approach. Whereas two teachers said they were not following the studies on Montessori approach in Turkey, those who confirmed that they were following the studies (n=7) said that they tried to access the relevant information via books (n=3), educational activities (seminar, course, symposia, etc.) (n=3), and the Internet (n=2).

Participant MT7 said she was interested in the scientific studies on the subject and that *"Academic studies generally focus on the comparison between children receiving education based on Montessori approach and children attending other schools. On-site studies are important for the Montessori schools with a rather limited implementation field and even for extending the resources. I follow studies with the said purpose."*

Views on studies on the Montessori approach. Teachers stated that they found introductions on Montessori approach insufficient (n=3), that the Ministry of National Education should support this approach (n=2), and that primary schools based on this approach should be opened (n=2).

Having said that, thanks to recent education studies in Turkey, Montessori and Montessori approach have come to be better known (n=2). MT2 emphasized, *"Especially, new activities have been conducted in Turkey about Montessori approach. Activities and symposia held in recent years are a good development. Although the number of new schools is not sufficient, these are positive for their development."*

Teachers also emphasized that the schools were opened by commercial motives (n=3). MT8 stated: *"The new schools do not have all the materials, there is no faucet, space is not sufficient. They hang a Montessori label at their gates, yet when you enter as deceived by the photograph, you encounter educators who even fail to assimilate the philosophy of the education and who have inadequate training. And so we see organizations opened solely by commercial motives."*

Views on criticisms of the Montessori approach. The teachers identified the sources of criticism against Montessori approach as lack of knowledge as regards how to conduct education based on the materials (n=4), restriction of children's creativity (n=4), and not allowing imaginary play (n=3). Nevertheless, they affirmed that such criticisms were based on the fact that Montessori approach was a largely unknown system (n=5) and on biases (n=3) and that criticism would fade when people get familiar with the approach, since they were following the Ministry of National Education program (n=4). The teachers expressed their views on the above issue as follows:

MT1; *"I also had biases. Now I can see that a child could engage in an activity for four-five minutes."*

MT5; *“There are many criticisms against this approach in Turkey. They think that children cannot do the activities by themselves. They think that Turkish parents will experience difficulty in this education since they tend to intervene continuously. I think these biases will fade away thanks to the activities.”*

MT3: *“I thought during the first workshop activities for Montessori approach that activities based on this approach were not feasible, as so many friends attending the course with me thought the same. I thought that children would not engage in the activities, that it was impossible to show interest in each and every child in a wide group, and that freedom and negative behaviors would increase. However, now I can see in this process that there are materials in which each child can show an independent interest, and that there is no need for extra activities or lack of materials. I have seen that children can learn by themselves, and we can use all our energy to guide the student. I understand the criticism of people who are not present at the practical dimension. This is because of the fact that this is an approach whose value one cannot realize without working on it.”*

In light of the findings above, the views of teachers on Montessori approach were discussed below also taking into consideration different studies on the approach.

Discussion and Conclusion

All participants confirmed that they received training on the philosophy of the Montessori approach. Moghni, Zailoni, and Fernando (2010) argued that the most important characteristic of Montessori method was the fact that the method was established on a particular educational philosophy. Therefore, training on the philosophy of Montessori approach should be considered positive for understanding and implementing the approach.

Most of the participants said that they were trained in all the fields. Studies in the relevant literature investigate the effect of the approach on child development based on the five basic activity fields, namely Everyday Living Skills, Sensorial Activities, Mathematics Activities, Language Activities, and Cosmic Education Activities (universal learning activities) (Arslan, 2008; Durakoglu, 2011; Lillard, 1988; Yigit, 2008). It should be thus concluded that the required infrastructure has been established thanks to the teachers' training in basic activity fields and understanding of basic fields.

In Montessori classes, children are allowed to engage in the activities and use other fields in the school that they want (Kayili & Ari, 2011). The necessary environment is made available for children so they can pick the activity they want to engage in (Mutlu, Ergisi, Butun Ayhan, & Aral, 2012). Most of the teachers stated that as for the practical dimension of the education, they have learned how to use the materials step by step under the guidance of trainers. All teachers, except for one, underscored that they received practical training in classrooms without children. This can be considered a disadvantageous situation on the grounds that the teachers lacked the opportunity to observe how children used and selected the materials and how children used the spaces.

Montessori (1950) emphasized that it was the material and not the teacher that was essential in Montessori schools (as cited in Durakoglu, 2010). In such an approach, the task of the teacher is not easy, although it is limited. Above all, the teacher is expected to be attentive, not in need of verbal communication, having a special skill in observation, assistance, and keeping silent, and additionally being patient, calm, and modest. While defining the required attributes of the teachers, the participants suggested views, as presented in the findings section above, parallel to the relevant literature. Especially, more than half of the teachers agreed that Montessori teachers should be patient, and they focused on such attributes as tolerance, less intervention, and observer attitude. One of the participants also underscored the fact that personal disposition was also required to become a Montessori teacher. It could be considered an important finding that the participants had views parallel to that of Montessori as to the required attributes of a Montessori teacher.

The materials made available to children and the activities they pick in line with their fields of interest suggest that the programming is built on the interests of children rather than those of the adult (Isaacs, 2007). Although the teachers considered their education adequate, almost all the teachers, having understood the said aspect of the practical dimension of the approach, stated the fact that children were not involved in the practical phase during their education in Turkey was a disadvantage. However, they confirmed that practice without children also made an important contribution as they realized during their activities at schools.

The relevant studies agree upon the suggestion that the most important part of the designing and implementation of the in-service training activities is determining the needs (Gokdere & Cepni, 2004). According to the teachers' views, more than half of the teachers said they did not receive any in-service training, and the rest received only a limited number of trainings. The consensus was that there was a need for professional in-service training activities.

For a school can be accepted as a Montessori school, it must be recognized by a Montessori Association. There is no school in Turkey complying with the above requirement. Therefore, there is no formally recognized Montessori school in Turkey. As a matter of fact, the International Montessori Association has not listed Turkey among the countries having Montessori schools (Durakoglu, 2010). The fact that three of the interviewed teachers stated that the schools in Turkey were opened by commercial motives and failed to comply with the standards of the schools giving education based on Montessori approach suggests that activities with an aim to have Turkey listed within the countries with international Montessori schools should be conducted.

Despite the criticisms against the Montessori approach that the approach restricts the creativity of children, relevant studies have suggested the contrary (Brophy & Choquette, 1973). Similarly, four participant teachers received criticisms that the approach undermined creativity, and three teachers received criticisms that the approach did not allow imaginary play. The major criticism against Montessori program in a study by Katz (1990) was that structured materials and restricted tasks

would undermine creativity. Further criticism included that Montessori method impeded the children's social development, that it was an excessively controlled education since the teachers practiced it in line with their own perception, and that children had to use a limited number of materials that needed to be preserved each year. The participant teachers emphasized that they received similar criticisms in Turkey, but felt these would be proved to be groundless after it was practiced.

The present study provided views on the teacher dimension of the Montessori approach and the practical dimension of the Montessori approach in Turkey. In the light of the participant teachers' views, taking into consideration that the alternative approach has been implemented only for the 3-6 years age group in Turkey, an education activity on Montessori approach with world standards of the theoretical and practical dimensions also involving the 0-3 years age group and primary education levels should be considered a requirement moving forward. Such an educational activity in Turkey is important in order to comply with the worldwide Montessori approach standards.

Teachers emphasized the need for experienced supervisors and teachers for the in-service training activities in Montessori approach. Furthermore, the participant teachers asserted that there were only a very limited number of scientific studies on Montessori approach in Turkey. Therefore, it can be said that there is a need for such publications in the form of journals, books, and articles, etc., which would guide the theoretical and practical dimensions of the approach.

It was understood that Montessori approach was criticized in Turkey without any practical experience of it and that claims that the approach was not feasible and undermined creativity could be disproved by the very activities based on Montessori approach.

The Montessori approach requires good guides and supervisor teachers. Based on the fact that the participant teachers expressed their inadequacies on certain points, the qualitative level of the teachers and activities in Turkey can be improved with the support of the International Montessori Association.

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Montessori Yaklaşımını Uygulayan Okullarda Çalışan Öğretmenlerin Montessori Yaklaşımına İlişkin Görüşleri

Atıf:

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Özet

Problem Durumu: Alternatif eğitim alanında önemli bir yere sahip olan ve dünyanın birçok yerinde uygulanan Montessori yaklaşımının Türkiye için yeni ve Montessori öğretmenleriyle ilgili araştırmaların sınırlı sayıda olması nedeniyle Montessori öğretmenleriyle ilgili araştırmaların yapılmasına ihtiyaç duyulmaktadır.

Araştırmanın Amacı: Türkiye’de Montessori yaklaşımını uygulayan okullarda çalışan öğretmenlerin, Montessori yaklaşımına ilişkin görüşlerini incelemek amacıyla planlanan araştırmada, aşağıda yer alan sorular öğretmen görüşlerine göre değerlendirilmeye çalışılmıştır.

- Türkiye’de Montessori yaklaşımına yönelik öğretmenler nasıl yetiştirilmektedir?
- Montessori öğretmenlerine göre Montessori eğitimi ve öğretmeni nasıl olmalıdır?
- Türkiye’de Montessori yaklaşımına yönelik eğitim çalışmaları ve uygulamalar nasıl yürütülmektedir?

Araştırmanın Yöntemi: Araştırmaya ilişkin veriler nitel araştırma yöntemlerinden, temel nitel araştırma ile toplanmıştır. Nitel verilerin analiz edilmesinde, betimsel analiz yöntemi kullanılmıştır. Araştırmada, Ankara ilinde bulunan ve Montessori yaklaşımını uygulayan üç farklı okulda çalışan dokuz öğretmenle görüşme yapılmıştır.

Araştırmanın Bulguları: Montessori yaklaşımını uygulayan okullarda çalışan öğretmenlerin, Montessori yaklaşımına ilişkin görüşleri alt başlıklar altında toplanıp aynı görüşler ortak cümleler ile verilmiştir. Öğretmen görüşlerinin, hem birbirini destekler nitelikte olduğu hem de birbiriyle çatışan farklı bakış açılarını ortaya koyan nitelikte olduğu görülmüştür. Veri analizi sonucunda bulgular sekiz başlık altında toplanmıştır;

Montessori yaklaşımına yönelik alınan eğitim. Montessori yaklaşımına yönelik alınan eğitim teori ve uygulama olmak üzere iki alt başlıkta incelenmiştir. Uygulama kısmıyla ilgili daha fazla alt tema oluşturulmuştur.

Montessori yaklaşımını uygulayan öğretmenlerin tümü, bu yaklaşıma yönelik eğitim aldıklarını belirtmiştir. Öğretmenler eğitimlerini; üniversitede proje kapsamında (n=4), çalıştıkları kurumda grup şeklinde (n=3), Binbir Cicek Vakfı'nın 150 saatlik sertifika programı (n=1) ve ABD'de AMS'de-akretide eğitim (n=1) olarak Montessori yaklaşımını uygulayan okullarda çalışmaya başladıklarını ifade etmiştir.

Öğretmenler teorik olarak aldıkları eğitimde; Montessori yaklaşımının felsefesi (n=9), Montessori eğitimiyle ilgili matematik, fen vb. bütün alanlar (n=5), Montessori'nin hayatı (n=2) Montessori yaklaşımına yönelik eğitimde sınıf yönetimi ve sınıftaki çalışma alanları (n=2), Montessori yaklaşımının tarihsel gelişimi (n=1), Montessori eğitiminde günlük yaşam (n=1) konularıyla ilgili bilgi verildiğini belirtmiştir.

Öğretmenler Montessori yaklaşımına yönelik eğitimin uygulamasını, çocukların olmadığı Montessori sınıflarında kendileri uygulamıştır (n=2). Montessori materyallerini eğitimcilerin tanıttığını (n=6) ve materyallerin nasıl kullanıldığını öğrenerek, aşama aşama ilerlediklerini (n=5) belirtmişlerdir. ABD'de eğitim alan bir öğretmen ise sertifikalı Montessori öğretmeni yanında bir yıllık staj aldığını, yaklaşık 840 saat uygulama yaptığını vurgulamıştır.

Montessori yaklaşımını uygulayan öğretmenlerin sahip olması gerektiği özellikler; Montessori yaklaşımı doğrultusunda eğitim yapan/yapacak öğretmenlerin bu yaklaşımı uygulamaya yönelik kişisel yetkinliklerinin olması gerektiği (n=1), çocukları seven, saygı duyan ve hoşgörü gösteren (n=3), çocuklara doğru/yanlış dönütler vermekten ve uyardıktan sakınan (n=3), rehberlik edip çocukların potansiyelinin farkında olan (n=4) bireyler olması gerektiğini belirtmişlerdir. Yine genel olarak, Montessori yaklaşımına göre eğitim yapan öğretmenlerin sabırlı olması gerektiği ifade edilmiştir (n=5).

Montessori yaklaşımı ile ilgili alınan eğitimin yeterliliği. "Montessori yaklaşımıyla ilgili aldığınız eğitim yeterli mi?" sorusuna, hayır (n=2), evet (n=7) yanıtı veren öğretmenlerden; aldıkları eğitimin yetersiz olduğunu düşünenlerden (n=2) biri öğretmenin sürekli kendisini geliştirmesi gerektiğini belirtirken diğeri ise Montessori materyallerinin bir kısmını tamamlayamadığını belirtmiştir.

Alınan eğitimin yeterli olduğunu belirten öğretmenler (n=7); oldukça kapsamlı bir eğitim aldıklarını (n=2), teorik ve uygulama olarak verilen eğitimin yeterli olduğunu (n=2), özellikle Türkiye'de Montessori yaklaşımına yönelik eğitim veren Emel Cakıroglu Wilbrandt ile çalışmanın eğitim açısından farkındalık oluşturduğunu (n=2) belirtmişlerdir. Alınan eğitimin uygulamada pekiştiğini (n=4), bütün materyalleri çocukların olduğu bir ortamda onlar kullanırken gözlemlemek istediklerini (n=2) açıklamışlardır.

Öğretmenler alınan eğitimin yeterliliğini sınıfta çocuklarla çalışırken, materyalleri sunma ve kullanmada problem yaşamadıklarında fark ettiklerini (n=3) zorlandıkları noktalarda ise eğitim sırasında aldıkları notlara başvurduklarını (n=2) ifade etmişlerdir.

Montessori öğretmenlerinin güçlük çektikleri alanlarda aldıkları hizmet içi eğitimler. Öğretmenlerin yarısından fazlası hiçbir şekilde hizmet içi eğitim almadıklarını (n=5)

belirtmişlerdir. Evet, (n=4) hizmet içi eğitim alıyorum yanıtını veren öğretmenler bu eğitimi; uzman öğretmenlerden (n=3) ve sempozyumlarla (n=3) aldıklarını belirtmişlerdir. Hizmet içi eğitimlerde konu olarak, materyaller (n=2), çocuklar (n=2), bütçe (n=1), farklı kurumlardaki uygulamalar (n=1) ile ilgili eğitim aldıklarını ifade etmişlerdir.

Öğretmenlerin kendilerini daha ileriye götürecek planları. Montessori yaklaşımına göre eğitim veren öğretmenler, çalıştıkları alanla ilgili olarak daha ileriye dönük olarak yurt dışı eğitim almak (n=3), kendilerine ait okul açmak (n=2), yüksek lisans eğitimlerini bu alanda yapmak (n=2), uzmanların, deneyimli Montessori öğretmenlerinin açtığı okullarda gözlem yapmak istediklerini (n=2) ifade etmişlerdir.

Türkiye’de Montessori yaklaşımına yönelik yapılan çalışmaların takip edilmesi. Türkiye’de Montessori yaklaşımına yönelik yapılan çalışmaları, iki öğretmen takip etmediklerini belirtirken, takip ediyoruz (n=7) diyen öğretmenler konu ile ilgili bilgiye kitaplardan (n=3), eğitim çalışmalarından (seminer, kurs, sempozyum v.b) (n=3) ve internet üzerinden (n=2), çalıştıklarını belirtmişlerdir.

Montessori yaklaşımına yönelik yapılan çalışmalar hakkındaki düşünceler. Öğretmenler Montessori yaklaşımına yönelik yapılan tanıtımları yeterli bulmadıklarını (n=3), Milli Eğitim Bakanlığı’nın bu yaklaşımı desteklemesi gerektiğini (n=2), ilköğretim boyutunda da bu yaklaşım doğrultusunda okulların açılması gerektiğini (n=2) belirtmişlerdir.

Son yıllarda Türkiye’de yapılan eğitim çalışmalarıyla, Montessori ve Montessori yaklaşımının daha fazla tanınmaya başlandığını (n=2) ifade etmişlerdir. Öğretmenler ayrıca açılan Montessori okullarının ticari kaygıyla açıldığını (n=3) belirtmişlerdir.

Montessori yaklaşımına yapılan eleştiriler hakkındaki düşünceler. Öğretmenler Montessori yaklaşımına yönelik yapılan eleştirilerin kaynağını; materyallerle eğitimin nasıl yapılacağına bilinmemesi (n=4), çocukların yaratıcılıklarını kısıtlaması (n=4) ve hayali oyuna olanak tanımaması (n=3) olarak ifade etmiştir. Fakat bu eleştirilerin bilinmeyen bir sistem olmasından (n=5), ön yargılarından (n=3) ve Milli Eğitim Bakanlığı’nın programını uyguladıkları için yaptıklarını tanıdıkça eleştirilerin azalacağını (n=4) belirtmiştir.

Araştırmanın Sonuçları ve Önerileri: Öğretmenlerin tümü Montessori felsefesine uygun eğitim olarak yaklaşımı içselleştirdiklerini belirtmişlerdir. Bütün eğitim etkinlikleriyle ilgili eğitim aldıklarını fakat uygulama boyutunun çocuksuz ortamlarda yapıldığı için eksik kaldığını ifade etmişlerdir. Ayrıca Türkiye’de açılan okulların ticari kaygıyla açıldığını ve Montessori yaklaşımına göre eğitim yapan kurumların standartlarını taşımadığını vurgulamışlardır. Montessori yaklaşımına yönelik yapılan tüm eleştirilerin uygulamalardan sonra yersiz olduğunun anlaşılacağını belirtmişlerdir. Bu yaklaşıma yönelik deneyimli süpervizyonlara, hizmetiçi eğitime ve bilimsel çalışmalara ihtiyaç duyulduğu görülmüştür.

Anahtar Sözcükler: Alternatif eğitim, Montessori yaklaşımı, Montessori öğretmeni, erken çocukluk eğitimi.

An Investigation on Teacher Candidates' Perspectives about Behaviors Positively Affecting Classroom Atmosphere*

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Abstract

Problem Statement: A revision of literature shows that there are studies focusing on student and teacher perceptions of classroom atmosphere; however, no research has been found to be related to teacher candidates' perspectives on their behaviors in terms of positive classroom atmosphere. As teacher candidates are the main subject and the future organizers of the teaching environments, it is important to carry out a study on which variables of the classroom atmosphere they are aware.

Purpose of the Study: This study aims to investigate teacher candidates' points of view about teacher behaviors influencing the classroom atmosphere. Also, this research intends to determine communication strategies that teacher candidates suggest about positive and effective classroom atmospheres.

Method: At a primary school education department of a state university, third-year students were told to prepare a report about the following questions: "According to you; how should the communicative and effective classroom context affect the classroom atmosphere?, What should teachers do? Discuss these issues through examples." The study was based on 70 teacher candidates' reports about these questions. In this research, content analysis – one of the qualitative research methods – was used.

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Findings: It was seen that teacher candidates offered some strategies reinforcing a positive classroom atmosphere such as knowing students and the effective use of non-verbal messages and communication methods to struggle with unwanted classroom behaviors. In addition, it was emphasized that the teacher was an important factor in creating the classroom atmosphere. It was given importance that the classroom had to be considered as a democratic and social system and the teacher's positive personal characteristics were highlighted.

Conclusion and Recommendations: It can be said that teacher candidates are, to some extent, aware of what should be done or should not be done in creating a positive classroom atmosphere; however, there are some points that they are lacking. Pre-service teacher training programmes should be re-arranged in order to compensate for these lacking points and to guide teacher candidates to a sense of awareness in their classes. In line with this, classroom management, teaching experience and teaching practice courses in the curriculum of pre-school education programmes should be revised through theory and practice entirety.

Keywords: Communication, positive classroom atmosphere, prospective teacher, classroom management.

Introduction

Education can be defined as a communication activity. The objective of education is to be able to make a behavior change on the behalf of the receiver; therefore, if we would like to be good at influencing, training or co-operating the person we are in touch with, we should have good relationships (Yuksel, 2008). In other words, the aims of the source and the receiver; that is, between the student and the teacher, should be positive and their communication should be based on mutual, effective understanding. In such a situation, although negative feelings and opposing views have been transmitted, the main approach has been to understand and to tell; shortly, to compromise. The relationship between the source and the receiver changes into mutual confidence, value and dialogue (Basaran, 2000). Therefore; it is important to establish the framework of the teacher-student relationship on the basis of trust-value and dialogue. If it is possible to set up a contact between the teacher and the student on the principle of mutual confidence, value and dialogue, it is possible to create the ultimate classrooms. The learning process by means of positive communication will provide a platform in which the mutual confidence and understanding are strengthened, resulting in a positive classroom atmosphere.

Classroom communication is not only a process of teaching but also a process of determining interpersonal interaction (Kuzu, 2003). This is for communication and requires interpersonal skills. Teachers with good and developed interpersonal and social skills both teach well and tackle their students' misbehavior efficiently (Stemler, Elliott, Grigorenko & Sternberg, 2006). Most teachers, however, say that

they have difficulties in communicating with students and struggle with managing their behaviors, especially those who misbehave. This may derive from the fact that teachers are not equipped with a satisfactory level of interpersonal and social interaction training, although they receive systematic education on various teaching aspects of classroom management. Though this is the case, it is known that teachers' effective use of communication skills plays a key role in students' perceptions of themselves and the world around them. This will also pioneer students' effects on their environment. In line with his teacher's communication skills, the student may turn into an individual who finds himself and others important, who is sensitive to people and social problems and who can communicate efficiently. Conversely, the student may turn into an individual who is not taught to value others, who hates learning and causes personal and social problems and who becomes estranged. That is why it is vital that teachers firstly establish good contact with their students.

When we talk about communication, we generally mean transmitting a message; that is, speaking. Communication, however, is not only speaking. Communication means to know what to say, when and where to say it, and how to decide how to say it. Also, it entails presenting what we want to say in a simple, clear and fluent way through eye contact. In addition to this, we should follow if our message is well-received or not. If teachers show understanding and acceptance and provide a tolerant atmosphere for their students, the students will be given a chance to feel secure and behave accordingly. In such a relationship, the child develops in positive way, so he becomes more constructive, positive, productive and creative. When he feels that he is accepted and given importance, he also feels that he is loved.

Effective classroom management is one of the most important factors of teaching. One of the objectives of classroom management is not only to facilitate teaching but also to increase the learning time, to provide and to protect a warm and supportive classroom climate, to prevent students' destructive behaviors and to provide a convenient atmosphere where the students can show good behaviors (Doyle, 1986; Emmer & Stough, 2001; Jones, 1996). In order to achieve all of these, it is essential that the teacher should listen effectively, should give clear instructions, and should use positive body language and "I-messages" while organizing students' behaviors. In short, the classroom atmosphere is made up of interpersonal relationships such as student-student, student-teacher and interaction of various factors such as the clarity of rules, students' wishes, the teacher's support, attitude, expectations, classroom management style and her motivation for the lesson, attendance, lesson plans, innovation, the ability to be up-to-date, and the quality of interaction. Therefore, the classroom atmosphere acquires an environmental characteristic which is unique to the classroom. Also, the classroom atmosphere can be defined as a communication and interaction among individuals and as a pattern of relationships.

A revision of the related literature on classroom atmosphere shows that there are studies focusing on students' perceptions of classroom atmosphere at different levels, the relationship between class atmosphere and students' achievement, the effect of speaking problems on classroom climate and on the effects of the relationship between classroom atmosphere and teacher-student interaction through various

aspects (Bilgic, 2007; Bilgic, 2009; Cananoglu, 2011; Erdogan, 2009; Karsi, 2012; Kunkul, 2008; Mumcu, 2008; Ozgok, 2013). No research, however, has been found to be related to teacher candidates' perspectives on their behaviors in terms of positive classroom atmosphere. As teacher candidates are the main subject and the future organizers of the teaching environments, it is important to carry out a study of which variables of the classroom atmosphere they are aware. At that point, it is vital to determine the weaknesses and probable solutions to include in the curriculum of pre-service teacher training programmes. The contribution and the encouragement of the positive classroom atmosphere on students' development and on effective attendance cannot be ignored, which make this study essentially important.

Aim of the Study

The main aim of the study is to investigate teacher candidates' points of view about teacher behaviours positively affecting the classroom atmosphere. In line with this aim, the research questions of this study are as below:

1. What strategies are offered by teacher candidates to establish a positive classroom atmosphere?
2. What are teacher candidates' opinions about the interaction that induces a positive classroom atmosphere?

Method

Research Design

Third-year students of a department of primary school education at a state university attending a classroom management course were instructed to write reports as a response to this question: How should classroom interaction and communication influence a positive classroom atmosphere? The students were told not to refer to the related literature. Instead, they were instructed to report their points of view according to their experiences. They worked individually. Therefore, this was a phenomenological study that focuses on the meaning of individual experiences. Such study designs focus on describing what all participants have in common as they experience a phenomenon. The basic purpose of phenomenology is to reduce individual experiences with a phenomenon to a description of the universal essence (Creswell, 2007).

Participants

The sample of this study consists of seventy third-year students. They were attending the primary school education department at a state university. Also, they took classroom management courses within their teacher education programme.

Research Instruments and Procedures

At a primary school education department of a state university, third-year students were told to prepare a report about the following questions: "According to you, how should the communicative and effective classroom context affect the

classroom atmosphere?, and What should teachers do? Discuss these issues through examples." The study was based on 70 teacher candidates' reports about these questions. The students were told not to refer to the related literature. Instead, they were instructed to report their points of view according to their experiences and they worked individually. Then, the reports were gathered and evaluated.

Data Analysis

The data of this study was based on the reports prepared by 70 student teachers. The data was transferred into the computer. The reports were read line by line and coded accordingly. The coding criteria were prepared in line with the related literature. During the analysis, a constant comparative method was followed. This method enables the researcher to work on the intensive data in a clear and short way (Kwale, 1996). Then, the codes were gathered and commonalities were identified. As a result of this, the categories (themes) emerged. The identified codes were related to each other and interpreted (Maykut & Morehouse, 1994). The reports were evaluated and the findings were written and transferred into tables in detail. In interpreting the findings, theoretical approaches in the related studies were consulted and related research findings were referred.

Results

The student teachers' points of view about teacher behaviors positively affecting classroom environment, communication strategies offered by them addressing positive classroom atmosphere were regarded in relation to positive classroom atmosphere interaction. The findings are given below. One of the aims of this study is to determine the student teachers' communication strategies for a positive atmosphere in the classroom. In accordance with this purpose, the student teachers emphasize components of communication in the classroom. Thirty-seven of the student teachers pointed out "the teacher" as a main component of classroom interaction. Twelve of them highlighted expressing one's self in a good way, "the skill of giving and receiving the message." Eight of them said that interaction in the school and out of the school were not independent and mentioned that the social environment and culture were influential on interaction. Also, they found the following components important: "importance of source and receiver" (n:8), "the importance of the student" (n:3), "the importance of classroom interaction in terms of social aspect" (n: 3), "the importance of feedback" (n:3), "the importance of message (content)" (n:2), "the importance of channels used" (n:1) and "the importance of techniques used to solve problems" (n:1).

The student teachers' communication strategies suggestions for a positive classroom atmosphere were put into these categories: "communication skills for negative and destructive behaviours," "effective communication skills," "environmental conditions and intervention to the behaviour," "positive acceptance/preventative skills" and "non-verbal communication." The codes under these categories are given in Table 1.

Table 1.

Communication Strategies Suggested by Teacher Candidates for a Positive Classroom Atmosphere

<i>Communication Skills for Negative and Destructive Behaviours</i>	<i>f</i>	<i>Effective Communication Skill</i>	<i>f</i>	<i>Environmental Conditions and Intervention to the Behaviour</i>		<i>Positive Acceptance/ Preventive Skills</i>		<i>Non-verbal Communication</i>	<i>f</i>
				<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>		
Using positive/instructional/non-blaming language	25	Listening	17	Being a role model as a teacher	10	Knowing the student	24	Effective use of gesture and mimics	21
The use of "I-language"	21	Emphatic listening and giving reaction	7	Coping with the problem when needed	8	Encouragement	7	Effective use of body language	18
Effective use of the language	13	Using effective listening skill	5	Reinforcement Use	8	Language Use Developing Self Confidence	7	Establishing eye-contact	13
Direct communication with the student	11	Effective feedback	5	Attention receiving, entertaining activities	3	Supporting	6	Effective use of tone of voice and accent	13
Polite talk	11	Using confirmative expressions while listening	4	Playing games	2	Rules	5	Physical contact	9
Negotiation with the Student after the lesson	7			Ignoring	2	Determination of the rules together	4	Being cheerful	6
Using non-verbal messages for warning	6			Sharing rules and expectations with students	2	Realizing the positive behaviour	3	Being aware of students' non-verbal expressions	6
Giving explanations without questioning	6			Cooperation with the parents in problem solving	1	Emphasis on the student's strengths	3	Effective use of non-verbal communication	6

Table 1 Continue

Communication Skills for Negative and Destructive Behaviours	f	Effective Communication Skill	f	Environmental Conditions and Intervention with the Behaviour	f	Positive Acceptance/ Preventive Skills	f	Non-verbal Communication	f
Attention on the verbal communication	5			Eliminating attention-receiving distractors and Organizing the environment	1	Organizing classroom meetings	2	Giving importance to physical appearance	3
Being clear	5			Defining the behaviour	1	Box of wishes and complaints	1		
Using physical contact for warning	1					Giving responsibility and tasks	1		
Allocating enough time for thinking	1					Celebrating special days (birthdays)	1		
						Determining the reasons for the student's behaviours	1		
						Addressing the student by his name	1		
						Encouraging instead of appreciating	1		

As for the student teachers' suggestions for positive classroom interaction strategies, much emphasis was seen on the categories "communication skills for negative and destructive behaviours," and "non-verbal communication." Under these categories, these codes are salient: "Using positive/instructional/non-blaming language," "use of me-language," "Effective use of gesture and mimics," "effective use of the body language." Also, from the category of positive acceptance/preventive skills, "knowing the student" was salient. However, "effective communication skills" and "environmental conditions and intervention to the behaviour" categories were not mentioned so much. In these categories, the codes "listening" and "being a role model as a teacher" were salient. Some examples from the codes and from the categories are given below.

"...While the teacher is teaching, Hüseyin is talking to his friends. The teacher approaches him and receives his attention by touching his shoulder and his desk as if it is not on purpose and helps him to concentrate ..." (K27 touching (physical contact))

"... when we say to our students "you are not listening," they feel that they are attacked and they directly start to defend. Instead of that, the teacher should use me-language such as "I feel disturbed when I am interrupted and I cannot help other students." When they use me-language, this may guide them to behaviour change..." (K31_{use of I-language})

"... he was talking to us softly and warmly, "Can you go to the blackboard now?" This was giving confidence to us. We were not afraid of going to the blackboard. The teachers' expressions were not to scare the students but to raise confidence..." (K53_{Using positive/instructional/non-blaming language})

"...I was in the last level of the secondary school. As I came to the class as a late comer, I was isolated from my friends. Everybody was making fun of me. My teacher talked to them for an hour and told them that it was wrong what they were doing. My teacher wanted them to establish empathy with me ..." (K51_{struggling with the problem when there is}).

"... we should be careful with our behaviours when we are interacting with our students in the classroom ..." (E46_{being a role model as a teacher})

"When I was in the 5th year of the primary school, my teacher was so understanding and tender... She was using positive language... She was talking to her students politely. For example; when she asked a question in the class, she always asked in a very polite way. She was thanking everyone for their participation in the class..." (K43_{speaking politely, use of positive language})

"... we had an exam and I got a low score and I felt bad. Because I felt embarrassed, I started to cry. I went out of the class. The teacher followed me and talked to me. She calmed me down and told me that the score did not make so much of difference to her..." (K41_{directly talking to the student})

"... I was in the 6 level. I did not like my arts teacher. This teacher became our form teacher in the 7th year. I was the class president, so I had to be in contact with the form teacher. As she became our form teacher, she started to get to know us better and behaved closer and warmer. We, as students, started to give her lesson more importance..." (K28_{knowing students})

"... When the teacher says 'well-done' or when the teacher gives a star to students who do a good job, it will motivate the other students and reinforce participation among students ..." (K30_{use of reinforcement})

When the student teachers talked about communication strategies for positive classroom atmosphere, they also mentioned strategies which were possible to hinder a positive classroom atmosphere and communication types. The participants' points of view about this were divided into four categories. These categories were "solution messages," "suppressive messages," "indirect messages," and "reactional/traditional." Table 2 shows the codes of the categories.

Table 2.*Communication Strategies and Message Types Hindering a Positive Atmosphere*

<i>Solution Messages</i>	<i>f</i>	<i>Suppressing Messages</i>	<i>f</i>	<i>Indirect Messages</i>	<i>f</i>	<i>Reactional/ Traditional</i>	<i>f</i>
Ordering	8	Accusing	11	Language affecting self-confidence negatively	6	Use of reinforcement	9
Threatening	4	Judging	8	Looking down on	5	Use of punishment	7
Giving advice	2	Criticizing	7	Underestimating	2	Authoritarian classroom setting	2
Giving ethical/moral messages	1	Nicknaming/labelling	7				
Providing solution alternatives	1	Physical punishment	6				
Warning/scolding	1	Suppressing	4				
Guiding	1	Threatening	2				
		Questioning	1				
		Insulting	1				
		Use of force	1				
		Speaking impolitely	1				
		Undervaluing	1				

When the student teachers' communication strategies and types hindering a positive atmosphere were considered, it was seen that the 'ordering' and 'threatening' codes under the category of "solution messages" were salient. From the category of "suppressing messages," 'accusing,' 'judging' and 'criticizing' codes and from the category of "indirect messages," 'language use affecting self-confidence negatively' and 'looking down on' codes were those mostly emphasized by the student teachers as negative forms of communication. Also, some participants mentioned that from the category of "reactional/traditional," the code of 'use of reinforcement' could hinder positive atmosphere. Here are some direct examples from the participants' points of view in codes and in categories given.

"When I was at the mathematics lesson in the primary school, I could do the exercises but I had difficulties in problems. My teacher's attitudes and words to me were really bad. Her/His communication was not good..." (K57 *language use affecting self-confidence negatively*)

"...He was such an angry teacher that he was always shouting at all students and he was slapping the students who were moving left or right. He slapped at least three or four students while ordering them to queue in front of all other students..." (K55 *physical punishment*)

"... ordering destroys the communication... threatening is also a wrong behaviour... nicknaming is wrong... no need to criticize, accuse or judge..." (K36 *solution messages, suppressive messages*)

One of the objectives of this study is to find out how a positive, interactive classroom should be in line with the student teachers' perspectives. In relation to this

objective, when the student teachers were explaining the characteristics of a teacher's behaviours affecting classroom atmosphere positively, they also drew attention to what kind of personal and professional characteristics a teacher should have. These are; "being fair (n=11), being gentle (n=8), being affectionate (n=7), being close (n=7), being transparent (n=6), being consistent (n=5), teacher's liking her profession (n=4), being flexible (n=3), being patient (n=2), being constructive (n=2), experience (n=2), use of jokes and comics (n=2), being sincere (n=1), giving equal chance (n=1), being dynamic (n=1), being natural (n=1), being calm (n=1), liking the children (n=1), being objective (n=1), not comparing (n=1)."

The student teachers' perspectives about positive classroom atmosphere interaction were categorized as physical/instructional, social and preventive. The codes under these categories are given in Table 3.

It was seen that the category "social situation" was a salient one in the student teachers' suggestions about positive classroom atmosphere. In this category, the codes 'valuing the students' opinions,' 'atmosphere where students can express themselves comfortably' and 'a democratic classroom' were salient. The least talked about, but briefly mentioned category was "the preventative environment." In this category, the code 'giving value to the student/respect' was salient. The least mentioned category among the suggestions was "physical/instructional." In this category, 'atmosphere where the students' needs are met' and 'one-on-one interest' were salient. Some examples from the student teachers' ideas under the categories and the codes are given below.

"...while addressing my students, I behaved not as a dictator but as an older sister, a mother or a friend..." (K49 atmosphere where students can express themselves comfortably)

"When I saw Gamze from my practice teaching school, I thought that she was a lazy student, showing no interest on her lesson... but she was a shy student wishing special interest. We should increase our communication with such students and give them the interest they deserve, we should have one-on-one contact with them..." (E42 one-on-one attention)

"...Nese teacher was a very well-known teacher with her teaching in the city. She treated the students as if they were her own children. While her students were playing football, they were sweating and she was changing their clothes so that they would not be ill ..." (E38 valuing the student)

"... if such a person had cleaned my nose in the same way, I would have felt important and valuable ..." (E35 emphatic atmosphere)

Table 3.*The Student Teachers' Points of View about a Positive Classroom Interaction Atmosphere*

<i>Physical/ Instructional</i>	<i>f</i>	<i>Social</i>	<i>f</i>	<i>Preventative</i>	<i>f</i>
Atmosphere where students' and teachers' needs are met	14	Valuing the students' opinions	26	Valuing the student/Showing respect to the student	32
One-on-one attention	10	Atmosphere where students can express themselves comfortably	19	Trust for the teacher	16
Working in cooperation	8	Democratic classroom/democratic attitudes and behaviours	13	Mutual respect, love and confidence	14
Use of different method and techniques	8	Life experiences out of classroom	10	Emphatic Atmosphere	7
Giving importance to individual differences	5	Positive attitude towards the student	8	Unconditional acceptance	4
One-group seating chart	2	Positive student-teacher relationship	7	Making the student feel that he is trusted	2
One-on-one work with students through group activities	1	Warm atmosphere in which the orders are well-defined	6	Teacher's effort to be loved	1
Producing a product as a classroom	1	A healthy relationship between the student and the student	4	Atmosphere giving a good and relaxed feeling	1
Student-centered classroom atmosphere	1	Combining and guiding atmosphere	3	Atmosphere improving self-confidence	1
		Close atmosphere	3		
		Atmosphere where the students' and the teachers' expectations are met at a common point	2		
		Mutual interaction	1		

While the student teachers were talking about a positive interactive classroom atmosphere, they also mentioned the factors hindering the positive classroom atmosphere. The student teachers' perspectives about this were given in three

categories as "situations hindering a positive classroom atmosphere." These categories were "physical/instructional," "unsocial" and "other." The codes under these categories are given in Table 4.

Table 4.

Situations Hindering a Positive Classroom Atmosphere

<i>Physical/ Instructional</i>	<i>f</i>	<i>Unsocial</i>	<i>f</i>	<i>Others</i>	<i>f</i>
Distance (The teacher's fixed position)	5	The teacher's focus only on the lesson	7	Discrimination	9
The organization chart of students and their desks	4	Distance (psychological)	3	Prejudice	3
Crowded class	2	Not considering the students' interests and needs	2	Making a role/pretending	1
Not implementing different methods and techniques	1	Indifferent	1		
		Transferring private problems into the classroom	1		
		Not valuing the student	1		

It was seen that the student teachers' perspectives on the factors hindering the positive classroom atmosphere were concentrated on the category "unsocial" behaviours and attitudes. Under this category, the codes 'the teachers focus only on the lesson' and 'distance (psychological)' were prominent. Under the category of "physical/instructional," the participants emphasized 'distance (the teacher's fixed position) and 'the organization chart of students and their desks.' Also, under the category of "other," they mentioned 'discrimination' as a factor hindering a positive classroom atmosphere. The student teachers' points of view about the codes which were placed into categories are given below.

"... one of our teachers was so far away from us in the classroom. When he wanted one of us to go to the blackboard, he had to point as well "You, go to the board" by pointing. That was of course scary and propelling..." (K53 distance the teacher's fixed position in the class)

"... I was a third-year student at a primary school. I was late for the class. I was cold and ill. I knocked at the door and went in. The teacher called me over and asked me why I was late and gave me a slap... Then, someone knocked at the door. Another student whose scores were better than me was late. The teacher called him over and listened to his excuses and let him go to his desk..." (E39 discrimination)

"... let's draw two models of a teacher. One of them enters the classroom and directly focuses on his lesson, showing no effort to get to know his students more and not considering his students' ideas..." (E69 (the teacher focuses only on the lesson)

Discussion and Conclusion

Most of the student teachers identify the teacher as a main component of classroom interaction and classroom atmosphere. They also highlight the teacher's personal characteristics (being fair, being gentle, being close, etc.). In the related literature, it has been said that the teacher is as important for the harmony of the classroom as the orchestra conductor is to an orchestra (Doyle, 1986; Gordon, 1996; Martin & Baldwin, 1996; Weinstein & Mignano, 2007). This finding is also significant from the perspective of teacher training programmes. This reveals that student teachers, even in their B.A. education, are aware of their responsibilities for the future. Similarly, when the student teachers talk about the importance of "message receiving and giving," they say that it is the teacher's responsibility to start communication and to provide a continuation. It has been found important that the participants have already mentioned this factor. In contemporary schools, one-way communication in which the teacher tells and the student listens is not valued any more. Giving and receiving messages should be multidimensional and effective. The teacher should also be a good listener, while expressing himself/herself in a good way. According to Yuksel-Sahin (2010), in a modern classroom where speaking and listening should be together, it is a must that teachers learn multidimensional communication skills through which students express their feelings, opinions and ideas. Another factor that the student teachers are aware of is the idea that "social environment and culture affect classroom interaction." In the related references about classroom management, social setting and culture have been emphasized as sources affecting management (Jones & Jones, 2007; Tas, 2005; Watson & Battistich, 2006).

Similarly, the findings from the studies about the reasons for students' misbehaviours are also related to social context, the setting where the family lives, the family structure and friends' circle (Lemlech, 1999; Weinstein & Mignano, 2007). A striking point in the results is that the "student," which is an essential factor, has only been considered by a few participants. This may derive from the fact that the student teachers employ a teacher-centered perspective. If we consider this finding in line with Wolfgang's point of view (2001), the control point where the student teachers are standing is close to the interventionist approach in which the teacher control is at a high level. From the perspective of the control in the classroom in the classroom management attitudes and beliefs, it has been found that teachers and student teachers are interventionists in terms of teaching management but interactive regarding human management (Akdemir, 2014; Martin, Yin & Baldwin, 1998; Okut, 2011; Sadik & Bulut Ozsezer, 2015; Savran-Gencer & Cakiroğlu, 2007; Unal & Unal, 2009).

A great number of the communication strategies suggested by the student teachers about a positive classroom atmosphere are mostly related to strategies about how to cope with misbehaviours. In this study, this category has been called "communication strategies against negative and destructive behaviours." The participants say that they prefer more constructive strategies when they encounter unwanted behaviours such as "instructional/non-blaming language" and "the use of me-language." Also, the codes "listening," "the teacher as a role model," and

"knowing the student" have been mentioned by the participants. These codes have been placed in a different category in this study but they are categorized in the dimension of behaviour management in the related literature. This may indicate that the student teachers are aware of the significance of positive behaviour management in establishing and maintaining positive atmosphere in tackling misbehaviours. In the same way, the supporting result comes from the finding that the codes in the category of "non-verbal communication," "effective use of gestures and mimics," "use of body language," "keeping eye-contact," and "effective use of tone of voice and accent" have been reported as factors facilitating communication and as strategies requiring less power in struggling with unwanted behaviours. It has been extensively highlighted in the related literature that the least power should be used to cope with misbehaviours (Brandes & Ginnis, 1986; Charles, Senter & Barr, 1996; Emer & Stough 2001; Gordon, 1996; Hall & Hall, 1988; Nimmo, 1997; Nelson-Jones, 1995; Sadik, 2000).

In terms of the student teachers' communication strategies and message types hindering a positive atmosphere, it has been seen that the student teachers prefer communication obstacles, that is, "a rejecting language/not accepting language" which has been referred to as "solution messages," "suppressing messages," and "indirect messages" by Gordon (1996). Such messages in the related literature have been reported to show that the teacher is the authority and the student has to accept his authority. This type of message can also regarded as a "you-message" and it pushes the students to defend, it destructs the students' personalities, and it gives the feeling that the students are not respected and taken into consideration. This affects confidence, love and respect in the classroom atmosphere negatively (Gordan, 1996). The negativity in the relationship between the student and the teacher affects the classroom atmosphere in the same way (Basaran, 2000; Doyle, 1986; Emer & Stough, 2001; Ozturk, 2002; Ozyurek, 2007). The findings obtained in this study have shown that the student teachers exhibit non-interventionist attitudes and use less power in control in maintaining a positive classroom atmosphere. In another study by Bulut et. al. (2008); however, it has been discovered that the teachers tend to use more power in control and prefer Gordon's (1996) rejecting/not accepting language in the classroom communication.

In student teachers' suggestions on interaction for positive classroom atmosphere, the following categories have been mostly reported: "valuing the students' opinions," "atmosphere where students can express themselves comfortably," "democratic classroom atmosphere," and "valuing and respecting the student." This shows that the student teachers give importance to providing a secure classroom atmosphere where students can express themselves. This is also in line with the finding that the student teachers have concentrated on "unsocial" behaviours and attitudes as factors hindering a positive classroom atmosphere. This is what social and preventative environments necessitate as reported in the related literature. Traditional, authoritative and/or reactional attitudes damage relationships with students, resulting in a negative effect on a positive classroom atmosphere

(Basaran, 2000; Doyle, 1986; Emmer & Stough, 2001; Jones, 1996; Ozturk, 2002; Ozyurek, 2007).

In conclusion, knowing the student, effective use of non-verbal messages and positive skills to cope with misbehaviours have come into prominence in the student teachers' suggestions for communication strategies to establish a positive classroom atmosphere. As for the student teachers' points of view about the positive classroom atmosphere interaction, it has been observed that the salient factors are that the teacher is an important component in building classroom atmosphere and the classroom should be regarded as a democratic and social system where the teacher's positive personality characteristics are important. In light of these findings, it can be said that the student teachers know what to do and what not to do in establishing positive classroom atmosphere. Though this is the finding, it is vital to make some adaptations in pre-service teacher training programmes so that the student teachers can transfer their awareness into their future classrooms. Therefore, the academic courses in the primary school education curriculum such as classroom management, practice teaching and teaching experience should be revised to integrate theory and practice. For example, the student teachers should be given actual classroom opportunities to establish classroom atmospheres. In addition, the student teachers should be given chances to transfer what is in their minds into practice. This can be done by educational counselors in the course of classroom management by means of short simulation experiences.

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Öğretmen Adaylarının Sınıf Atmosferini Olumlu Etkileyen Davranışlar Hakkındaki Görüşlerinin İncelenmesi

Atıf:

- Bulut Ozsezer, M. S., & Iflazoglu Saban, A. (2016). An investigation on teacher candidates' perspectives about behaviors positively affecting classroom atmosphere. *Eurasian Journal of Educational Research*, 66, 139-158
<http://dx.doi.org/10.14689/ejer.2016.66.8>

Özet

Problem Durumu: Eğitim bir iletişim etkinliği olarak tanımlanabilir. Çünkü eğitimde amaç kaynak tarafından amaçlanan davranışın ve davranış değişikliğinin alıcıda oluşmasıdır. Bu nedenle karşımızdaki insanı etkileme, eğitme ve birlikte çalışma konusunda başarılı olmak istiyorsak iyi ilişkiler içinde olmamız gerekir (Yuksel, 2008). Yani öğretmen ve öğrencinin bir başka deyişle kaynak ve alıcının amaçları olumlu olmalı ve iletişim şekli ise karşılıklı etkili anlaşmak temeline dayanmalıdır. Böyle bir durumda olumsuz duygular, karşıt düşünceler iletirse bile, temel yaklaşım anlamak / anlatmak yani anlaşmaktır. Böylelikle kaynak ve alıcı arasındaki ilişki güvene, değere ve diyaloga dönüşür (Başaran, 2000). Dolayısıyla öğretmen-öğrenci ilişkisinin çerçevesini güven-değer-diyalog bağlamında oluşturmak gerekir. Eğer öğretmen-öğrenci arasında karşılıklı güvene, değere ve diyaloga dayalı ilişki

oluşturulabilirse bunun bir sonucu olarak sınıflarda istenilen ortam oluşturulabilir. Olumlu iletişim ile sağlanacak öğretim süreci, öğretmen-öğrenci arasındaki karşılıklı güven ve anlayışın güçlendirilmesine ortam hazırlayarak sınıfta olumlu bir havanın, olumlu sınıf atmosferinin sağlanması ile sonuçlanacaktır.

Sınıf içi iletişim öğretimi gerçekleştirilmenin yanı sıra kişilerarası etkileşimi de belirleyen bir süreçtir (Kuzu, 2003). Bu iletişim amaçlıdır ve kişilerarası ilişkilerde beceri gerektirir. Kişilerarası-sosyal becerisi gelişmiş öğretmenler hem öğretimi gerçekleştirir hem de öğrencilerin istenmeyen davranışlarını becerikli bir biçimde yönetir (Stemler, Elliott, Grigorenko & Sternberg, 2006). Ancak öğretmenlerin çoğu; davranışları yönetme ve istenmeyen davranışa neden olan öğrenci ile iletişim kurma konusunda zorlandıklarını belirtmektedirler. Bu durum öğretmenlerin öğretimin yönetimi ile ilgili sistematik eğitim almakla birlikte kişilerarası-sosyal etkileşimle ilgili yeterince eğitim almamaları ile açıklanabilir. Oysa öğretmenlerin iletişim becerilerini etkili kullanmaları aynı zamanda öğrencilerin de kendilerini ve çevreyi algılamalarına sonra da çevreyi etkilemelerine öncülük edecek kilit önemdedir. Öğrenci öğretmenin kullandığı iletişim biçimine göre kendini ve başkalarını değerli bulan, insanlara ve toplumsal sorunlara duyarlı ve etkili iletişim kurabilen bir bireye ya da değer verilmeden bilgi aktarılan, öğrenmekten nefret eden, bireysel veya toplumsal sorunlar çıkaran, yabancılaşmış bir bireye dönüşebilecektir. Bunun için öğrencilerin önce öğretmenleri ile iletişim kurabilmelerinin sağlanması önemlidir.

Sınıfı etkili yönetme işi öğretmenlik mesleğinin en önemli unsurlarından biridir. Sınıf yönetiminin amacı öğretimi kolaylaştırmanın yanı sıra, öğretim zamanını arttırma, sıcak ve destekleyici bir sınıf atmosferi yaratma ve koruma, öğrencilerin zarar verici davranışlarını önleme, istendik davranışların artması için uygun ortamı sağlama gibi amaçları da gerçekleştirmeye yöneliktir (Doyle, 1986; Emmer ve Stough, 2001; Jones, 1996). Tüm bu sayılanların yapılabilmesi ve olumlu sınıf atmosferinin oluşturulabilmesi öğretmenin etkin dinlemesi, açık ve net yönergeler verebilmesi, davranışa yönelik düzenlemeler yaparken olumlu dili ve ben dilini etkili bir şekilde kullanabilmesiyle ilişkilendirilebilir. Dolayısıyla sınıf atmosferi, öğrenci-öğrenci ve öğretmen-öğrenci arasındaki kişilerarası ilişkiler, kuralların açıklığı-belirginliği, öğrencilerin istekleri, öğretmenin desteği, tutumu, beklentileri ve yönetim biçimi, derse yönelmesi, katılım, ders düzeni, yenilik, güncellik, iletişimin niteliği ve rekabet ortamı gibi faktörlerin etkileşiminden oluşmaktadır. Bu nedenle, sınıf atmosferi, sınıfa özgü bir çevresel özellik oluşturmaktadır. Bütün bunlardan hareketle aslında sınıf atmosferini sınıf içinde oluşan bireylerarası iletişim, etkileşim ve ilişkiler dokusu olarak da tanımlamak mümkündür.

İlgili literatür incelendiğinde sınıf atmosferini konu alan araştırmaların; öğrencilerin çeşitli kademelerde sınıf atmosferi algıları, sınıf atmosferiyle öğrenci başarısı arasındaki ilişki, konuşma probleminin sınıf iklimine etkisi, öğretmen-öğrenci arasındaki çeşitli konulardaki etkileşimlerin sınıf atmosferine etkileri ile ilgili oldukları belirlenmiştir (Bilgiç, 2007; Bilgiç, 2009; Cananoğlu, 2011; Erdoğan, 2009; Karşı, 2012; Künkül, 2008; Mumcu, 2008; Özgök, 2013). Ulaşılabilen kaynaklar çerçevesinde öğretmen adaylarının olumlu sınıf atmosferine yönelik öğretmen davranışlarına ilişkin görüşlerini inceleyen bir araştırmaya rastlanmamıştır. Oysa öğretim ortamının hem öznesi hem de gelecekte düzenleyicisi konumunda olan öğretmen adaylarının sınıf atmosferinin hangi değişkenlerinin farkında olduklarını belirlemek önemlidir. Bu konu eksikliklerin belirlenmesi ve gidermeye yönelik

hizmet öncesi eğitim aşamasında önlemler geliştirilmesi bakımından da önemlidir. Olumlu sınıf atmosferinin öğrencilerin gelişimlerine katkı sağlama ve onları etkin katılıma özendirme noktasında önemi yadsınamaz bu nedenle de bu araştırma önemlidir.

Araştırmanın Amacı: Bu araştırmanın temel amacı öğretmen adaylarının sınıf atmosferini olumlu etkileyen öğretmen davranışları hakkındaki görüşlerini belirlemektir. Bu amaç doğrultusunda aynı zamanda öğretmen adaylarının sınıf içi olumlu atmosfere yönelik önerdikleri iletişim stratejiler ve sınıf içi olumlu atmosfere yönelik etkileşim ortamı hakkındaki görüşleri belirlenmeye çalışılmıştır.

Araştırmanın Yöntemi: Bir devlet üniversitesinin sınıf öğretmenliği anabilim dalı 3. sınıfına devam eden öğrencilere sınıf yönetimi dersi kapsamında öğretmen adaylarına sınıf atmosferini olumlu etkileyen sınıf içi iletişim ve etkileşim ortamı nasıl olmalıdır? öğretmenler neler yapmalıdır? sorusu sorularak rapor yazmaları istenmiştir. Öğrencilerden literatürden yararlanmadan kendi görüşleri doğrultusunda raporu hazırlamaları istenmiştir. Her bir öğretmen adayının bu görevi tek başına yapması istenmiştir ve daha sonra bu raporlar toplanarak araştırmacılar tarafından değerlendirmeye alınmıştır. Araştırmada 70 öğretmen adayı tarafından hazırlanan raporlar araştırmanın çalışma grubunu oluşturmuştur. Bu araştırmada verilerin analizinde nitel araştırma yöntemlerinden içerik analizi yöntemi kullanılmıştır.

Araştırmanın Bulguları: Öğretmen adaylarının sınıf içi olumlu atmosfere yönelik öğrenciyi tanıma, sözel olmayan iletişim etkili kullanma ve istenmeyen davranışlarla baş etmeye yönelik olumlu becerileri iletişim stratejileri olarak önerdikleri belirlenmiştir. Araştırmada ayrıca sınıf içi olumlu atmosfere yönelik etkileşim ortamı ile ilgili olarak; öğretmenin sınıf atmosferini yaratmada önemli bir öge olduğu, sınıfın demokratik ve sosyal bir sistem olarak ele alınması ile öğretmenin olumlu kişilik özelliklerine vurgu yapıldığı belirlenmiştir.

Araştırmanın Sonuçları ve Öneriler: Sonuç olarak öğretmen adaylarının, sınıfta olumlu atmosfer oluşturmada, öğretmenlerin yapması gereken ve yapmaması gerekenlerin ne olduğunun az çok farkında olduğu söylenebilir. Ancak yine de öğretmen adaylarının olumlu sınıf atmosferi oluşturma konusundaki bu farkındalığının gelecekte sınıflarına yansıyabilmesini sağlamak amacıyla hizmetöncesi eğitim programlarında bazı düzenlemeler yapılmalıdır. Bu bağlamda öncelikle sınıf öğretmeni yetiştirme programında bulunan sınıf yönetimi, öğretmenlik deneyimi ve öğretmenlik uygulaması ders programları teori ve uygulama bütünlüğü sağlanacak şekilde yeniden düzenlenebilir. Örneğin çeşitli uygulamalarla birebir yaşayarak sınıf atmosferi oluşturmalarına fırsat verecek önlemler alınmalı. Ayrıca düşüncede olan öğretmen adaylarının bu tutumlarının davranışa dönüştürülebilmesi için sınıf yönetimi ders içeriğinin eğitsel danışmanlarla, yansıtıcı küçük grup yaşantı süreçleri ve uygulama ile bütünleştirilerek sunumuna yönelik düzenlemeler yapılmalıdır.

Anahtar Kelimeler: İletişim, olumlu sınıf atmosferi, aday öğretmen, sınıf yönetimi.

Value Priorities of Teacher Candidates in the Education Faculty of Pamukkale University in Denizli, Turkey

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Abstract

Problem Statement: Behavior is the visible conclusion of unseen values. More concretely, the teaching attitudes of teachers are affected by their values. The study of values is therefore fundamental to the study of teaching. If it is possible to understand the values of teachers, it is possible to estimate the teaching behaviors of teacher candidates. This will help identify which values of students are barriers to improving their teaching abilities and adjust the teaching curricula to resolve these issues before teacher candidates become teachers. An effort must be made to change the values that hinder the teaching abilities of teacher candidates and support them with values that will help them teach.

Purpose of the Study: The purpose of this study was to explore the terminal and instrumental values that contribute to the formation of value types of teacher candidates.

Method: The Schwartz Value Survey (SVS) was used to measure the values of the teacher students. The population of this study included 4856 students who attended different departments in the faculty of education. The data were collected from 498 students who were selected by a stratified random sampling technique. Questions guiding the study were: (1) What are the values of the education faculty students as future school teachers? (2) Are there any significant value differences between students who belong to various departments of the faculty? (3) Are the values affected by specific variables such as gender?

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Findings: Results indicated that 48% of female teacher candidates (156) and 41% of male teacher candidates (71) ranked family security terminal value as a supremely important value guiding their lives. When the teacher candidates are in their first three years of school, their first rank value preferences tend to be conservative values. However, when they reach the fourth class, their first rank value priorities shift to universal value type. All students except social sciences students preferred conservative values as primary values that direct their behaviors.

Conclusion and Recommendations: It is necessary to develop universal values for teacher candidates. According to the findings, both female and male students noted conservative higher order value types. When they reach their fourth year, their first rank value priorities shift to universal value type. Students studying in the department of social sciences primarily preferred a universal value called "a world at peace."

Keywords: Higher order value types, Value types, Terminal values, Instrumental values

Introduction

Values are critical in all human lives because they affect attitudes and shape behaviors. There has been a considerable amount of research on values and value theory has been an important issue in psychology since Rokeach's (1973) work. Schwartz (1992) explained values as criteria that people use to choose and justify their behavior and much of the subsequent research has been influenced by Schwartz's values theory. Values are beliefs, and beliefs influence perceptions (Robbins 2005). Reece and Brandt (1999) called values the deep personal beliefs and preferences that influence behavior. Gibson et al. (1997) defined values as "a person's view of the world." Behavior is an important aspect of a person's inner world. Robbins (2005) saw values as a specific mode of conduct of existence.

Today, the most recent version of the Schwartz Value Survey (SVS) measures ten basic values that were found to work universally in different cultures and social groups. Schwartz (1992) conducted his SVS with a wide survey of over 60,000 people to identify common values that acted as 'guiding principles for one's life.' Schwartz identified 10 value types. The power value type reminds people social status and dominance over people and resources. Stimulation represents an exciting life. Self-direction prioritizes independence, creativity, and freedom. The universalism value type demonstrates social justice and tolerance. Benevolence indicates the welfare of others. The conformity value type requires obedience. Tradition indicates respect for traditions and customs. The achievement value type represents personal success. The hedonism value type reveres pleasure. Security is related with safety and the welfare of society. These ten value types contain four higher-order value types. Openness to change combines stimulation, self-direction, and a part of hedonism; self-enhancement includes achievement and power and hedonism; conservation contains security, tradition, conformity; and self-transcendence contains universalism and benevolence.

For each value type, Schwartz (1992) also chose terminal and instrumental values, which are also expressed via consumption behavior. *Terminal Values* are desirable end-states of existence: the goals that people would like to achieve during their life time. *Instrumental Values* are preferable models of behavior or means of achieving one's terminal values. Schwartz explained terminal and instrumental values, which can be considered the sources of ten value types. These ten value types represent the ten dimensions of the SVS.

Table 1 shows the relationships between higher order value types, value types, terminal values, and instrumental values. It brings clarity and a different point of view to Schwartz's classified values. The table of classified values isn't intended to change the meaning of Schwartz's value order; it is only to aid understanding.

The related studies (Dilmac et al., 2008; Karaca, 2008; Oguz, 2012; Fatoki, 2016; Caliskan et. al., 2015) generally focused on these ten dimensions and their priorities for teacher candidates including security, universalism, hedonism, power, achievement, stimulation, conformity, tradition, benevolence, and self-direction. However, they do not emphasize the behaviors related to these dimensions. Terminal (i.e. creativity) and instrumental (i.e. curious) values, on the other hand, form the basic foundation of the value types.

The purpose of this study was to explore the terminal and instrumental values that contribute to the formation of value types of teacher candidates and their priority orders for them. It was hypothesized that this perspective will assist to observe, analyze, and identify the behaviors responsible for the formation of value types. For this reason, the items that represent the value types on the SVS have been handled one by one.

This research was intended to determine the values of the teacher candidates of the education faculty program of Pamukkale University. Questions guiding the study were:

- (1) What are the terminal and instrumental values of the education faculty students as future teachers?
- (2) Are there value differences between students who belong to various departments of the faculty?
- (3) Are their values affected by uncontrollable variables such as gender?

Table 1.*The Table of Classified Values*

<i>Higher order value types</i>	<i>Value types</i>	<i>Terminal values</i>	<i>Instrumental values</i>
<i>Conservation</i>	Security	National security	Healthy
		Family security	Clean
	Tradition	Sense of belonging	
		Social order	
<i>Openness to change</i>	Conformity	Reciprocation of favors	Accepting one's lot in life
			Moderate
	Self-Direction	Politeness	Devout
		Self-discipline	Humble
Stimulation	Hedonism	Self-respect	Obedient
		Creativity	Honoring parents and elders
	Hedonism	Freedom	Choosing own goals
		An exciting life	Curious
<i>Self-enhancement</i>	Achievement	A varied life	Independent
		Pleasure	Daring
	Power	Pleasure	Enjoying life
			Enjoying life
	Universalism		Capable
			Ambitious
<i>Self-transcendence</i>	Benevolence	Self-Respect	Successful
		Social power	Intelligent
	Benevolence	Wealth	Influential
		Authority	Preserving public image
<i>Self-transcendence</i>	Benevolence	Social recognition	Protecting environment
		Social Justice	Broad minded
	Benevolence	A world at peace	
		A world of beauty	
<i>Self-transcendence</i>	Benevolence	Equality	
		Unity with nature	
	Benevolence	Wisdom	
		Inner harmony	
<i>Self-transcendence</i>	Benevolence	Spiritual life	Forgiving
		Meaning in life	Honest
	Benevolence	True friendship	Helpful
		Mature love	Loyal
			Responsible

The table of classified values (Table 1) designed by the author of this paper in the light of Schwartz (1992), shows the relationships between higher order value types, value types, terminal and instrumental values.

Method

Research Design

Because this study attempts to determine significance value priorities as a guiding principle in candidate teachers' lives, the descriptive survey was considered the proper research model.

Research Sample

The population of this study included 4856 students studying different departments of the Faculty of Education in Pamukkale University during 2010-2011. By employing Cochran's (1962) proposed formula for stratified random sampling, 496 students were chosen as a sample. To determine an appropriate sample size to represent the population, the table generated by Krejcie and Morgan (1970) and reprinted by Gay (1996) was also used. After determining the representative sample size (356), the population-sample ratio was calculated by a simple proportion formula and found to be 7.36%. This ratio was used as sampling criteria for selecting students from each department.

Research Instrument and Procedure

The SVS was used to measure the values of the teaching students in the education faculty of Pamukkale University. This survey was chosen because it has been validated and shown to be reliable cross-culturally in more than 20 countries (Schwartz, 1992), and measures an individual's core values rather than behavioral values (Ralston et al., 1999).

The SVS presents two lists of value items. Items 1 to 30 represent terminal values and items 31 to 57 indicate instrumental values. Respondents rated the importance of each value item "as a guiding principle in MY life" on a 9-point scale labeled 7 (of supreme importance), 6 (very important), 5, 4 (unlabeled), 3 (important), 2 (unlabeled), 1 (unlabeled), 0 (not important), and -1 (opposed to my values).

Validity and Reliability

The SVS was translated into Turkish by the researcher. The translated instrument was submitted to bilingual academics to verify its accuracy. The validity and reliability procedures were conducted for the Turkish translation and it was found reliable (Cronbach's Alpha = .947) and valid.

Data Analysis

The data of this research was collected by administrating the SVS and a descriptive analysis was used for the overall assessment of the participants' views. The collected data was analyzed by several statistical techniques including percentages and frequencies. SPSS 15.0 was used for analysing of data.

Results

This section presents the findings of this study involving 323 female (65%) and 173 male (35%) candidate teachers. Table 2 shows teacher candidates' perceptions towards terminal values by their gender.

Table 2.

Teacher Candidates' Perceptions of Terminal Values by Gender

<i>Value Order</i>	<i>Female</i>	<i>Male</i>
1	Family Security	Family Security
2	A World at Peace	Self Respect
3	National Security	Social Justice
4	Self Respect	Freedom
5	Social justice	National Security

According to the findings, both female and male students rated the "family security" value highest. Of the teacher candidates, 48% of females (156) and 41% of males (71) ranked the "family security" terminal value as the most important value guiding their lives. "Family security" was ranked 227 times as the supreme value type, which means that 46% of the total sample of candidate teachers prioritized it. At the same time, 170 candidate teachers (34%) ranked "family security" as very important. There is a high level of acceptance among candidate teachers about the family security terminal value, which can be called a conservative terminal value and also considered a higher order value type. As shown in Table 2, male and female students have the same primary value (i.e. Family Security), but diverge from there. Female students preferred "a world at peace," a universal value, while male students preferred "self-respect," which belongs to the openness to change value group. Generally, it can be argued that national and family security is a primary value directing students' behavior.

Table 3 shows teacher candidates' perceptions towards instrumental values by gender.

Table 3.

Teacher Candidates' Perceptions of Instrumental Values by Gender

<i>Value order</i>	<i>Female</i>	<i>Male</i>
1	Healthy	Healthy
2	Honoring of parents and elders	Honoring of parents and elders
3	Choosing own goals	Choosing own goals
4	Independent	Independent
5	Clean	Clean

Of teacher candidates, 159 (49%) females and 74 (41%) of males ranked "Healthy" as their primary instrumental value. This instrumental value was ranked first 233 times, which means that 47% of the sample ranked it as important. An additional 157

(32%) candidate teachers ranked “healthy” as very important. There is widespread acceptance among candidate teachers about the value of the healthy instrumental value. These findings show very interesting value orientations for candidate teachers. Three of the five values preferred by students, including “healthy,” “honoring of parents,” and “clean,” are considered conservative instrumental values. However, the other two values, “choosing own goals” and “independent,” are in openness, the opposite higher order value type. It is very surprising that students’ instrumental values were not related to self-enhancement (achievement, power, hedonism) and self-transcendence (universalism, benevolence).

According to Table 4, teacher candidates’ value preferences change by their year in school.

Table 4.

Teacher Candidates’ Perceptions of Terminal Values by Their Year in School

Terminal values	Year 1	Year 2	Year 3	Year 4
1	National security	National security	Family security	A world at peace
2	Self respect	Family security	Social justice	Family security
3	Inner harmony	Social justice	National security	National security
4	Family security	A world at peace	A world at peace	Self respect
5	A world at peace	Self respect	Self respect	Social justice

Among fourth year teacher candidates, 49% ranked “a world at peace” as the primary guiding value to their lives. An additional 35% ranked it as very important. During their first three years of school, the teacher candidates’ primary value preferences tend to be conservative values such as national and family security. However, when they reach the fourth class, these value priorities shift to “a world at peace” as a terminal value, which is a universal value type. The universal value type is perceived as a “self-transcendence higher order value type” and this seems to increase depending on seniority. For example, teacher candidates’ value preferences in the first year in school tend to be conservative, but according to their educational experiences, their primary conservative values shift over time to universal value types. Their conservative values have been also pushed down to the second or third ranks.

Table 5 shows that all teacher candidates chose “healthy” as their primary instrumental value regardless of class level.

Table 5.*Teacher Candidates' Perceptions of Instrumental Values by Year in School*

Instrumental Values	Year 1	Year 2	Year 3	Year 4
1	Healthy	Healthy	Healthy	Healthy
2	Honest	Honoring of parents and elders	Honoring of parents and elders	Choosing own goals
3	Choosing own goals	Independent	Choosing own goals	Independent

Among teacher candidates, 62% in their first year in the faculty of education, 53% in their second year, 44% in their third year, and 41% in their fourth year ranked the "healthy" instrumental value type first, demonstrating that teacher candidates perceive health as the highest ranked instrumental value needed for their security. Other reported higher order instrumental values included self-transcendence (honesty) and openness to change (choosing own goals, independence, etc.).

These findings about teacher candidates' perceptions of terminal values by their departments have been shown in Table 6. All students except those in social sciences preferred conservative values as the primary values directing their behavior. On the other hand, students (50%) studying in the department of social sciences primarily preferred a universal value called "a world at peace."

Table 6.*Teacher Candidates' Perceptions of Terminal Values by Department*

Pre-School	Primary School	Social Sciences	Science	Turkish
National security	Family security	A world at peace	Family security	Family security
A world at peace	National security	National security	Self respect	National security
Family security	A world at peace	Family security	Inner harmony	Freedom
Self respect	Self respect	Social Justice	True Friendship	Social justice
Social justice	Social justice	Self respect	Social justice	A world at peace

Table 7 shows teacher candidates' perceptions towards instrumental values by their departments. Among the teacher candidates attending different departments of the faculty, 63% ranked the "healthy" instrumental value as their primary value.

Table 7.

Teacher Candidates' Perceptions of Instrumental Values by o Department

<i>Pre-school</i>	<i>Primary school</i>	<i>Social sciences</i>	<i>Science</i>	<i>Turkish</i>
Healthy	Healthy	Healthy	Healthy	Healthy
Honoring of parents and elders	Honoring of parents and elders	Honoring of parents and elders	Honoring of parents and elders	Honoring of parents and elders
Choosing own goals	Independent	Clean	Clean	Clean
Enjoying Life	Choosing own goals	Choosing own goals	Independent	Choosing own goals
Independent	Honest	Independent	Responsible	Successful

It is interesting to note that students attending different departments of the faculty of education have the same instrumental values in the first and second ranks "health" and "honoring of parents and elders," respectively. Health is a security value, but honoring parents and elders is a "conformity" value type. However, both "security" and "conformity" are included in conservation higher order value types.

Discussion and Conclusion

Values are very effective for directing the behaviors of all individuals. In light of the data obtained, it is clear the candidate teachers (both male and female) were primarily affected by conservative values. Turkish student teachers more often displayed traditional-conservative preferences (Thornberg & Oguz, 2016). Women and men do not differ greatly in the order of importance they attribute to the ten values (Schwartz & Rubel, 2005). Dilmac et al. (2008) did not find any difference between male and female teacher candidates' perceptions of conservative value types, but their value orders showed differences related to universalism. He also found that candidate teachers rank universal values highest. Results suggest that teacher candidates' opinions of social values change with relation to gender (Kurt, 2014).

"Devout," an instrumental value of tradition and a conservative value type, is not related to national and family security. It can be said that the national and family security were much more important than being devout. According to this finding, it

is possible to state that the more concrete values, including security, come before the abstract values, such as devoutness.

Never-ending human needs trigger the effects of human motivation. Needs create tension, which in turn makes a person take action to satisfy the need. Once a goal has been achieved, there is a sense of satisfaction and reduced tension (Reece & Brandt 1999) and another need emerges. According to Maslow, people tend to satisfy their needs in a particular order. Maslow identified five basic groups of human needs that emerge in a specific sequence in a hierarchy of importance. In this scheme, when one need is satisfied, another emerges and demands satisfaction, and so on through the hierarchy. The five levels of needs that represent the order of importance to the individual are physiological, safety, social, esteem, and self-actualization (Lunenborg & Ornstein, 1996). According to Maslow, people who have not satisfied their physiological needs cannot think about their security needs. Therefore, students cannot be motivated by their security needs toward desired behaviors in an educational setting.

The findings of this study showed that candidate teachers mainly thought the conservative values directed their behaviors. Similarly, Balay (2014) discovered that candidate teachers ranked security higher than respect. Besides this, the students could not consider environmental and personal values as primary affecting values. Depending on the findings, it seems that students are probably in a state of tension and cannot be motivated by higher level needs including social, esteem, and self-actualization because they can not satisfy their more fundamental security needs. Oguz (2012) used the SVS to examine teacher candidate value types and found that pre-service teachers possess mostly universalism, benevolence, and security types. The study revealed high importance of universalism, security, self-direction, and benevolence (Moskvicheva et. al, 2016).

Considering Turkey's geopolitical situation, it's clear that Turkey has great strategic importance. All over the Middle East there is great chaos. The Turkish people, as well as the teacher candidates, experience security needs more than other needs, and this need still seems to be unsatisfied. This unsatisfied security need suppresses the universal, self-enhancement, and self-transcendence higher order value types. Nations from Eastern Europe, Western Europe, the Far East, North America, and those influenced by Islam show characteristic patterns, each of which differs meaningfully from the others (Schwartz, 1994). Security and tradition values are an important part of past and present Turkish culture (Aypay, 2016).

From an economic perspective, many negative conditions exist for faculty of education graduates. Their assignment as teachers is not guaranteed. In addition, teacher salaries are very low and insufficient to support a family. For these reasons, candidate teachers may have preferred family security as a primary value.

The data shows that self-enhancement, which is a high order value type, is not perceived by the teacher candidates in this study as a primary value. It is expected that anyone who values self-enhancement will be affected by achievement, power, and hedonism. Wealth, authority, social power, ambition, capability, and enjoying

life are behavior models of these values. The traditional structure of Turkish society and its religious values do not support to idea that people should use the power or money that they possess only for their own improvement.

Islamic values necessitate that wealthy people should share one fourth of their earnings with poor people. According to Islamic values, ambition is also considered a weakness and a sin. Islamic Sufism depends on self-control. It might be true that candidate teachers do not consider self-enhancement values as primary to their own behaviors because of the cultural structure of Turkish society.

However, it is remarkable that as teacher candidates progress through school, higher universal values suppress conservative social values and become the primary values directing their behaviors. This difference between grades and value orders of candidate teachers is obvious and has been noted in other studies (Karaca, 2008). Dilmac et al. (2008) found that teacher candidates in their fourth year of the faculty ranked universalist value types as the guiding principal in their lives. Karaca (2008) indicated that the value priorities of teacher candidates did not vary between departments.

As the time devoted for education increases, universal terminal and instrumental values that affect behaviors, such as social justice, a world at a peace, a world of beauty, equality, unity with nature, wisdom, inner harmony, protecting the environment, and being broad-minded might emerge. The increasing competencies to cope with life that people acquire through education may also reduce the importance of security values (Schwartz, 2006). Akin (2009) examined the democratic values of teacher candidates, including a freedom terminal value, and found that female teacher candidates had more democratic values than their male counterparts.

According to the findings, both female and male students ranked conservative higher order value types, such as the "family security" value, highest. When they reach their fourth year, though, their first priority shifts to "a world at peace" as a terminal value, which is a universal value type. Instrumental values were not significantly related to self-enhancement (achievement, power, hedonism) and self-transcendence (universalism, benevolence) among the students' five highest value preferences. Students studying in the department of social sciences primarily preferred a universal value called "a world at peace."

This study identified, the value priorities of teacher candidates. It is necessary to develop universal values for teacher candidates in the education faculties for the sake of the world and national peace. The "universalism" value type represents a preference for social justice and tolerance and teaching "universal" values can help to break down the walls of prejudices. Education may reduce the importance of security values (Schwartz, 2006). Values affect attitudes and attitudes affect behaviors.

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Denizli Pamukkale Üniversitesi Eğitim Fakültesi'ndeki Öğretmen Adaylarının Değer Öncelikleri

Atıf:

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Özet

Problem Durumu: Bizim kolaylıkla görebildiğimiz bir davranış sadece sadece değerlerin bir sonucudur. Öğretmenlerin öğretme davranışları da onların değerleri tarafından etkilenmektedir. Bu yüzden değerler konusu öğretim çalışmalarına temel teşkil eder. Eğer öğretmen adaylarının değerlerini anlayabilirsek öğretmen adaylarının olası öğretme davranışlarını tahmin edebiliriz. Böylelikle öğretmen adaylarının hangi değerlerinin öğretmenlik becerilerine engel teşkil edip etmediğini bulabiliriz. Ve onlar mezun olmadan onları eğiterek onları etkileyebiliriz. Öğretim becerilerine engel olan değerleri değiştirmeye çalışmalıyız ve öğretim becerilerine destek olan değerlerini de geliştirmelerine yardımcı olmalıyız.

Araştırmanın Amacı: Bu araştırmanın amacı öğretmen adaylarının değerlerinin oluşumuna ve önceliklerinin belirlenmesine katkısı olan amaç ve araç değerlerinin ne olduğunu keşfetmektir. Çalışmaya yön veren sorular aşağıdaki gibidir:

- (1) Geleceğin okul öğretmenleri olarak öğretmen adaylarının amaç ve araç değerleri nelerdir?
- (2) Fakültenin çeşitli bölümlerinde okuyan öğretmen adaylarının değer öncelikleri sıralamasında farklılıklar bulunmakta mıdır?
- (4) Değerleri cinsiyet gibi kontrol edilemeyen değişkenlere göre farklılık göstermekte midir?

Araştırmanın Yöntemi: Öğretmen adaylarının değerlerini ölçmek için Schwartz Değerler Ölçeği (SVS) kullanılmıştır. Bu çalışmanın evrenini eğitim fakültesinin farklı bölümlerine devam etmekte olan 4856 öğrenci oluşturmaktadır. Veriler rastgele tabakalı örnekleme tekniği kullanarak belirlenen 498 öğrenciden elde edilmiştir. Araştırmanın %63'ünü (323) kız öğrenci, % 35'ini (173) erkek öğrenci oluşturmaktadır.

Araştırmanın Bulguları: Sonuçlar göstermektedir ki kız öğretmen adaylarının %48'i ve erkek öğretmen adaylarının %41'i aile güvenliğini hayatlarına yön veren üstün öneme sahip amaç değer olarak ilk sıraya yerleştirmişlerdir. Kız ve erkek öğrenciler arasında birinci sırada konzervatif bir amaç değer olan aile güvenliğinin ilk sırada yer aldığı görülmektedir. Aile güvenliği "Güvenlik" üst değer tipi sıralamasına girmektedir. 1,2,3 ve 4. Sınıfta okuyan öğretmen adaylarının ilk üç sınıfta davranışlarına etki eden öncelikli ana değer olarak conservative değerleri (ulusal güvenlik ve aile güvenliği) seçtikleri, dördüncü sınıfa gelindiğinde ise öncelikli değer

olarak evrensel bir değer tipi olan Dünya’da barış ana değerinin tercih edildiği görülmektedir. Dikkat çeken başka bir nokta ise evrensel bir değer için öncelik sıralamasında fakültede geçirilen zaman arttıkça kademeli olarak yükselmesi ve birinci sırada yer alan konservatif bir değer için yerini almış olmasıdır. Dördüncü sınıfta konservatif değerler 2. 3. Sıralara ötelenmiştir. Sosyal Bilgiler öğretmenliği dışında diğer bölümlerde okuyan öğretmen adaylarının davranışlarına yön veren öncelikli değer olarak konservatif değerleri tercih ettikleri görülmektedir. Sosyal bilgiler öğretmenliği bölümünde okuyan öğrenciler için ise ilk sırada evrensel bir değer olan Dünya’da barış yer almıştır.

Araştırmanın Sonuçları ve Önerileri: Elde edilen veriler ışığında öğretmen adaylarının davranışlarına öncelik veren değerler bakımından en çok konservatif üst sıra değer tipinden etkilendikleri söylenebilir. Fakat şunu da belirtmek gerekir ki konservatif değer tipi olan gelenek’in araç değeri dindarlık, ulusal güvenlik ve aile güvenliği amaç değerlerinin araçları olan sağlık ve temizlik araç değerlerinin önüne geçememiştir. Öyle görünüyor ki öğretmen adayları için ulusal güvenlik ve aile güvenliği dindarlık araç değerinden daha önceliklidir. Öğretmen adaylarının öncelikli ara değeri Sağlık olmuştur. Güvenliği sağlayacak ara değer öğretmen adaylarına göre ilk sırada sağlıklıdır.

İhtiyaçlar insanın hayatında bitmek tükenmek bilmeyen bir döngüdür. Motivasyon sürecini bu bitmek tükenmek bilmeyen ihtiyaçlarımız başlatır. İhtiyaç organizmada bir dengesizlik yaratır. Bu dengesizlikten kurtulmak için motive olur ve bir davranışta bulunuruz. Eğer davranışımız uygun bir davranışsa organizmamızı tekrar dengeye sokar ve bu sefer başka bir ihtiyacı karşılamak için güdüleniriz. Maslow ihtiyaçlar hiyerarşisi teorisinde bir insanın hayatında ihtiyaç olarak görebileceği ihtiyaçları en temel ihtiyaçtan en uzak ihtiyaca doğru sınıflandırmıştır. Ve Maslow’un teorisinin dayandığı bilimsel ilkelere göre bir önceki basamakta yer alan ihtiyaçlar karşılanmadıkça bir sonraki basamakta yer alan ihtiyaç için güdülenemeyiz ve davranışta bulunamayız. Yani fizyolojik ihtiyaçları karşılanamayan bir birey güvenlik ihtiyacı için motive olamaz. Öğretmen adaylarının conservative değerleri sıklıkla davranışlarına yön veren öncelikli değerleri olarak görmeleri bunun yanında çevre ve kişisel değerleri ön sıralara taşıyamamaları güvenlik ihtiyaçlarını karşılayamadıkları, gerilim yaşadıkları ve üst basamaklarda yer alan sosyal ihtiyaçlar, saygı ihtiyacı ve kendini gerçekleştirme ihtiyacı için motive olamadıklarını anlatıyor olabilir. Verilere bakıldığında üst sıra değer tipi olan Öz-genişletim (başarı, güç ve hazcılık) değer tipinin öncelikli değerler olarak algılanmadığı göze çarpmaktadır. Öğretmen adaylarının öz genişletim değerlerini davranışları için öncelikli birer değer olarak görmüyor olmaları Türk toplumunun kültürel yapısından kaynaklanıyor olabilir.

Bununla birlikte öğretmen adayları için bir üst sınıfa çıktıkça evrensel değerlerin konservatif değerleri bastırıp davranışa yön veren öncelikli değer olarak ortaya çıkması dikkat çekicidir. Eğitime ayrılan süre; Sosyal adalet, Dünya barışı gibi davranışa yön veren evrensel araç ve amaç değerlerin öne çıkmasına yardım ediyor olabilir.

Öğretmen adaylarının üst sıra değer tiplerinden birisi olan değişime açık olma davranışlarını geliştirmeleri gerekmektedir. Bir insanı değişime açık hale getiren değerler Schwartz'a göre meraklı olma, kendi hedeflerini belirleme araç değerleri ve öz-saygı, yaratıcılık amaç değerleridir. Yaratıcılığı davranışlarına yön veren öncelikli değer olarak gösteremeyen öğrenciler yaratıcı nesiller yetiştirmekte zorlanabilirler. Değişime açık olmayı sağlayacak amaç ve araç değerler konusunda çalışmalar yapılabilir ve öğretmen adayları desteklenebilir.

Anahtar Kelimeler: Üst sıra değer tipleri, değer tipleri, amaç değerler, araç değerler.

Turkey's Progress Toward Meeting Refugee Education Needs The Example of Syrian Refugees

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Abstract

Problem Statement: Historically, Turkey is an immigrant country. It has experienced various migration waves from Asia, Awrupa and Africa. Recently, Turkey has confronted a huge wave of migration. Turkey tries to meet many needs besides the educational needs of refugees, but there is not enough study on refugess in the field of educational sciences in Turkey.

Purpose of the Study: The purpose of this study is to analyze the Turkey's progress toward meeting refugee education needs through the example of the Syrian Refugee experience.

Method: The study uses a case study of the refugees in Mardin and its districts. The data in this study is compiled through interview and observation techniques. An interview form was developed and included the standards (access, integration, quality, protection, participation, partnership, observation and evaluation) suggested by the Office of UNCHR. Coordinators, directors and teachers at schools in Mardin, Midyat and Kızıltepe were interviewed. The researchers tried to turn the data into quantitative and qualitative indicators, taking into account the standards for the various levels of meeting refugee education needs.

Findings and Results: Turkey supported refugee education in various ways; for instance, opening schools in the refugee camps and meeting various needs for voluntary schools. The results indicated, however, that according to measures of access, integration, quality, protection, participation, partnership, observation and evaluation, refugee education

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needs have been inadequately met, and Turkey hasn't a system for refugee education.

Conclusions and Recommendations: It has been suggested that Turkey develop a refugee education policy and use UNCHR standards for refugee education. For this, first, Turkey should create a systematic format for its refugee education program. MEB should develop a policy on refugee education. For example, MEB should use UNHCR's criteria to measure access, integration, quality, protection, participation, partnership, observation and evaluation of refugee education. In addition, educational sciences should research refugee education from a holistic perspective that includes relevant international law and policy fields.

Key Words: Migration, refugee education rights, refugee education standards, level of Turkey's refugee education

Introduction

Migration and asylum are historical and social phenomena that date from early ages of humanity. These phenomena are affected by different factors and cause irreversible consequences. In addition, globalization, migration and asylum have become important phenomena during our last century. Globally increased population mobility has caused the formation of refugee populations within the overall population in most countries. Large populations of the world claim refugee status due to economic, social, and political reasons, the wish for a better life, as well as extraordinary reasons such as drought and war.

The total numbers of worldwide refugees in the Report of the United Nations High Commissioner for Refugees (UNHCR) was registered as 45,2 million at the end of 2012. 7,6 million people fled from their own country in 2012. UNHCR's commissar António Guterres points out that the increasing refugee population is in an alarming situation. Furthermore, he expressed the difficulty of preventing international conflicts or finding solutions to these conflicts. The Report of the UNHCR is based on the data compiled from governments, non-governmental organizations and the United Nations (2012a).

Migration and asylum demand international cooperation because of the large populations involved. The refugee problem requiring international cooperation is coordinated by the Office of the UNHCR. Refugee processes can vary, with different designations such as guest, temporary stay and permanent stay. Individual asylum, or small groups of asylum, seekers consist of people who intend to stay permanently in the host countries. Large numbers of refugees who flee from extraordinary situations such as war return to their countries. The United Nations, refugee hosting countries, and other national and international organizations cooperate in order to provide basic life requirements and education as well.

The processes of migration and asylum are dealt with according to the national and international legal texts, which results in a significant terminology of migration and asylum. The categories of migration and asylum are refugees, asylum-seekers, pending cases, internally displaced people (IDP) protected/assisted by UNHCR, returned refugees, returned IDPs and stateless people. Refugee is defined as a person entitled to benefit from the protection of the United Nations granted by UNHCR, regardless of being in a country agreeing with the terms of Convention relating to the Status of Refugees, Art. 1A(2), 1951 as modified by the 1967 Protocol, or being recognized as a refugee by a hosting country (IOM, 2014).

An asylum seeker is a person who looks for safety from oppression or serious damage in a country other than his or her own and waits for a decision on the application for refugee status under suitable international and national instruments. In the case of a negative decision, the asylum seeker must go the country and may be run out, as may any non-national in nonuniform or illegal situation, unless authorization to stay is provided on humanitarian or other related grounds (IOM, 2014).

People who are displaced (IDPs protected / assisted by UNHCR) are forced to leave in order to avoid armed conflicts, general violence, violations of human rights or the effects of natural or human-created disasters, and who do not cross internationally recognized borders of countries. In its broadest sense, returned refugees, returnees, returned IDPs refer to those who actually return. This return might be the return of those displaced from their own countries, as well as refugees, asylum seekers and skilled citizens returning from the host country to the origin country. Return categories are divided into voluntary, forced, assisted and spontaneous returns. Moreover, there are sub-categories explaining who returns; for example, the return of refugees (IOM, 2014). Also, according to IOM, a stateless person is one who is not accepted as a citizen by any State according to its law (Art. 1, UN Convention relating to the Status of Stateless Persons, 1954). As such, a stateless person lacks those rights attributable to national diplomatic protection of a State, with no inherent right of sojourn in the State of residence and no right of return in case he or she travels.

The concept of the refugee is preferred because of its most protected status, since education is everywhere and in every condition considered one of the fundamental human rights. This notion is broadened in a way that includes refugees through some legal texts. The Convention Relating to the Status of Refugees includes refugees' educational situations in addition to the other cases. The Convention was confirmed on 28 July 1951 in Geneva. It entered into force on 22 April 1954. Article 22 concerns refugee education;

1. The Contracting States shall accord to refugees the same treatment as is accorded to nationals with respect to elementary education.
2. The Contracting States shall accord to refugees treatment as favourable as possible, and, in any event, not less favourable than that accorded to aliens generally in the same circumstances, with respect to education other

than elementary education and, in particular, as regards access to studies, the recognition of foreign school certificates, diplomas and degrees, the remission of fees and charges and the award of scholarships.

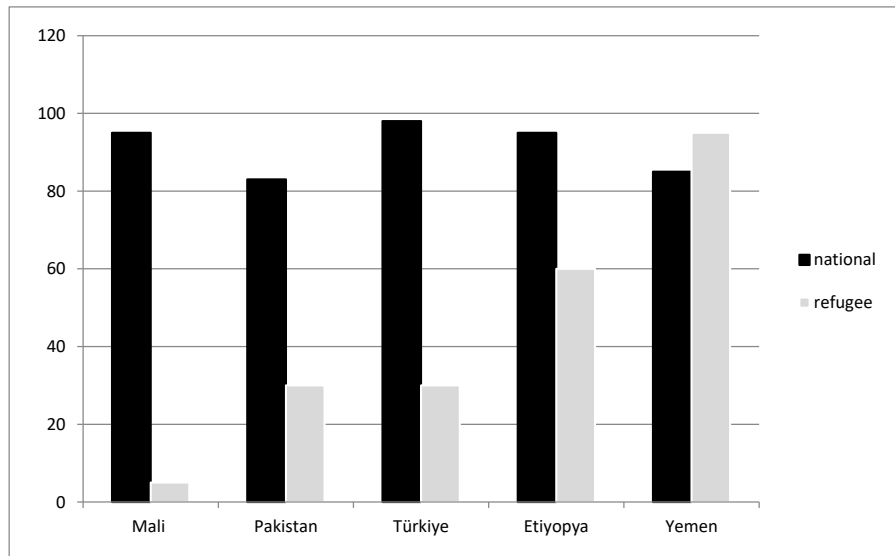
Turkey ratified the treaty on 24 August 1951, and The Turkish government entered reservations which it could make under article 42 of the Convention at the time of ratification. Reservation and declaration made upon ratification: "No provision of this Convention may be interpreted as granting to refugees greater rights than those accorded to Turkish citizens in Turkey."

As a result, countries provide education to refugees as they do for their own citizens. Nevertheless, countries do not fulfill their duties about the provision of education to refugees. They place more importance on their own citizens in educational matters. Therefore, education provided for refugees is limited, unbalanced, and of low quality. It is not protective for the risk groups and lacks institutional coordination and resources.

Gross Enrolment Ratios related to nationals and refugees may be seen in Table 1. As shown in Table 1, refugee participation in primary school is lower than that of nationals. For example, 5% of the refugees in Mali are included in primary education, compared to 97% of nationals. This ratio is 30% for refugees and 98% for nationals.

Table 1.

Gross Enrolment Ratios for Refugees and Nationals (2008)



Source: Dryden-Peterson, 2011

Social, political and economic burdens of refugees on the countries where they live, as well as limited budgets to address their needs, constitute a big obstacle for the

development of sensitivity for refugee education. Furthermore, facing population growth due to mobility, countries have difficulty producing policy on refugee education. Thus, countries need to increase their capacities to meet educational requirements. UNHCR (2012b) policy places great importance on the provision of quality and protective education. The principles of this policy support integrating refugees into national education systems, education up to the end of secondary school for all refugees, investment in consecutive training for teachers, determining new standards and indicators to measure progress towards a quality and protective education, and providing for the funding needs for high quality and protective education to be met consistently.

Recently, Turkey has been one of the countries where refugees from the Middle East, Asian Republics, Eastern Europe and Africa have come to live. Moreover, Turkey confronts global and massive influxes of refugees due to the Syrian Civil War (Dincer, Federici, Ferris, Karaca, Kirisci and Ozmenek, Carmıklı, 2013). Some of the refugees stay in camps at borders, while others endeavor to live in metropolitan areas. The number of Syrian refugees has increased greatly.

In Table 2, the number of Syrian refugees is provided. Syrians fleeing from the civil war in their country have come to Turkey since 29 April 2011. They are hosted in 10 cities and in 22 temporary shelters. Turkey's strategy toward Syrians is an "open door policy" (AFAD, 2014, p. 35). The number of Syrian refugees fleeing since 2011 is 715215. This number is higher than the populations of non-metropolitan cities in Turkey.

Table 2.

Number of Syrian Refugees

Gender	Frequency	Percentage
Female	351919	48,2
Male	363296	50,8
Total	715215	100

Source: AFAD, 2013

In Table 3, age, gender and education distribution are provided. The Syrian civil war has created a significant burden for Turkey, and Turkey provides for most of the refugee needs on its own, except for a small amount of outside support. One of these requirements is the provision of education. A majority of refugees have aged out of educational opportunities and cannot benefit from education rights according to the Office of UNHCR.

Table 3.*The Distribution of Age, Gender and Education*

Age	Male	Female	Total	Education level
0-4	9.4	8.4	17.8	Nursery
5-11	10.6	10.1	20.7	Nursery Primary
12-17	7.5	7.3	14.8	Primary Secondary
18-59	21.5	21.6	43.1	University Adult education
60+	1.7%	1.9	3.6	

Source: UNHCR, 2014

There is almost no study related to refugees in the educational literature of Turkey, except for a small part of a thesis, -“Language Learning and Transit Refugees in Turkey by Garrett Hubing (2011): A Case Study of Afghans in Sivas”. Actually, there are articles and theses dealing with refugee problems in the frameworks of health, law, and media. The lack of academic studies regarding refugees in Turkey, despite its being an important center for refugees, is a paradox. The academic studies on refugees are regarded as an important dimension of the solution.

Ager and Strang seek a conceptual frame work for refugee integration in their study “Understanding Integration: A conceptual Framework”. The study claims that education is an important factor for the integration of refugees. The skills refugees obtain during education periods are crucial for their being effective members of society (Ager and Strang, 2008). Owing to the importance of integration in education, there are a lot of studies regarding refugee education. For instance, the research by Isık-Ercan (2012) on the Burmese suggests advocacy for the Family.

Academic interest in the solutions to the refugee problem is essential. Thus, the studies related to refugees and their education are increasing in both number and importance. The most important indicator of this growth is the increase in journals and research on this subject, such as the Journal of Refugee Studies (Oxford Journal, 2014), Journal of Immigrant & Refugee Studies (Taylor&Francis, 2004) and Journal of Refugee Studies (FMO, 2014). Academic knowledge about refugees facilitates the process. Despite these academic developments, the refugee problem in Turkey has not attracted academicians, which is difficult to understand because of Turkey being a host country. Turkey needs to strengthen its capacity on this subject in order to solve the refugee problem and to meet the needs of refugee education.

The Aim of Study

The aim of this study is to determine the level at which Turkey is meeting refugee education needs in its provision of refugee education rights, which is a sub -

component of education right. Furthermore, it suggests the importance of strengthening its capacity for refugee education by developing its national educational processes, including those aimed at refugees. Subaims of the study:

- Access to education for refugees
- Integration of refugees into the national education system
- Quality of refugee education
- Protection of refugees who are at risk
- Participation of refugees
- Partnership
- Observation and evaluation

Method

Research Design

The research design was developed qualitatively, since it gives researchers details in the research process (Kumbetoglu 2005). A case study technique is used in the research. A study case is the detailed analysis of a social unit's past and present situation and its qualities within the environment (Kazak, 2001, 146; Punch, 2005). In this paper, because the Syrian refugees have special conditions and they live specialities, the case study is the preferred form of analysis.

Study Group

The study was carried out in Mardin and its districts with high populations of refugees. Although Turkey is an important hosting country for migration, this study was limited to Syrian refugees who fled to Mardin and its districts from beginning of Syrian civil war to March 2014. The study group was determined by purposive sampling technique (Balci, 2015). The study group consisted of Syrian volunteers from Mardin City Center, Midyat City Center, Midyat Camp and Kiziltepe, AFAD Mardin Directorship, Mardin MEB, Kiziltepe MEB, Midyat MEB and Midyat Camp Education Coordinatorship in March 2014.

Research Instrument and Procedure

For data collection, an interview form was developed based on the UNHCR education standards (2012c) used for refugees. These standards include access, integration, quality, protection, participation, partnership, observation and evaluation. Necessary corrections in the interview form were made by experts.

Reliability and Validity

To prove the reliability and validity of the paper, expert examination, purposive sampling and dependability conformability techniques (Yıldırım&Simsek, 2008, p. 265) were used. The paper was examined by an educational science expert. Expert views have supported the views of the researchers. The statements of those interviewed resonate with the findings. Purposive sampling technique was used to choose the study group in relation to the aims and sub-aims of the paper.

Data Analysis

Systematic analysis technique was used in analysing the data compiled through interviews. Systematic analysis is based on the descriptive presentation of the data to reach causal and descriptive results and to determine some notions and concepts, along with the relationship between these concepts and notions (Kumbetoglu, 2005, p. 154). The data collecting tool used in this research consisted of the standards (access, integration, quality, protection, participation, partnership, observation and evaluation) suggested by the UNHCR. The data is analyzed according to these standards.

Results

Access to education is the most important standard suggested by the UNHCR to improve education both qualitatively and quantitatively. *Access* is ensuring that refugees have access to all education services in the same way and at similar cost to that of nationals. *Integration* refers to education services for refugees integrated within the national public system. *Quality* is ensuring that the education offered to refugees conforms to national and international standards and provides a safe and child-friendly learning environment carried out by well-educated teachers. *Protection* is providing protection and special assistance to the most vulnerable groups and individuals among refugee communities so they can access education equitably, including separated and orphaned children, girls and women at risk, the elderly, persons with disabilities and refugees in need of special education. *Partnership* is partnering with a wide range of actors, especially governments, local authorities, other UN agencies, international agencies, NGOs, civil society and community organizations, academic institutions and the private sector to ensure the availability of quality education services for refugees. *Participation* is ensuring that community members participate actively, transparently and without discrimination in assessment, planning, implementation, monitoring and evaluation of education programmes in urban settings. *Monitoring and evaluation* involve establishing and utilising efficient monitoring and evaluation (M&E) systems to improve programme implementation, prioritization and impact.

Access

Refugee Access to Education in Turkey shows differences according to refugees' law status (with dual citizenship) and school facilities. Refugees can attend Turkish public schools, Turkish schools (as a guest student), the centers opened by non-governmental organizations, municipalities and Syrian volunteers and other schools (AFAD, 2013). However, the facilities offered by schools are not the same. Four schools consisting of primary, secondary, high school and vocational training are available in Mardin and its districts. There are different levels of education in these schools, one of which is in Midyat.

Table 4 includes the distribution of schools and courses and includes their types, levels and founders. The schools founded by volunteers in Mardin consist of primary,

secondary and high schools. Refugee Camp School was founded by AFAD and voluntaries. Nursery, primar, secondary and high schools are available at camp school. There is just a primary, secondary and high school. High school students attend the camp high school.

Table 4.

Schools and Courses

Place	School type	School level				
		Nursery	Primary	Secondary	High School	Adult Education
Mardin	Voluntary	-	1	1	1	-
Midyat	Voluntary/ AFAD	1	2	2	1	6
Kızıltepe	Voluntary	-	1	1	1	-
Total	4	1	4	4	3	6

Table 5 includes the distribution of the number of students and the type of school. The number of registered students in schools is 2401 according to Table 5, which shows the distribution of place and school type. A large number of students attends refugee camp schools (958), while the smallest number of students attend the school in Mardin (400).

Table 5.

The Number of Students and the Types of Schools

Places	Schools	Number of students
Mardin	Voluntary	400
Midyat-Outside Camp	Voluntary/AFAD	958
Midyat-Camp	Voluntary	412
Kızıltepe	Voluntary	531
Total	4	2401

Officers in the education department say that most students attend voluntary schools, adding that guest students at public schools are very few. Opening a special school for the Syrian refugees is an essential precaution. The Turkish Ministry of National Education directs students who do not know Turkish to the schools where the medium of instruction is Arabic. Midyat school administrators in the camp stated, "There are many students who have access to an education camp outside. There are many families outside the camp and they do not go to any school." Similar phrases were offered by the school's director in Midyat Center: "Especially in high school, students are able to attend school because there is only one high school in Midyat in the camp."

Integration

There have been no major improvements in incorporating *education* for refugees into the national education system in Mardin and its districts. That standard is for long and permanent refugee stays. Since Syrian refugees are regarded as guests, they prefer providing *educational service* instead of integrating the refugees into the educational system. The refugees in Mardin are eligible for the integration of education on the condition that these refugees have dual-citizenship and permission to stay more than six months. The refugees who do not have the above-mentioned statuses remain out of the system and attend voluntary schools. Syrian school administrators in Mardin stated that they preferred to strengthen refugee schools rather than provide integration into the national education system. School administrators in the camp stated that, "Students come to our school more accurately because Arabic is not the language of instruction and there are the differences in both programs". Schools significantly opened and managed by the Syrian opposition can be seen to be associated with Syria's future. The Syrian opposition has set up an education commission and prepared a book for refugee schools.

Quality

Factors such as competence of teachers, curriculum, physical equipment of schools, educational materials and security determine the quality of education. Twelve teachers are employed in vocational programmes relating to computers, nursery care, cosmetology, sewing, the Quran and sports. Except for Turkish teachers, all teachers are voluntary Syrians. Some of the teachers are "teacher," and others are students attending classes. The classes consist of 30-40 students, and these classes lack educational equipment. The curriculum is prepared by Syrian Council for Education (Syrian opposition). The books published according to this curriculum are available in every school except Mardin City Center School.

The school in Mardin Center was converted from an old building housing Quran courses. Most of the windows had no glass had heating problems. Mardin City Center School lacked physical equipment and materials. There are desks and a board in the tent schools at Midyat Camp. The basement in one of the schools in Midyat is arranged for refugee education. The school in Mardin was a Quran course and there was no glass in the windows, which caused the heating problem. The school was opened by Syrian volunteers in an independent building allocated by the District Governorate in the Kiziltepe district and was in physically better condition than the other schools.

Protection

It is obvious that a significant proportion of the refugees who were displaced due to the civil war are at risk. In spite of their survival, they have lost most of their relatives and their shelters. The fact that war itself is traumatic worsens refugees' conditions. Thus, all refugees are in risk groups; however, there is no special programme or effort to address the risk groups in Mardin and its provinces, yet the young at the camps and in the cities receiving bad news from other side of the border need serious protection. The Director of Mardin City Center said, "Some of the refugee children with transportation problems do not attend the schools". It can be said that the disabled and the ones needing special education are out of the education system entirely.

Partnership

The number of refugees is greater than the population of 60 cities in Turkey, which causes a huge burden for Turkey. It was determined through interviews at schools that very limited support from outside is provided. During interviews in schools, school administrators said that there is a very limited amount of support provided. The director of the school in the Mardin center indicated that Turkish and international organizations have visited them and have said they would help, but then no one said when they might return. Three of the refugee schools were opened by the Syrian Opposition (ETELAF) and some non-governmental organizations with the cooperation of Syrian volunteers. Planning, application, observation and evaluation of these schools are carried out by the participants mentioned. Nevertheless, there is no study by AFAD or volunteers that has determined the needs of the community regarding education. Access to education depends on the refugee application, which makes it impossible to include the students who do not apply for education. There is no finding about refugee groups and the representation of organizations (another component of participation). A research profile of the refugees is not performed; therefore, it is difficult to say anything about the refugee group and the representation of organizations.

Monitoring and Evaluation

Monitoring and evaluation includes the recognition of the major components of the monitored person, usage and determination of the existing education management information system, data collection, analyses and reporting, using multiple sources of data and access to information, monitoring and implementing partners to monitor students (IP). Monitoring and evaluation at camp schools under the supervision of AFAD is performed by an authorized AFAD official. Monitoring and evaluation at voluntary schools is performed by volunteers. The study of AFAD officials and volunteers is based on daily observation, which is not systematic. As mentioned above, this type of monitoring and evaluation is far from incorporating all appropriate components.

Discussion and Conclusion

Because of the war that started in Syria in 2014, Turkey was faced with its history's greatest migration. Turkey has tried to meet many needs beside the educational needs of the refugees. Turkey do it boot human issueand the requirement ofthe signed international contacts. Despite the fact that Turkey's effort is deprived of a systemic approach, it causes not to findresponseof these great efforts sufficiently. Certainly, in this regard, it is important to recognize that Syrian refugees are perceived as "guests". Though the war had been underway for four years when this work in Turkey was begin in 2014, it is thought that the likelihood of refugees returning home has been gradually reduced (Dincer and the others, 2013; Kutlu, 2014). This situation is understood from the educational practies that Turkey cannot improve upon convenient practices in response to the "open door policy" related to refugees.

The work done in relation to this topic supports the work's findings. In Kutlu's research (2014, p. 9), there are important problems related to *access*, but very limited of the Syrian refugees access to educational opportunities. The *integration* criterion

demonstrates similar findings to Kutlu's research (2014), indicating very limited options for the Syrian children to continue with Ministry of Education (MEB) schools. Kutlu expresses that schools are in quite inconvenient conditions as well.

In Bahcesehir Universty's research on the traumas of Syrian children (2015), posttraumatic stress disorder, high levels depression and "very high" clinic findings are observed. Among the findings of the Bahçeşehir Universty, with research done in Istanbul, Gaziantep, and Şanlıurfa, it is seen that so many public, NGO and intenational partnerships contribute to it. public, NGOs and intenational partnerships are quite limited in Mardin and its enviroments.

Conclusion

Refugee matters are more compicated than simple analysis from an educational sciences persperctive can address. A holistic social sciences perspective that includes international law and policy fields is required. Turkey needs such a holistic social sciences approach to the issue of Syrian refugees. At the same time, this situation indicates that educational sciences currently neglect refugee education. Academic research will be a source for MEB and researchers interested in refugee education, and this research is quite limited in Turkey.

In the paper, it is understood that Turkey struggles so much with refuge education, but it does not have a systematic approach. In this regard, it is believed that the lack of an MEB refugee education policy is ineffective. Thus, UNHCR access, integration, quality, protection, participation, partnership, observation and evaluation used to determine the level at which Syrian refugee education needs are met, and according to many other criteria, it is determined that Turkey's response to these needs is inadequate.

Recommendations

Turkey does not have a systematic perspective on refugee education. Therefore, Turkey should create a systematic framework for its refugee education studies. MEB should develop a policy on refugee education; for example, MEB should use UNHCR's criteria of access, integration, quality, protection, participation, partnership, observation and evaluation of refugee education. In addition, educational sciences should research refugee education from a holistic perspetive that includes fields like international law and policy.

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Türkiye'nin Mülteci Eğitimini Karşılama Düzeyi Suriyeli Mülteciler Örneği

Atf:

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Özet

Problem Durumu: Göç ve iltica insanlık tarihi kadar eskidir. Son yüzyılda özellikle küreselleşme ile birlikte göç ve iltica tekrar önemli bir olgu olarak karşımıza çıkmaktadır. Ekonomik, sosyal, siyasi ve daha iyi bir yaşam arzusunun yansira kuraklık ve savaş gibi olağanüstü nedenler büyük oranda nüfusu mülteci konumuna düşürmüştür. Türkiye son yıllarda Ortadoğu, Asya Cumhuriyetleri, Doğu Avrupa ve Afrika'dan artan sayıda bir mültecinin akımına uğramıştır. Ayrıca yaklaşık altı yıldır süren Suriye iç savaşı ile birlikte Türkiye büyük ve kitlesel bir mülteci karşı karşıya kalmıştır.

Suriyeli mültecilerin bir kısmı kamplara yerleştirilirken, bir kısmı ise başta metropoller olmak üzere farklı şehirlerde topluma karışmış bir şekilde yaşamaktadır. Türkiye'de Suriyeli mültecilerin sayısı yaklaşık üç milyona ulaşmıştır. Suriye iç savaşının en büyük yükünü Türkiye, mültecilerin ihtiyaçlarını çok az miktarda dış destek görmekle birlikte çoğunu kendisi karşılamaktadır. Bu ihtiyaçlarından biri de eğitimidir. Buna karşın UNHCR'in verilerine göre Türkiye'deki mültecilerin önemli bir kısmı eğitim hakkından yararlanamamaktadır. Türkiye'de mülteci sorununu sağlık, hukuk ve medya gibi bağlamlarda çalışan birçok çalışma bulunmakla birlikte doğrudan mülteci eğitimine ilişkin neredeyse hiç çalışmaya rastlanmamaktadır. Türkiye'nin bir göç ve mülteci ülkesi olmasına karşın bu konuda akademik üretimin olmaması büyük bir paradokstur. Çünkü başta entegrasyon sağlama ve göç travmasını atlatmak gibi mülteci sorunlarının çözümü için akademik çalışmalar etkili bir kaynak olarak görülmektedir. Nitekim Mültecilere ve mülteci eğitimine ilişkin çalışmalar dünya ölçeğinde yoğun ilgi görmektedir. Dünyadaki bu gelişmelere karşın Türkiye'de mülteciler konusu akademisyenlerin ilgisini çekmemektedir. Türkiye'nin mülteci sorununa ilişkin sorun çözme kabiliyetinin güçlendirilmesi gerekmektedir. Bunun için de mülteciler konusunda bilimsel bilginin üretilmesi şarttır.

Araştırmanın Amacı: Bu çalışmanın amacı eğitim hakkının bir alt bileşeni olan mültecilerin eğitim hakkının sağlanması bağlamında Türkiye'nin mülteci eğitimini karşılama düzeyini belirlemektir. Kendi yurttaşların yararlandığı eğitimsel süreçlerin mültecileri kapsayacak şekilde geliştirilerek mülteci eğitimine karşılama düzeyini güçlendirmek için öneriler geliştirmektir.

Araştırmanın Yöntemi: Araştırmanın deseni, araştırma sürecinde detayları ortaya çıkarma imkanı veren nitel araştırma yöntemi tercih edilmiştir. Araştırmada toplumsal bir birimin geçmişini, şimdiki durumunu ve çevreyle ilişkisel özelliklerini oldukça ayrıntılı bir biçimde incelenmesine imkana veren örnek olay incelemesi tekniği kullanılmıştır. Araştırmanın çalışma grubunu Mardin ve ilçelerinde yerleşen/yerleştirilen Suriyeli mülteciler oluşturmaktadır. Araştırma Mardin merkez, ilçeleri ve Mart 2014 tarihi ile sınırlandırılmıştır. UNHCR'in mülteci eğitimi için kullandığı standartlardan bir görüşme formu geliştirilmiştir. Görüşme formu erişim, entegrasyon, kalite, koruma, ortaklık, katılım, gözlem ve değerlendirme sorularını kapsamaktadır. Çalışmanın geçerliliği için uzman incelemesi, katılımcı teyidi ve güvenilirlik için ise "amaçlı örnekleme teknikleri kullanılmıştır.

Araştırmanın Bulguları: Türkiye'de mültecilerin eğitimi *erişimleri* mültecilerin hukuki statüleri (çifte vatandaş-mülteci) ve okul imkânlarına göre değişmektedir. Mülteciler "resmi Türk okulu, Türk okulu (misafir öğrenci olarak), belediye, STK ve Suriyeli gönüllülerin açtığı merkezler ve diğer" okullara gidebilmektedirler. Kamp içinde çeşitli meslek kursları ve bir okul öncesi sınıfı da bulunmaktadır.

Buna karşın Suriyeli gönüllülerin ifadesine göre halen herhangi bir eğitime erişemeyen çok sayıda öğrenci bulunmaktadır. Mültecilerin eğitim sistemine *entegrasyonu* konusunda önemli bir adım atılmamıştır. Bu standart daha çok uzun süreli ve kalıcı oturumu olan mülteciler içindir. Suriyeli mülteciler "misafir" olarak telaki edildiklerinden eğitim sistemine entegre etmek yerine *eğitim hizmeti* vermeyi tercih etmiştir. Mardin ve ilçelerindeki uygulama misafir mültecilerden çifte vatandaş olanlar ve altı aydan fazla oturumu olanlar eğitim denkliklerini ispat ettikleri zaman ulusal eğitim sistemine dahil olabilmektedirler.

Eğitimin *kalitesi* öğretmen yeterliği, müfredat, okulun fiziki donanımı, eğitim materyalleri, güvenlik gibi etkenler belirlemektedir. Mülteci okullarında öğretmen sayısının yetersizliğinin yansısı öğretmenlerin bir kısmı meslekten olmayan ya da henüz üniversite ara sınıflarında okuyan gönüllü Suriyeli öğrenciler oluşturmaktadır. Okullar bina ve donanım açısından da oldukça yetersizdir. Kamp okulları sahra çadırlarında açılmış ve sadece sıra ve karatahtadan ibarettir. Sadece Kızıltepe ilçe merkezinde müstakil bir binada bir okul açılmıştır. Bu okul daha iyi koşullara ve donanıma sahiptir.

Savaşın yerinden ettiği insanların büyük risk altında oldukları ortadadır. Bu anlamda mültecilerin tümü risk altında bulunan gruplar içinde sayılabilir. Buna karşın Mardin ve ilçelerindeki okullarda risk altında bulunan grupların *korunmasına* yönelik herhangi için özel bir program ve çabaya rastlanmamıştır. Sınırın ötesinde devam eden savaşta her gün yakınları ile ilgili haberler alan mülteci gençlerin ciddi bir korumaya ihtiyaçları olduğu açıktır. Diğer taraftan engelli ve özel eğitime ihtiyacı olan öğrenciler ile ilgili de herhangi bir çabaya da rastlanmamıştır.

Mülteci sayısı Türkiye'nin 60 ilin nüfusundan daha fazla. Kuşkusuz bu Türkiye için büyük bir külfete karşılık gelmektedir. Bu nedenle *ortaklık* standardı gereği özellikle dışarıdan destek için ortak bulunması gerekmektedir. Çalışmada ortaklıklardan sağlanan desteğin oldukça sınırlı olduğu saptanmıştır. Katılım standardı, eğitim

konusu olan topluluğun belirlenmesi, eğitim hizmetlerinin sunumunda mültecilerin katılımı, mülteci grup ve örgütlerin katılım ve temsili bileşenlerinden oluşmaktadır. Kamp ve kamp dışındaki okullar gönüllüler tarafından kurulduğundan eğitim programlarının planlama, uygulama, izleme ve değerlendirilmesinde tarafların katılımı sağlanmaktadır. Buna karşın eğitim konusu olan topluluğun belirlenmesinde AFAD ya da gönüllülerin bir çalışması söz konusu değildir. Eğitime erişim mültecilerin başvurusu ile gerçekleşmektedir.

Mülteci eğitimine ilişkin *izleme ve değerlendirme* AFAD denetimindeki kamptaki okullarda izleme ve değerlendirme AFAD'ın eğitim yetkilisi yaparken, gönüllülerin kurduğu okullarda ise kendileri tarafından yapılmaktadır. AFAD ve gönüllülerin izleme ve değerlendirme çalışmalarının sistematik olmayan ve daha çok günlük gözlemlere dayanmaktadır. Yukarıda ifade edildiği gibi izleme ve değerlendirme bileşenlerini içeren bir izleme ve değerlendirmeden oldukça uzaktır.

Araştırmanın Sonuçları ve Önerileri: Çalışmada Türkiye'nin mültecilerin barınma beslenme ve sağlık ihtiyacının yanında eğitim ihtiyaçlarını da karşılamaya çalıştığı saptanmıştır. Bunu hem insani bir mesele hem de inza attığı uluslararası sözleşmelerin gereği olarak yapmaktadır. Buna karşın Türkiye'nin eğitime ilişkin çabalarının sistematiklikten yoksundur. Türkiye'de Suriyeli mültecilerin statüleri ile yapılan tartışma yapılan hizmetlerin sistematikliğin de olumsuz etkilemektedir. Çünkü Suriyeli mülteciler *misafir* olarak algılanmakta ve geçici olarak görülmektedirler. Çalışmanın yapıldığı 2014 yılında savaşın üzerinden dört yıl geçmiş ve dönme ihtimalleri giderek azalmıştır. Bu durum Türkiye'nin mültecilere ilişkin *açık kapı* politikasına uygun pratikler geliştiremediğini eğitim pratiklerinden anlaşılmaktadır. Bu konuda MEB mülteci eğitimi politikasının olmamasının etkili olabilir. Nitekim Suriyeli mültecilerin eğitimlerini karşılama düzeyini belirlemek için UNHCR'in "erişim, entegrasyon, kalite, koruma, ortaklık, katılım ve izleme ve değerlendirme" kriterleri kullanılmış ve birçok kritere göre oldukça yetersiz olduğu saptanmıştır. Türkiye mülteci eğitimi konusundaki çalışmalarını sistematik bir formata kavuşturmalıdır. MEB mülteci eğitimi konusunda politika geliştirmelidir. Bunun için MEB mülteci eğitimi konusunda UNHCR'in kullandığı "erişim, entegrasyon, kalite, koruma, ortaklık, katılım ve izleme ve değerlendirme" kriterlerini kullanabilir. Eğitim bilimleri mülteci eğitimi konusu ile ilgilenemeye başlamalıdır. Mülteciler konusu uluslararası politika, uluslararası hukuk gibi alanları da içine alan bütünsel bir sosyal bilim perspektifi ile araştırılmalıdır.

Anahtar Kelimeler: Göç, mülteci eğitim hakkı, mülteci eğitim standartları, mülteci eğitimini karşılama düzeyi.

The Relationship between Teachers' Views about Cultural Values and Critical Pedagogy

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Abstract

Problem Statement: Known as basic elements directing individuals' lives, cultural values are hidden cultural elements that influence all evaluations and perceptions. Values, in that sense, are elements individuals are aware of and provide the answer to the "what should I do?" feeling (Schein, 1992). Critical pedagogy is a project based on defining what education basically is and questioning traditional education mentality (Yilmaz & Altinkurt, 2011). The purpose of critical pedagogy is to transform educational practices and school by creating an atmosphere where teachers and students develop common sense through theory, practice, and critical analysis and where they can question and discuss the effective relationships between learning and social transformation (Giroux, 2007; 2009).

Purpose of the Study: This study aims to assess the relationship between teachers' opinions on cultural values and critical pedagogy.

Method: The study is in a survey model. The sampling of the study consists of 304 teachers working in Kutahya province centre. Data was collected through Cultural Values Index and The Principles of Critical Pedagogy Scale. Descriptive statistics, t-test, ANOVA and Pearson correlation analyses were used in the analysis of the collected data.

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Findings: The findings suggest that teachers see the society with high power distance, above moderate level in terms of avoiding uncertainty and individualism and close to feminine values. It was also found out that teachers showed a moderate level agreement in critical pedagogy principles and its sub-dimensions. Participants' total scores related to critical pedagogy principles and their opinions on educational system sub-dimension were revealed to differ based on gender variable. Participants' opinions on cultural values and critical pedagogy principles do not differentiate according to tenure and fields of study. There are significant relationships between teachers' opinions on cultural values and critical pedagogy principles.

Conclusion and Recommendations: This study considers teachers' scores related to cultural values dimensions, which include Power Distance, Uncertainty Avoidance, Individualism versus Collectivism, and Masculinity versus Femininity. Teachers voted critical pedagogy principles in a medium-level. They showed the highest participation successively in functions of schools, education system and emancipator school levels amongst others. While the participants' perception of the power distance, individualism versus collectivism, and masculinity versus femininity in the society increase, the positive views about the education system sub-dimension increase. Furthermore, while the participants' perception of the power distance, individualism versus collectivism, uncertainty avoidance, and masculinity versus femininity in the society increase, the positive views about the functions of schools decrease. While the participants' perception of the power distance in the society increase, their participation in the views of the emancipator school sub-dimension decrease. While the participants' perception related to the uncertainty avoidance increases the positive views about the Critical Pedagogy decrease.

Keywords: Critical pedagogy, cultural values, teachers.

Introduction

The aim of this study is to assess the relationships between cultural values individuals have and their views on critical pedagogy. To achieve this end, cultural values and critical pedagogy concepts were explained first, and then the relationships between these two concepts were investigated. Known as basic elements directing individuals' life, cultural values are hidden cultural elements that influence all evaluations and perceptions. According to Rokeach (1973), values are individuals' beliefs about their ideal behaviour styles or life purposes and they are versatile standards that guide behaviours in different ways. Values, in that sense, are elements individuals are aware of and provide the answer to the "what should I do?" feeling (Schein, 1992). As a result, values seem to be an individual's tendency to prefer certain cases in their relationships with other individuals (Hofstede, 1991).

Cultural Values

There are various classifications about cultural values. Among these classifications, Hofstede's (1980) classification is a commonly used one. Thus, this classification is used in the current study. Hofstede (1980) divided cultural values into four dimensions: "Power Distance, Individualism versus Collectivism, Masculinity versus Femininity and Uncertainty Avoidance" (Hofstede, 1980, 1991).

Power Distance (PDI): This is the classical use of power, the ability of making others do the work (Hoy & Miskel, 2001). Power distance focuses on the relationships of the weak with the strong in society. Power distance between superiors and subordinates is present in all organizations and societies. What is important is a society's degree of acceptance and legitimization about unequal distribution of power (Hofstede, 1980). In societies with high power distance, the power difference between superiors and subordinates is bigger and the need for superiors to legitimize their use of power is lower. In such societies, hierarchy represents a naturally existent inequality; this inequality is a phenomenon that is normal and naturally accepted in such societies. In societies with low power distance, on the other hand, the need to legitimize the power use is higher. Hierarchy is used in the distribution and identification of social roles in these societies (Hofstede, 1980; 1983; 1991; Schwartz, 1999).

Individualism versus Collectivism (IDV): This dimension is about the degree to which individuals are integrated with the group. Individualism is more common in societies where the relationships between people are loose (Hofstede & Bond, 1988). Individuals' interpretation (construction) of self-concept is separate in individualistic societies (Markus & Kitayama, 1991). There are innate strong relationships integrated with the group in collectivist societies (Hofstede & Bond, 1988). While individual goals are consistent with inner-group goals in collectivist societies, individual goals are more prioritized over inner-group goals in individualistic cultures and there is an inconsistency between individual goals and inner-group goals (Wasti, 2003). Societal interests are always more important than individual interests in cultures where collectivism is the norm and the ultimate goal is agreement and harmony in society. Individuals are protected by society and they are expected to behave in accordance with group interests (Hofstede, 1983, 1991). While the "we" concept is taught in collectivist societies, there is a focus on "I" in individualistic societies. Individualism versus the collectivism dimension shows whether members of an organization behave independently, freely, and autonomously, or whether they are more dependent members who are in harmony and trust relationships within the group (Sisman, 2002).

Masculinity versus Femininity (MAS): Hofstede (1980, 1983) explained masculine and feminine values by analysing whether differentiation of gender roles in societies and values dominating society are masculine or feminine values. In societies where masculine values dominate, values such as progress, gain, success, freedom, responsibility, and achieving superiority are more prevalent (Hofstede, 1980; 1983; 1984). Values that come to the fore in societies where feminine values are dominant

are relationships, security, cooperation, and dependence (Hofstede, 1980). In societies with high masculine values, individuals' self-actualization needs and their beliefs in their own independent decisions are high (Hofstede, 1980; 1984). On the other hand, in societies with low masculine values, the need for freedom and self-actualization is low (Hofstede, 1980, 1984).

Uncertainty Avoidance (UAI): Uncertainty avoidance is a cultural value dimension that refers to the degree individuals in a society deal with uncertainty and their perceptions about seeing uncertainty as normal, acceptable, and tolerable (Hofstede, 1980). Members of societies with high levels of tendency to avoid uncertainty feel uncomfortable and uneasy and display behaviours to avoid these situations (Hofstede, 1980, 1983, 1984). That is why, in these societies there is more work stress, staying in the same workplace for a long time, less motivation for success, less risk-taking, more necessity for instructions, rules and hierarchy (Hofstede, 1980). In societies where uncertainty avoidance is low, uneasiness, discomfort, and stress are felt less and considered as normal parts of daily life (Hofstede, 1980, 1984). Thus, there is less standardization and rules.

Critical Pedagogy

Critical pedagogy, in its broadest sense, can be defined as an educational interpretation that discusses educational problems. Critical pedagogy is a project based on defining what education basically is and questioning traditional education mentality (Yilmaz & Altinkurt, 2011). The purpose of critical pedagogy is to transform educational practices and school by creating an atmosphere where teachers and students develop a common sense through theory, practice and critical analysis and where they can question, discuss the effective relationships between learning, and social transformation (Giroux, 2007, 2009).

Critical pedagogy is in opposition of the traditional pedagogy. There are considerable differences between critical pedagogy and traditional pedagogy in terms of communication between teacher and student. In traditional pedagogy, there is a hierarchical order in educational institutions. Students' critical thinking skills to question what they are presented as reality and the world they live in are not developed (Yilmaz & Altinkurt, 2011). As a result, it could be stated that critical pedagogy is related to questioning educational attainment, the quality of attained education, and results of outputs in a society. Within that context, queries of reflections of neoliberal educational policies and capitalist order, which deeply affect educational attainment, are of great significance for critical pedagogy.

The purpose of both traditional and liberal education is to help students reach a certain level of proficiency and gain certain skills. However, the traditional educator carries out this task based on the principles of preserving the institutional structure of existing systems. Emancipator educator, on the other hand, tries to unravel the mystery of dominant ideology that specifies almost all needs of students (Freire, 2009). There seem to be important differences between critical pedagogy and traditional pedagogy in the way teacher and students interact in addition to their roles. In traditional pedagogy, teacher-student interactions are seen to be a reflection

of power struggles in society. There is a hierarchical order in the educational setting. Students' critical thinking skills to question what they are presented as reality and the world they live in are not developed (Yilmaz & Altinkurt, 2011).

Critical pedagogy in this study is investigated on three dimensions: Education system; functions of schools; and emancipator school. These dimensions were taken from Yilmaz's (2009) study that tried to determine principles for critical pedagogy. Yilmaz (2009) gathered the principles he specified through factor analysis under three headings.

Education System: sub-dimension focuses on qualities resulting from education as a system. Social status of education emphasizes that it reproduces inequalities and poverty, keeps the existing status-quo instead of developing it, educates individuals as the state desires; power relationships and dominant powers have influence on education system and schools are used as a social control tool.

Functions of Schools: dimension includes school and social justice relationship, relationship between teacher and student, interaction in classroom setting, the quality of knowledge given and curriculum used at school, the channels used to reach information, and the status of teachers and students; in short, the purpose of school and reason for existing.

Emancipator School: dimension emphasizes that education is a process of emancipating and focuses on school's role in this process. It is also mentioned that the schools' duty is not to prepare students for society; rather, it is to contribute to individuals knowing themselves and becoming liberalized. Most importantly, this dimension focuses on schools as emancipating areas.

In conclusion, these dimensions help people look at the educational system from a critical point of view, questions schools' reasons for being, and emphasizes that education is a process of emancipation.

Relationship between the Cultural Values and Critical Pedagogy

One of the topics critical pedagogy significantly considers is the idea that the state trains people to be submissive through the educational system (Apple, 2004; 2006; Freire, 2010; McLaren, 2011). Freire (2010) defines such an education as the "banker model education". In this model, the teacher teaches and students learn because the teacher knows, thinks, says everything, disciplines, executes, selects the program (curriculum), and combines knowledge authority with his/her own professional authority. In the banker education model, the teacher is the subject of the learning process. The student does not know everything; instead, they are the object to be thought about, while they listen quietly, are disciplined, and follow teachers' choices and how they implement the program. In short, students are the object of the learning process (Freire, 2010).

This situation goes on with the modern state. With the purpose of preserving the current status-quo, the modern state does not start radical reform initiatives; instead it pretends that it is carrying out reform but does not attempt to create basic

structural changes (Spring, 2010). Illich (2009) who supports deschooling society, Baker (2006) who opposes compulsory education, or Spring (2010) who defends liberal education and maintains that schools are tools that shape people's ethical and social needs in the name of interests of the dominant elite class. The cultural codes of society come into play in that phase because the approach mentioned above continues through the cultural transfer process. Schools in traditional schools are used as tools for compulsory culture transfer.

According to Morgan (1998), culture refers to different lifestyles that various human groups own and there are various classifications regarding culture. Hofstede (1980, 1991) discusses national culture in four dimensions: "Power Distance, Individualism versus Collectivism, Masculinity versus Femininity, and Uncertainty Avoidance". These dimensions refer to lifestyle, human relationships, and educational systems of a given society. For example, the purpose of education in an individualistic society is to learn how to learn and the diploma acquired increases self-esteem. In such societies, individuals come before society; they have their own right to live and their own thoughts and rules and regulations to treat all people equally. In cultures where collectivism is a norm the purpose of education is how to do something (Hofstede, 1991).

Cultural values embedded in a society deeply influence individuals' opinions and evaluations about various subjects. In that sense, the assessment of relationship between teachers' opinions on critical pedagogy and their cultural values are important for analysis of critical pedagogy. Based on this, the current study attempted to assess if there is a relationship between cultural values in educational organizations and teachers' opinions on critical pedagogy principles. Based on this general aim, the following questions were answered in the study:

1. What are pre-school, primary, and secondary school teachers' opinions about cultural values and critical pedagogy principles?
2. Do pre-school, primary, and secondary school teachers' opinions about cultural values and critical pedagogy principles differ according to gender, tenure, and field of study?
3. Is there a significant relationship between pre-school, primary, and secondary school teachers' opinions about cultural values and critical pedagogy principles?

Method

Research Design

A survey research methodology was employed in the study because the study tried to assess the existing situation regarding teacher opinions about cultural values and critical pedagogy principles.

Research Sample

The universe of the study consisted of 1,430 teachers working in preschool, primary, and secondary schools in Kutahya's city centre. The disproportionate cluster sampling method was used to select the sample. Sample size was calculated as 304 with a confidence level of 95%. Analyses were conducted using 304 valid questionnaires that were returned. A total of 61.8% of the respondents were female (n=188), and 38.82% were male (n=116). A total of 10.2% of the participants were preschool education teachers (n=31), 37.2% of the participants were primary school teachers (n=113), and 52.6% (n=160) had specific fields. Seniority of the teachers who participated in the study varied between 1 and 38. While 39.5% (n=120) of teachers have 1-10 years of tenure, 42.1% (n=128) of them had 11-15 years of tenure, and 18.4% (n=56) of them had above 16 years of tenure.

Research Instrument and Procedure

The data collection instrument of the study incorporated Cultural Values Index (Hofstede, 1980), and The Principles of Critical Pedagogy Scale (Yilmaz, 2009).

Cultural Values Index developed by Hofstede (1980) was adapted to Turkish by Turan, Durceylan, and Sisman (2005). The scale has 36 items with 1-Totally disagree and 5-Totally disagree. The items in the scale consist of judgments in four dimensions: Power Distance (good administrators must sometimes be affectionate, sometimes strict, but must always protect his/her employees); Individualism versus Collectivism (decisions made by one person are more effective than those made by groups); Masculinity versus Femininity (relationships among employees must be separated from emotions and must be based on a certain distance); Uncertainty Avoidance (uncertainty regarding work in institutions is dangerous and must be decreased). The Cronbach's Alpha reliability coefficient of the scale is .72. For the scores gathered from sub-dimension Power Distance, high means high power distance, and low means lower power distance. For the scores gathered from the sub-dimension Individualism versus Collectivism, high means individualism while low means collectivism. For the scores gathered from the sub-dimension Masculinity versus Femininity, high means masculine values and low means feminine values. Finally, for the scores gathered from the sub-dimension Uncertainty Avoidance, high means avoidance from uncertainty is high, and low means avoidance from uncertainty is low.

The Principles of Critical Pedagogy Scale developed by Yilmaz (2009) consisted of 31 items and three sub-dimensions (1-Education System Sub-dimension, 2-Functions of Schools Sub-dimension, 3-Emancipator School Sub-dimension). The first dimension is called "Education System Sub-dimension", which consists of 15 items. In this sub-dimension, there are items like "Power relations in society are influential on education", "Schools reproduce poverty (social status)", "State schools are supported by the dominant social structure and in return, they work to support the structure", "Schools are places where inequality is reproduced". The second sub-dimension called "Functions of Schools Sub-dimension" consists of 11 items. In this dimension, there are items such as "At schools, teachers and knowledge must be the

centre", "The main goal of schools is to convey information", "A good student is the one who obeys rules", and "Discipline is an indispensable part of schools". The third and the last sub-dimension, "Emancipator School Sub-dimension" consists of five items. In this dimension, there are the following items: "People must work hard to gain a solid footing in society", "Schools must be places where students are emancipated", "Education is a must to gain a solid footing in society", "The function of schools is to prepare children for future", and "Teachers must share their authorities and responsibilities in the classroom with students". The Cronbach's Alpha reliability coefficient of the scale is .75. The scale is answered as follows: 1-I totally disagree; 2-I disagree; 3-I moderately agree; 4-I agree; and 5-I totally agree. Some of the scale items are conversely encoded. Total score of the answerers show to what extent they agree with the principles of critical pedagogy (Yilmaz, 2009).

Data Analysis

In the present study, descriptive statistics, t-test, ANOVA, and the Pearson correlation analysis were used. Correlation coefficients were considered to be high when their absolute value was in the range of 0.70-1.00, moderate when their absolute value was in the range of 0.69-0.30, and low when their absolute value was in the range of 0.29-0.00.

Results

In this part, participants' opinions regarding cultural values and critical pedagogy were first asked. Later, these opinions were compared based on gender, tenure, and fields of study variables. Finally, whether there is a significant relationship between participants' opinions regarding cultural values and critical pedagogy was assessed. Participants showed the highest scores among dimensions of cultural values respectively as Power Distance ($M=3.31$, $S=0.48$); Uncertainty Avoidance ($M=2.78$, $S=0.43$); Individualism versus Collectivism ($M=2.74$, $S=0.35$); and Masculinity versus Femininity ($M=2.18$, $S=0.59$).

Two items teachers showed highest scores in Power Distance sub-dimension are "Good administrators must sometimes be affectionate, sometimes strict, but must always protect his/her employees ($M=4.44$, $S=0.93$)" and "Interpersonal relationships are important in an institution ($M=4.38$, $S=0.85$)" items. Two items with the lowest scores are: "It is normal that administrators give priority to people with status ($M=2.49$, $S=1.21$)"; and "Centralist structure in institutions is important ($M=3.01$, $S=1.04$)" items.

The two items that teachers showed the highest scores in are in the Individualism versus Collectivism sub-dimension where respondents showed greater preference for the items: "Children should be taught 'we' rather than 'I' concept ($M=4.33$, $S=0.91$)" and "Duty comes before relationships ($M=3.62$, $S=0.99$)". Two items with lowest scores are "Decisions made by one person are more effective than those made by groups ($M=1.87$, $S=1.03$)" and "Worker-leader relationships are based on mutual interests ($M=1.92$, $S=1.03$)".

Two items teachers showed the highest scores in the Masculinity versus Femininity sub-dimension are "Working in a job one likes is more important than one's career (M=3.81, S=1.16)" and "Relationships among employees must be separated from emotions and must be based on a certain distance (M=2.80, S=1.24)". Two items with the lowest scores are "Conflicts can be solved only through fighting and struggle (M=1.58, S=0.92)" and "The most important value in social life must be financial gains and promotions (M=1.92, S=0.97)".

Two items teachers showed the highest scores in under the Uncertainty Avoidance sub-dimension are the items: "Uncertainty regarding work in institutions is dangerous and must be decreased (M=3.83, S=1.09)" and "Written rules can be flexible and expanded when needed (M=3.50, S=1.10)". Two items with lowest scores are "Employees must always be occupied and controlled frequently (M=2.14, S=1.04)" and "There is only one correct way of doing things and administrators know it (M=2.19, S=1.08)".

Participants' scores regarding critical pedagogy principles are at the moderate level (M=2.90, S=0.28). Dimensions where teachers showed the highest scores are respectively in the Functions of School (M=3.02, S=0.35), Education System (M=2.92, S=0.48), and Emancipator School (M=2.57, S=0.44) sub-dimensions.

Two items teachers showed the highest scores in under the Education System sub-dimension are "The results of central exams in the education system are not indicator of student success (M=3.70, S=1.06)" and "School is a social control tool (M=3.55, S=1.03)". Two items with the lowest scores are "School reproduces poverty (M=2.20, S=1.13)" and "School devastates individual and society (M=2.21, S=1.18)".

Two items teachers showed the highest scores in under the Functions of Schools sub-dimension are "Schools should work to maintain social justice (M=4.05, S=0.96)" and "Teacher should question himself/herself when he or she is criticized (M=3.88, S=1.05)". Two items with the lowest scores are "Discipline is an indispensable part of schools (M=1.96, S=0.96)" and "School is an indispensable institution (M=1.99, S=1.15)".

Two items teachers showed the highest scores in under the Emancipator School sub-dimension are "Teachers should share authority and responsibility with students (M=3.69, S=0.99)" and "School should be an emancipating place for students (M=3.46, S=1.06)". Two items with the lowest scores are "People must work hard to gain a solid footing in society (M=1.89, S=1.87)" and "Education is a must for gaining a solid footing in society (M=1.90, S=0.97)".

Comparison of Participants Based on Gender, Tenure, and Field of Study

While teachers' opinions on Individualism versus Collectivism sub-dimension differ [$t_{(302)}=2.32$; $p<.05$] according to gender; they do not differ on the sub-dimensions of Power Distance [$t_{(302)}=0.99$; $p>.05$], Masculinity versus Femininity [$t_{(302)}=0.37$; $p>.05$], and Uncertainty Avoidance [$t_{(302)}=1.88$; $p>.05$]. Male participants were found to have more positive opinions (M=2.79, S=0.34) than female participants (M=2.70, S=0.35) in the Individualism versus Collectivism sub-dimension.

While opinions based on total scores on principles of critical pedagogy [$t_{(302)}=2.65$; $p<.05$] and their opinions regarding the education system sub-dimension differ [$t_{(302)}=2.55$; $p<.05$] according to gender, teachers' opinions on the functions of schools [$t_{(302)}=0.48$; $p>.05$] and emancipator school [$t_{(302)}=1.36$; $p>.05$] sub-dimensions do not differ. Male participants were found to have more positive opinions on total scores ($M=2.95$, $S=0.25$) on critical pedagogy and the educational system sub-dimension ($M=3.01$, $S=0.48$) than female participants.

There is not any difference between teachers' opinions on Power Distance [$F_{(2-303)}=0.64$; $p>.05$], Individualism versus Collectivism [$F_{(2-303)}=0.30$; $p>.05$], Masculinity versus Femininity [$F_{(2-303)}=1.91$; $p>.05$], and Uncertainty Avoidance [$F_{(2-303)}=0.43$; $p>.05$] sub-dimension according to seniority.

There is not any difference between teachers' total scores on the education system sub-dimension [$F_{(2-303)}=0.81$; $p>.05$]; functions of schools' sub-dimension [$F_{(2-303)}=0.00$; $p>.05$]; emancipator school sub-dimension [$F_{(2-303)}=0.91$; $p>.05$], and critical pedagogy principles [$F_{(2-303)}=0.26$; $p>.05$] sub-dimension according to seniority.

Teachers' opinions on the sub-dimensions Individualism versus Collectivism [$F_{(2-303)}=0.27$; $p>.05$], Masculinity versus Femininity [$F_{(2-303)}=0.44$; $p>.05$], and Uncertainty Avoidance [$F_{(2-303)}=0.43$; $p>.05$] do not differ according to fields of study. Participants' opinions on Power Distance [$F_{(2-303)}=3.65$; $p<.05$] sub-dimension do not differ according to field of study. In the field of study, branch teachers' power distance perceptions ($M=3.37$, $S=0.51$) are found to be higher than preschool education teachers ($M=3.14$, $S=0.39$).

There is not any difference between teachers' opinions on the education system sub-dimension [$F_{(2-303)}=1.88$; $p>.05$], function of schools sub-dimension [$F_{(2-303)}=0.02$; $p>.05$], emancipator school sub-dimension [$F_{(2-303)}=1.98$; $p>.05$], nor the critical pedagogy principles sub-dimension [$F_{(2-303)}=1.98$; $p>.05$] according to field of study.

The Relationship between Cultural Values and Critical Pedagogy

Table 1 shows the results of Pearson Correlation analysis employed to assess the relationship between participants' opinions on cultural values and critical pedagogy principles.

Table 1.

The Relationship between Participants' Opinions on Cultural Values and Critical Pedagogy Principles

Sub-dimensions	Education System	Functions of Schools	Emancipator School	Critical Pedagogy
Power Distance	.14*	-.32**	-.16**	-.07
Individualism versus Collectivism	.16**	-.16**	.05	.07
Uncertainty Avoidance	.00	-.33**	-.06	-.17**
Masculinity versus Femininity	.28**	-.28**	-.02	.09

* $p<0.05$; ** $p<0.01$

There is a low level and positive correlation between teachers' opinions on Power Distance sub-dimension and education system sub-dimension ($r=.14$, $p<.05$). There is a moderate and negative correlation between teachers' opinions on Power Distance sub-dimension and Functions of Schools sub-dimension ($r=-.32$, $p<.01$); and a low level and negative correlation between teachers' opinions on Power Distance sub-dimension and Emancipator School sub-dimension ($r=-.16$, $p<.01$).

There is a low level and positive correlation between teachers' opinions on Individualism versus Collectivism sub-dimension and Education System sub-dimension ($r=.16$, $p<.01$) and a low level and negative correlation between Individualism versus Collectivism sub-dimension and Functions of Schools sub-dimension ($r=-.16$, $p<.01$).

While there is a moderate level and negative correlation between teachers' opinions on the Uncertainty Avoidance sub-dimension and Functions of Schools sub-dimension ($r=-.33$, $p<.01$), there is a low level and negative correlation between teachers' opinions on Uncertainty Avoidance sub-dimension and Total Score of Critical Pedagogy sub-dimension ($r=-.17$, $p<.01$).

There is a low level and positive correlation between teachers' opinions on the Masculinity versus Femininity sub-dimension and the Education System sub-dimension ($r=.28$, $p<.01$) and a low level and negative correlation between the Masculinity versus Femininity sub-dimension and the Functions of Schools sub-dimension ($r=-.28$, $p<.01$).

Discussion and Conclusions

This study attempted to assess the relationship between teachers' opinions on cultural values and critical pedagogy. Teachers' scores related to cultural values dimensions respectively are Power Distance, Uncertainty Avoidance, Individualism versus Collectivism, and Masculinity versus Femininity. Thus, it could be articulated that teachers see community with high Power Distance, slightly above moderate level in Uncertainty Avoidance and Individualism and closer to Feminine values. Teachers generally favoured high Power Distance. The item that the highest number of teachers chose was "Good administrators must sometimes be affectionate, sometimes strict but must always protects his/her employees" in the Power Distance dimension, which shows that teachers are in favour of higher power distance. In Hofstede's (2005) study, Turkey was found to be a country with high Power Distance. Yaman and Irmak (2010) reached similar results by showing that there is a high Power Distance between teachers and administrators.

There is almost no environment in Turkey where individuals can express their feelings freely to the elderly or where employees can do the same to their superiors. The hierarchical social structure can be felt in every stage of life in Turkish culture. This can be exemplified by the teacher or principal at school and top director at work. The natural result of this are frequently observed, unquestioned directives and applications contradicting with equality, justice, and merit.

According to teachers, avoiding uncertainty in the Uncertainty Avoidance sub-dimension is slightly above average. Teachers believe that uncertainty experiences during organizational work are harmful and should be minimized. Hofstede's (2005) study showed that Turkey is among the countries that do not like uncertainty. Similarly, according to Sargut (1994), Turkey is a country where determinism is dominant and avoidance from uncertainty is high. This signals fear, stress, and anxiety against the unknown. While some societies can be successful in working with uncertainties, some cannot tolerate even a small amount of uncertainty. Societies that cannot tolerate uncertainty want everything to be rule-based, clear, and certain as uncertainty negatively affects trust-based environments in these societies. That is why resistance to change is higher in such societies as change involves a great deal of uncertainty. To exemplify, the most important reason why many people want to be civil servants in Turkey is that there is no uncertainty in civil service due to its accompanying job security. In societies that tolerate uncertainty, situations that are flexible and sometimes not predictable do not bother individuals much. Because in such societies, individuals' self-confidence is high, change is desired and necessary. There is even a concept of dancing with uncertainty in such societies. Far-east countries are known as countries with low levels of uncertainty avoidance.

Instructors favoured individualism a little bit more over collectivism in the Individualism versus Collectivism sub-dimension. Yet, the participants mostly agreed upon the necessity of teaching students the notion of 'we' instead of 'I'. Teachers' low participation in the opinion that "one man's decisions are more correct than the group decisions" and "employer-employee relation is based upon interests" shows that the communitarian properties in the society are still surviving. Turkey is generally known to be a weak individualism country where the 'we culture' is in dominance. In Hofstede (2005) Turkey was also noted as a country where communitarian values stand out. Accordingly, groups like family, tribes, and organizations are important in Turkey. Yet, it is also noted that the younger citizens with higher education, especially in densely urban western parts of the country show individualistic properties although Turkey is known to have a communitarian culture (Kagıtcıbası, 2006). Kutahya, the city where the study was carried out, is located in western Turkey and teachers are of high education. So we can say that the teachers are more individualistic, yet have some communitarian aspects.

When it comes to Masculinity versus Femininity dimension, the instructors think that feminine values play more of an important role in the society. The entry that people agreed most with in this dimension is, 'It is more important for a person to do the preferred job than the career' and this reflects the aforementioned idea. Furthermore, in Hofstede (2005), Turkey appears to be closer to feminine values. In societies with high masculine values the individuals' anxiety of standing out is dominant and accordingly, values such as competence, ambition, working for money, and need for promotion come into prominence. In societies with high feminine values, values such as taking pleasure from the job done, human relations, empathy, efficient communication, trust, and cooperation dominate the culture. In these cultures, because harmony and consensus are important, common properties

come more into focus rather than mentioning the differences. The proverb “*Suruden ayrilani kurt kapar*: Wolves eat the ones who fall out of the herd” in Turkish culture supports this idea.

Teachers voted for critical pedagogy principles to a moderate degree. They showed the highest participation successively in “*Functions of Schools, Education System and Emancipator School levels amongst others*”. Yilmaz (2009) and Yilmaz and Altinkurt (2011) have also reached similar findings. So, it can be inferred that teachers participated in critical pedagogy principles at a medium level.

The entries that had the highest participation from teachers were: “*The results of central exams in the education system are not the indicators of student achievement*”; “*the schools must work for providing social justice*”; and “*teachers must share the authority and responsibility with students*”. This proves that critical pedagogy principles are accepted by teachers. However, when generally evaluated, the teachers have not participated in critical pedagogy principles at a high level. Underdeveloped critical thinking skill, one of the challenging problems of the Turkish Education System, has its effects on teachers, too. Being a long-time, learn-by-rote education system, the Turkish Education System is responsible for raising individuals who accept the present situation rather than questioning it. The students of a teacher who do not adopt critical pedagogy principles based upon questioning the present situation and criticizing it would also likely be obeying and unquestioning. But what is important in this process—in the present period in which citizenship is becoming the marketplace and the youth-consuming subjects rather than questioning critical subjects (Giroux, 2009)—is raising critical citizens who have the desire and skill to ask questions about the relations observed in the society. As a result, the teachers must show a high participation in these principles (Yilmaz & Altinkurt, 2011).

Cultural properties of the society play an important role in this case, as well. As stated above, Turkish society is among the high Power Distance societies. Based on this, as inequality in the society is accepted of norm and nature, it needs not to be questioned. Values like consenting, obeying, and accepting without questioning are praised more. In such societies where there is little participation or supporting environment, and a lot of inspection and authoritarian administrators, there is little questioning of present practices.

Participants’ opinions about cultural values in the Power Distance, Masculinity versus Femininity, and Uncertainty Avoidance sub-dimensions don’t change based on gender. They, however, do so in sub-dimension Individualism versus Collectivism. In this sub-dimension, male teachers tend to see society more individualistic than female teachers do. Caha, Toprak, and Dalmis (2002) say that women display a more communitarian attitude than men. This finding was obtained in other studies too (Darwish & Huber, 2003; Cho, Mallinckrodt, & Yune, 2010). It is stated that this is because of the social gender roles’ impacts. The role in society given to women generally reflects an attitude dependent, consenting, and valuing of human relationships.

As participants' opinions on sub-dimensions of functions of schools and emancipator school do not change depending on the gender, their opinions on sub-dimension of total score critical pedagogy principles and education system do change according to the gender. Male teachers showed a higher participation in sub-dimension of total score critical pedagogy principles and education system than female teachers. This shows that male teachers have adopted these principles much better than their female counterparts. In their studies, Yilmaz and Altinkurt (2011) determined that the teacher candidates' opinions differed according to their genders. In Yilmaz and Altinkurt (2011), it is the male teacher candidates who showed the highest participation in the sub-dimension of education system and total score critical pedagogy principles. In Yilmaz (2009), such difference in genders was not determined.

Participants' opinions about cultural values, Power Distance, Individualism versus Collectivism, Masculinity versus Femininity, and Uncertainty Avoidance sub-dimensions do not change according to seniority. According to this, it can be said that teachers' opinions on cultural values do not change with the level of seniority.

Participants' opinions on sub-dimensions of total score critical pedagogy principles, education system, functions of schools and emancipator school do not change according to seniority. In his study, Yilmaz (2009) determined that the opinions of primary school teachers on sub-dimensions of total score critical pedagogy principles, education system, functions of schools and emancipator school do change according to seniority. In all three stated scores, while the higher seniority teachers have negative opinions, the lower seniority teachers have a positive opinion.

Participants' opinions on the sub-dimensions of Individualism versus Collectivism, Masculinity versus Femininity, and Uncertainty Avoidance do not change according to their field of study. But their opinions on the sub-dimension Power Distance do change according to their field of study. This difference is between subject matter teachers and preschool teachers. Among participants, subject matter teachers, class teachers, and preschool teachers think that Power Distance is the highest. That is, the higher the school level where the teachers work, the higher the Power Distance is perceived.

There is a low level and in the positive relationship between teachers' views on the Power Distance sub-dimension and the Education System sub-dimension; there is a moderate level and in the negative relationship between teachers' views on the Power Distance sub-dimension and the Functions of Schools sub-dimension; there is a low level and in the negative correlation between teachers' views on the Power Distance sub-dimension and the Emancipator School sub-dimension. When participants are in the perception of high Power Distance in the society, they also show higher levels of participation within the education system sub-dimension that emphasizing the inequalities produced by the education system. It is evidenced that high Power Distance perception in the society relates to accepting the inequalities as a normal and natural phenomenon (Hofstede, 1980). Within this context, the relationship here is very meaningful. While the participants' perception of the Power

Distance in the society increases, the following items decrease: the positive views about the functions of the schools sub-dimension that emphasizes school must provide social justice; the main goal of the school is not to transfer information; and the teacher is not the only authority in the class. The reverse of this situation is also considered. Being teachers in low Power Distance perception increases their belief that schools must provide social justice. While the participants' perception of the Power Distance in the society increase, their participation in the views of the emancipator school sub-dimension that emphasise the school should be a liberating environment decrease. Or in the opposite manner, as the perception of Power Distance decreases their belief that the school should be a liberating environment increases.

There is a low level and the positive relationship between teachers' views on the Individualism versus Collectivism sub-dimension and the Education System sub-dimension; there is a low level and in the negative relationship between teachers' views on the Individualism versus Collectivism and the Functions of Schools sub-dimension. While the participants' individualistic properties increase, their participation levels of the education system sub-dimension that emphasize the inequalities produced by the education system also increase. Since individualism emphasizes more individual perspective than the group perspective, it is normal that the participants' views related to the education system that prevents individuality is positive. While the participants' individualistic properties increase, their related belief that the school should provide social justice decreases. The reverse of this situation is also considered.

There is a moderate level and negative relationship between teachers' views on the Uncertainty Avoidance sub-dimension and the Functions of Schools sub-dimension. There is a low level and negative relationship between teachers' views on the Uncertainty Avoidance and the Total Score of Critical Pedagogy. While the participants' perception related to the Uncertainty Avoidance increases, the positive views about the Functions of Schools sub-dimension that emphasizes that the school must provide social justice, the main goal of the school is not to transfer information, the teacher is not the only authority in the class, and the positive views about the Total Score of Critical Pedagogy decrease. The reverse of this situation is also considered.

There is a low level and positive relationship between teachers' views on the Masculinity versus Femininity sub-dimension and the Education System sub-dimension; there is a low level and negative relationship between teachers' views on the Masculinity versus Femininity and the Functions of Schools sub-dimension. While the participants' views related to the masculine values increase their participation levels of the Education System sub-dimension that emphasize the inequalities produced by the education system increase; the positive views about the Functions of Schools sub-dimension that emphasize that the school must provide social justice, the main goal of the school is not to transfer information, and the teacher is not the only authority in the class decrease. The reverse of this situation is also considered.

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Öğretmenlerin Kültürel Değerler ve Eleştirel Pedagoji İle İlgili Görüşleri Arasındaki İlişki

Atf:

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Özet

Problem Durumu: Kültürel değerler bireylerin yaşamlarına yön veren temel unsurlar olarak, bütün değerlendirme ve algıları etkileyen gizli kültürel unsurlardır. Hofstede (1980) kültürel değerleri "Güç Mesafesi, Bireycilik-Toplulukçuluk, Erillik-Dışillik ve Belirsizlikten Kaçınma" olmak üzere dört boyutta ele alınmıştır (Hofstede, 1980, 1991). Eleştirel pedagoji, en genel anlamıyla, eğitim sorunlarını tartışan bir eğitim yorumu olarak tanımlanabilir. Eleştirel pedagoji, özde eğitimin ne olduğu ve geleneksel eğitim anlayışı ile ilgili sorgulamalar ve yapılan tanımlar etrafında örülmüş bir projedir (Yılmaz & Altinkurt, 2011). Eleştirel pedagoji geleneksel pedagoji anlayışına karşı çıkmaktadır. Geleneksel pedagoji ile eleştirel pedagoji arasında öğretmen öğrenci iletişimi açısından önemli ayrılıklar bulunmaktadır.

Araştırmanın Amacı: Bu çalışmanın amacı, eğitim örgütlerinin kültürel değerleri ile öğretmenlerin eleştirel pedagoji ilkelerine ilişkin görüşleri arasında bir ilişki olup olmadığının belirlenmesidir. Bu genel amaç çerçevesinde araştırmada aşağıdaki sorulara yanıt aranmıştır: 1) Okulöncesi, ilkökul ve ortaokul öğretmenlerinin kültürel değerler ve eleştirel pedagoji ilkeleri hakkındaki görüşleri nasıldır? 2) Okulöncesi, ilkökul ve ortaokul öğretmenlerinin kültürel değerler ve eleştirel pedagoji ilkeleri hakkındaki görüşleri cinsiyet, kıdem ve branşa göre değişmekte midir? 3) Okulöncesi, ilkökul ve ortaokul öğretmenlerinin kültürel değerler ve eleştirel pedagoji ilkeleri hakkındaki görüşleri arasında bir ilişki var mıdır?

Araştırmanın Yöntemi: Araştırma, tarama modelinde desenlenmiştir. Araştırmanın evrenini Kütahya il merkezinde görev yapan 1430 öğretmen oluşturmaktadır. Örneklem girecek öğretmenlerin belirlenmesinde oransız küme örneklem tekniği kullanılmıştır. Örneklem büyüklüğü, % 95 güven düzeyi için 304 olarak hesaplanmıştır. Araştırmada veri toplama aracı olarak Kültürel Değerler Ölçeği (Hofstede, 1980) ve Eleştirel Pedagoji İlkeleri Ölçeği (Yılmaz, 2009) kullanılmıştır.

Verilerin analizinde betimsel istatistikler, t-testi, ANOVA ve Pearson korelasyon katsayısı analizleri kullanılmıştır.

Araştırmanın Bulguları: Katılımcılar, kültürel değer boyutları arasında en yüksek katılımı sırası ile Güç Mesafesi (AO=3.31, S=0.48); Belirsizlikten Kaçınma (AO=2.78, S=0.43); Bireycilik-Toplulukçuluk (AO=2.74, S=0.35) ve Erillik-Dişillik (AO=2.18, S=0.59) boyutlarına göstermiştir. Katılımcıların, eleştirel pedagoji ilkelerine katılım düzeyi orta düzeydedir (AO=2.90, S=0.28). Öğretmenlerin en yüksek katılım gösterdiği boyutlar sırası ile Okulun İşlevleri (AO=3.02, S=0.35), Eğitim Sistemi (AO=2.92, S=0.48) ve Özgürleştirici Okul (AO=2.57, S=0.44) alt boyutlarıdır. Öğretmenlerin Bireycilik-Toplulukçuluk [$t_{(302)}=2.32$; $p<.05$] boyutundaki görüşleri cinsiyete göre değişirken; Güç Mesafesi [$t_{(302)}=0.99$; $p>.05$], Erillik-Dişillik [$t_{(302)}=0.37$; $p>.05$] ve Belirsizlikten Kaçınma [$t_{(302)}=1.88$; $p>.05$] alt boyutlarındaki görüşleri cinsiyete göre değişmemektedir.

Katılımcıların eleştirel pedagoji ilkeleri toplam puandaki görüşleri [$t_{(302)}=2.65$; $p<.05$] ve eğitim sistemi alt boyutundaki görüşleri [$t_{(302)}=2.55$; $p<.05$] cinsiyete göre değişirken; okulun işlevleri [$t_{(302)}=0.48$; $p>.05$] ve özgürleştirici okul [$t_{(302)}=1.36$; $p>.05$] alt boyutlarındaki görüşleri değişmemektedir. Öğretmenlerin, Güç Mesafesi [$F_{(2-303)}=0.64$; $p>.05$], Bireycilik-Toplulukçuluk [$F_{(2-303)}=0.30$; $p>.05$], Erillik-Dişillik [$F_{(2-303)}=1.91$; $p>.05$] ve Belirsizlikten Kaçınma [$F_{(2-303)}=0.43$; $p>.05$] alt boyutlarındaki görüşleri arasında kıdeme göre farklılık yoktur. Öğretmenlerin eğitim sistemi alt boyutu [$F_{(2-303)}=0.81$; $p>.05$]; okulun işlevleri alt boyutu [$F_{(2-303)}=0.00$; $p>.05$]; özgürleştirici okul alt boyutu [$F_{(2-303)}=0.91$; $p>.05$] ve eleştirel pedagoji ilkeleri toplam puandaki [$F_{(2-303)}=0.26$; $p>.05$] görüşleri arasında kıdeme göre farklılık yoktur. Öğretmenlerin, Bireycilik-Toplulukçuluk [$F_{(2-303)}=0.27$; $p>.05$], Erillik-Dişillik [$F_{(2-303)}=0.44$; $p>.05$] ve Belirsizlikten Kaçınma [$F_{(2-303)}=0.43$; $p>.05$] alt boyutlarındaki görüşleri bransa göre değişmemektedir. Katılımcıların, Güç Mesafesi [$F_{(2-303)}=3.65$; $p<.05$] alt boyutundaki görüşleri ise bransa göre farklılık göstermemektedir. Öğretmenlerin, eğitim sistemi alt boyutu [$F_{(2-303)}=1.88$; $p>.05$]; okulun işlevleri alt boyutu [$F_{(2-303)}=0.02$; $p>.05$]; özgürleştirici okul alt boyutu [$F_{(2-303)}=1.98$; $p>.05$] ve eleştirel pedagoji ilkeleri toplam puandaki [$F_{(2-303)}=1.00$; $p>.05$] görüşleri arasında bransa göre farklılık yoktur.

Öğretmenlerin, *Güç Mesafesi* alt boyutundaki görüşleri ile eğitim sistemi alt boyutundaki görüşleri arasında ($r=-.14$, $p<.05$) düşük düzeyde ve aynı yönde; okulun işlevleri alt boyutundaki görüşleri arasında ($r=-.32$, $p<.01$) orta düzeyde ve ters yönde; özgürleştirici okul alt boyutundaki görüşleri ile arasında ise ($r=-.16$, $p<.01$) ters yönde ve düşük düzeyde ilişkiler vardır. Öğretmenlerin, *Bireycilik-Toplulukçuluk* alt boyutundaki görüşleri ile eğitim sistemi alt boyutundaki görüşleri arasında ($r=.16$, $p<.01$) aynı yönde ve düşük düzeyde; okulun işlevleri alt boyutu ile arasında ise ($r=-.16$, $p<.01$) ters yönde ve düşük düzeyde bir ilişki vardır. Öğretmenlerin, *Belirsizlikten Kaçınma* alt boyutundaki görüşleri ile okulun işlevleri alt boyutundaki görüşleri arasında ($r=-.33$, $p<.01$) ters yönde ve orta düzeyde bir ilişki varken eleştirel pedagoji toplam puan ile arasında ($r=-.17$, $p<.01$) ters yönde ve düşük düzeyde bir ilişki vardır. Öğretmenlerin, *Erillik-Dişillik* alt boyutundaki görüşleri ile eğitim sistemi alt boyutundaki görüşleri arasında ($r=.28$, $p<.01$) aynı yönde ve düşük düzeyde; okulun işlevleri alt boyutundaki görüşleri ile arasında ise ($r=-.28$, $p<.01$) ters yönde ve düşük düzeyde bir ilişki vardır.

Araştırmanın Sonuç ve Önerileri: Öğretmenler genel olarak yüksek güç mesafesinden yana görüş bildirmiştir. Öğretmenlere göre, Belirsizlikten Kaçınma alt boyutunda belirsizlikten kaçınma orta düzeyin biraz üzerindedir. Öğretmenler, Bireycilik-Toplulukçuluk alt boyutunda az bir farkla bireycilikten yana görüş bildirmiştir. Erillik-Dişillik boyutunda ise, öğretmenler toplumda daha çok dişil değerlerin hâkim olduğunu düşünmektedir. Katılımcılar toplumda yüksek güç mesafesi algısında olduklarında, eğitim sisteminin ürettiği eşitsizliklere vurgu yapan eğitim sistemi alt boyutuna da daha yüksek düzeyde katılım göstermektedir. Katılımcıların toplumdaki güç mesafesi algısı yükseldikçe, okulun bir özgürleşme ortamı olması gerektiğine vurgu yapan özgürleştirici okul alt boyutundaki görüşlere katılımları azalmaktadır. Ya da ters bir şekilde, güç mesafesi algısı düştükçe okulun özgürleşme alanı olması gerektiğine olan inanç artmaktadır. Katılımcıların bireycilik özellikleri arttıkça, eğitim sisteminin ürettiği eşitsizliklere vurgu yapan eğitim sistemi alt boyutuna ilişkin katılım düzeyleri artmaktadır. Katılımcıların bireycilik özellikleri arttıkça, okulun sosyal adaleti sağladığına ilişkin inançları azalmaktadır. Ters durum da geçerlidir. Katılımcıların belirsizlikten kaçınmaya ilişkin algısı yükseldikçe, okulun sosyal adaleti sağlaması gerektiğine, okulun asıl amacının bilgi aktarmak olmadığına, sınıftaki tek otoritenin öğretmen olmadığına vurgu yapan okulun işlevleri alt boyutundaki ve eleştirel pedagoji ilkeleri toplam puandaki olumlu görüşleri azalmaktadır. Ters durum da geçerlidir. Katılımcıların, eril değerler ile ilgili görüşleri arttıkça, eğitim sisteminin ürettiği eşitsizliklere vurgu yapan eğitim sistemi alt boyutuna ilişkin katılım düzeyleri artmakta; okulun sosyal adaleti sağlaması gerektiğine, okulun asıl amacının bilgi aktarmak olmadığına, sınıftaki tek otoritenin öğretmen olmadığına vurgu yapan okulun işlevleri alt boyutundaki olumlu görüşleri ise azalmaktadır. Ters durum da söz konusudur.

Anahtar Kelimeler: Eleştirel pedagoji, kültürel değerler, öğretmenler.

Using Generalizability Theory to Examine Different Concept Map Scoring Methods

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Abstract

Problem Statement: In addition to being teaching tools, concept maps can be used as effective assessment tools. The use of concept maps for assessment has raised the issue of scoring them. Concept maps generated and used in different ways can be scored via various methods. Holistic and relational scoring methods are two of them.

Purpose of the Study: In this study, the reliability of the concept map scores, which were made by the students and which were scored by different teachers using different scoring methods (holistic and relational), will be discussed in terms of G theory.

Methods: The research was performed during the fall semester of the 2010-2011 academic year, between December and January. Concept maps created by thirty-six students were scored by three different teachers who played roles as raters. Data were obtained from four different concept maps that were generated by each student.

Findings and Results: In focusing on the size of the variance estimates according to holistic scoring methods, while the student component (objects of measurement) accounts for one of the largest percentages of the variance (20%), the main effects of the task and the raters account for

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about 14% and almost 0% of the total variance, respectively. The difficulty level of tasks did not differ so much from student to student, and there is a scoring agreement among raters. Using the holistic scoring method, G and Φ coefficients were calculated as 0.63 and 0.57, respectively, depending upon the four tasks and three raters. In terms of relational scoring, the student component (object of measurement) accounts for 10% of the variance, the main effect of the task accounts for a very significant percentage of the variance (56%), and the main effect of the raters does not demonstrate any variance. G and Φ coefficients calculated over the four tasks and three raters in the study were .63 and .34, respectively.

Conclusions and Recommendations: According to the results of this study, Phi coefficient was higher in the concept map study in which the holistic scoring method was used. In this study, tasks represented a significant variance component for both scoring methods. This may be interpreted to mean that the levels of difficulty for the tasks differed according to the students using both methods. In each of the scoring methods, the variance related to the raters was found to be zero, which may result in the interpretation that raters scored the maps consistently.

Keywords: Generalizability theory, rater effect, scoring concept maps, scoring methods.

Introduction

Concept maps, which allow the visualization of concepts and show the relations between the concepts, are used to organize and present information in a graphical way. Generally, the concepts are written into the circles and square-like shapes, and the relationships between these concepts are shown by the use of arrows (Canas & Novak, 2006). Concept maps are an alternative method used to detect whether students understand a topic; through concept maps, students learn how to bridge the gap between learning issues and establish a meaningful learning. Also, it is an effective teaching strategy that involves active participation of students, which, in turn, gives students responsibility for their own learning (Kaptan, 1998; Nakhleh, 1994; cf. Kaya, 2003).

The basis of the concept map depend on Ausubel's (1962) meaningful learning. Novak (2010) stated that the theoretical basis of the concept map was established after the publication of Ausubel's Assimilation Theory of Meaningful Learning in 1963. According to Novak (2010), the key idea in Ausubel's theory is the distinction between rote learning and meaningful learning. In meaningful learning, the individual learns to apply knowledge to solve problems faced in real life, and to become adept at bringing information to the new learning. In short, it can be expressed as the ability to establish a relationship between prior and new learning. Information which is learned meaningfully becomes more permanent and serves to solve the original problem, while allowing one to incorporate future learning along

with creative thinking. An effective and economical method of providing meaningful learning in concept mapping studies has confirmed this idea (Novak, 2010).

The origin of the concept map depends on Novak and his research team's studies, set out in the 1970s at Cornell University, in a teaching process of 12 years, following changes in the methods through which students were introduced to science concepts (Misdates, 2009). Novak and Gowin's (1984) studies have been effective for recognition of concept maps all over the world (Ahlberg, 2004). Novak (2010) specified that they had been trying to determine why some students experience deep, meaningful learning while others develop just a superficial understanding.

Graphical maps of the concept in which information is schematized in a hierarchical structure are utilized in many different disciplines, especially in education, for different purposes, by both teachers and students at every stage of learning--in preparation of exams, various evaluation studies and course reviews (Kaptan, 1998; Kaya, 2003; Ingec, 2008). Novak (2001) suggested that concept maps can be used for educational purposes as well as for evaluation purposes. Additionally, the use of multiple-choice tests is not a necessity. Even in the context of national achievement exams over time, these tools may be used as effective assessment tools (cf. Kaya & Kilic, 2004). Using concept maps in education for the purpose of evaluation of student achievement is very important in terms of revealing shortcomings related to learning, as they enable us to learn whether students understand topics correctly. Concept maps play a very central role in understanding a student's knowledge structure, mistakes and misconceptions on given subjects (Sahin, 2002). As hierarchical, two-dimensional diagrams showing how information is organized, concept maps are accepted as a valid means of evaluation and research, primarily in mathematics and science fields. In addition, it is noted that this technique may be used as a tool of both preliminary assessment and final assessment with regard to revealing, strengthening and consolidating information (Allen, 2006).

The first step to be taken before using concept maps as a means of scoring and evaluation is to assure that teachers have earned the required qualifications to use them. After providing adequate training to teachers and making sure that they have the necessary competence, concept maps can be effectively used as tools for evaluation. Additionally, scoring maps belong to students who have not gained convenient knowledge and skills about visualizing what they have learned, starting them with figures and making meaningful connections, potentially leading to incorrect assessment of the student. In such a case, it could be difficult to determine the student's deficiency resulting from a subject area or a lack of understanding of technique

Using concept maps as a tool for assessment has brought the issue of scoring them to the agenda. In order to use this method for the purpose of assessment, teachers need to understand rating methods very well. Concept maps generated and used in different ways can be scored using varied methods. McClure, Sonak and Suen (1999) appraised the comparative point reliability of six different concept map scoring methods by calculating a generalization coefficient for each method. These

six different scoring methods are holistic, holistic with criteria map, relational, relational with criteria map, structural and structural with criteria map.

In the holistic scoring method, concept maps are taken as a whole. Taking into account students' reflections on their learning with related concepts on the map, and the existence of the related concepts on the map, they are evaluated with points on a scale of 1 to 10. Sonak and Suen (1999) developed a relational scoring method, adopting a technic discovered by McClure and Bell (1990). The relational scoring method is based on the separate grading of propositions. The proposition of the relationship between the two concepts is indicated using a labelled arrow. The total score of the map is calculated by collecting the scores given to each of the propositions, and each proposition is scored on a point scale of 0-3, based on whether it is correct (McClure, Sonak & Suen, 1999).

The structural scoring method is developed by Novak and Gowin (1984). In this method of scoring, propositions, hierarchy, examples and cross-links are scored. According to this method, the total score is calculated by giving 1 point for each correct proposition, 5 points for the current levels of hierarchy, 10 points for accurate and meaningful cross-links where propositions are valid and 1 point for each sample (Nakiboglu & Ertem, 2010). While the structural scoring method focuses on organization of the hierarchical structure of the concept maps, the relational scoring method is based on the quality of each individual component of the map (West, Park, Pomeroy & Sandoval, 2002).

Modified forms of previously described holistic, relational and structural scoring methods include holistic with criteria map, relational with criteria map and structural with criteria map scoring methods. In these methods, maps are scored based on a concept map developed by an expert group on the subject, as well as on the criteria (McClure, Sonak & Suen, 1999). Although technical characteristics of concept maps become critical when used as tools for evaluation, the means through which to evaluate reliability and validity of the scores obtained is not always clear (Yin & Shavelson, 2008). Measuring instruments such as those used in scientific studies to produce reliable results are desired.

Generalizability (G) theory is a statistical theory based on variance analysis developed by Cronbach and his colleagues (1972). This theory provides for the assessment of reliability by bringing a different perspective to the concept (Shavelson & Webb, 1991 cf. Deliceoglu, 2009). G theory purports to generalize points obtained by means of specific measuring instruments to a larger universe of their sample (Guler, 2009). G theory provides for the calculation of a single reliability coefficient by incorporating all mistakes coming from all sources of variability at the same time, and additionally examining sources of mistakes individually, with interactions specified with the theory itself (Brennan, 2001; Tasdelen, Kelecioğlu & Guler, 2010; Srikaew, Tanghanakanond & Kanjanawasee, 2015). If scores received by one of the students are considered an example of the universe of the concept map scores (under varying conditions; for example, the task, response format, scoring methods and so on), then scoring of concept maps can be examined within the scope of G theory. In

this respect, one of the reasons for using G theory is that there are many sources of errors in scoring of concept maps, and classical test theory cannot overcome the sources of these errors effectively (Yin & Shavelson, 2008). Ruiz-Primo and Shavelson (1996) emphasized that the scoring of concept maps can lead to different error sources like concepts, propositions, task type, response formats, conditions, raters. Thus, using G theory is especially appropriate in this kind of research (cf. Yin & Shavelson, 2008). Additionally, many studies have investigated the inter-rater reliability of concept map scoring using G theory. For instance:

Kaya Uyanik and Guler (2016) conducted a study to demonstrate that G theory is preferable to classical test theory while investigating the reliability of concept map measurement results. The G and Phi coefficients were computed. Taking the results of the research into consideration, it may be recommended that the G and D studies based on G theory should be performed when determining the reliability of measurement results in which different sources of variability such as concept maps are available; this approach presents detailed and explanatory results with one single analysis, in contrary to classical test theory.

Canbazoglu Bilici, Dogan and Erduran Avci (2015) investigated the use of concept maps as an alternative assessment tool in Science and Technology courses. For this purpose, they used structural and relational scoring methods to evaluate the concept maps. Using the scores given by two raters, Pearson correlation and generalizability coefficients were calculated to determine inter-rater reliability. The results of Pearson correlation demonstrated that there were strong and statistically significant correlations between the raters for both scoring methods. Using generalizability theory, G coefficients were calculated and results suggest that both concept map scoring methods are valid and reliable.

Erduran Avci, Unlu and Yagbasan (2009) conducted a study to analyze the concepts of a 7th grade science course. They used concept maps as an assessment tool. The two raters scored student concept maps, and G theory was used to investigate the reliability. G coefficient was calculated as .97. In addition to G theory, Pearson moment multiplication correlation coefficient of inter-rater was calculated and was found to be .99 ($p < .01$). They stated that, according to these results, it can be said that the evaluation was reliable and valid.

Because G theory can be chosen, especially in cases in which there is more than one active source of variability, many raters exist or measurement is performed more than one occasion (Guler, 2011; Lakey, 2016). G theory was preferred to use for determining reliability. So in this study, reliability of scores of concept maps, which were made by students and which were scored by different teachers, will be discussed in terms of G theory. Two different concept map scoring methods are used within the scope of this research. These are holistic and relational scoring methods. Using just two scoring methods for concept maps can be seen as one of the constraints of the research.

Method

Research Design

Study Group

The research was performed during the fall semester of the 2010-2011 academic year, between December and January. Participants consisted of thirty-six seventh-grade students whose ages ranged from 12 to 14, attending Ataturk Elementary School, Osmaniye, Turkey. Twenty-one of them were male, and fifteen of them were female. Information about the study group is also provided in Table 1.

Table 1.

Information about the Study Group

	<i>Frequency</i>	<i>%</i>
Female	15	42
Male	21	58
Total	36	100
<i>Age Average</i>	12.56	

Raters' Characteristics

In the study, concept maps created by students were scored by three different teachers who played roles as raters. Two of the raters were Science and Technology teachers, and the other was one of the researchers. Among the raters, two of them were female and one of them male. Teaching experience of the raters was 20, 16 and 5 years, respectively. The necessary training on concept maps and methods of scoring was provided by the researchers to the teachers. Science and Technology teachers stated that they benefited from this method, and there are some activities at the end of the guide books that they shared with their students.

Data Collection Tool

Data were obtained from four different concept maps that were used as data collection tools. The concept maps used in this study are related to a "force and motion" unit. Students had learned the topics of springs, force energy and power in actions, simple machines, and their concept maps related to these topics were scored. In the first of these concept maps, students created the concept map by themselves. In the second, some concepts were provided to students, and they were asked to build propositions and connections. In the third scenario, students chose missing concepts and connection sentences in the concept maps from the given alternatives. On the last concept map, students were asked to transfer to a concept map their knowledge about the topic before training. Teachers studied these concept maps together and examined the course books and necessary resources to make sure all of these topics were addressed, and they agreed on how to ask questions about the

concept maps. For all of these reasons, structured and semi-structured concept maps were preferred.

Results

In this study, 36 students' proficiency with creating concept maps was scored through two different scoring methods by three raters. The scores obtained from these scoring methods were analyzed separately according to G theory using SPSS (Musquash & O'Connor, 2006), and the results and interpretation are explained below.

Analysis of Scores Obtained from Holistic Scoring Method According to G Theory

Students (s) in this study were the objects of the measurement, the concept maps were the sources of other variables tasks (t) and raters (r) were the facets of this study. In this study, students were responsible for creating all of the concept maps, and then all of the concept maps created by students were scored by raters via the holistic scoring method. Thus, the research design of this study is a fully crossed (s x t x r) design. According to this design, the results related to the estimated variance components are provided below in Table 2.

Table 2.

Analysis of Variance Results and Variance Component Estimates for Students, Tasks of Concept Maps, Raters and Their Interactions

<i>Source of variance</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>Variance Component Estimates</i>	<i>Percentage of Total Variance Estimates</i>
s	239.44	35	6.84	.360	.204
t	91.16	3	30.39	.240	.135
r	6.48	2	3.24	.002	.001
st	239.18	105	2.28	.616	.348
sr	46.69	70	0.67	.590	.034
tr	15.97	6	2.66	.062	.035
str	90.20	210	0.43	.430	.243

In Table 2, both the key elements of ANOVA table and the variance component estimates are observed. Because G theory focuses on the size of the variance component estimates, and not the statistical significance of the facets or their interactions, Table 2 does not include the significance test results (Goodwin and Goodwin, 1991). In addition, percentages of each variance component as part of the total variance appear in the last column of the table. Four sources of variation are relatively large compared to the others. The variance component for students, which indicates the variance for a student mean score over tasks and raters, accounts for about 20% of the total variance. This result demonstrates that students systematically differed in their level of proficiency at creating concept maps. A second significant component is tasks, which accounts for about 14% of the total

variance. This relatively large component of the main effect of tasks indicates that tasks differed in difficulty level; some tasks were harder than others. A third significant component, students by task interaction, which accounts for about 35% of the variance, shows that some students created some concept maps well and other students created other concept maps well. A fourth large component (24%), residual error, indicates a large student-by task-by-rater interaction, unmeasured sources of variation, or both. This value indicates that a substantial proportion of the variability is due to facets not included in the study and/or random error. According to G theory, this interaction variance value should be as low as possible.

The components of variance due to the rater effect and its interactions were relatively small. The main effect for rater (.001), the interaction between students and raters (.034), and the interaction between raters and tasks (.035) were near zero. These results demonstrate that raters similarly scored student concept maps. The implication of the small rater effect for future similar research is that single raters can provide dependable ratings. As a result, and as seen in Table 2, as an advantage of G theory, researchers can see very clearly which resources affect the total variance (Guler, 2009). In G theory, the coefficient of G equivalent reliability coefficient in classical test theory is calculated. The coefficient of G is calculated using the equation provided below;

$$G - coefficient = \frac{\sigma_s^2}{\sigma_s^2 + \frac{\sigma_{st}^2}{n_t} + \frac{\sigma_{sr}^2}{n_r} + \frac{\sigma_{str}^2}{n_t n_r}}$$

In G theory, in contrast with the classical test theory, Phi coefficient can also be calculated in the circumstance of certain assessment. In this calculation, tasks, raters and all interactive variance components are taken as parts of certain variance. The greater denominator is calculated by adding these to the denominator of the coefficient of Phi. Thus, when the obtained coefficient gets smaller, phi coefficient--called reliability coefficient--is calculated this way;

$$\Phi - coefficient = \frac{\sigma_s^2}{\sigma_s^2 + \frac{\sigma_t^2}{n_t} + \frac{\sigma_r^2}{n_r} + \frac{\sigma_{st}^2}{n_t} + \frac{\sigma_{sr}^2}{n_r} + \frac{\sigma_{tr}^2}{n_t n_r} + \frac{\sigma_{str}^2}{n_t n_r}}$$

In this study, G and Φ coefficients were calculated as 0.63 and 0.57 and depended on four tasks and three raters. As can be understood from the equation, raters raised the reliability further. The low number of tasks in this study causes the reliability coefficient to be at a low level. In G theory, similar calculations to Spearman-Brown in classical test theory are possible. By means of this formula, when it is possible to change the number of items only in one test in classical test theory, G and Φ coefficient depend on the changing level of sources of variability which can be

calculated with the D Study in the G theory. G and Φ coefficients in cases of changing number of raters in circumstances of certain number of tasks are provided below in Table 3.

Table 3.

G and Φ coefficients of D Studies (n_t : 4)

Raters	1	2	3*	4	5
G-coeff.	.53	.60	.63	.65	.66
Φ -coeff.	.48	.54	.57	.58	.59

(*The number of raters in the study)

As seen in Table 3, an increased number of raters raise the reliability coefficient, but not so much. Therefore, raising the number of raters provides a positive contribution. In Table 4 below, G and Φ coefficients were calculated with number of raters settled as a constant and number of tasks as a variable.

Table 4.

G and Φ coefficients of D Studies (n_r : 3)

Tasks	4*	8	12	16	20
G-coeff.	.63	.76	.81	.84	.86
Φ -coeff.	.57	.71	.77	.81	.83

(*The number of tasks in the study)

As seen in Table 4, the increasing number of tasks raises the reliability. Therefore, if it is not possible to raise number of raters, and if it is possible to raise number of tasks, reliability increases. As can be seen in Table 3, twice the number of tasks raises the reliability coefficient by 0.07 when other circumstances are held as a constant. Therefore, in similar concept maps, using more tasks constitutes the study. In addition to Tables 2 and 3, Figure 1 clearly shows how increasing the number of tasks and raters affects the G and Phi coefficients simultaneously. According to Tables 3 and 4, together with Figure 1, it can be said that the number of tasks being increased should be more effective than increasing the number of raters.

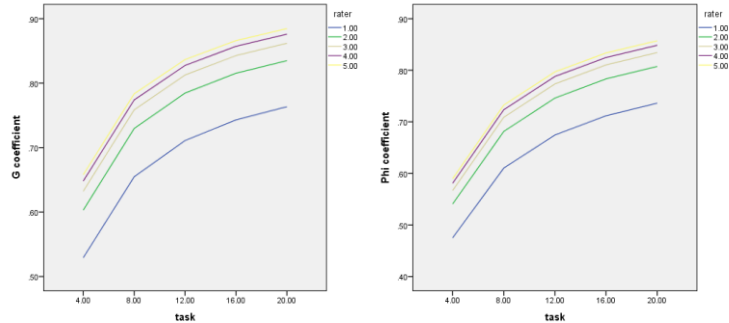


Figure 1. G and Phi coefficients for different number of tasks and raters

Analysis of Scores Obtained from Relational Scoring Method According to G Theory

The students (s) in the relational scoring method are the measurement object, just as in the holistic scoring method; the concept maps of other sources of variability in the tasks (t) and raters (r) are facets of the study. However, all of the students were responsible for creating concept maps, and these concept maps were scored by all raters together using the relational scoring method. Hence, this study is also a fully crossed ($s \times t \times r$) design. The patterns obtained by the analysis of variance and the generalizability results of the following components are provided in Table 5.

Table 5.

Analysis of Variance Results and Variance Component Estimates for Students, Tasks of Concept Maps, Raters and Their Interactions

Source of variance	SS	df	MS	Variance Component Estimates	Percentage of Total Variance Estimates
s	279.96	35	7.99	.421	.103
t	767.78	3	255.93	2.307	.564
r	1.56	2	.78	.000	.000
st	239.18	105	2.86	.813	.199
sr	299.89	70	0.51	.024	.006
tr	25.79	6	4.29	.108	.026
str	87.54	210	0.42	.417	.102

In Table 5, both key elements of ANOVA table and the variance component estimates are observed. When the results of Table 5 are compared to those of Table 2, similar findings can be seen. The variance component for students, which indicates the variance for a student mean score over tasks and raters, accounts for about 10% of the total variance. This result demonstrates that students systematically differed in their level of proficiency with creating concept maps. A second significant component is tasks, which accounts for about 56% of the total variance. This relatively large component of the main effect of tasks indicates that tasks differed in

difficulty level; some tasks were more difficult than others. A third significant component, students by task interaction, which accounts for about 20% of the variance, shows that the relative standing of students in creating concept maps differed across tasks. A fourth large component (10%), residual effect, suggests a large student-by-task-by-rater interaction, unmeasured sources of variation, or both. The components of variance due to the rater effect and its interactions were relatively small. The main effect for raters was zero, and the interaction between students and raters and the interaction between raters and tasks were near zero (.006 and .026, respectively). Overall, more of the variability comes from tasks than from raters. These results show that raters similarly scored student concept maps. The implication of the small rater effect for future similar research is that a single rater can provide dependable ratings.

G and Φ coefficients calculated over the four tasks and three raters for this design were .63 and .34, respectively. Although one of the highest variances was among students as measurement objects, task main effect variance and its interactions with other effect variances were higher than for student main effect, which results in a decrease in value of the coefficient of Φ , adding this highest variance to the denominator in calculation of Φ . This study of concept maps used the scoring method in Table 6 below. The number of tasks is held as a constant, and in case of changing number of raters, estimated coefficient values are given in G and Φ .

Table 6.

G and Φ coefficients of D Studies (n_i : 4)

Raters	1	2	3*	4	5
G-coeff.	.56	.61	.63	.64	.65
Φ -coeff.	.31	.319	.336	.339	.342

(* the number of raters in the study)

As shown in Table 6, increasing the number of raters increases the value of the coefficient of Φ . For this reason, it can be noted that in the case of circumstances where more raters work, this can contribute to an increase in the coefficient Φ . The following Table 7 shows the estimated values of G and Φ in the circumstances in which the number of raters is held as a constant and the number of tasks changes.

Table 7.

G and Φ coefficients of D Studies (n_r : 3)

Tasks	4*	8	12	16	20
G-coeff.	.63	.77	.83	.86	.88
Φ -coeff.	.336	.501	.598	.663	.709

(*The number of task in the study)

Increasing the number of tasks increases the reliability value, as can be seen in Table 7. For this reason, if it is not possible to raise the number of raters in the study, increasing the number of tasks may contribute to the study. In addition to Tables 6 and 7, in Figure 2 it can be observed clearly how increasing the number of tasks and raters affects the G and Phi coefficients simultaneously. As seen in Tables 6 and 7, together, and Figure 2, it can be concluded that increasing the number of tasks should be more effective than increasing the number of the raters.

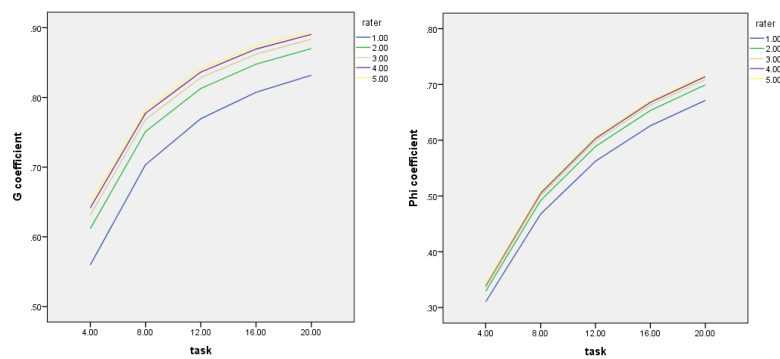


Figure 2. G and Phi coefficients for different number of tasks and raters

Discussion and Conclusion

According to the results of this study, G and Phi coefficients were higher in the concept map study in which the holistic scoring method was used, and estimated residual variance component (sxtxr) calculated using the relational concept map scoring method was higher. The proportion of task variance is 20% in the study in which the holistic scoring method was used, and the task variance component calculated using the relational scoring method accounted for about 56% of the total variance in scores. This may be interpreted as a result of the levels of difficulty of the tasks differing according to individuals when using the relational scoring method. In each of the scoring methods, the variance related to the raters was found to be almost zero, which may mean that raters scored the maps consistently in both scoring methods. On the basis of these results, it is suggested that holistic scoring method be used in evaluating concept map studies. In cases where the relational scoring method is used, it is advisable to make the students practice creating concept maps, offer more explanation to the raters and provide more details about scoring methods. In addition, according to the results of both scoring methods and based on high residual variance, it is recommended that students take a source of error in other external factors (environment, a measurement tool, test manager, etc.) in creating concept maps. Since the G coefficients are similar for both scoring methods, and the Phi coefficient is higher for the holistic scoring method than for the relational scoring

method, if the aim of the study is to make an absolute decision, the holistic scoring method is recommended.

For future similar studies, it can be suggested that more tasks and fewer raters be used for reliable results. In this study, the "Force and Motion" unit in a Science and Technology course is discussed. The concept maps on different courses in different subjects and whether they provide reliable and valid results can be researched. In addition, the studies which include different and more sources of variability besides the sources of variability of the tasks and the raters in this study may be recommended.

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Kavram Haritalarının Puanlanmasında Puanlayıcı ve Puanlama Yöntemi Etkisinin Genellenabilirlik Kuramıyla İncelenmesi

Atıf:

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Özet

Problem Durumu: 1970'lerde ortaya konan kavram haritaları, bilginin hiyerarşik bir düzen içerisinde şematize edilerek görselleştirilmesini sağlayan grafiksel araçlardır. Kavram haritaları eğitimde bir konudaki kavramlar arasındaki ilişkinin daha açık, anlamlı öğrenilmesini sağlamaya yardımcı olabilecek araçlardır. Novak (2001), kavram haritalarının öğretim amaçlı kullanılabilirdiği gibi değerlendirme amaçlı da kullanılabileceğini, çoktan seçmeli testlerin kullanılmasının bir zorunluluk

olmadığını ve hatta zamanla ulusal başarı sınavlarında bu araçların etkili bir değerlendirme aracı olarak kullanılabileceğini belirtmiştir (Akt: Kaya ve Kılıç, 2004). Kavram haritalarının eğitimde değerlendirme amaçlı olarak kullanılması, öğrencilerin konuyu anlayıp anlamadıklarını göstermesi ve öğrenme ile ilgili eksiklerini ortaya çıkarması açısından çok önemlidir. Kavram haritaları, öğrencinin bilgi yapısını, konuyla ilgili yanlışlarını ve yanlış anlamalarını belirlemede oldukça fonksiyonel bir işleve sahiptir (Şahin, 2002). Kavram haritalarının değerlendirme aracı olarak kullanılması bunların puanlanması konusunu gündeme getirmiştir. Bu yöntemin değerlendirme amaçlı olarak kullanılabilmesi için öğretmenler tarafından puanlama yöntemlerinin çok iyi bilinmesi gerekmektedir. Farklı şekilde oluşturulan ve kullanılan haritalar farklı yöntemlerle puanlanabilmektedir. Bu yöntemlerden iki tanesi bütüncül ve ilişkisel puanlama metotlarıdır. Bütüncül puanlama yönteminde kavram haritaları bir bütün olarak ele alınır, öğrencilerin kavramlarla ilgili öğrenmelerini haritaya yansıtabilmeleri ve ilgili kavramların haritada yer alması göz önünde tutularak 1-10 arasında bir puanla değerlendirilir. İlişkisel puanlama yöntemi önermelerin ayrı ayrı puanlanması temeline dayanmaktadır. Önerme iki kavram arasındaki ilişkinin etiketlenmiş bir ok aracılığıyla gösterilmesi olarak tanımlanır. Haritanın toplam puanı, ayrı önermelerin her birine verilen puanların toplanmasıyla bulunmaktadır ve her bir önerme doğru olup olmadıklarına göre 0-3 arasında bir puan almaktadır (McClure, Sonak ve Suen,1999). Kavram haritası, değerlendirme aracı olarak kullanıldığında teknik özellikleri kritik hale gelmesine rağmen, elde edilen puanların güvenilirlik ve geçerliliğinin nasıl değerlendirileceği her zaman net değildir (Yin ve Shavelson, 2008). Genellenebilirlik (G) kuramı, temeli varyans analizine (ANOVA) dayanan güvenilirliğin değerlendirilmesini sağlayan, Cronbach ve arkadaşları (1972) tarafından geliştirilen, güvenilirlik kavramına farklı bir bakış açısı getiren istatistiksel bir kuramdır (Shavelson ve Webb, 1991 Akt; Deliceoğlu, 2009). Öğrencilerden birinin aldığı puan kavram haritası puanlarının evreninden bir örnek olarak düşünülürse (değişen bütün koşullar altında örneğin; görev, cevap formatı ve puanlama metotları vb.) kavram haritalarının puanlanması G kuramı kapsamında incelenebilir. Ruiz-Primo ve Shavelson, (1996) kavram haritası puanlamasının; kavramlar, önermeler, görev tipi, cevaplama formatları, durumlar, puanlayıcılar ve puanlama yöntemleri gibi farklı hata kaynakları içerdiğinden, bu tür araştırmalarda G kuramının kullanılmasının bilhassa uygun olduğunu belirtmiştir (Akt: Yin ve Shavelson, 2008).

Araştırmanın Amacı: Bu çalışmada, farklı öğretmenler tarafından puanlaması yapılan öğrencilerin oluşturduğu kavram haritalarının puanlarının güvenilirlikleri G kuramı açısından ele alınacaktır. Bu araştırma kapsamında kavram haritası puanlama yöntemlerinden ikisi kullanılmıştır. Bunlar; bütüncül (holistik) puanlama ve ilişkisel puanlama yöntemleridir. Kavram haritalarının puanlanmasında sadece bu iki yöntemin kullanılabilmiş olması araştırmanın sınırlılıklarından biri olarak görülebilir.

Araştırmanın Yöntemi: Araştırma, Osmaniye ili Merkez Atatürk İlköğretim okulunda 7.sınıfta öğrenim görmekte olan 15'i kız, 21'i erkek olmak üzere 36 öğrenci ile gerçekleştirilmiştir. Araştırma 2010-2011 eğitim-öğretim yılı güz dönemi Aralık-Ocak

ayları içerisinde gerçekleştirilmiştir. Araştırma kapsamında öğrencilerin yapmış olduğu kavram haritalarını üç farklı öğretmen puanlamışlardır. Veriler, veri toplama aracı olarak kullanılan dört farklı kavram haritasından elde edilmiştir. Bu çalışmada kullanılan haritalar Kuvvet ve Hareket ünitesiyle ilgilidir.

Araştırmanın Bulguları: Çalışmada 36 öğrencinin dört kavram haritası oluşturabilme düzeyleri iki farklı puanlama yöntemiyle üç puanlayıcı tarafından puanlanmıştır. Her bir puanlama yöntemine göre elde edilen puanlar G kuramına göre ayrı ayrı analiz edilmiş ve elde edilen sonuçlar yorumlanmıştır.

Bütünsel puanlamada, çalışmada yer alan öğrenciler (s) ölçmenin objesi olup, diğer değişkenlik kaynakları olan kavram haritaları görevleri (t) ve puanlayıcılar (r) da çalışmanın yüzey (facet)lerini oluşturmaktadır. Bu çalışmada tüm öğrenciler tüm kavram haritalarını oluşturmakla sorumlu olduklarından ve tüm puanlayıcılar tarafından bütünsel puanlama yöntemiyle puanlandıkları için çalışma tümüyle çaprazlanmış (s x t x r) desenden oluşmaktadır. Genellebilirlik analiziyle elde edilen varyans bileşenlerine ilişkin sonuçlara göre, en büyük değişkenlik kaynaklarından birinin öğrenciler olduğu görülmüştür (gerçek varyans). Diğer ana etkiler olan görev, toplam varyansı açıklayan en büyük bileşenlerden biri olurken (yaklaşık %14), puanlayıcı bileşeni toplam varyansın açıklanmasına neredeyse hiç bir katkıda bulunmamaktadır (%001). Etkileşimlere baktığımızda öğrenci-görev bileşeni toplam varyansın yaklaşık %35'ini açıklarken, görev-puanlayıcı etkileşimi toplam varyansın çok küçük bir kısmını açıklamaktadır (%034). Üçlü etkileşimin, bir başka deyişle artık etkisinin, toplam varyansdaki payı ise %24'tür. G kuramına göre, artık etkisine ilişkin varyans değerinin olabildiğince küçük olması istenir. Bu değer, puanlardaki değişimin çalışmada yer almayan farklı değişkenlik kaynaklarına bağlı ortaya çıkmış olabileceğinin sinyalini vermektedir. G kuramında, klasik test kuramındaki güvenilirlik katsayısına karşılık gelebilecek G katsayısı hesaplanmaktadır. G kuramında, klasik test kuramından farklı olarak bir de mutlak değerlendirmenin söz konusu olduğu durumlar için ayrıca Phi katsayısı (reliability coefficient) da hesaplanabilmektedir. Yukarıdaki eşitliklere dayalı olarak, çalışmada yer alan dört görev ve üç puanlayıcı üzerinden hesaplanan G ve Φ katsayıları sırasıyla .63 ve .57 olarak bulunmuştur.

İlişkisel puanlama yönteminde de aynı desen kullanılmış ve yine en büyük değişkenlik kaynaklarından birinin öğrenciler olduğu görülmüştür (%10). Görev ana etki bileşeni, toplam varyansı açıklayan en büyük bileşen olurken (yaklaşık %56), puanlayıcı bileşenin toplam varyansın açıklanmada bir payı bulunmamaktadır (%000). Diğer taraftan ikili etkileşimlere bakıldığında öğrenci-görev, öğrenci-puanlayıcı ve görev-puanlayıcı etkileşimleri sırasıyla yaklaşık %20, %0 ve %03 olarak elde edilmiştir. Buradan anlaşılacağı üzere, kavram haritalarında yer alan görevlerin zorluk düzeyleri öğrenciler için farklılık gösterirken, öğrencilerin ve görevlerin puanlanması puanlayıcıdan puanlayıcıya farklılık göstermemektedir. Üçlü etkileşimler artık etki olarak isimlendirilir ve eğer çalışmada, ölçme sonuçları güvenilir ise artıklara ait olan bu değer olabildiğince küçük olması istenir. İlişkisel puanlama yönteminin kullanılarak elde edilen puanlar üzerinden bulunan artık etki varyansı toplam varyansın %10'unu açıklamaktadır. Elde edilen bu varyans değeri,

puanlardaki deęişimin alıřmada yer almayan farklı deęişkenlik kaynaklarına baęlı ortaya çıkmıř olabileceęinin sinyalini vermektedir. alıřmada yer alan drt grev ve  puanlayıcı zerinden iliřkisel puanlama yntemi iin hesaplanan G ve Φ katsayıları sırasıyla .63 ve .34 olarak bulunmuřtur.

Arařtırmanın Sonu ve nerileri: Elde edilen sonulara gre, her ik puanlama yntemi iin G katsayısı aynı bulunmuřken, Phi katsayısı btnsel puanlama ynteminin kullanıldıęı kavram haritası alıřmasında daha yksek bir deęere sahiptir. Bu sonulara dayanarak mutlak kararkların alınması amaalanan kavram haritası alıřmalarında, btnsel puanlama yntemini kullanmak nerilebilir. İliřkisel puanlama ynteminin kullanılacaęı durumlarda ise ęrencilerin kavram haritalarını oluřturmada daha fazla pratik yapması ve puanlayıcılara puanlama konusunda daha fazla aıklama yapılması ve puanlama ltlerinin daha ayrıntılı verilmesi nerilebilir. Ayrıca, her iki puanlama yntemiyle elde edilen sonulara gre, artık varyansın yksek ıkmasına dayalı olarak, ęrencilerin kavram haritası oluřturulmasında hata kaynaęı olabilecek dięer dıř etkenlerin (ortam, lme aracı vb.) de dikkatlice kontrol altına alınması gerektięi nerilmektedir.

Anahtar szckler: Genellenebilirlik kuramı, puanlayıcı etkisi, kavram haritalarının puanlanması, puanlama yntemleri.

Social and Emotional Function of Music Listening: Reasons for Listening to Music

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Abstract

Problem Statement: The reasons that people listen to music have been investigated for many years. Research results over the past 50 years have showed that individual musical preference is influenced by multiple factors. Many studies have shown throughout that music has been used to induce emotional states, express, activate, control emotions, relax, and communicate. It can be suggested that asking “how students shape music in their mind, the importance of music, and which genres they listen to and why” can help educators achieve their goals more easily.

Purpose of Study: This study investigated the involvement of music in the lives of university students; the type of music they listen to in the university and during childhood; why they listen to music; and the emotional and social function of music. Of the students attending different departments of Dokuz Eylul University Faculty of Fine Arts, 322 were randomly selected to participate in this study. Open-ended questions were used to reveal their reasons for listening to music and the musical genres they prefer.

Method: To reveal how often students listen to music, why they listen to music, and what type of music they listen to during university and childhood, a questionnaire with open-ended questions was used. A content analysis methodology was used to analyze the data.

Findings and Results: Findings revealed that the main reasons for listening to music were enjoyment, emotional mood, peer group, and family. In addition, the majority of students reported that they listen to

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music between two and nine hours per day. The most preferred genres were rock, jazz, western art, and pop. The least preferred genres were Turkish musics. The preferred genres and listening frequencies were found to be different in childhood and in university. In addition, the preferred musical types of the participants were different from those their families preferred.

Conclusions and Recommendations: The fact that the participants' preferred genres of music differed during adulthood and childhood and also differed from their families' preferences indicates that the family's role in the development of musical tastes is not significant. Another striking finding is that Turkish music genres are not more popular. This finding can be associated with the fact that music represents social identity. It is seen that Enjoyment and emotional mood were among the main reasons for listening to music.

Keywords: Reasons for Listening to Music; Musical preference; Emotional function of music; Social function of music.

Introduction

Identifying the underlying factors that affect the music listening experiences of individuals can make it possible to use these factors in education. While it is perfectly feasible to ask individuals if they're interested in any field of art, this question loses its meaning when applied to music as a form of art. If a group of university students was asked 'Do you listen to music?', it is highly likely that they'd all answer affirmatively. But why and how do we choose the music we listen to? For the past 50 years, music psychology researchers have been seeking the answer to this question. According to Berlyn's (1971) neurophysiologic study, musical preference depends on the activating potential that music creates in the individual. This theory also suggested that people like music with a middle level of complexity and familiarity and that higher or lower levels negatively affect our preference. Konecni (1982) took this theory further and concluded that musical preference differs with the listening environment. Individuals build their preferences through social, emotional, cognitional conditions, and the listening environment along with their activity and mood during the listening process. Another theoretical approach to this subject is the prototype model developed by Martingale and Moore (1989), who suggested that individuals perceive musical excerpts based on the prototype (as cited in North & Hargreaves, 2008, 77-86).

According to North and Hargreaves (2008), these theories are insufficient to describe the reasons that people listen to music. These early studies overlooked socio-cultural factors, and as individual values take over, studies in this field have started moving in a different direction. When approached from the perspective of socio-cultural factors, it is clear that individuals gain or lose status with others based on their tendency to think like other members of the group. A good example would

be high school or university students preferring to listen to the same type of music as their friends, simply because their friends are listening to it.

Universities provide a safer environment where individuals feel more freedom than in other levels of education. Because this is the time that young people become an adult, it can be theorized that the preferences made during this period would be more permanent. According to Leblanc (1991), this permanency increases as individuals grow older. Additionally, according to North and Hargreaves (2002), individuals defined their musical preferences between ages 20-25 more permanently. Considering that music is mostly consumed by young adults (North, Hargreaves, & O'Neil, 2000), it is acceptable that these studies have been performed with the same demographics. With the progress of technology, students can more easily find specific types of music, form bands, and make their own music. In other words, music listening, performing, singing, and composing has become a big part of in university student life. Armed with this knowledge, researchers have started to study not just the student's music dynamics during their university education, but also their extracurricular musical activities. Zillmann and Gan (1997) emphasized that the answers to "why are you listening to music?" aren't inconsistent and diverse, but the most common responses are related to entertainment first and serving multiple needs second. These needs have been subsequently classified and measured in research. For example, during their research on English young adults, North, Hargreaves, and O'Neil (2000) used a scale of 12 reasons for listening to music on a wide sample of students. Framing these reasons based on identity and mood, they've grouped these reasons under three primary categories: to make an impression, to meet emotional needs, and enjoyment. A large portion of the participants stated that they prefer certain types of music to "look cool"; to impress their friends and family; and to satisfy their emotional needs. A similar study by Tarrant, North, and Hargreaves (2000) categorized "impression" under "social needs" and used the same classification. They investigated the reasons that young adults in the US and UK listen to music, and concluded that the two main reasons are "to leave an impression" and "satisfying emotional needs (relaxation, pleasure)." Studying students in Portugal and England, Boal-Palheiros and Hargreaves (2001) found that students relate listening to music at home with relaxation, mood, and social relationships, while they related listening to music at school with being active and as a source of motivation. North, Hargreaves, and Hargreaves (2004) found that students answered respectively "enjoyment", "passing time", and "habit". Juslin and Laukka (2004) concluded that emotion is the leading motivation for music listening.

Law and Ho (2015) suggested that there is a gap between the musical learning preferences in and out of school. Additionally, several studies have indicated that the music lesson is not one of the popular lessons among students (North, Hargreaves, & O'Neill, 2000, 256). According to Sloboda (1990), concerts and home rank as more tasteful musical environments than school (as cited in Boal-Palheiros & Hargreaves, 2004, 40). Gurgen (2016) found that students of fine arts prefer jazz and blues instead of local genres, while students in music education prefer rock and metal music mostly.

Listening to music at home and at school has a direct relation to age. Theories aiming to explain the effect of aging during the late childhood and early adolescence emphasize the relative importance of family and relatives. The results of a growing number of studies indicate the effects of listening to music on the formation of personal and social identity, establishment of interpersonal relationships, and regulation of mood and emotion (Boal-Palheiros & Hargreaves, 2001).

In a study of 24 students, Herbert (2012) have analyzed the students' 14-day diaries, with commentary phenomenology, and detected eight important psychological points relating to mood: excitement, dissociation, relaxation, connectedness, emotion and mood, daydreams, exploration of emotion, and multimedia experience.

These studies have found that reasons related to emotion rank higher than others almost exclusively. Schafer, Smukalla, and Oelke (2013, 2) suggested that music listening related to Maslow's hierarchy of needs. At the bottom of the pyramid are physiological needs. After the satisfaction of physiological needs comes self-actualisation. During self-actualisation, individuals have stated that they felt detached from time and space and had deep emotional experiences. Maslow's (1964) studies on mysticism, religion, art, and creativity showed that one of the most frequent peak experiences that promptly arise and activate triggers is music (as cited in Schafer et al., 2013, 2).

The struggle to understand the reaction of a listener to music is challenging but exciting because music is a factor triggering emotions. Research based on "emotion" has been ignored and overlooked in the past, but has recently become more prominent (Juslin & Laukka, 2004). Saarikallio and Erkkilä (2007) suggested a model to fill the gap in music's effect on daily life, which they recognized as being investigated by other researchers but still demonstrated significant gaps. This model, which analyzes mood regulation during music listening in young adults, describes the satisfaction of emotional needs (such as entertainment, relaxation, mental activity, etc.) with musical activities (such as listening, playing, singing).

It is important for teachers and administrators responsible for music education to identify students' listening habits, the genres they enjoy, and why they listen to music. The purpose of this study was to determine the musical background of students attending Dokuz Eylul University, Faculty of Fine Arts and factors prompting them to listen to music in the context of emotional and social functions of music.

Method

Research Design

This study was a qualitative case study. The data was analyzed with a content analysis technique including conceptualization of the data, detection of the categories that correctly explain the concepts, and regulation of the data (Yıldırım & Simsek, 2013, 159).

Research Sample

Of the students attending the Dokuz Eylul University Faculty of Fine Arts, 322 were randomly selected to participate in the study. Of these, 89 were studying in the music department and 233 in other departments, including sculpture (18), traditional arts (44), ceramics (20), graphic design (77), photography (22), painting (28), and textile (24). Their mean age was 23.

University students were chosen as participants over younger students because their favorite music genres are more stable, the genres they listen to are more diverse, and they can identify music genres more accurately (Leblanc, 1991; LeBlanc, Sims, Siivola, & Obert, 1996; Berg, Fierros, & Pérez, 2015).

Research Instrument and Procedure

A questionnaire with open-ended questions was used to reveal how often students listen to music, why they listen to music, and what type of music they listen to during university and childhood. Questions were determined by two expert instructors from the Educational Sciences Department. The clarity and understandability of the questionnaire was tested beforehand with different sample groups, and took its final shape afterwards.

Data Analysis

In this study, data were collected through 'interview of the open-ended questions' (Yıldırım & Simsek, 2013, 148). To reveal the reasons for choosing a genre, students were asked "What do you think made you choose the genre(s) or type of music you listen to?" After coding the answers, categories were developed. Categorization is the classification of the concepts obtained from the content analysis (Yıldırım & Simsek, 2013, 260). The categories in this study were "personal factors", "environmental factors", and "musical factors" (Table 2). Two investigators were consulted when performing the categorization. A separate form was developed to verify the integrity of the data set. Twenty of the 322 conversation records were randomly chosen and the answers were classified into this form by two independent observers, whose results matched the researcher's. Answers were compiled into a table using frequency and percentage calculations.

Results

Music Listening Frequency

Students were asked how often they listen to music in their daily lives and four categories were defined. Table 1 shows these categories along with their frequency, and percentage rates.

Table 1.*How Frequently Students Listen to Music*

<i>n = 322</i>	<i>f</i>	<i>%</i>
<i>1-2 days a week</i>	12	3.72
<i>3-4 days a week</i>	19	5.90
<i>Everyday</i>	286	88.81
<i>Other</i>	5	1.55

According to Table 1, 88.8% of the students listen to music every day. Additionally, when those students who listen to music everyday noted that the duration ranged between two and nine hours per day. Those who selected "Other" provided answers such as "it depends" and "sometimes I never listen to music, sometimes I listen to music very often".

Musical Genres that Students Listen to

To understand the students' musical past and determine what they and their family listened to during their childhood, the students were asked, "What types of music do you listen to the most?" and "What was the type of music you used to listen to during your childhood the most?" As the answers included many sub-genres, these answers have been consolidated within more general parent genres, and reduced to 13. For example, "Progressive Rock" was consolidated with "Rock"; answers such as Trance and House were categorized under "Electronic Music". The results, along with frequency and percentages, are shown in Table 2.

Table 2.*Genres Students and Their Families Listen to*

<i>Musical Genres (n=322)</i>	<i>University</i>		<i>Childhood</i>		<i>Family</i>	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
<i>Rock (progressive rock, hard rock, indie rock)</i>	158	49.06	65	20.18	30	9.31
<i>Jazz</i>	113	35.09	-	-	23	7.14
<i>Western Art Music</i>	108	33.54	13	4.03	38	11.80
<i>Pop</i>	105	32.60	190	59.00	98	30.43
<i>Blues</i>	79	24.53	-	-	12	3.72
<i>Electronic (dubstep, trip-hop, trance, house, techno)</i>	74	22.98	-	-	-	-
<i>Metal</i>	60	18.63	22	6.83	-	-
<i>Traditional Turkish Art Music</i>	43	13.35	14	4.34	94	29.19
<i>Reggae</i>	26	8.07	-	-	4	1.24
<i>Latin</i>	21	6.52	-	-	4	1.24
<i>Rap/Hip-Hop</i>	19	5.90	-	-	4	1.24
<i>Turkish Folk Music</i>	19	5.90	19	5.90	75	23.29
<i>Turkish Arabesque Music</i>	11	3.41	8	2.48	18	5.59
<i>Ozgun Music*</i>	5	1.55	-	-	11	3.41
<i>No Answer</i>	8	2.48	54	16.77	66	20.49

* A political and local music genre in Turkey.

Table 2 shows that 49.06% of the participants listen to rock in university, while 20.18% listened to rock during their childhood. Students listening to the second most popular genre, jazz (35.09%), stated that they didn't listen to this genre in childhood. The same applies to blues, which 24.53% of university students listen to, none of whom listened to this genre during childhood. Additionally, these genres reported very low percentages of family listening history (7.14% and 3.72%).

The percentage of students who listened to western art music during university was 33.54%. Of these, 4.03% listened to western art during childhood and 11.80% reported that their families listened to this genre.

Pop music attracted more listeners during their childhood, with 59% of respondents, compared to 32.60% of university students who still listen to this genre, and 30.43% reporting that this genre was popular in their family.

Of the participants' families, 29.19% listened to traditional Turkish art music, while 4.43% of participants reported listening to this genre during childhood, and 13.35% reported listening to traditional Turkish art music as university students. A consistent 5.90% of respondents reported listening to Turkish folk music during childhood and at university, while the influence among families was much higher (23.29%).

Electronic music listeners (22.98%) reported that they didn't listen to electronic music during childhood and that it wasn't a genre their families listened to, while 18.63% of respondents reported listening to metal as university students, with 6.68% listening to this genre during childhood, and none reporting that their families listened to metal.

Latin, reggae, and rap having a notably low percentage of listeners during childhood and among families, but each of these genres registered between 5 and 8% of university students as listeners. Between 2 and 6% of respondents reported listening to Arabesque Music as children, as university students, and among their families.

16% of the participants did not mention the genres they listened to in childhood and 20.49% of the participants did not mention the genres their families listened to.

Reasons Why Students Listen to Music

Categories were formed based on student answers to the question "What do you think made you choose the genre(s) of music you listen to?" Table 3 shows the appropriate answers to these categories, as well as their frequency and percentage.

Table 3.*Why Students Listen to Music Based on Music Departments and Other Departments*

	Total (n=322)		Music (n=89)		Non-music (n=233)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>Personal Factors</i>						
Enjoyment	87	27.01	22	24.71	65	27.89
Emotional Mood	49	15.21	6	6.74	43	18.45
Other	49	15.21	6	6.74	43	18.45
<i>Environmental Factors</i>						
Peer group	47	14.59	15	16.85	32	96.96
Family	32	10.00	12	13.48	20	8.58
Where I live	15	4.65	4	4.49	11	4.72
School	10	3.10	7	7.86	3	1.28
Media	7	2.17	4	4.49	3	1.28
Other	12	3.72	3	3.37	9	3.86
<i>Musical Factors</i>						
General Properties	48	14.90	30	33.70	18	7.72
Technical Properties	21	6.52	11	12.35	10	4.29
No Answer	38	11.80	7	2.17	31	9.62

Table 3 shows that "enjoyment" and "emotional mood" (of the "personal factors" category) are the most frequent reasons for listening to music. Environmental factors are second, with musical factors third. As expected, students from the music department registered more musical factors than personal or environmental factors. It should be noted that 11.80% of the students did not answer this question.

Example Sentences

Table 4 shows a selection of example answers to "What do you think made you choose the genre(s) of music you listen to?"

Table 4.*Example Reasons That Students Listen to Music*

		<i>Personal Factors</i>
<i>Enjoyment</i>		"Because I like it"
		"Because I find it pleasant"
		"It entertains me"
<i>Mood / Emotional State</i>		"Satisfies my emotional state"
		"It fixes my emotional state"
		"It rests my soul"
		"It speaks to my emotions"
		"Relaxing/Calming"
<i>Other</i>		"Changes my mood"
		"My ambition to research"
		"Seeking difference"
		"Curiosity"
	"Because I'm an artist"	

Table 4 Continue

<i>Personal Factors</i>	
<i>Environmental Factors</i>	
<i>Peer Group</i>	"Because the people I've met recently listen to it..." "Someone whom I see as an idol listen to this" "There was a girl I used to like in school, and I've started to listen to this genre to look cool to her" "Listening to it thanks to my social circle"
<i>Family</i>	"My brother suggested it" "It used to play at home" "My dad used to listen to it" "That's how I grew up"
<i>Where I live</i>	"Different cultures I belong to" "Where I live" "My socio-cultural state" "Culture"
<i>School</i>	"Having studied at fine arts high school has a great impact" "I listen to this because I study in Music Sciences"
<i>Media</i>	"I've heard it on the Radio and started listening to it" "Internet links" "TV Series / Soundtracks"
<i>Other</i>	"Because it's not popular" "Places I've been and went to had a great impact" "My lifestyle"
<i>Musical Factors</i>	
<i>General Properties</i>	"I like the singer / band" "Because it's high quality music" "Because I'm interested in the artists' lives." "I perform the same genre" "I like the bands' political views" "I play an instrument"
<i>Technical Properties</i>	"Rhythms and scales they play" "Harmonic Structure" "Virtuosity of the musician" "Melody" "Complex Rhythms" "Quality of the mechanical recording and cleanliness of the sound"

Discussion and Conclusion

Understanding why people listen to music is a big field of research with many difficulties, as musical taste can be affected by many factors. North and Hargreaves classified these factors as listener, musical genre, and state of listening/environment.

It is well known that music has a big place in the lives of young adults, and the findings of this research confirm this; 89% of the students listen to between two and nine hours of music every day. Similarly, Lamont et al. (2003) concluded that young adults listen to 13 hours of music every week, and more importantly, found that young adults spare more time for listening to music than they do for other daily activities.

Tekman and Hortacsu (2002), in their research conducted in Turkey, concluded that the purpose and effects of the music depends on individuals' pasts and their

actions. They also found that individuals listen to music not only to relax but to feel energized and become more active. For example, western art music is used to relax, and rap music helps listeners feel energized. Also, participants were aware that Turkish Folk Music enhanced their social identity and arabesque music diminished and rejected their social identity. Investigating the relationships between musical genres and prejudice, Senel (2014a) reported that participants belonging to different age groups describe arabesque music listeners as uncultured, unpleasant, and problematic. As shown in Table 2, the percentage of people listening to Turkish music (Traditional Turkish art Music, Turkish Folk Music and Turkish Arabesque Music) is comparatively low, which can be tied to music's effects on representing the social identity (Hortacsu, 2012; Rentrow & Gosling, 2003; Senel, 2014b). Another way to think about this is that individuals may claim not to like certain types of music not because they don't like those genres, but because it's incompatible with their social identity or because of their prejudice against the people listening to these genres. North and Hargreaves (2008) stated that social identity was one of the key factors affecting musical preferences. Stalhammer (2006) theorized that the three biggest elements affecting people's musical identities are the global music industry, cultural background, and environmental factors.

Results show that the genres participants listen to during childhood and their university years are different, and other than Pop music, the genres they listen to are different from their families' preferences. Participants stated that during their university years, they generally prefer genres they didn't listen to during their childhood (Table 2). With this in mind, it seems that family musical preferences doesn't necessarily shape musical preferences, and that families frequently fail to transfer their musical preference heritage to the next generation; the music industry and peer groups have a much larger influence than families. However, 16% of the participants did not mention the genres they listened to in childhood and 20.49% of the participants did not mention the genres their families listened to. This may be attributable to an inability to remember the past or a lack of musical activities related to childhood and family.

In this study, participants repeatedly stated that "enjoyment", "emotional state", and "close social environment" were the main reasons they preferred certain types of music. Zillion and Gan (1997) concluded that the reasons young adults listen to music are entertainment and various other needs. Boal-Palheiros and Hargreaves (2001) similarly reported that students replied to the open-ended "why do you listen to music" question with "enjoyment", "emotional state", and "social needs", ultimately concluding that "enjoyment" is the biggest function in listening to music. Likewise, North et al. (2000) found that young adults prefer certain types of music to satisfy their social and emotional needs. Also, the answers students gave align perfectly with Herbert's (2012) psychological analysis of diaries, focusing on emotional state, relaxation, and communication. In this study, music students replied based on their musical knowledge, specifically that they liked music because of the "musicians' virtuosity", "harmonic structure", and similar musical reasons, while non-musicians replied that their emotional state and close social environment were the biggest influences on their preferences. Therefore, it can be concluded that a formal music education strongly affects individuals' musical preferences.

Most researchers agree that emotions are the biggest reason we listen to music and that the power of music slowly became a tool to activate, change, empower, and

alleviate emotions. Many studies have shown how music has been used to induce emotional states, express, activate, control emotions, relax, and communicate (Zillmann & Gan, 1997; Juslin & Laukka, 2004; Saarikallio & Erkkilä, 2007; Herbert, 2012). Likewise this study showed that over 50% of students listen to music for these same reasons.

It can be suggested that asking “how students shape music in their mind, the importance of music, and which genres they listen to and why” can help educators achieve their goals more easily, motivate students more forcefully, and most importantly, produce better learning outcomes.

As previously mentioned, there are two ways of learning about music: in school and out of school. Students generally prefer their own music to school music. It is essential to add popular and local music genres to the curriculum to establish a bridge between these two different environments. According to Hargreaves et al. (2003, p. 156), the relationship between formal and informal music making is complicated. In addition to focusing on learning materials and institutions, the dialog between teacher and student, and the role of students in their own learning should also be considered.

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Müzik Dinlemenin Duygusal ve Sosyal İşlevi: Üniversite Öğrencilerinin Müzik Dinleme Nedenleri

Atıf:

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Özet

Problem Durumu: İnsanların müziği neden dinlediği uzun yıllardır merak konusu olmaktadır. Son 50 yıldır yapılan çalışmalarda ve geliştirilen kuramlarla müzik beğenisinin çok çeşitli faktörlerden etkilendiği ortaya konmuştur. Bu faktörler, dinleyici, müzik parçası veya türü ve dinleme durumu/ortamı olarak sınıflandırılabilir. Giderek artan sayıdaki çalışma sonuçları, müzik dinlemenin kişisel ve sosyal kimlik oluşumu, kişiler arası ilişkilerin şekillenmesi ve ruh hali ile duygu durumunun düzenlenmesi üzerine olan etkilerine işaret etmektedir.

Araştırmanın Amacı: Bu çalışma Müzik bölümü öğrencileri ile diğer sanat bölümlerinde okuyan öğrencilerin müzik dinleme nedenlerini müziğin duygusal ve sosyal işlevleri bağlamında belirlemeyi amaçlamaktadır. Ayrıca öğrencilerin üniversite ve çocuklukta hangi müzik türlerini dinlediklerini, ailelerinin dinledikleri türlerle benzerlik ve farklılıkların saptanması da amaçlanmıştır.

Araştırmanın Yöntemi: Araştırmada nitel araştırma desenlerinden durum çalışması deseni kullanılmıştır. Araştırmanın katılımcılarını Dokuz Eylül Üniversitesi Güzel Sanatlar Fakültesinin farklı bölümlerinde okuyan tesadüfi olarak seçilmiş 322 öğrenci oluşturmaktadır. 89'u Müzik Bilimleri, 233'ü diğer bölümlerde (Resim, Grafik Tasarım, Heykel, Fotoğraf, Seramik) okumakta olan öğrencilerin yaş ortalaması 23'dür. Öğrencilerin müzik geçmişlerini anlamak için şimdi, çocukken ve ailelerinin dinledikleri müzik türlerini ortaya koymak amacıyla sırasıyla " En çok hangi müzik türlerini dinlemektesiniz?", " çocukken en çok dinlediğiniz müzik türleri nelerdir?" ve "Ailenizde en çok hangi müzik türleri dinlenirdi?" açık uçlu soruları sorulmuştur. Yanıtlar birçok alt müzik türünü de içerdiğinden bu yanıtlar ana müzik türüne eklenerek 13 tane müzik türüne indirgenmiştir. Verilerin toplanmasında görüşme türlerinden "açık uçlu anket görüşmesi" (Rubin, 1983'den 'den aktaran Yıldırım ve Şimşek, 2013, p.148) kullanılmıştır. Açık uçlu soruların analizinde nitel araştırma tekniklerinden içerik analizi kullanılmıştır. Öğrencilerin verdikleri yanıtlardan benzer olanlar bir araya getirilmiş ve kategoriler içeren bir form oluşturulmuştur. Yanıtların kategorize edilmesinde yine uzman görüşüne başvurulmuştur. Ayrıca verilen yanıtların hangi kategoriye girdiğinin net olarak belirlenebilmesi için 2 bağımsız gözlemcinin yardımı ile rastgele seçilen 20 adet öğrenci anketindeki yanıtlar bu forma kaydedilmiştir. Formlar karşılaştırıldığında 2 gözlemcinin de yanıtları araştırmacı ile paralel yönde değerlendirdiği görülmüştür.

Araştırmanın Bulguları: Araştırma sonucunda öğrencilerin büyük çoğunluğunun (%89) haftanın her günü 2 ila 9 saat arası müzik dinlemekte olduğu belirlenmiştir. Öğrencilerin büyük bölümü Rock, Jazz, Klasik ve Pop müzik türlerini, çok az bir bölümü ise Türk Halk Müziği, Arabesk ve Özgün müzik türlerini tercih ettiklerini belirtmişlerdir. Katılımcıların dinledikleri müzik türleri ve dinlenme oranlarının üniversitede ve çocuklukta farklılıklar gösterdiği, ayrıca Pop müzik dışında dinledikleri müzik türlerinin ailelerinin tercih ettiklerinden farklı olduğu saptanmıştır. Katılımcılar genelde çocuklukta daha az dinlemeyi tercih ettikleri ya da hiç dinlemedikleri müzik türlerini yetişkinlikte en çok tercih ettikleri tür olarak belirtmişlerdir. Katılımcıların %49,06'sının üniversitede, %20,18'inin çocuklukta Rock müzik dinlediği görülmektedir. Rockdan sonra en fazla dinlenen tür olan Jazz'ı dinleyenler (%35,09) çocukluklarında bu müzik türlerini hiç dinlemediklerini belirtmişlerdir. Aynı şekilde Blues müzik de yetişkinlikte % 24,53 oranında dinlenirken çocuklukta hiç dinlenmediği görülmektedir. Ayrıca ailede bu türlerin dinlenme oranları düşüktür (% 7,14 - % 3,72).

Klasik müzikte ise dinleme oranı % 33,54 iken, çocuklukta (%4,03) ve ailede ise bu oranın düşük olduğu görülmektedir (%11,80). Pop müziğin ise en çok çocukken dinlendiği (%59,00) gözlenmekle beraber üniversitede %32,60, ailede ise % 30,43 dinlendiği bulgusuna ulaşılmıştır. Katılımcıların %29,19'unun ailesinde Türk Sanat

Müziği dinlenirken, çocuklukta bu oranın % 4,34 düştüğü, yetişkinlikte ise %13,35'e yükseldiği görülmektedir. Türk halk müziği ise çocukken ve yetişkinlikte, % 5,90 gibi çok az dinlenme oranına sahipken, ailede bu oranın % 23,29 olduğu görülmektedir. Katılımcıların % 22,98'inin dinlediği Elektronik müzik türünün çocukken ve aile ortamında hiç dinlenmediği gözlenirken, metal müziğin ise aile ortamında hiç dinlenmediği fakat çocukken % 6,83 oranında, yetişkinlikte ise % 18,63 oranında dinlendiği sonucuna ulaşılmıştır. Katılımcıların çocukken ve ailelerinde de hemen hemen hiç dinlenmediği gözlenen Reggea, Latin ve Rap müzik türleri yetişkinlikte % 5 ile % 8 arasında değişen oranlarda dinlenmektedir.

Araştırmanın Sonuçları ve Önerileri: Müzik dinlemenin öğrencilerin gündelik hayatlarında oldukça büyük yer kapladığı söylenebilir. Türk müziklerinin dinlenme oranının genel olarak düşük olması dikkati çeken bir bulgudur. Bu bulgu müziğin sosyal kimliği temsil etme işlevi ile bağdaştırılabilir. Bir başka deyişle bu müziği dinlemediklerini belirten bireylerin bu müzik türlerini gerçekten sevmedikleri için değil de ait oldukları sosyal kimlik ile uyum sağlamadıkları veya bu müziği dinleyen kesime karşı duydukları önyargı nedeniyle tercih etmiyor olabilirler. Yetişkinlikte, çocuklukta ve ailede dinlenen müzik türlerinin farklılık göstermesi şu andaki müzik zevklerimizde şekillenmesinde ailemizin payının daha az olduğu veya ailelerin kendi müzik zevklerini bir sonraki kuşağa aktarmada başarısız olduğu, dolayısı ile müzik tercihi müzik endüstrisi ve arkadaş çevresinin etkisinin aileden daha ağır bastığı söylenebilir. Beğeni ve ruh hali kategorilerinin ağırlıklı olarak müzik dinleme nedeni olarak belirtildiği saptanmıştır. İkinci sırada çevresel etkenler, son sırada ise müziksel etkenler gelmektedir. Müzik bölümü ve diğer bölümlere ayrı ayrı baktığımızda müziksel etkenlerin genel özellikler de dahil olmak üzere daha çok müzik bölümü tarafından müzik dinleme nedeni olarak belirtildiği ve diğer bölümlere göre ruh hali ve beğenin ikinci planda kaldığı görülmektedir. Öğrenme sürecinde "öğrencinin müziği kafasında nasıl anlamlandırıldığı, müziğin onlar için önemi, hangi müzikleri dinledikleri ve neden dinledikleri" sorgulandığında eğitimcinin öğretim hedefine daha rahat ulaşması, öğrenmede güdünün artması ve daha verimli öğrenme ortamları yaratılması sağlanabilir.

Anahtar Sözcükler: Müzik dinleme nedenleri, müzik tercihi, müziğin duygusal işlevi, müziğin sosyal işlevi.

Teacher Opinions on the Innovation Management Skills of School Administrators and Organizational Learning Mechanisms¹

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Abstract

Problem Statement: In modern society, schools, just as other institutions, are required to be innovative organizations. For this purpose, they must not only be learning organizations, they must also be innovative. In this sense, the purpose of this study is to discover the relationship between organizational learning mechanisms at schools and innovation management skills of school administrators.

Purpose of the Study: The purpose of this study is to determine high school teachers' opinions of the innovation management skills of school administrators and organizational learning mechanisms at high schools.

Method: The research was conducted with the relational survey model, and 272 teachers were sampled with the random sampling method. To collect the research data, the Organizational Learning Mechanisms Scale and Scale of Innovation Management in Schools were used. The data was analyzed with frequency, percentage, standard deviation, mean, and Spearman's rho correlation analyses.

Findings and Results: According to the results of the research, teachers' opinions of both the organizational learning mechanisms of their schools

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and their administrators' innovation management skills were medium level in total and at sub-dimensions; and there is a high-level, positive, and significant relationship between teachers' opinions of organizational learning mechanisms and the innovation management skills of school administrators.

Keywords: Innovation management, organizational learning mechanisms, school administrator, teacher.

Introduction

The changes that a society, from which resources are obtained and to which output is given, goes under also continuously change the functions, responsibilities, and definitions of schools. In order for schools to respond to society's changing structure, they need to change and innovate themselves. In order to become institutions that execute learning throughout the schooling process, it is crucial for schools to make innovative attempts and effectively manage these attempts. In an information society, schools not only have to teach, but also have to learn (Banoglu & Peker, 2012). In this study, organizational learning and innovation management was discussed institutionally; then the present condition of high schools was determined and suggestions were put forward.

Organizational Learning Mechanisms at Schools

Organizational learning, which was introduced by Cyert and March (1963) in the 1960s, has been discussed variously and put under the spotlight of management and organizational science studies. Many new models were created, and organizational learning was discussed from different viewpoints after Argyris and Schon introduced the first organizational learning model in 1978. In the literature, the term is defined as: determining mistakes and correcting them (Argyris & Schon, 1978); past experiences and their efficacy and insight, knowledge, and relationships with future experiences (Fiol & Lyles, 1985); continuously enhancing required skills in order to reach desired results (Senge, 1990); and reacting against the uncertainty and complexity of the environment to enhance the idea of making a difference in organizational functions (Toremén, 2011).

Although there have been many ideas on how organizational learning is practiced, most of them have emerged from Argyris and Schon's (1978) single loop and double loop learning method. Single loop learning is defined as learning to adapt or lower the learning level (Argyris, 1976; Senge, 1990; Fiol & Lyles, 1985). This learning type emerged in order to correct organizational mistakes, and organizations incorporated this into their goals and policies (Toremén, 2011). Single loop learning is short-term, superficial, temporary, a repetition of past behaviors, and at the routine level of organization (Fiol & Lyles, 1985). Accordingly, it can be said that the goal of the single loop method is to optimize the present system and to extinguish all the mistakes.

What differentiates double loop learning from single loop learning is that double loop learning changes the mental models, policies, and assumptions underlying daily routines and actions (Van Grinsven & Visser, 2011). After comparing double loop learning with mistakes, Argyris (1995) defined double loop learning as changing the underlying program, which blames others. Contrary to single loop learning, it not only determines and corrects mistakes, but in order to attain goals, it also involves changing the strategies, norms, and values that lead to wrong actions (Huang & Shih, 2001).

Contrary to the two learning types, triple loop learning helps the organization learn how to learn, and it enables the organization structure to become ready for learning. Snell and Chak (1998) defined triple loop learning as organization members becoming aware of structures (which were present before them and which prevented or supported learning) and eventually creating new structures and strategies. Argyris (1978) defined this type of learning as learning to learn, and Marquardt (2002) defined it as testing whether learning has been achieved or not and executing learning by discussing assumptions with a critical position. Finally, Ameli and Kayes (2011) defined triple loop learning as organizations being able to learn how to practice single loop and double loop learning.

Organizational learning mechanisms—which are referred to as the institutional structures and procedural arrangements that enable organizations to directly gain knowledge by allowing members to collect, analyze, store, and systematically disseminate information related to them and their performance—are abstract and observable systems operated by organization members (Popper & Lipshitz, 1998). The knowledge being analyzed and shared by organization members through shared learning forums that enable distribution (which can make a change in routines and processes); meetings, reviews, and comparison teams are examples of these mechanisms (Schechter & Feldman, 2010; Lipshitz, Friedman & Popper, 2007). These mechanisms also form the basis that allows the disseminated knowledge to become a property of the organization (Schechter & Asher, 2012). Although they have an equivalent role with the nervous system in the individual's learning process, they do not guarantee that learning will be fruitful and useful (Popper & Lipshitz, 2000).

In order for current school systems to provide a true educational service for students and parents, they should be transformed into learning organizations that utilize collective knowledge (Duffy 1997). It is important for schools to become institutions that execute organizational learning and the extent, in what way, and how organizational learning takes place is also important. Schools, as learning organizations, are institutions where workers from all levels can collaborate, continuously learn, and practice what they have learned (Silins, Mulford & Zarins, 2002). In order to become successful learning organizations, schools have to promote double loop learning, which considers individual and organizational assumptions and goals together with their actions, behaviors, and results and aims at enhancing them (Toremén, 2011). This means information is shared throughout schools, and information gains value as it is shared (Ozen Kutanis & Mesci, 2013). In order for schools to keep up with the developments, they have to raise individuals who adapt

themselves to changing trends (Park, 2006); thus, educational institutions have to efficiently manage learning mechanisms and exploit organizational learning.

Innovation Management at Schools

Innovation indicates a positive and intentional change. When considered as an organizational concept, innovation is the promotion of new ideas and developments by the people within the organizational structure (Edwards, 2000). By considering innovation as managing all the processes related to new ideas, technological development, and creating and marketing new or renovated products/services, Trott (2005) focuses on successfully applying new ideas within the organization.

Innovation in organizations is not a process that gives results in a single step. Instead, it requires proper planning and management, begins by creating and selecting ideas, and embodies them into concrete changes (Jacobs and Snijders, 2008; Cited in: Eveleens, 2010). Innovation is an organizational process based on research and the desire to make change, which includes inter- and intra-organizational relationships and which leads to product and process changes (Acaray, 2007). Because innovation does not occur by itself and is a process, innovation is an actual study, and it can and should be managed like a regular organizational function. Yet unlike other organizational functions, innovation is a work of knowledge and requires intelligence and knowledge (Drucker, 2003). Therefore, in order to successfully complete the innovation process, organizations need to focus on innovation results and carry out their practices within this process (Aygen, 2006).

In the Oslo Manual (2005), innovation is classified into product, process, marketing, and organizational innovations. Trott (2005) defined it as management, production, and service innovations; and Durna (2002) classified it into product-process innovation, radical and slow innovations, and operational innovations. Along with the classifications, organizations have strategy, research and technology, and marketing functions throughout the innovation management process. These functions interact with the internal and external elements of the organization. The information collected from these interactions contributes to the organization's knowledge store and enable developing new products/services and processes (Trott, 2005).

The purpose of innovation in school organizations is to enhance educational results. Educational innovations are evident in product, process, and service strategies of schools that aim at changing the present conditions and create unique features to improve organizational performance (Choul, Shen, Hsiao & Chen, 2010). As educational innovations have started to focus on school-based innovations (Hofman, Boom, Meeuwisse & Hofman, 2012), cultural, individual, and interactive innovations have gained importance over technical-rational innovations (Hofman & Dijkstra, 2010).

There is a two-way interaction between education and innovation: while schools reshape themselves according to social changes, they also pioneer social innovation (Ozdemir, 2013). Therefore, educational organizations, which are responsible for

planning the country's future human resources, have to predict the future, determine the required change, and enable these changes to become permanent (Beycioglu & Aslan, 2010). According to Argon and Ozcelik (2007), national and international change becomes evident in various ways in social and open educational systems and directly or indirectly affects the individuals who are included or excluded in the process. Everything that emerges without innovation first becomes ordinary due to institutions, ideas, technology, and changes, then loses its functions and becomes less effective (Acikalin, 1998).

Schools have to function with their features that are open to change and to society's and students' emotional side, that recognize social diversity, are highly sensitive to technology, protect moral values by enhancing them, cooperate with the workers, teach democracy and practice democracy, prepare for the competitive environment, resist external threats without drifting away from the facts of life, and question themselves while promoting these (Beycioglu & Aslan, 2010). Educational systems, which have expanded due to student diversity, not only face economic competition and demands regarding social cohesion, but also face increasing economic limitations, which have caused an increase in the search for innovation (Stormquist, 1999).

Innovation Management and Organizational Learning Mechanisms

Innovation and constant development depend on the creative and learning skills of organizations (Gol & Bulbul, 2012). Innovation has become more complex due to technology and the rapidly developing environment of customer and social demands (Cavusgil, Calantone & Zhao, 2003). The reason for this is the information that organizations need for innovation has expanded significantly (DuPlessis, 2007). In a setting where there is too much information, organizations have to select the information and hand it in to the organization or create its own information in order to enable new ideas to emerge, turn ideas into innovations, and effectively manage the innovation process. At this point, organizational learning enables the information that promotes innovation to be created, acquired, disseminated, and exploited (Valle, Valencia, Jimenez & Caballero, 2011).

Organizational learning supports knowledge management, helps enhance creative skills throughout the innovation process (Avci, 2009), creates a shared intelligence for workers, and serves as a resource for innovations (Ozdevecioglu & Bickes, 2012). Garcia, Ruiz, and Llorens (2007) underlined that organizational learning supports creativeness, inspires new information and ideas, increases the applicability of these ideas, and hence becomes the basis of innovation. While Therin (2002) states that learning requires the acquisition of new information by integrating new knowledge or matching the present knowledge, McCharen, Song, and Martens (2011) underline that constant and cooperative organizational learning is crucial for long-term and innovative educational reforms. Lemon and Sahota (2004) claim that organizational learning culture formally or informally scans its environment; therefore, it reaches specific knowledge and assumptions and paves the way for innovations that enable the organization to adapt to its surroundings.

The organizational learning process, which begins by acquiring knowledge, continues as the knowledge is distributed to and interpreted by groups and as a shared understanding is created and passed on to the organizational memory (Ozdevecioglu & Bickes, 2012). A shared understanding and organization memory gained from organizational learning serve as the resources for new ideas. Koc and Ceylan (2007) underline that new ideas and suggestions carry the value of being the starting point of innovation. The feedback that is gained through innovative ideas resulting from organizational memory enables the organization to enter a new learning process. Accordingly, it can be said that organizational learning and innovation are facts that support and guide each other.

Purpose of the Study

The purpose of this study was, after determining the organizational learning mechanisms that educational organizations use and identifying the innovation management skills of school administrators, to determine through teacher opinions whether there are any relationships between the organizational learning mechanisms and innovation management skills of school administrators. The main purpose was to determine teacher opinions of the innovation management skills of school administrators and organizational learning mechanisms at high schools within the city center of Bolu. In accordance with this purpose, answers to the following questions were sought:

Considering the teachers who work in high schools of the center of Bolu;

1. What are their opinions regarding the organizational learning mechanisms and innovation management skills of their administrators?
2. Are there any relationships between their opinions of the innovation management skills of high school administrators and their opinions of the organizational learning mechanisms at schools where they work?

Method

Research Model

This study was designed with the relational screening model. The relational screening model is used in studies where the relationship between two or more variables is explored without interfering with the variables (Buyukozturk, Cakmak, Akgun, Karadeniz & Demirel, 2012). With this study, the relationships between teacher opinions of the innovation management skills of high school administrators and the organizational learning mechanisms at high schools in Bolu were determined.

Research Sample

The population of the study consists of 790 teachers who worked during the 2013-2014 academic year in public high schools in the center of Bolu. Sampling was

done in order to generalize study results in the population, and 272 teachers were contacted with the simple random sampling method. The main characteristic of this method is that each sample has an equal chance of being selected (Buyukozturk, Cakmak, Akgun, Karadeniz & Demirel, 2012). According to Cohen, Manion and Morrison (2007: 104), a sample of 260 people is enough for a population of 790 people.

When demographic distribution of the sample was investigated, it was seen that 115 (57.7%) of the sample was female and 157 (42.3%) was male. The distribution according to teaching experience showed that 75 (27.6%) of the sample had 0-10 years of experience, 125 (46.0%) had 11-20 years of experience, and 72 (26.5%) had 21 years or more of experience. When the sample's distribution according to teachers' fields was considered, it was seen that 49 (18.0%) of the teachers were teaching mathematics and science, 87 (32.0%) were teaching social sciences, 28 (10.3%) were teaching foreign languages, 19 (17.0%) were teaching sports and arts, and 89 (32.7%) were teaching vocational subjects.

Data Collection Instrument

To collect the research data, the Organizational Learning Mechanisms Scale and Scale of Innovation Management in Schools were used.

The Organizational Learning Mechanisms in Schools Scale was developed by Schechter (2008) and translated into Turkish by Unal (2014). The scale has a total of 27 items and four sub-dimensions: 1) storing, remembering, using information; 2) acquiring and disseminating information; 3) seeking information; and 4) analyzing information. The Cronbach's alpha internal consistency coefficients of the scale that Unal (2014) analyzed for validity and reliability were .84, .87, .82, and .67. The Cronbach's alpha coefficients for the sub-dimensions of the scale were .94, .91, .85, and .83; and the total scale was .97. The options of the 5-point Likert scale ranged from "none" to "totally have."

The Innovation Management in Schools Scale is a scale of 32 items and four sub-dimensions that was developed by Bulbul (2012) and passed its reliability and validity tests. The sub-dimensions of the scale were: project management, organizational culture and structure, innovation strategy, and input management. The Cronbach's alpha internal consistency coefficients of the sub-dimensions of the scale were .94, .90, .85, and .85; the total scale was .96. The Cronbach's alpha internal consistency coefficients of the study scale were .96, .93, .91, and .87; and the total scale was .98. The options of the 5-point Likert scale ranged from "totally disagree" to "totally agree."

Analysis and Interpretation of Data

The data was analyzed with SPSS 17.0 software. In order to decide what analyses should be conducted on the data, the distribution normality of the data was analyzed with the Kolmogorov Smirnov test, and it was found that the data did not range normally ($p < .5$). Percentage, frequency, arithmetic mean, standard deviation, and

Spearman's rho correlation analyses were conducted while analyzing the data. The score interval used on interpreting the scale options are given in Table 1.

Table 1.
The score intervals used to interpret the scale options

Given Score	Options	Score Interval
1	Totally Disagree/None (1)	1.00-1.80
2	Agree Less/(2)	1.81-2.60
3	Reasonably Agree/(3)	2.61-3.40
4	Agree a Lot/(4)	3.41-4.20
5	Totally Agree/Totally Have (5)	4.21-5.00

Findings

In this section, the findings regarding the research questions are presented. In Table 2, descriptive statistics of teacher opinions of the innovation management skills of school administrators are presented.

Table 2.
Teacher opinions of the innovation management skills of school administrators

	Dimensions	N	\bar{X}	Sd
Innovation Management	Project Management	272	3.21	.84
	Organizational Culture and Structure	272	3.29	.91
	Innovation Strategy	272	3.28	.84
	Input Management	272	3.25	.86
	Total Scale	272	3.25	.80

According to Table 2, teacher opinions of the innovation management skills of school administrators, organizational culture and structure received the highest score average ($\bar{X}= 3.29$), project management received the lowest score average ($\bar{X}= 3.21$) among the sub-dimensions, and both sub-dimensions are at the "reasonably agree" level. The average total scale scores of teachers ($\bar{X}= 3.25$) are similarly at the "reasonably agree" level.

In Table 3, descriptive statistics regarding teacher opinions of the organizational learning mechanisms at schools are presented.

Table 3.
Teacher opinions of organizational learning mechanisms

Organizational Learning Mechanisms	Dimensions	N	\bar{X}	Sd
	Storing Information	272	3.32	.83
	Acquiring and Disseminating Information	272	3.07	.86
	Seeking Information	272	3.42	.85
	Analyzing Information	272	3.38	.87
	Total Scale	272	3.27	.78

According to teacher opinions of the innovation management skills of school administrators on Table 3, seeking information gained the highest score average (\bar{X} = 3.42), acquiring and disseminating information gained the lowest score average (\bar{X} = 3.07), and both sub-dimensions are at the "reasonably agree" level. The average total scale scores of teachers are similarly at the medium level (\bar{X} = 3.27). This indicates that according to the study participants' opinions, the organizational learning mechanisms used at high schools are at the medium level both for sub-scales and the total scale.

Table 4 below includes the findings regarding the relationship between teacher opinions of the innovation management skills of high school administrators and organizational learning mechanisms at high schools.

Table 4.
Relationship between teacher opinions of the innovation management skills of high school administrators and organizational learning mechanisms at high schools

Scales and Dimensions	Storing Information	Acquiring and Disseminating Information	Seeking Information	Analyzing Information	Learning Mechanisms Total Scale
Project Management	.687*	.740*	.645*	.608*	.744*
Organizational Culture and Structure	.617*	.686*	.594*	.558*	.669*
Innovation Strategy	.662*	.695*	.611*	.565*	.703*
Input Management	.557*	.642*	.586*	.511*	.626*
Total Innovation Management Scale	.692*	.745*	.660*	.610*	.771**

* $p < .05$; ** $p < .01$

According to the Spearman's rho correlation analysis, whose results are presented in Table 4, there are several relationships between teacher opinions of the innovation management skills of school administrators and organizational learning mechanisms at high schools at the total scale level and sub-dimension levels. The correlation coefficient absolute value between 0.70 and 1.00 indicated a high relationship, 0.70-0.30 indicated a medium level relationship, and 0.30-0.00 indicated a low-level relationship (Buyukozturk, 2008).

Discussion and Conclusion

High school teacher opinions of organizational learning mechanisms at schools are medium level for the total scale and the sub-dimensions. Similarly, opinions of the innovation management skills of administrators are also at the medium level for the total scale and sub-dimensions. Study findings show that teachers in Bolu find the innovation management skills of administrators at the medium level and recognize high schools at the medium level as organizational learning mechanisms. These indicate that the innovation management skills of administrators are not at a sufficient level and that high schools are not at a satisfactory level to be regarded as organizational learning mechanisms. The results were regarded as negative for the high schools and administrators, and there were institutionally supportive results as well. When we take into account that innovation management and organizational learning are two variables that support each other, it is normal for school administrators to have medium-level innovation management skills and carry out organizational learning at a medium level. Learning and innovation should be considered together in order to enable organizational survival and development. While learning increases new ideas and the creative skills of the school and its staff, innovation provides a competitive advantage for the organization through these skills. Therefore, organizational learning is one of the pioneers of innovation (Ozdevecioglu & Bickes, 2012). That school administrators are recognized to have insufficient innovation management skills means that teachers find administrators to be incapable of creating an innovative environment that would further foster innovations and of getting the staff to adopt or recognize these innovations. Schools are the center and initiator of innovation, the staff should constantly follow the changes and innovation, and learning teams should be formed in schools. This point should be regarded as a value and vision among schools, the staff should agree on this vision, and school administrators should take on this duty (Simsek & Yildirim, 2004). Since schools are one of the most important institutions for human resources, school administrators should benefit from this resource in initiating and processing stages, they should create a positive environment through group work and cooperation. However, teachers found school administrators to be at medium level in using the appropriate innovation strategies and benefiting from the resources for innovations at the project management input dimension level. This shows that according to teacher opinions, administrators do not have sufficient knowledge. The reason for these teacher opinions may be due to school administrators not making many initiatives. School administrators should consider the regulations and legislations during all changes. These regulations and legislations limit the radius of

action of administrators and cause them to behave timidly. Schools should be places where the spirit of entrepreneurship and innovation prevails (Balay, 2004), and innovation is an act of taking risk. In order for school administrators to take risks on innovations, their radius of action should be expanded. Although the innovation management skills of administrators were at the medium level, Gol & Bulbul (2012) and Bulbul (2012) observed that school administrators have a sufficient level of innovation management skills. The reason for the differences in the findings may be due to the differences among groups, the culture and structure differences between schools, or the administrators having different levels of innovation management skills.

With respect to learning organizations, teacher opinions of organizational learning mechanisms in high schools are at the medium level. But in a knowledge-based society, the role of the education system is to raise learning individuals, and the role of the education administration is to make the school a learning school (Calik, 2003). It is crucial for high schools to embody this characteristic through its individuals. Graduates from these schools have a small chance to continue with higher education and therefore join society and display every feature they gain from the school in the society. The tendency to learn is a feature of both developed societies and developed organizations (Avci, 2009), and the basis for being a learning society is to have learning individuals. High schools, which have strategic importance in being learning organizations, have to create a learning culture where innovations are experienced and where workers can enhance their competencies (Mohanty & Kar, 2012). The more an organizational culture is open to learning, competition, productivity, performance, etc., the higher productivity it will have (Kathrins, 2007). No matter how much the institutional culture supports learning, some drawbacks of schools prevent them from being learning organizations. Although these drawbacks are unique for each school, in the literature these drawbacks are listed as: not predicting the problems and solutions of schools beforehand, not accepting the problems or ignoring them, insufficient resources, inconsistency with technological developments, strict hierarchy, prioritizing bureaucracy, resistance to changes, inadequate reward system, level of understanding supervision and inspection, lack of communication between workers, lack of participation in the decision making process, unwillingness to undertake responsibilities, blaming others for failure, weak leadership skills of administrators, focusing on duties, refraining from delegation of authority, lack of vision, not sharing information, preventing information to develop, dwelling too much on systems and processes in order to think strategically, expecting results to come too soon, ignoring the results when they come late, connecting people with problems, ignoring unique ideas, etc. (Arat, 1997; Barutcugil, 2004; Kucukoglu, 2005; Diker, 2007; Yucel, 2007; Yigit, 2013; Turhan, Karabatak & Polat, 2014). In order to create a learning organization environment, administrators should have new ideas that will guide the organization, prepare the staff for learning processes, and be a model for the staff together with their team (Calik, 2003). One other reason why high schools are not regarded as efficient learning mechanisms is because mechanic organizational structures that bureaucracy and strict hierarchy introduce prevail in the public

schools. Bureaucracy and hierarchy can slow learning and in fact negatively affect it. Other studies of the Turkish education system support this finding (Guclu & Turkoglu, 2003; Unal, 2006; Unal, 2014).

The final important result was a high level, positive, significant relationship for teacher opinions of the innovation management skills of administrators and organizational learning mechanisms at high schools. There are many studies in the literature that support this finding (Avci, 2009; DuPlessis, 2007; Garcia, Ruiz & Llorens, 2007; Kapucu, 2012; Liao & Wu, 2010; Murat & Baki, 2011; Salim & Sulaiman, 2011; Siguaw, Simpson & Enz, 2006; Stata, 1994).

Like the other studies in the literature, this study states that there is a positive connection between organizational learning and innovation management, and one of the crucial components of organizational learning is innovation management. Therefore, a learning school is a school open to innovation and that innovates itself. Innovation encourages learning in order to carry out personal and occupational development, information sharing, and cooperation. The innovation of schools and the sustainability of their developments and success depends on their organizational innovation management skills and their effort to realize the learning organization goal (Kerman, Freundlich, Lee & Brenner, 2012). Being open to innovations depends on seeing the future, learning new techniques and methods related to work, and adapting to changing conditions. This requires schools to cooperate, develop themselves, and constantly apply innovation practices (Saritas, 2001). Schools are the center of information. At this point, all the workers of the school have a responsibility, but school administrators have major roles and responsibilities. In order to create learning organizations, school administrators should participate in creating and sharing information, they should act as leaders, and develop a school culture that will enable the school workers to adopt the school's visions and missions.

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Okul Yöneticilerinin Yenilik Yönetimi Becerileri ile Okullardaki Örgütsel Öğrenme Mekanizmalarına İlişkin Öğretmen Görüşleri

Atıf:

- Omur, Y. E. & Argon, T. (2016). Teacher opinions on the innovation management skills of school administrators and organizational learning mechanisms. *Eurasian Journal of Educational Research*, 66, 243-262
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Özet

Problem Durumu: Örgütsel öğrenme kavramı hem yönetim ve örgüt bilimi ile ilgili çalışan akademisyenler, hem de uygulayıcılar tarafından ilgiyle karşılanmakta ve birçok kaynakta farklı yazarlar tarafından yorumlanmaktadır. 1978 yılında ise Argyris ve Schön tarafından örgütlerde öğrenme ile ilgili ilk model ileri sürülmüştür. Bu model ve sonrasında birçok akademisyen ve yazar alanla ilgilenerek örgütsel öğrenmeyi farklı açılardan ele almışlardır. Bu bağlamda örgütsel öğrenme kavramı, hataların tespit edilip düzeltilmesi, geçmiş eylemler ve onların etkililiği ile gelecekteki eylemler arasında geliştirilmiş olan sezgi, bilgi ve ilişkiler ve istenen

sonuçlara ulaşmak için gerekli olan yetenekleri sürekli geliştirmek olarak tanımlanabilmektedir.

Zaman içinde bir çok yazar, örgütsel öğrenmenin nasıl gerçekleştiği konusunda çeşitli fikirler ileri sürmüşlerse de bunların büyük bir kısmı tek döngülü öğrenme ve çift döngülü öğrenme kavramları etrafında toplanmıştır. Tek döngülü öğrenme, adapte olmayı öğrenme veya alt düzey öğrenme olarak tanımlanabilmektedir. Örgütsel hataların düzeltilmesi için kullanılan bu öğrenme şekli, örgütlerin mevcut amaç ve politikaları dahilinde gerçekleşmektedir. Tek döngülü öğrenmenin genellikle kısa dönemli, yüzeysel ve geçici olduğunu belirterek geçmişteki davranışların bir tekrarı olabileceğini ve örgütün rutinleri seviyesinde kaldığı bilinmektedir. Bu bağlamda tek döngülü öğrenmenin hedefinin, mevcut sistemin optimizasyonu ve hataların ortadan kaldırılması olduğu ileri sürülebilir.

Çift döngülü öğrenme ise tek döngülü öğrenmeden farklı olarak günlük eylem ve rutinlerin altında yatan zihinsel modellerin, politikaların ve varsayımların değiştirilmesini öngörmektedir. Çift döngülü öğrenme ise hatalarla karşılaşıldığında başkalarının suçlanmasına neden olan ve temelde yatan ana programın değiştirilmesi olarak tanımlanmaktadır. Tek döngülü öğrenmenin aksine çift döngülü öğrenme sadece hataların tespit edilip düzeltilmesi ile kalmaz. Aynı zamanda hedeflerin gerçekleştirilebilmesi için hatalı eylemlere yön veren stratejilerin, değerlerin ve normların değişmesini de kapsamaktadır.

Tek döngülü öğrenme örgütün var olan yapısı dahilinde eylemlerin uyarlanması yoluyla öğrenmeyi sağlarken, çift döngülü öğrenme ise bu eylemlerin altında yatan zihinsel süreçlerin, yapıların değiştirilmesi vasıtasıyla öğrenmeyi sağlamaktadır. Bu iki düzey öğrenmeden farklı fakat ikisini de kapsayıcı nitelikte olan üç döngülü öğrenme ise örgütün öğrenmeyi öğrenmesi, örgüt yapısının öğrenmeye uygun bir hale getirilmesi anlamına gelmektedir. Kısacası üç döngülü öğrenme örgüt üyelerinin, kendilerinden önce örgütte var olan ve öğrenmeyi engelleyen veya teşvik eden yapıların farkına vararak öğrenme için yeni yapı ve stratejiler geliştirmesi olarak tanımlanabilir.

Yenilik kavramı ise var olan bir şeyde, öncekinden daha olumlu yönde değişiklikler yapmak ve ortaya yeni bir şeyler koymak olarak tanımlanabilir. Örgüt bağlamında ele alındığında ise yenilik kavramı örgütün çevreye uyum sürecinin kolaylaştırmak için çıktığı, yapı ve süreçlerde yapılan bir değişim aracı olarak tanımlanabilir. Yenilik kavramını tanımlarken göz önünde bulundurulması gereken bir nokta, yeniliğin değişimle karıştırılmaması gerektiğidir. Yenilik kavramı değişimden daha dar bir alana vurgu yapmak için kullanılır ve geleneksel bir şekilde ürünler ve süreçler üzerine odaklanmış olumlu ve özel bir değişimdir.

Örgütlerde yenilik, tek seferde gerçekleşen bir olgu olmanın aksine bir süreci kapsayan eylemler bütünü olduğu gibi, aynı zamanda belirli prensipler çerçevesinde gerçekleşmesi gereken bir süreci ifade etmektedir. Örgütlerde yenilik, tek bir hamlede gerçekleşip verim alınabilen bir olgu değil, aksine iyi bir planlama ve yönetim gerektiren bir süreç gerektirmektedir. Bir diğer deyişle yeniliğin kendi kendine gerçekleşmediği ve bir süreci kapsayarak gerçekleştiğinden hareketle,

yeniliğin de diğer örgütsel süreçler gibi yönetilmesi gerektiğini ifade etmek yanlış olmayacaktır.

Özetlemek gerekirse örgütlerde yenilik, hızlı bir şekilde değişiklik gösteren dünya ve çevre şartlarına uyum sağlama ve hatta bu çağın bir adım önüne geçebilmek için bir gerekliliktir. Çünkü sürekli gelişim gösteren bir ortamda yenilikten uzak kalan örgütlerin fonksiyonlarını sürdürebilmeleri mümkün değildir. Diğer yandan örgütlerin yenilik girişimlerini ne yönde başlatacaklarını belirleyebilmeleri açısından belirli bir seviyede bilgi toplamaları ve bu bilgiyi işleyerek örgüt açısından anlamlı bir hale getirmeleri gerekmektedir. Bu noktada da yenilik yönetimi açısından örgütlerin öğrenmesi ve bu öğrenme sürecinde kullandıkları mekanizmalar önem kazanmaktadır.

Kaynağını aldığı ve çıktısını verdiği toplumların geçirdiği değişimler, okulların işlevlerinin, yükümlüklerinin ve tanımlarının da sürekli değişmesini zorunlu kılmaktadır. Örneğin pozitivist paradigmalara göre okul, öğrenciye bilmesi gerekenleri öğreten ve gerçek bilginin tartışmasız doğru olduğunu savunan kurumlar olarak tanımlanabilecekken yeni değerler ışığında okuldan beklenen, bilgiyi değil öğrenmeyi öğretmek öğrencinin kendi bilgisine ulaşmasını sağlamaktır. Okula ilişkin olan bu algının değişmesinin altında yatan sebeplerden biri de toplumun artık endüstri toplumu olmaktan çıkıp bilgi toplumu haline gelmesidir. Okulun da toplumun bu değişen yapısına cevap verebilmesi için değişiklik göstermesi, sanayi toplumu bireylerinden ziyade bilgi toplumu bireyleri yetiştirebilecek şekilde bir değişim ve yenileşme göstermesi gerekmektedir. Bu bağlamda ise okulların örgütsel öğrenmeyi gerçekleştirebilen kurumlar olabilmeleri, yenilik girişimlerinde bulunabilen ve bu girişimleri etkili bir şekilde yönetebilen örgütler haline gelmeleri önem kazanmaktadır.

Araştırmanın Amacı: Bu doğrultuda yapılan bu çalışma ile eğitim örgütlerinin kullandıkları örgütsel öğrenme mekanizmalarının neler olduğu, yöneticilerin yenilik yönetimi becerilerinin ne düzeyde olduğu ve örgütsel öğrenme mekanizmaları ile yenilik yönetimi becerileri arasındaki ilişkinin ne düzeyde olduğu belirlenerek literatüre katkıda bulunulmak amaçlanmıştır.

Araştırmanın Yöntemi: Bu araştırma, ilişkisel tarama modelindedir. Bu doğrultuda yapılan bu çalışma ile Bolu ili merkez ilçede bulunan liselerdeki örgütsel öğrenme mekanizmaları, yenilik yönetimi becerileri ve aralarındaki ilişki var olan şekliyle belirlenmeye çalışılmıştır. Araştırmanın evrenini ise 2013-2014 eğitim öğretim yılında Bolu ili Merkez ilçedeki liselerde görev yapan öğretmenleri kapsamaktadır. Araştırmada öğretmenlerin tamamına ulaşamayacağı için örneklem alma yoluna gidilmiş ve basit rastgele örneklem alma yöntemi kullanılmıştır. Bu doğrultuda çalışma Bolu Merkez ilçedeki liselerde görev yapan 272 öğretmen ile yürütülmüştür. Araştırma verilerinin toplanmasında Okullarda Örgütsel Öğrenme Mekanizmaları Ölçeği ve Okullarda Yenilik Yönetimi Ölçeği kullanılmıştır. Araştırma verilerinin çözümlenmesinde yüzde frekans analizleriyle, parametrik olmayan tekniklerden Spearman Rho Korelasyon Analizi kullanılmıştır.

Araştırma Bulguları: Araştırma sonucunda lise öğretmenlerinin hem okullarındaki örgütsel öğrenme mekanizmalarına ilişkin hem de yöneticilerin yenilik yönetimi becerilerine ilişkin görüşlerinin toplamda ve alt boyutlarda orta düzeyde olduğu ve öğretmenlerin örgütsel öğrenme mekanizmalarına ile yöneticilerin yenilik yönetimi becerilerine ilişkin görüşleri arasındaki yüksek düzeyde, pozitif yönlü ve anlamlı ilişki olduğu sonuçlarına ulaşılmıştır.

Sonuç ve Öneriler: Araştırma sonuçları doğrultusunda; liselerdeki öğrenme mekanizmalarının yüksek düzeyde işletilmesi için üç döngülü öğrenmeyi gerçekleştirecek şekilde çalışmasının sağlanması, liselerin bilgiyi daha etkili arayan, oluşturan, yorumlayıp anlamlandıran ve gerektiğinde kullanmak üzere hafızasında saklayabilen kurumlar haline getirilmesi sağlanarak yenilikçilik potansiyelinin artırılması, yöneticilerin okullarıyla ilgili inisiyatif alabilmelerini sağlayacak esnek bir hareket alanı oluşturularak yenilik konusunda risk alabilir bir duruma getirilmeleri, liselerin örgütsel öğrenme mekanizmaları ve yenilik yönetimine yönelik ihtiyaç ve beklentileri belirlenirken okul tür ve farklılıkları göz önünde bulundurulması önerileri geliştirilmiştir.

Anahtar Kelimeler: Yenilik yönetimi, örgütsel öğrenme mekanizmaları, okul yönetimi, öğretmen.

The Relationship between Teachers' Job Satisfaction and Loneliness at the Workplace

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Abstract

Problem Statement: Emotional circumstances of the teachers are one of the most significant variables that determine their professional efforts and performance. In this context, some the research has shown that teachers' job satisfaction and loneliness at the school both have unique aspects. Gradually raising interest on loneliness and job satisfaction of teachers has brought a new question on whether there is a significant relationship between teachers' job satisfaction and loneliness at school.

Purpose of the Study: The purpose of this study was to determine the relationship between the job satisfaction of the teachers working in the primary schools and their loneliness at work.

Method: This quantitative study was designed as correlational research design. The participants of the study consist of 369 teachers teaching in elementary schools in Istanbul. The correlations between the dimensions of loneliness at work and job satisfaction was determined with simple linear correlation test. And the prediction level of emotional deprivation and social companionship to intrinsic job satisfaction and extrinsic job satisfaction were determined with multiple linear regression test.

Findings: The results of the study have indicated that there was significant and negative correlation between dimensions of loneliness at work and job satisfaction of teachers. The results of regression analysis indicated that emotional deprivation and social companionship together had a significant relationship with the intrinsic satisfaction. And the social companionship was the significant predictor of intrinsic satisfaction. Besides, it is found that emotional deprivation and social companionship together had a significant relationship with the extrinsic satisfaction and

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only the social companionship was the significant predictor of extrinsic satisfaction.

Conclusion and Recommendations: As a result, in order that the schools may reach the determined objectives, the teachers' performances can be said to be very important. In order to increase the teachers' performances, it is necessary to increase the job satisfaction. In the researches carried out, it was determined that there was a relationship between the teachers' job satisfaction and the extent of social friendship at the workplace. In case such relationships are adverse, the loneliness at workplace reveals. Therefore, in order to enable to increase the productivity of the organization due to the increase of the teachers' performances, it is necessary to prevent teachers from falling into loneliness in schools by supporting the extent of social friendship which is an extent of the job satisfaction.

Keywords: Intrinsic job satisfaction, extrinsic job satisfaction, loneliness, primary school teachers

Introduction

Business life has a substantial place in human life. People work in most of their life span. If their job is on the right track, people are motivated and satisfied with their job (Arches, 1991; Butler, 1990). A high level of job satisfaction provides benefits for employees in terms of performance increase and productivity. In addition, scholars argued that job satisfaction provides benefits for organizations in terms of productivity growth and low employee turnover rates (Brief, 1998; Chen, 2008).

The concept of job satisfaction is defined from different points of view. Job satisfaction is a person's pleasure in his/her work life (Locke, 1976); employees' satisfaction in the workplace (Davis, 1984); a likable and emotional situation showing up as a result of the assessment of employees' job and experience (Testa, 1999); the happiness resulting from collaborative work performed with colleagues, pleasure to work, and pecuniary advantage (Simsek, 1998); the difference between the level of employees' meeting the requirements and the significance level given to the requirements (Cetinkanat, 2000); and/or the level of pleasure or positive feeling in the workplace (Basaran, 2000). Based on these definitions, it can be said that job satisfaction is employees' pleasure provided by moral and material profit.

The research on job satisfaction started in the 1930s and reached its highest level in the 1960s (Sisman & Turan, 2004). In terms of organizations and employees, the importance of job satisfaction showed up when the researcher willing to enhance productivity of the organization emphasized human factors and personal needs instead of the structure and process of organization. When employees are satisfied in their needs, their motivation will be increased. This situation will affect the employees' job satisfaction positively (Bluedorn, 1982).

Several theoretical and practical studies have been conducted to explain job satisfaction (Koroglu, 2012). Primary research dealing with job satisfaction is Maslow's Theory of Hierarchy of Needs, Herzberg's Double Factor Theory, McClelland's Need for Achievement Theory, and Alderfer's ERG Theory (Brief, 1998). Herzberg pointed out that employees' job satisfaction influenced external and internal factors. Internal factors deal with personal need and prestige. External factors include the factors dealing with business environments, like management, colleagues, promotion, and development (Aliyev, 2004). According to Herzberg, internal factors increase job satisfaction, whereas external factors affect the job satisfaction negatively (Papin, 2005).

Studies on job satisfaction (Akyuz, 2002; Altas, 1992; Balci, 1985; Baron, 1986; Celik, 1987; Cetinkanat, 2000; Ergene, 1994; Hunisch & Hulin, 1991; Koustelios, 2001; Mathieu, 1991; Ostroff, 1992; Scott & Taylor, 1985; Sisman & Turan 2004; Staw, 1984; Spector, 1997; Zigareli, 1996) showed that job satisfaction was correlated with turnover intention, absenteeism, organizational citizenship, exhaustion, physical and psychological well-being, the joy of life, productivity, leadership, personality, relationship between employees, time of retirement, and mobbing. A few studies analyzed the relationship between job satisfaction and loneliness at work. Reichman's research entitled "Loneliness" (1959) was the first study on the subject. It was accepted as a psychoanalytic research. Before the 1970s, research about loneliness investigated loneliness in conjunction with abnormal cognitive processes, narcissism, psychopathology, and alcoholism. According to Peplau and Perlman (1982), loneliness means the difference among those relation levels that are expected and those that are obtained from social relationship.

Studies on loneliness have shown that married people feel less alone than single ones (Berg, 1981; Caar & Schellenbach, 1993; Creecy, 1985; Lynch, 1977; Sears, 1991; Weiss, 1973). Although loneliness is generally felt more by women, bachelors in search of more qualified social relationships are more fragile than women (Acorn, 1992; Rogers, 1961; Weiss, 1973); loneliness is felt most in the older and early ages (Berg, 1981; Dugan & Kivett, 1994; Rogers, 1961; Sears, 1991); loneliness decreases with education level, and people with higher status jobs feel less loneliness (Ozkorukcugil, 1998); loneliness is felt in managerial status (Tabanali & Korumaz, 2014).

Loneliness at work is closely associated with the concept of loneliness, but in certain points these concepts dissociate. Loneliness at work states isolation and solitude stemming from social environment (Yilmaz & Aslan, 2013). A person's loneliness at work affects his/her psychological well-being and job performance negatively (Gumbert & Boyd, 1984).

Most studies on loneliness at work (Dogan, Cetin & Sungur, 2009; Izgar, 2009; Mercan et al., 2012; Sisman & Turan, 2004; Tabanali & Korumaz, 2014; Yilmaz & Aslan, 2013; Yuksel, Ozcan & Kahraman, 2013; Wright, Burt & Strongman, 2006) analyze loneliness under two major topics: social loneliness and emotional loneliness. Social loneliness is that a person has a very poor relation with the other organization

members or does not have any relation with them. Emotional loneliness involves the quality of the employee's relationship with his/her colleagues. This sub-dimension is defined as the emotional quality of relationships at the workplace (Dogan, Cetin & Sungur, 2009). Emotional loneliness emerging at the workplace occurs when the employee avoids conveying his/her opinions to other employees and thinks other employees cannot understand his/her opinions (Mercan et al., 2012).

Loneliness at work causes a disorder in the balance between personal and organizational targets, declines job satisfaction and productivity of employees, and promotes fear of failure, feelings of incompetence, contestable attitudes, work overload, fearful organizational climate, and perceived work stress. (Wright, 2005). In this context, the purpose of this study was to determine the relationship between the job satisfaction of teachers working in primary schools and their loneliness at work. In order to reach this purpose, the research questions of the study were determined as follows:

1. Do emotional deprivation and social friendship, which are the sub-dimensions of loneliness at the workplace, significantly predict internal job satisfaction?
2. Do emotional deprivation and social friendship, which are sub-dimensions of loneliness at the workplace, significantly predict external job satisfaction?

Method

Research Design

In the current quantitative study, a correlational design was preferred to measure two or more factors to determine the extent to which the values for the factors were related or change in an identifiable pattern (McMillan & Schumacher, 2006). The predictor variable of this study was loneliness of teachers at the school, and the dependent variable of the study was their job satisfaction.

Research Sample

The participants of the study were teachers from schools located in the province of Istanbul, and they were selected according to convenience sampling, which was suggested for a less time-consuming and easier application for the researcher. The participants were 369 elementary school teachers working in Istanbul. The researcher considered gender, marital status, age, career phases, and level of education while recruiting participants of the study.

Research Instrument and Procedure

Participants were asked for to fill out the "Loneliness at Work Scale" originally developed by Wright, Burt and Strongman (2006) and adopted into the Turkish language by Dogan, Cetin and Sungur (2009). There were 16 items in the questioner. Five of the items (5, 6, 10, 11, 12, 14, 15, 16) were reverse entry. The scale had two dimensions: emotional deprivation and social companionship. Cronbach's alpha for

scores on the subscales ranged from .81 to .87, indicating adequate reliability. The total scale's Cronbach alpha was found to be .88 for the data in this study.

Another data collection instrument of the study was the "Minnesota Job Satisfaction Scale" short form originally developed by Weiss et al. (1967). The MSQ consists of 20 items and uses a 5-point Likert-type response format. The MSQ comprises two distinct components: intrinsic job satisfaction measures feelings about the nature of the job tasks. On the other hand, extrinsic job satisfaction measures feelings about situational job aspects external to the job. Scores possibly ranged from 16 to 80. Cronbach's alpha for scores on the subscales ranged from .84 to .96, indicating a high level of reliability. The total scale's Cronbach alpha was found to be .98 for the data of this study.

Data Analysis

In the first step, means, standard deviations, and minimum and maximum scores were determined to describe the data. Then the Kolmogorov-Smirnov test was used to find out the normality of the distribution of the data. The distribution was found to be normal at the .05 significance level. Therefore, the researcher preferred to use parametric analysis to answer the research questions. The correlations between the dimensions of loneliness at work (emotional deprivation and social companionship) and job satisfaction (intrinsic job satisfaction and extrinsic job satisfaction) were determined with a simple linear correlation test. The prediction level of emotional deprivation and social companionship to intrinsic job satisfaction and extrinsic job satisfaction were determined with a multiple linear regression test. The level of significance was calculated as $p < .05$ for all of the analysis.

Results

Means, standard deviations, and minimum and maximum scores were determined to describe the data. The results are presented in Table 1.

Table 1.
Descriptive Analysis Results

	Dimensions	N	Min.	Max	\bar{X}	Std.
Loneliness at work	Emotional deprivation	369	9	33	16,96	5,800
	Social companionship	369	7	29	12,99	4,824
	Total	369	16	55	29,95	9,495
Job satisfaction	Intrinsic satisfaction	369	17	85	58,57	10,352
	Extrinsic satisfaction	369	8	40	24,67	5,589
	Total	369	20	100	68,65	12,143

All of the participants filled out all of the items in dimensions of loneliness at work and job satisfaction. The minimum score of the emotional deprivation dimension was 9, and the maximum score was 33. The mean score of this dimension was 16,96, and the standard deviation was 5,80. Another dimension of loneliness is social companionship. The minimum score of this dimension was 7, and the maximum score was 29. The mean of the social companionship dimension was 12,99, and the standard deviation was 4,82. The results indicated that the minimum score of the total scale was 16, and the maximum score was 55. The mean of the total scale was 29,95, and the standard deviation was 9,49.

Job satisfaction results showed that the minimum score of the intrinsic satisfaction dimension was 17, and the maximum score was 85. The mean score of this dimension was 58,57, and the standard deviation was 10,35. Another dimension of job satisfaction was extrinsic satisfaction. The minimum score of this dimension was 8, and the maximum score was 40. The mean of extrinsic satisfaction dimension was 24,67, and the standard deviation was 5,58. The results indicated that the minimum score of the total scale was 20, and the maximum score was 100. The mean of the total scale was 68,65, and the standard deviation was 12,14.

2. Correlation between Dimensions of Loneliness at Work and Job Satisfaction of Teachers

The prediction level of the dimensions of loneliness at work to dimensions of teachers' job satisfaction was tested with multiple linear regression analysis. Before running multiple linear regression analysis, the researcher determined correlations between the dimensions of loneliness at work and job satisfaction.

Table 2.

Correlation between the Dimensions of Job Satisfaction and Loneliness at Work

Variables	\bar{X}	Sd	1	2	3	4
Loneliness at work scale						
1- Emotional deprivation	16,96	5,800	1,00			
2- Social companionship	12,99	4,824	,594	1,00		
Minnesota Job Satisfaction Scale						
3- Intrinsic satisfaction	58,57	10,352	-,162	-,261	1,00	
4- Extrinsic satisfaction	24,67	5,589	-,199	-,219	,816	1,00
p<0,000						

The Pearson's correlation analysis indicated that there was significant correlation between the dimensions of loneliness at work and job satisfaction of teachers. This negative correlation was significant in the level of $p<0.000$. In this study, the multicollinearity of independent variables was found at the moderate level. All of these results let researcher run a regression analysis to find out the prediction level of loneliness at work to job satisfaction level of teachers.

3. Prediction Level of Dimensions of Loneliness at Work to Intrinsic Job Satisfaction

After fulfilling the correlation assumption for running regression analysis, the researcher ran the multiple linear regression analysis to determine the prediction

level of the dimensions of loneliness at work to the dimensions of teachers' intrinsic job satisfaction.

Table 3.

The Regression of Dimensions of Loneliness at Work to Intrinsic Job Satisfaction

Variables	B	ShB	β	t	p	Zero-order r	Partial r
Constant	65,984	1,729	-	38,161	,000	-	-
Emotional deprivation	-,019	,112	-,010	-,166	,868	-,162	-,009
Social companionship	-,547	,135	-,255	-4,064	,000	-,261	-,208
R=	,261	R ² =	,068				
F ₍₂₋₃₆₆₎ =	13,400	p=	0,000				

The results of the regression analysis indicated that emotional deprivation and social companionship together had a significant relationship with intrinsic satisfaction ($R=.261$, $R^2=0.68$), ($F_{(2-366)}=13,400$, $p<0.01$). According to standardized regression coefficients, the order of significance of predictors was social companionship ($\beta=-.255$) and emotional deprivation ($\beta=-.010$). The result of the regression analysis was that social companionship was the only significant predictor ($p<0.01$) of intrinsic satisfaction. According to the regression analysis results, the regression equation of intrinsic satisfaction was: Intrinsic Job Satisfaction= ($-.547 \times$ Social Companionship Scale Score).

4. Prediction Level of Dimensions of Loneliness at Work to Extrinsic Job Satisfaction

The researcher ran multiple linear regression analysis to determine the prediction level of the dimensions of loneliness at work to the dimensions of teachers' extrinsic job satisfaction.

Table 4.

The Regression of Dimensions of Loneliness at Work to Extrinsic Job Satisfaction

Variables	B	ShB	β	t	p	Zero-order r	Partial r
Constant	28,758	,940	-	30,599	,000	-	-
Emotional deprivation	-,102	,061	-,106	-1,685	,093	-,199	-,088
Social companionship	-,181	,073	-,156	-2,474	,014	-,219	-,128
R=	,235	R ² =	,055				
F ₍₂₋₃₆₆₎ =	10,743	p=	0,000				

The results of the regression analysis indicated that emotional deprivation and social companionship together had a significant relationship with extrinsic satisfaction ($R=.35$, $R^2=0.55$), ($F_{(2-366)} = 10,743$, $p<0.01$). According to standardized regression coefficients, the order of significance of predictors was social

companionship ($\beta=-.156$) and emotional deprivation ($\beta=-.106$). The results of the regression analysis were that social companionship was the only significant predictor ($p<0.01$) of extrinsic satisfaction. According to the regression analysis results, the regression equation of extrinsic satisfaction was: Extrinsic Job Satisfaction= ($-.181 \times$ Social Companionship Scale Score).

Discussion and Conclusion

In this study intending to determine the relationship between the job satisfaction of teachers and their loneliness at workplace, it was determined that there was a meaningful and inverse relationship between the extents of loneliness at the workplace and job satisfaction. One of the most important resources of organizations is their employees, and the performance of the employees is the main factor influencing the success of organizations. Whether employees can perform highly and work efficiently depends on their satisfaction with their jobs. Within this frame, the issues of how satisfied employees are and how employees are made satisfied are brought into the agenda (Erdil, Keskin, Imamoglu & Erat, 2004). Therefore, research on employees' job satisfaction has been carried out since the 1930s.

Job satisfaction is a term dominated by emotions because it cannot be seen and it is just felt (Luthans, 1995). Job satisfaction means the pleasure, happiness, and satisfaction experienced by an employee in his working life (Kesen, 2005). When it comes to job satisfaction, the pecuniary advantage obtained from a job, the colleagues with whom the employee likes working, and happiness coming from completing tasks comes to mind (Eren, 2012). Job satisfaction is closely associated with factors such as working conditions, promotion and improvement opportunities, and working environment (Balci, 1983).

Enhancing the administration style and the working conditions, maintaining a circle of friends, and the feeling of appreciation provide positive contributions to the job satisfaction of employees (Erdil et al., 2004). Furthermore, the relationship of employees to other employees at the workplace has a unique importance in terms of job satisfaction. The fact that the relationship with other employees is not good confronts us as a form of loneliness at the workplace.

Loneliness in working life, unlike general loneliness, may be active only in the work environment. An individual who has satisfying and healthy relationships in his daily life and does not experience the feeling of loneliness has difficulty establishing social relationships and receiving social support. This situation may cause the individual to experience the feeling of loneliness and decline in his work life (Dogan, Cetin & Sungur, 2009). Lam and Lau (2012) stated that experiencing loneliness will cause lower quality leader-member and organization-member exchanges at work and that teachers will be worse at in-roles and extra-roles in their workplaces.

Loneliness in work life is approached through social friendship and emotional deprivation. Loneliness at the workplace is more visible than personal loneliness (Reinking & Bell 1991). Emotional deprivation describes the quality of the employee's

relationship with his colleagues at the workplace and may be defined as the perception of the emotional quality of relationships at the workplace. Social friendship is about the amount of relationships at the workplace and may be defined as the perception of the number of relationships at the workplace (Dogan, Cetin & Sungur, 2009). The extent of social friendship, the failure to join the social network of the workplace, and considering himself a part of the social network at the workplace are in question for the employee. It can be said that employees who do not communicate easily with other employees at the workplace, do not attend social activities such as picnics, parties, and dinners, and do not show interest in various events, such as weddings, births, and funerals experience loneliness at the level of social friendship. In addition, people experiencing loneliness at the level of social friendship at the workplace have difficulty sharing their daily problems and personal ideas about work, finding someone with whom they can spend time during the breaks, and do not feel like a part of a social circle at the workplace (Mercan, Oyur, Alamur, Gul & Bengul, 2012). At the level of social friendship, the facts that employees join in the social relationships at the workplace and considers themselves as a part of a social circle at the workplace are in question. The employees who do not communicate with the other employees at the workplace easily and do not show interest in the activities can be said to experience loneliness at the level of social friendship (Dussault & Thibodeau, 1997). It can be said that lack of communication plays an important role on the sub-dimension of social friendship (Mercan et al., 2012). The human being who is a social being needs to establish satisfying, meaningful, and healthy relationships with other people. The human being's need for communication is so strong that in addition to emotional stress and problems, he can have physical problems unless he can establish the above-mentioned healthy and satisfying relationships (Dogan, Cetin & Sungur, 2009).

One of the main effects of loneliness experienced at the workplace on employees is job dissatisfaction and deeper feelings of loneliness among colleagues (Mercer, 1996). The fact that lonely individuals have problems with self-confidence, consider as insufficient, and lose their belief in being successful will cause dissatisfaction with work. Gumbert and Boyd (1984) state that the decrease in an individual's dissatisfaction with work will cause a significant loss in efficiency (Yilmaz, 2011).

It is an inevitable fact that the effects of loneliness affect not only the private lives of individuals, but also their working life. Providing peace at the workplace and creating a safe working environment is important for the individual. Unless loneliness can be prevented, it will cause many adverse impacts on the employees. Failure to prevent loneliness will affect the individual's efficiency, decrease his peace at the workplace, and may prevent him from feeling secure (Kaplan, 2011).

The most obvious results of loneliness at the workplace are expected to be the decrease of productivity and the job satisfaction. The fact that employees who fail to perform sufficiently at the workplace due to loneliness have feelings of failure and consider themselves insufficient causes a further decrease in job satisfaction. It was determined that loneliness at the workplace was meaningfully associated with mental features such as competitor attitude, support of the colleagues, support

outside the job, support of the manager, workload, climate of fear, spirit of community, job satisfaction, perceived work stress, organizational commitment, and life satisfaction (Wright, 2005).

The main effect of loneliness experienced at the workplace on employees is job satisfaction. The fact that individuals feeling lonely have a problem with self-confidence, consider themselves insufficient, and lose the belief in their success will cause their dissatisfaction with work. Hawkley, Thisted, Masi and Cacioppo (2010) expressed that loneliness affected every age group at the workplace. Another adverse effect of loneliness in the working life is to cause stress. Individuals experiencing loneliness at their workplaces have been expected to have higher levels of stress. In such a situation, the productivity of the employee under stress will decrease significantly. Also, he will begin to show an unconfident, aggressive, introverted profile and have a low sense of self. This structure will both the employee to worsen his relationships with his colleagues and deepen his loneliness as a result (Keser & Karaduman, 2014). Killeen (1998) also stated that loneliness at work is an epidemic in modern society.

The job satisfaction of the employee who finds friends and supportive colleagues at the organization he works increases (Erdogan, 1996: 242). In inter-organizational relationships, each relationship is based on interdependence and mutual help. Whether such relationships are better or worse influences the job satisfaction of the employees (Basaran, 2000). The highest factor in the job satisfaction of bank staff is colleagues (Altinisik, 1997). This situation maintains its validity in terms of educational organizations and their employees.

Satisfaction decrease causes teachers to weaken mentally and have stress (Basaran, 1982). Loneliness at the workplace for teachers costs organizational loss (Bakioglu & Korumaz, 2014). Bilgen (1989) found that with the increase of teachers' loneliness, their level of social, personal, and general adaptation decreased (Bilgen, 1989). Colleagues and working conditions in organizations are considered among the determinants in teachers' job satisfaction (Marvin, 2006). The fact that teachers establish good relationships with their colleagues contributes to the development of a positive school environment by decreasing the fatigue of teachers and increases job satisfaction (Hughes, 2006). In previous research carried out in public schools, it was revealed that teachers trusted their colleagues most (Polat & Celep, 2008). It was also determined that there were meaningful relationships between the job satisfaction of applicants to the department manager of Ministry of Education and their level of social loneliness (Sisman & Turan, 2004).

The quality of the relationship with colleagues, being approved or recognized by inspectors and the school principal, effective leadership, and obtaining opportunities to develop professional abilities and skills all play an important role in the job satisfaction of the teachers (Cockborn, 2000; Hargreaves, 1994; Kushman, 1992; Meek, 1998; Klecher and Loadman, 1999; McLaughlin et al., 1986, as cited in: Isiklar Purcek, 2014).

Erdil and Ertosun (2011) stated that a supportive organization environment decreased the feeling of loneliness and made a positive impact so that the employees could feel good (happy) and that social environment and loneliness were predictors of whether employees could feel good (happy) (Erogluer & Yilmaz, 2015).

As a result, in order for schools to reach the determined objectives, the teachers' performances can be said to be very important. In order to improve teacher performance, it is necessary to increase their job satisfaction. In this study, it was determined that there was a relationship between teachers' job satisfaction and the extent of their social friendships at the workplace. In cases where such relationships are adverse, loneliness at the workplace increases. Therefore, in order to increase the productivity of the organization through teacher performance, it is necessary to prevent teachers from falling into loneliness at work by supporting social friendship, which impacts job satisfaction.

The results of this study allow the researcher to make some suggestions for further research and policy. The suggestions are presented as follows:

1. The relationship between loneliness at work and job satisfaction should be analyzed through qualitative research. This kind of research can be used to better comprehend the details of this relationship.
2. School principals should support social companionship groups organizing both in-school and out-of-school activities. The existence of these kinds of groups would raise both the external and internal job satisfaction of teachers.
3. Policymakers should try to find ways to decrease the loneliness of teachers at schools because this would indirectly affect teachers' job satisfaction. Teaching at school is a social role and has emotional aspects. Hence, policymakers should be aware of these aspects when deciding on teachers.

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İlkokul Öğretmenlerinin İş Doyumları ile İşyerindeki Yalnızlıkları Arasındaki İlişki

Atıf:

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Özet

Problem Durumu: İnsanlar yaşamlarının büyük bir kısmını iş yerlerinde geçirirler. İş yerleri insanlar için bu nedenle büyük önem taşımaktadır. İş yerleri sadece para kazanmak amacıyla gidilen yerler değildir. İş yerlerinde sosyal ihtiyaçlarını da giderirler. Bu nedenle insanların iş yerinde mutlu olması önem taşır. İş yerinde mutlu olmak, iş doyumunu olarak da adlandırılabilir. İnsanlar yaptıkları işten doyum sağlarsa motivasyonları yükselmektedir. İş yerinde çalışanların motivasyon yüksekliği ise verimlilikte artışa yansımaktadır. Ayrıca iş yerinde olumsuzluklar olarak gösterilebilecek iş gücü devri, iş yavaşlatma, iş niteliğinde meydana gelen niteliksiz sonuçlar gibi istenmeyen durumların azalmasına veya ortadan kalkmasına neden olmaktadır. İş doyumunu, bireyin iş hayatından aldığı haz, duygusal istenen durum, iş yerinde beklentilerinin karşılanması, olumlu duygulara yönelme olarak tanımlanabilir. İnsanların iş yerinde verimlilikleri ve iş doyumları ile ilgili diğer bir kavram ise iş yerinde yalnızlık kavramıdır. İş yerinde yalnızlık, yalnızlık kavramından farklı olarak çalışanın iş yerinde bulunduğu sosyal çevrede yalnız kalma durumudur. Bireyin iş yerindeki yalnızlığı performanslarını olumsuz etkilediği gibi ruhsal durumları ile de olumsuz sonuçlar doğurmaktadır. İş yerinde yalnızlık kavramı genellikle, sosyal yalnızlık ve duygusal yalnızlık olma üzere iki alt boyutta ele alınmaktadır. Sonuçta, iş yerinde bireylerin verimliliklerinin artırılması, onların iş doyumları ve iş yerindeki yalnızlıklarının giderilmesi ile gerçekleştirilebilir.

Bu nedenle, yöneticilerin örgütün amaçlarını gerçekleştirmek için iş yerinde yalnızlık ve iş doyumunu kavramlarını dikkate alma gerekliliği ortaya çıkmaktadır.

Araştırmanın Amacı: Bu araştırmanın amacı, ilköğretim okullarında görev yapan öğretmenlerin iş doyumları ile yalnızlıkları arasındaki ilişkiyi incelemektir. Bu amaca ulaşmak için, iş doyumunun iki alt alanı olan içsel motivasyon ve dışsal motivasyon ile iş yerinde yalnızlığın iki alt alanı olan duygusal yoksunluk ve sosyal ilişkiler ayrı ayrı incelenmiştir.

Araştırmanın Yöntemi: Araştırma, ilişkisel tarama modelinde düzenlenmiş nicel bir araştırmadır. Araştırmaya İstanbul ilinde 2014-2015 eğitim-öğretim yılında görev yapan ilkökul öğretmenlerinden 369 kişi katılmıştır. Katılımcılar kolay örnekleme yoluyla seçilmiştir. Katılımcılara "İş Yerinde Yalnızlık Ölçeği" ve "Minnesota İş Doyum Ölçeği" uygulanmıştır. Minnesota İş Doyumu Ölçeği, 20 maddeden oluşan ve beşli likert tipi bir ölçektir. Ölçekte içsel ve dışsal iş doyumunu ölçen iki alt boyut bulunmaktadır. Toplam Cronbach Alpha değeri .98 bulunmuştur. İş yerinde Yalnızlık Ölçeği 16 maddeden oluşmaktadır ve beşli likert tipi bir ölçektir. Ölçekte duygusal yoksunluk ve sosyal ilişkiler olmak üzere iki alt boyut bulunmaktadır. Toplam Cronbach Alpha değeri .88 bulunmuştur. Verilerin analizinde iş yerinde yalnızlık ölçeğinin alt boyutları ve iş doyumunu ölçeğinin alt boyutları arasında korelasyon analizi yapılmıştır. Ayrıca iş yerinde yalnızlık ölçeğinin duygusal yoksunluk ve sosyal ilişkiler boyutlarının, iş doyumunu ölçeğinin alt boyutlarını oluşturan içsel doyum ve dışsal doyum boyutlarını açıklama düzeyini araştırmak için çoklu doğrusal regresyon analizleri yapılmıştır.

Araştırmanın Bulguları: Yapılan analizlere göre öğretmenlerin iş doyumları ve iş yerindeki yalnızlıkları arasında negatif yönlü bir ilişki bulunmuştur. Söz konusu değişkenler arasındaki ilişki istatistiki olarak anlamlıdır. Bu anlamlı ilişki değişkenler arasındaki yordama düzeyini belirlenmesini sağlayan regresyon analizini yapılabilir kılmaktadır. Yapılan regresyon analizinin sonuçlarına göre duygusal yoksunluk ve sosyal ilişkiler boyutları içsel doyum ile anlamlı bir ilişkiye sahiptir ($R=.261$, $R^2=0.68$), ($F(2-366)=13,400$, $p<0.01$). Ancak, yalnızca sosyal ilişkiler boyutu içsel doyumun anlamlı bir açıklayıcısıdır ($p<0.01$). Yine yapılan regresyon analizine göre dışsal doyum boyutu ile duygusal yoksunluk ve sosyal ilişkiler boyutu arasında anlamlı bir ilişki saptanmıştır ($R=.35$, $R^2=0.55$), ($F(2-366)=10,743$, $p<0.01$). Ancak, regresyon analizi sonuçlarına göre yalnızca sosyal ilişkiler boyutu dışsal doyumun anlamlı bir açıklayıcısıdır ($p<0.01$).

Araştırmanın Sonuçları ve Önerileri: Analiz sonucunda elde edilen bulgulara göre, iş yerinde yalnızlığın alt boyutları ile iş doyumunu arasında negatif yönlü anlamlı bir ilişki vardır. Eğer yalnızlık artar ise, iş doyumunu azalacaktır. Aynı şekilde, yalnızlığın alt boyutlarından olan sosyal ilişkiler boyutu içsel ve dışsal doyumun anlamlı bir açıklayıcısıdır. Sosyal ilişkilerin bulunmadığı ya da düşük olduğu örgütlerde içsel doyum da dışsal doyum da azalacaktır. Diğer çalışanlarla kolay iletişim kuramayan; piknik, akşam yemeği gibi sosyal aktivitelere ilgi göstermeyen iş görenlerin sosyal ilişkiler anlamında yalnız oldukları söylenebilir. İş yerinde yaşanan yalnızlığın en önemli sonuçları da iş doyumundaki düşüştür. Yalnızlık hisseden bireylerin özgüven

konusunda problem yaşaması, kendilerini yetersiz görmeleri ve başarıya olan inançlarını kaybetmeleri iş doyumunda da düşüşe neden olacaktır. Bireylerin iş doyumundaki düşüş, önemli derecede verim kaybına yol açacaktır. İş yerindeki yalnız bireyin özel hayatını da etkiler. Özel hayat ise iş yerinde ki iş doyumunun önemli belirleyicilerindendir. Öğretmenlerin iş doyumundaki düşüş öğretmenlerin strese girmelerine neden olmakta ve meslektaşları ile bağlarını zayıflatmaktadır. Oysa meslektaşlarla iyi ilişkiler, iş yerinde yalnızlığı azaltan ya da ortadan kaldıran önemli değişkenlerdendir. Sonuç olarak, okulların amaçlara ulaşabilmesi için öğretmenlerin performansları önemli rol oynamaktadır. Öğretmenlerin performanslarını yükseltmek için iş doyumunu artırmak gereklidir. Yapılan araştırmada öğretmenlerin iş doyumları ile iş yerinde sosyal ilişkiler boyutu arasında ilişki olduğu saptanmıştır. Aksi durumda iş yerinde yalnızlık hissi ortaya çıkacaktır. Bu yüzden öğretmenlerin performanslarını yükselterek kurumun verimini artırabilmek için sosyal ilişkiler desteklenerek öğretmenlerin yalnızlık hissine kapılmaları önlenmelidir.

Anahtar Sözcükler: İçsel iş doyumunu, dışsal iş doyumunu, yalnızlık, ilköğretmenleri.

Effects of Cognitive-Behavioral-Theory-Based Skill-Training on University Students' Future Anxiety and Trait Anxiety*

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Abstract

Problem Statement: Future Anxiety (FA) and Trait Anxiety (TA) have negative effects on individuals' productivity, which can lead them to feelings of insecurity and eventually depression. Knowing more about future anxiety helps people feel more secure and produce more effectively for themselves, and eventually for society. This research examined the efficacy of a cognitive-behavioral theory (CBT)-based training program on FA and TA.

Purpose of the Study: This study aimed to examine the effectiveness of a CBT-based training program on the FA and TA of university students.

Method: A quasi-mixed methods design was used for this study. The sample consisted of 28 university students (14 experimental, 14 control) in a public university in the Aegean Region of Turkey during the 2015-2016 academic year. Brief Symptom Inventory and Beck Depression Inventory were used to select participants for group processes. The Personal Information Form, Trait Anxiety Inventory, Positive Future Expectations Inventory, and Anxiety of Making Mistakes Scale were used as quantitative data collection instruments. Qualitative data were obtained using the General Evaluation of Group Processes form. Eight sessions were designed and applied to the experimental group. No procedures were applied to the control group. Quantitative data were analyzed using two-way repeated measures ANOVA, paired samples t-test and Mann Whitney U. A thematic analysis was also applied to the qualitative data.

* This present study was presented as an oral presentation at the 3rd International Eurasian Educational Research Congress held between the 1st and the 3rd of June, 2016, in Muğla, Turkey.

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Findings and Results: Results revealed that a CBT-based Overcoming FA and TA Skill-Training program decreased university students' trait anxiety levels and anxiety about making mistakes, while increasing positive future expectations.

Conclusions and Recommendations: The present study found that a skill-training program based on CBT affected individuals' future perceptions in an expected way. Similar research should be conducted with different age groups and different samples. Further research may focus on developing a measurement for FA.

Keywords: Future anxiety, trait anxiety, psycho-educational group, university students.

Introduction

Anxiety is defined as "a future-oriented emotion, characterized by perceptions of uncontrollability and unpredictability over potentially aversive events and a rapid shift in attention to the focus of potentially dangerous events or one's own affective response to these events" (Barlow, 2002, p. 104). According to Clark and Beck (2011, p. 5), anxiety is considered a complex response system in cognitive, affective, physiological, and behavioral terms. They also stated that highly aversive events trigger anxiety since these events are perceived as unpredictable and uncontrollable moments that could potentially pose a threat to an individual. A great number of studies reported that college students have many problems within different areas and that they feel anxious about different issues (Erkan, Ozbay, Cihangir-Cankaya, & Terzi, 2012; Koydemir & Demir 2005; Ozbay, 1996). During their college years, people inevitably consider their future life because of a desire to create a healthy, happy adulthood for themselves (Yesilyaprak, 1985). Occasionally, this tendency to think about the future gives place to future anxiety (FA).

As a specific form of anxiety, FA is defined as a state of uncertainty, fear, and worry concerning threatening changes in one's personal future. In general cases, FA has certain characteristics. FA may lead to: (i) passively waiting to see what will happen in life; (ii) avoiding ambiguity and risk; (iii) sticking to well-known ways in life; (iv) using different regressive defense mechanisms rather than making strides with negative situations; and (v) using social sources to make one's future safe. FA leads individuals to avoid making future plans. People struggling with FA have difficulty with humor, have more negative psychological symptoms, and cannot feel effective in handling difficult future life situations (Zaleski, 1996).

FA has negative effects on individuals' productivity, which can lead them to feeling insecure and eventually depressed about their future (Zaleski, 1996). In particular, as a period between adolescence marked by complete liability for social responsibilities, the college years are climacteric of lifelong development and psychological symptoms consequently tend to increase during this period (Yesilyaprak, 1985; Bozkurt, 2004). Erdur-Baker and Bicak (2006) stated that college

students are more concerned about their future than people in other developmental stages of life. Supporting that, Guleri (1999) reported that only 44% of young adults are optimistic about their future, which means they might not be overly optimistic. Erozkhan (2011) reported that senior college students have anxiety about exams, which represent the final step before graduation and starting a working life. This situation also causes college students to feel a sense of hopelessness about their future. These kinds of problems can cause psychological and somatic symptoms (Erozkhan, 2011). So, knowing more about FA is about being more secure and producing more effectively for one's self, and eventually for society. Thus, FA is an important issue to cope with for both individual and society.

As Zaleski (1996) emphasized, one of the strong elements of FA is its cognitive rather than emotional components. In this context, everyone has cognitions including their own positive or negative beliefs about the future. Positive beliefs about worry regard worrying as something that can help people prepare for the worst scenarios, while negative beliefs about worry relate to the low probability of those bad scenarios occurring (Koerner & Dugas, 2006). While college students' negative ways of thinking are powerful predictors of their anxiety and negative coping styles, their positive thinking and anxiety levels have a negative correlation (Mahmoud, Staten, Lennie, & Hall, 2015). High FA and trait anxiety (TA) individuals have many more negative beliefs and fewer positive beliefs about the future and do not comfortably list many reasons why the threatening event may not happen.

A cognitive model is at the forefront since it works on cognitions and thus brings out changes in emotions and behaviors (Sanders & Wills, 2003). This is why, while coping with FA, restructuring negative beliefs about the future is the major issue of FA intervention. When individuals learn to think in a realistic way, their mood and behavior will improve (Beck, 2001). Cognitive Behavioral Therapy (CBT) is a well-known and well-accepted therapy approach, especially for the treatment of different anxiety types, because of its measurable characteristics and empirical results reporting its effectiveness with the prevention and intervention of various anxieties. For example, Butler Chapman, Forman and Beck (2006) reported large effect sizes of CBT for generalized anxiety disorder, panic disorder, social phobia, post-traumatic stress disorder, and unipolar depression. Hofmann and Smits (2008) similarly proposed that CBT was efficacious for adult anxiety disorders. Accordingly, Karahan, Yalcin and Erbas (2014) reported that their CBT-oriented anger management program was effective in reducing the anxiety levels of college students. From this perspective, a cognitive behavioral approach seems to be an effective intervention for FA.

As previously mentioned, anxiety and FA can create distress among college students. With this in mind, it is necessary to develop college students' skills for coping with their anxiety. In this manner, college students can be more productive during their life and improve their psychological health. In addition, there are a great number of studies in the literature about coping anxiety (Dugas et al., 2003; Hofmann & Smits, 2008; Karahan et al., 2014), but experimental studies on FA could not be found. Although a study by Karahan et al. (2014) was based on anger management,

this Turkish study investigated the efficacy of their program on college students' anxiety levels. In contrast, the skill training program detailed in this study aims to directly cope with anxiety and beyond coping with general anxiety. It also targets coping with FA. Within this scope, Mahmoud, Staten, Lennie, & Hall, (2015) specified that it is necessary to directly study college students' negative ways of thinking to help them manage anxiety with prevention and intervention programs. When considering the prevention of various anxieties, CBT comes to the forefront as a well-known approach to help individuals develop their own understanding about the sources of their anxiety. CBT also presents a new understanding for TA by restructuring these sources. Likewise, Butler et al. (2006) reported that CBT-based therapies are effective for different types of anxiety. Consequently, the skill-training program of overcoming FA and TA in the current study was based on CBT. Since 16.5% of the Turkish population is between the ages of 15-24 (Turkish Statistical Institute, 2015), research on FA may have a wide-reaching impact. As a consequence, this study targets the CBT-based FA and TA Skill-Training Program's effectiveness on Turkish university students' FA and TA.

Method

Research Design

This study was designed with a quasi-mixed method in which a researcher collects quantitative and qualitative data, reducing the required consolidation of this data (Teddle & Tashakkori, 2009). Several steps were followed in this study. First, the quantitative part of the study included a pretest, posttest, and follow up using a quasi-experimental design together with a matched pair design. Second, the qualitative data were examined to triangulate the data and generate more insights for the study.

Study Group

Before the skill-training program began, the research ethics committee submitted the safety report of this research. Subsequently, an announcement about the skill-training program was published on the official website of the university denoting the official granting of permission. After that, 60 students applied to participate in the skill-training group and completed the Beck Depression Inventory (BDI) and Brief Symptom Inventory (BSI). Individuals suffering from psychological disturbances (such as depression) or recent traumatic experiences were not proper for group studies (Gucray, Cekici, & Colakkadioglu, 2009). On this basis, thirteen of these students were eliminated from the study group because of high scores from BDI and BSI.

One of the researchers interviewed all 47 applicants and completed the research instruments. In experimental studies, matching the experimental and control groups allows for the controlling of independent variables in terms of specific features (Cohen, Manion, & Morrison, 2007). Therefore, the applicants were matched, as control and experimental group, according to different variables such as FA (mean

TAI, PFEI, AMM scores), age, and gender. Later, one applicant was randomly selected for the experimental group and another applicant was randomly selected for the control group for internal validity. This selection process continued until 15 individuals were selected for both groups. During the sessions, one experimental group member dropped out and one member was randomly removed from the control group. Eventually, the study was conducted with 28 students (14 in each group) studying in different faculties at a public university in the Aegean Region of Turkey during the fall semester of the 2015-2016 academic year, all aged between 21 and 24 years (mean ages of the students in experimental and control groups were 20.21 and 20.92 years, respectively). Independent samples *t*-test was administered to determine if there are any statistically significant differences between PFEI and TAI pretest scores of the experimental and control groups, but no significant difference was found [$t(26) = -1.07$; $p > .05$; $t(26) = 1.53$; $p > .05$ respectively]. Mann Whitney U test was applied to determine whether or not there was a significant difference between pretest of the experimental and control groups as pretest scores for AMM did not meet normality assumption. No significant difference was found in terms of pretest scores between two groups ($U = 83.50$, $p > .05$).

Research Instruments

Personal information form (PIF). This form was designed by the researchers and contained questions about demographic information, psychiatric history, and trauma experience history of the participant.

State-trait anxiety inventory (STAI). The scale was developed by Spielberger, Gorsuch and Lushene (1970), and adapted to Turkish by Oner and Le Compte (1985). The STAI consists of two different subscales: state and TA, with 20 items in each subscale. In this study, only the trait anxiety subscale (TAI) was used. Items are scored between 1 (almost never) and 4 (almost always). On the Turkish form of the scale, the Kuder-Richardson (alpha) reliability coefficient ranged from .83 to .87. The total item reliability of the scale is between .34 and .85. The Turkish version of STAI has good validity and reliability (Oner & Le Compte, 1985).

Positive future expectations inventory (PFEI). This scale aims to measure positive expectations regarding the participant's personal future (Imamoglu, 2001). This scale is a five-item scale with items scored between 1 (completely disagree) and 5 (completely agree). The Cronbach's alpha level of the PFEI was .85 and the test retest reliability was .72.

Frost multidimensional perfectionism scale (FMPS). The FMPS aims to evaluate perfectionism in a multidimensional way. The FMPS was developed by Frost, Marten, Lahart and Rosenblate (1990), and adapted to Turkish by Kagan (2011). This scale consists of 35 items and six subscales. In this study, only the "anxiety of making mistakes" (AMM) subscale was used. The items are scored between 1 (completely disagree) and 5 (completely agree). Pearson correlations of psychological variables with the scale scores were found to be adequate for the Turkish version of the scale. The overall internal consistency was 0.91. The construct validity of the scale is satisfactory for subscales and ranges between 0.31 and 0.82.

Beck depression inventory (BDI). The BDI is a 21-item tool to detect emotional, cognitive, and motivational symptoms during depression (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Items are scored on a three-point scale and the total score ranges from 0 to 63. The Turkish properties of the scale were studied by Hisli (1988) and the reliability coefficient is .65. The split-half reliability of the scale is .78 for student groups and .61 for depressive patients. As a result, Hisli (1988) reported that the scale has a good reliability and validity.

Brief symptom inventory (BSI). The BSI is a 53-item, 5 point (0-4) self-report scale developed by Derogatis (1992) and adapted into Turkish by Sahin and Durak (1994). This tool aims to evaluate psychological distress and psychiatric disorders in people. The internal reliability of the Turkish form ranges from .55 to .86 for sub-scales. The Turkish form of the BSI is five factor and factor loadings range between .75 and .87. The Turkish version of form of BSI is reported to have a good reliability and validity (Sahin & Durak, 1994).

General evaluation of group processes (GEGP). The general evaluation form, developed by De Lucia-Waack (2006) and adapted into Turkish by Colakkadioglu and Gucray (2012), was revised for the current study and applied to the group members. It aims to determine group participants' personal experiences about group studies. Three experts from the Counseling Psychology Department read the revised GEGP form and the final version of the form was designed based on their feedback.

Procedure

Quantitative data were analyzed with SPSS version 17.0. The normal distribution of participants' scores was examined with the Shapiro-Wilk test and the PFEI scores for pretest and posttest were normally distributed ($p > .05$). Homogeneous distribution of variances between groups was examined by F test and homogeneous variance for PFEI was determined to be $p > .05$. The equality of covariance matrix was checked by M test of Box and equality of covariance matrixes hypothesis was accepted ($F = 1.959$, $p > .05$). Hence, a mixed-design analysis of variance was applied to the PFEI scores.

For TAI, pretest scores appeared to meet normal distribution requirement ($p > .05$), but posttest scores do not match for the control group ($p < .05$). Furthermore, the control group's AMM scores did not match the normality assumption in terms of the pretest. This study used an independent sample *t*-test for the analysis of the TAI scores of the experimental and control groups and a Mann Whitney U test for analysis of the TAI posttest scores and AMM pretest and posttest scores. Follow-up test scores of each scale showed normal distribution ($p > .05$). Posttest and follow-up scores of the experimental group were compared by using paired samples *t*-test. The significance level was set at $\alpha = .05$.

Qualitative data obtained from the GEGP were examined using the thematic approach described by Simsek and Yildirim (2011). Researchers listed all the expressions of participants, including 87 significant statements. Accordingly, to explore the degree of reliability, the relation between two researchers' codes was

computed and the consistency between their coding was 87.68%. The coding process led to the creation of categories and ultimately to the identification of themes.

For internal validity, all sessions of the psycho-education program were recorded by a camera. The recordings were examined and supervised by three experts (one PhD and two MAs) in the field of Counseling Psychology to determine whether the applications were consistent with the skill training program. As a precaution to ensure external validity, applicants with high BDI and BSI scores were excluded with the aim of constructing a study group that was a better representative of community population.

Experimental Praxis

Researchers designed eight sessions of skill-training program inspired by Robichaud and Dugas's (2006) CBT program protocol used for generalized anxiety disorder, with the idea that FA has some similarities with the physical, emotional, and cognitive dimensions of general anxiety disorder. Additionally, the skill-training program was built on a structure of applications, objectives, and practices (De Lucia-Waack, 2006). Four counseling psychologists (one PhD and three MAs) and one specialist in curriculum development (MA) reviewed the program. Each session lasted approximately 90 minutes. Data collection instruments (TAI, PFEL, AMM, GEGP) were applied to the group members immediately after the last session. Follow-up measures were collected four weeks after the last session.

Various basic CBT techniques, such as cognitive restructuring, goal setting, role-playing, relaxation, and homework, were used in particular sessions. *Session I* was designed to allow group participants to meet each other and then the group leader introduced the format of the sessions. *Session II* ensured that participants were informed about the cognitive-behavioral approach by means of the ABC model, which is a core model of CBT. *Session III* focused on the core components of FA within an anxiety cycle, specifically designed for FA. *Session IV* covered functional and dysfunctional anxiety about future realization. *Session V* focused on anxious perspective blocking and an acceptance perspective to help individuals overcome future time uncertainty. *Session VI* focused on the acceptance and development of new skills for dealing with non-controllable variables in life. A new acceptance toolbox was introduced to the participants. *Session VII* was a complete relaxation experiment aimed at helping students learn new relaxation skills. *Session VIII* aimed to help participants realize when they reached their initial personal goals for this group.

Results

Quantitative Results

Table 1 shows statistical data relating to participants' PFEL, TAI, and AMM scores in the experimental and control groups.

Table 1.

Mean and Standard Deviation values for PFEI, STAI and AMM pretest, posttest, and follow-up test scores of students in the experimental and control groups

	Pre-test		Post-test		Follow up Test	
	\bar{X}	Sd	\bar{X}	Sd	\bar{X}	Sd
Experimental Group						
PFEI	15.36	3.46	21.21	2.39	20.79	2.46
TAI	51.64	9.33	38.79	9.98	39.50	9.51
AMM	24.86	7.45	16.36	5.77	15.14	4.64
Control Group						
PFEI	16.86	3.94	16.14	3.04	16.71	3.91
TAI	47.00	6.48	47.29	4.63	47.07	5.78
AMM	22.50	7.77	22.36	6.87	22.57	7.27

As shown in Table 1, pretest, posttest, and follow-up PFEI test scores of the experimental group were 15.36 (Ss=3.46), 21.21 (Ss=2.39) and 20.79 (Ss=2.46), respectively. Similarly, the pretest, posttest, and follow-up TAI test scores of the experimental group were 51.64 (Ss=9.33), 38.79 (Ss=9.98) and 39.50 (Ss=9.51), respectively. The AMM score of the experimental group was 24.86 (Ss=7.45) for pretest, 16.36 (Ss=5.77) for posttest, and 15.14 (Ss=4.64) for follow-up test. Additionally, the control group's pretest, posttest, and follow-up PFEI scores were 16.86 (Ss=3.94), 16.14 (Ss=3.04), and 16.71 (Ss=3.91), respectively. Similarly, the control group's pretest, posttest, and follow-up TAI scores were 47.00 (Ss=6.48), 47.29 (Ss=4.63), and 47.07 (Ss=5.78), respectively. The AMM scores of the control group were 22.50 (Ss=7.77) for pretest, 22.36 (Ss=6.87) for posttest, and 22.57 (Ss=7.27) for the follow-up test. Results of the mixed-design analysis of variance are shown in Table 2, demonstrating that the PFEI, TAI, and AMM scores of the students in the experimental group were significantly different than those in the control group. Table 2 also shows the four-week long effect of skill-training program.

Table 2.

Mixed Design Analysis of Variance Results of PFEI

The Source of Variance	Sum of Squares	Sd	Mean Square	F
Between groups	427.36	27		
Group	44.643	1	44.643	3.033
Error	382.717	26	14.720	
Within groups	412.000	28.000		
Measure (pretest-posttest)	92.571	1.000	92.571	14.302**
Group x Measure	151.143	1.000	151.143	23.351**
Error	168.286	26.000	168.286	
Total	839.36	55.000		

*p<.05, **p<.001

According to the ANOVA results for mixed measures shown in Table 2, the main effects were found to be insignificant [$F(1-26)=3.03$; $p>.05$], but the measurement main effect [$F(1-26)=14.302$; $p<.001$] and group*measure interaction effect [$F(1-26)=23.351$; $p<.001$] were found to be significant. The significant group*measure interaction effect indicated that participating in the experimental praxis has different effects on the pretest and posttest PEFI scores. The Mann Whitney U test was administered to determine whether there was a statistically significant difference in terms of TAI and AMM between groups, and results are illustrated in Table 3.

Table 3.

Mann Whitney U Test Results of TAI and AMM Post-Test Scores of Experiment and Control Groups

		n	Mean Rank	Sum of Ranks	U
STAI	Experimental	14	11.00	154.00	49.00*
	Control	14	18.00	252.00	
AMM	Experimental	14	10.64	149.00	44.00*
	Control	14	18.36	257.00	

$p<.05$

As shown in Table 3, the TAI and AMM scores of the experimental group were significantly different (TAI, $U=49.00$ $p<.05$; AMM, $U=44.00$, $p<.05$). As expected, the mean TAI and AMM scores decreased. These findings demonstrate that the skill-training program was effective on students' trait anxiety and anxiety of making mistakes.

To examine the four-week long effect of the program on the experiment group, the PFEI, TAI, and AMM posttest and follow-up scores were compared using the paired sample *t*-test. According to the paired sample *t*-test results, the PFEI, TAI, and AMM scores of the experimental group showed no significant difference with the mean of posttest and follow-up test ($t(14)=.343$, $p>.05$; $t(14)=-.733$, $p>.05$; $t(14)=-.688$, $p>.05$), respectively. These results indicate that the effects of the skill-training program continued for four weeks.

Qualitative Results

The answers of the GEGP were categorized and subsequently grouped into themes, as shown in Table 4.

Table 4.*Examples of Invariant Structure, Their Corresponding Categories, and Emerging Themes*

Examples of Participants' Expressions	Categories	Themes
When I change my perspective about a situation, the meaning of it is changing.	Realization of alternative thinking	
My irrational way of thinking cause anxiety about future.	Realization of irrational automatic thoughts	Reconstructing of future anxiety related thoughts
I have learnt how to think rationally.	Learning rational thinking	
I have learnt my thinking style determine my actions.	Thoughts' effects on behaviors	
I can cope with my problems step by step.	Separating problems into parts	
Now I see I could not be so patient for life goals requiring time.	Ability to understand importance of time to reach long term goals	Problem solving about future possibilities
There will be always trammels, as well as alternative ways to solve them.	Perceived problem solving efficacy	
My hope and future commitment increased.	Future hope	
It is better not trying to control uncontrollable variables of my future.	Tolerance of uncertainty	Recognizing future anxiety and future hope
I discovered the triggers of my FA.	Components of FA	
Worry and anxiety is different, hyper alertness is useless.	Dysfunctional worry	
Imagination technique helped me a lot to imagine a hopeful future.	Imagination	
Breathing style is very important to control my body.	Breathing technique	Relaxation methods
Relaxation methods will be useful to cope with psychical symptoms of anxiety.	Relaxation	

As shown in Table 4, thoughts about the “reconstructing of future anxiety” were related to group members’ responses about their awareness of the importance of their perspective on their emotional mood and behaviors about FA. They also reported that changing FA is possible by changing their perspective with techniques. It is possible to infer from the theme “problem solving about future possibilities” that some of the participants realized that their level of perceived problem solving ability is related to feeling more secure about possible future threats. Some of them noted that instead of insisting on dysfunctional problem solving methods, they can feel more constructive by using conditioned problem solving methods with their current problem.

It can clearly be inferred from the theme “recognizing future anxiety and future hope” that participants were not used to tolerating uncertain events, but instead tried to control uncontrollable variables. They are now aware of the core components of FA and have alternative ways of dealing with such emotions. Additionally, they

realized that acceptance of uncertain life events is the key to coping with FA. As understood from the “relaxation methods” theme, the CBT program contains stress reducing methods and thought restructuring methods. Some participants remarked that they were impressed with the efficacy of the relaxation methods. To sum up, the emerging themes were consistent with the aims of each session. Results of the qualitative data analysis show that the findings of the GEGP support the findings of the quantitative data collection instruments.

Discussion and Conclusion

According to the quantitative findings of the study, university students’ positive future expectations, TA, and anxiety of making mistakes scores decreased after CBT-based group skill-training aimed at overcoming FA. In addition, the control group’s positive future expectations, TA, and anxiety of making mistakes scores were not significantly different before and after the study. These results demonstrate that the decreasing FA and TA of university students was a result of experimental applications. This result is consistent with the literature relating to TA, as a great number of studies have proposed the efficacy of CBT for anxiety (Butler et al., 2006; Gould, Otto, Pollack, & Yap, 1997; Hofmann & Smits, 2008; Johnston, Titov, Andrews, Dear, & Spence, 2013; Karahan, Yalcin, & Erbas, 2014; Kendall & Southam-Gerow, 1996; Melnyk et al., 2015; Monti, Tonetti & Bitti, 2014; Stallman, Kavanagh, Arklay & Bennett-Lev, 2016). Although there have been no experimental studies specifically about FA, many studies focusing on anxiety treatment with CBT report similar results to the present study (Dugas et al., 2003; Norton & Price, 2007; Silverman et al., 1999). Cognitive-behavioral skill training for overcoming FA and TA, which was developed for the current study, essentially aimed to eliminate the intolerance of uncertainty by restructuring beliefs about the future. Then this program targeted helping participants accept their internal experiences about future perspectives and learn effective relaxation methods. CBT-based group sessions about overcoming FA were also structured as Bieling et al. (2006) clarified.

According to Lang and Craske (2000), anxious thinking about the future has small indications that individuals can be aware of. The group practices in this study helped individuals become more aware of their own hypothesis about the future and determine which of their beliefs were rational and which were irrational. Group members also had an opportunity to set up a situation to determine whether the hypothesis was valid or not. With the support and assessment of other group members, the process of testing these hypotheses became more powerful. In this awareness process, group members modified their predictions about future life according to new information, which is known as restructuring in CBT (Lang & Craske, 2000).

The qualitative findings of the study have implications about the effectiveness of skill training group applications. First, group members indicated that they were satisfied with the group practices and reached their own group goals with the

sessions and homework. Second, group members reported that their irrational thoughts about the future turned into rational thoughts. They also realized that rational thinking about future life leads to a proportionate emotional mood with the future reality. These results are consistent with the related literature. In a study on general anxiety, Johnston, Titov, Andrews, Dear, and Spence (2013) showed that using cognitive strategies for changing ideas promotes healthy behaviors and helps people develop skills for coping with disordered emotions. Melnyk et al. (2015) also used a CBT-based skill training program for cognitive restructuring, which ultimately decreased the anxiety levels of university students. As a result, group members felt more controlled and relaxed about uncertainty of their future and current anxiety.

Third, group members reported having a more balanced view about future life and a new focus on their present life, as well as their academic and career responsibilities. Eventually, they stopped focusing on their future anxiety thinking and started generating thoughts about a more secure future. Fourth, most group members were very satisfied with the session about gaining acceptance skills. They realized that acceptance was not the same as confirming or submitting, but actually something more than that. They ultimately felt more relaxed and set up a toolbox during the group session to develop acceptance skills. Lastly, most group members noted that they were pleased to have learned relaxation methods that they could use during anxious times. Similarly, Johnston et al. (2013) also reported that relaxation methods were efficient for coping with emotional disorders.

One of the group members, an exchange student from another Turkish university, dropped out of the group in the fourth session. It is possible that this member could not adapt to his new environment or the group members. In conclusion, recent years have witnessed an increase in the number of cognitive-based anxiety therapy studies intended to train individuals to cope with their anxieties. Yet research to determine the specific kind of anxiety, FA, for further applications has recently become more prominent. Training individuals to restructure their beliefs about their future perspective may help prevent a particularly depressive population. The present study found that a skill-training program based on cognitive behavioral therapy positively affected the future perceptions of participants in an expected way. It is hoped that this study will help illuminate a wide range of benefits for researchers and practitioners.

Limitations and Recommendations

This study has several limitations. First, participants were selected from a community sample and were all students from a public university. Second, there is no instrument to directly measure FA for Turkish population, so future anxiety was examined with different variables related to FA. Third, this study's qualitative data is limited with a general group process evaluation form, which is a self-report form.

Similar research should investigate the effectiveness of FA and TAI skill-training programs with different age groups and different samples. Further research should focus on developing a measurement about FA. Future researchers can also benefit from different techniques, such as observation and interviews in the collection of qualitative data. FA and TA are common facts for competitive societies and cognitive-behavioral interventions can help people cope more effectively.

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Bilişsel Davranışçı Kurama Dayalı Beceri Eğitiminin Üniversite Öğrencilerinin Gelecek Kaygısı ve Sürekli Kaygılarına Etkisi

Atf:

- Kaya, S., & Avcı, R. (2016). Effects of cognitive-behavioral-theory-based skill-training on university students' future anxiety and trait anxiety. *Eurasian Journal of Educational Research*, 66, 281-298
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Özet

Problem Durumu: Gelecek, doğası gereği belirsizdir. Bu belirsizlik gelecekle ilgili endişe hissine neden olabilir. Aslında endişe temelde gelecekteki olasılıklar ve tehditlerden beslenir. Kaygı ise strese neden olan kontrol edilemez bir endişe halidir. Gelecek kaygısı (GK) kaygının özel bir formudur ve kişisel geleceğe dair risk içeren değişimlerden doğacak belirsizliklere katlanamama ve bundan dolayı korku ve kaygı duyma durumudur. Geleceğe yönelik kaygılı bir yaklaşım ise, bireylerin motivasyonlarını ve sağlıklı planlama becerilerini etkileyerek, kendini beslemeye devam eder.

Bilişsel model, düşünce biçimlerinde değişim olduğunda, bunun duygu ve davranışlara yansıdığını ifade eder. Bu nedenle, GK ile baş etmede, gelecekle ilgili olumsuz inançları yeniden yapılandırmak GK müdahalelerinde temel konudur. Bilişsel-davranışçı terapi yaygın kullanılan bir terapi yöntemi olup, özellikle çeşitli

kaygı tedavilerinde etkililiği kanıtlanmıştır. Literatürde kaygı ile baş etme konusunda pek çok araştırma bulunsa da, GK ile yapılan deneysel çalışmaya rastlanmamıştır.

Araştırmanın Amacı: Türkiye'de toplam nüfusun %16.5'ini genç nüfusun oluşturduğu düşünüldüğünde, genç bireylerle yapılacak bu çalışmanın yaygın etkisinin olacağı düşünülmektedir. Ayrıca, GK ile ilgili baş etme yöntemleri, bireylerin geleceğe daha güvenli bakması ve yaşamlarının verimliliğini artırması açısından önemli görülmektedir. Bu çalışmanın amacı, bilişsel davranışçı yaklaşıma dayalı olarak geliştirilen gelecek kaygısıyla baş etme beceri eğitimi grup uygulamalarının üniversite öğrencilerinin gelecek kaygılarına etkisini araştırmaktır.

Araştırmanın Yöntemi: Bu araştırma yarı karma desene göre tasarlanmıştır. Yarı karma desende nitel ve nicel veriler toplanır, sonrasında nitel ve nicel bulguların bütünleşmesi azdır ya da yoktur. Çalışmaya başlamadan önce araştırmanın uygulanabilirliği açısından etik kurul raporu alınmıştır. Üniversite yönetiminden gerekli izinler alındıktan sonra, üniversite internet sayfasından gelecek kaygısıyla baş etme beceri eğitim programı yapılacağına dair ilana çıkmıştır. 60 öğrenci başvuruda bulunmuş ve depresyon puanları yüksek olanlar ile son zamanlarda travma yaşantısı olanlar (13 kişi) araştırmaya dahil edilmemiştir. 47 kişi ile ön görüşme yapılmış ve veri toplama araçları uygulanmıştır. Adaylar arasından deney ve kontrol grubu için sırayla ve seçkisiz olarak üyeler seçilmeye başlamış ve her grup için 15 üye olana kadar bu süreç devam etmiştir. Uygulamalar esnasında bir üye grubu bıraktığı için kontrol grubundan da bir üye çıkarılmıştır. Deney ve kontrol gruplarının Sürekli Kaygı Ölçeği (SKÖ), Olumlu Gelecek Beklentileri Ölçeği (OGBÖ) ve Hata Yapma Beklentileri Ölçeği'nden (HYBÖ) aldıkları ön-test puanları arasında anlamlı farklılığın olmadığı belirlenmiştir [Sırasıyla $t(26)=-1.07$; $p>.05$; $t(26)=1.53$; $p>.05$; $U=83.50$, $p>.05$].

Katılımcılar Ege Bölgesi'ndeki bir üniversitenin farklı bölümlerinde devam eden 21-24 yaş arası bireylerdir. Deney ve kontrol grubu için yaş ortalaması sırasıyla 20.21 ve 20.92'dir. Deneysel uygulamalar kapsamında oturumlar, Robichaud ve Dugas'ın genel anksiyete ile baş etmede önerdiği BDT temelli protokol dikkate alınarak geliştirilmiştir. 8 oturumdan (her biri 90 dakika) oluşan program 4 uzman tarafından incelenmiş ve düzeltilmiş, programa son hali verilmiştir. İzleme çalışması için veriler son oturumdan dört hafta sonra toplanmıştır. Oturumlarda bilişsel davranışçı yaklaşımın önerdiği teknikler kullanılmıştır. Her oturum duygu-durum kontrolü ile başlamış, önceki oturumun özetlenmesi, ödev kontrolü, ısınma egzersizi, güncel oturumun etkinliği, güncel oturumu değerlendirme ve sonraki oturumun ödevi şeklinde devam etmiştir.

Elde edilen nicel veriler SPSS 17.0 ile analiz edilmiştir. Normal dağılım gösteren ölçme araçları için karışık ölçümler için ANOVA testi kullanılmış, normal dağılım göstermeyen ölçümlerde Mann Whitney U testi uygulanmıştır. Nitel verilerin analizinde içerik analizi tekniğine başvurulmuştur. Katılımcılardan Grup Süreci Genel Değerlendirme Formu aracılığıyla elde edilen verilerle kodlama işlemine

gidilmiş, iki araştırmacı tarafından yapılan iki ayrı kodlaması arasında %87.68 oranında tutarlılık görülmüştür. Elde edilen kodlar ile temalar oluşturulmuştur.

Araştırmanın Bulguları: Nicel bulgular. Deney ve kontrol grubundaki üyelerin OGBÖ'den aldıkları ön-test ve son-test puanlarını incelemeye yönelik yapılan karışık ölçümler için iki faktörlü ANOVA testi sonucuna göre, grubun ana etkisi istatistiksel olarak anlamsızken [F(1-26)=3.033; p>.05], ölçümün ana etkisi [F(1-26)=14.302; p<.001] ve grup*ölçüm ortak etkisi [F(1-26)=23.351; p<.001] istatistiksel olarak anlamlı bulunmuştur.

SKÖ ve HYBÖ ile elde edilen puanlar ile Mann Whitney U testi yapılmıştır. Deney grubunun bu iki ölçme aracından aldıkları puanlar, kontrol grubunun puanlarına göre anlamlı olarak farklılaşmaktadır (SKÖ, U=49.00 p<.05; HYBÖ, U=44.00, p<.05).

Nitel bulgular. Grup Süreci Genel Değerlendirme Forumu'ndan elde edilen ilk bulguya göre, grup üyelerinin tamamına yakını kişisel amaçlarına büyük oranda ulaştığını ifade etmiştir. Elde edilen diğer bir bulgu da, grup üyeleri düşünce davranış ve duygu ile ilgili değişim farkındalıkları olduğunu belirtmiştir.

Son olarak üyelerin doldurduğu Genel Değerlendirme Formu'ndan elde edilen yanıtlar kodlanarak, kodlar kategoriler haline almıştır. Elde edilen kategoriler ile temalar oluşturulmuştur. Bu temalar şunlardır: GK ile ilgili düşüncelerin yeniden yapılandırılması, gelecekteki ihtimallerle ilgili problem çözme becerileri, GK'yi tanıma ve gelecek umudu, rahatlama metotları. Tüm nitel bulgular, beliren temaların oturum amaçlarıyla örtüştüğü yönünde yorumlanmıştır. Bu noktada, nitel bulgular aynı zamanda, nicel bulgularda deney grubu lehine oluşan değişimi destekler niteliktedir.

Araştırmanın Sonuçları ve Önerileri: Nicel bulgularda elde edilen sonuçlara göre bilişsel davranışçı yaklaşım temelli GK ile baş etme psiko-eğitim programının, üniversite öğrencilerinin olumlu gelecek beklentilerini artırmada, sürekli kaygılarını ve hata yapma beklentilerini düşürmede etkili olduğu söylenebilir. Bu sonuç kaygı ile ilgili bilişsel davranışçı yaklaşım temelli müdahalelerin rapor edildiği çalışmalarla benzerlik göstermektedir.

Nitel bulgulardan elde edilen sonuçlar da, grup üyelerinin geleceğe yönelik mantıksız düşüncelerinin yerini rasyonel düşüncelerin aldığı ve mantıklı düşüncelerle birlikte üyelerin kaygılarında azalma meydana geldiği ve daha iyi hissettikleri görülmektedir. Bu bulgular benzer çalışmalarla paralellik göstermektedir.

Bu araştırmanın bir sınırlılığı, grup üyelerinin klinik olmayan örneklemden seçilmesidir. Benzer çalışmalar farklı örneklemlemlerle yürütülebilir. İkinci bir sınırlılık, GK'yi doğrudan ölçen bir ölçme aracının olmaması ve ölçümlerin GK ile ilişkili değişkenlerle yapılmış olmasıdır. Gelecek araştırmalarda benzer bir çalışma gözlem ve görüşme gibi güçlü nitel araştırma metotlarıyla yapılabilir.

Anahtar Kelimeler: Gelecek kaygısı, psiko-eğitim grubu, üniversite öğrencileri.

The Effect of Vocal Training Methods on Improving Turkish Accent Defects

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Abstract

Problem Statement: Despite analyses of how vocal training methods can correct or improve Turkish-language accent defects, for most voice educators, the most important methods continue to be breathe management control and correct vocalization exercises. We therefore sought to demonstrate the relationship of song lyrics to breathe control, accent defects, and good diction.

Propose of Study: The aim of the study was to promote best practices in order to enhance students' speech in a university music department in Turkey. To that end, we administered vocal training in a group of 12 first-year student volunteers in the department. We recorded and evaluated differences in accent defects both prior to and subsequent to vocal training.

Methods: The sample included 12 first-year students in the Music Department of the Fine Arts Faculty at Erciyes University. We determined pre- and post-test results by using the same oral readings ("Minnelied," meaning 'Mutluluk Sarkisi' in Turkish). Prior to the study, the students read song lyrics chosen by voice education specialists and that were translated and adapted into Turkish. We performed testing with the *Vitalograph Alpha Model 6000 portable spirometer*, which we used to analyze the parameters of forced vital capacity, forced

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expiration volume during the first second, and vital capacity, as well as *PRAAT vocal analysis*. Afterward, the students read the text again, and we collected pre-and post-analysis data by using *PRAAT vocal analysis*. We analyzed accent defects in the words “insan,” “ormanda,” “gezerken,” “guzel,” “oter,” and “kopardigin” for intensity, intensity in air, amplitude, and pitch.

Findings and Results: Following voice training, FEV1 ($p < .05$) increased significantly, whereas vital capacity and forced vital capacity did not change significantly. Vocal analysis revealed that the amplitude of the words “insan,” “ormanda,” “gezerken,” “guzel,” “oter,” and “kopardigin” ($p < .05$) increased significantly. For the words “ormanda” and “gezerken,” intensity ($p < .05$ and $p < .001$) increased significantly, as did intensity in air ($p < .05$) for “guzel,” “oter” and “kopardigin.”

Conclusion and Recommendation: Students’ voice lessons in the Music Department can benefit from vocal training methods that significantly improve accent defects and expressions, as well as assist in breath management. This methodology ultimately promoted the correct expression of Turkish words.

Keywords: PRAAT, individual voice education, prosody problems.

Introduction

The aims of voice education are threefold: to assist with speech correction (i.e., articulation, phonation and breath usage), to provide instruction on self-expression, and to guide in singing professionally, or in Italian opera terminology, to master *bel canto*, or ‘beautiful singing’.

Especially designed to perfect language and lyrical articulation (Evren, 2013), voice education also includes correcting body posture and refining breathing techniques. For professional singing, singers need limpid diction (i.e., good articulation and phonation) and efficient breath control, with the proper use of abdominal muscles and the diaphragm. To optimize breath and voice control, singers need to perform intonation exercises that include vocalizations and vocal exercises with only vowels or consonants (Sabar, 2008), generally with piano accompaniment.

For singers, *intonation* refers to fluctuation in vowel vibration. In the Turkish language, fluctuation encompasses resonance, pitch contour, and intonation guidance. Unlike singing, reciting a melody involves natural vowel intonation that results in ascending and descending vowel differences (Vural, 2005). Intonation correlates directly with accent, articulation, and breath management. In some studies, audiologists generate findings that allow the measure of accent parameters only, since accent relates to duration, intensity, amplitude, and pitch. Technically, all of those parameters are measurable with *Praat vocal analysis* (Boersma, 2012; Kilic, 2011).

Correlating such results with phonology, Vural (2005) deduced that, in phonology, the vowel that vibrates most prominently in a sentence is accented. He moreover demonstrated that a voice accent appears as a periodic waveform, whereas non-accented vowels do not stimulate such waveforms, because accented syllables produce more breath and intensity. Arguably, then, the three primary elements of accent are vowel intensity, amplitude, and duration.

Music intonation involves *prosody*, which Arel (1997), defines as having two meanings, both from ancient Greek music. The first relates to musical instruments, whereas in the second, special accentuated syllables from spoken voice pitch variations together constitute music and lyrical relevance. Lyrics and music share few common parameters when realized orally or with instruments. In reading aloud, speakers need to supply prosodic variation, including word stress, emphasis, sentence intonation, and tempo, that is barely, if at all, apparent in any given text. Constructing those prosodic parameters in reading benefits from punctuation parameters and similar graphic devices, which constitutes an interesting but rather neglected question in language production research addressed so far by only a fringe group of researchers known as pausologists (O'Connell, 1988).

Speech therapy traditionally situates voice production in an educational context in which the voice is studied perceptually, acoustically, and physiologically. Perceptually, the voice consists of three basic components—pitch, volume, and timber—that are vital to developing a good, functional voice, usually described as having a pleasant vocal quality, adequate pitch and volume, and flexibility. A good voice should vary in pitch and volume and adapt to various situations (Bele, 2008).

Given all of the above, we designed this study to demonstrate the use of vocal training methods to eliminate accent defects in Turkish. We administered vocal training to a group of students in a university music department in Kayseri, Turkey, using the *Vitalograph Alpha Model 6000 portable spirometer* to analyze the parameters VC, FVC, and FEV1, supported by *Praat vocal analysis*.

Purpose of the Study

The purpose of this study was to ascertain how programmed vocal training can developmentally affect accent defects in a student sample.

Hypothesis

Voice educators doesn't know the relationship with the breath exercises and accented the consonants. Generally voice educators have known the relationship with the speech quality and auditory processing. However some of the voice educators emphasis the correction of the song lyrics, some of the voice educators do not emphasis the correction of the song lyrics. And researchers have observed the direct relationship with the song lyrics and breath control, accent defects and correction of the intonation (auditory processing and speech quality) also. Eventually the research hypothesis is the direct relationship with the song lyrics and breath control, accent defects and correction of the intonation.

The Question's Related with the Hypothesis

In training, singers essentially need to learn breath usage and management, relaxation techniques for the jaw, tongue, and lip movements, and how to use consonants and vowels correctly by way of voice education and elocution lessons.

If vocalists have good diction, then they will also have efficient breath usage control to express consonants and vowels efficiently and be able to relax and adapt their jaw for tongue and lip movements.

If there is a direct correlation between prosody studies in voice education and oral intonation studies, then voice training can teach people to use adequate pitch levels, to speak with less intensity, and to avoid voice musculature during speech.

Method

Research Design

Although voice educators emphasize breath usage control and vocalization in individual voice lessons, knowledge about the relationship among breath usage, control in consonant expression, and accent defects remains scarce. In general, voice educators recognize a direct relationship between oral reading studies and prosody studies, yet only a fraction have emphasized lyrics. In fact, researchers have observed that the most important topics for most voice educators are breath management control and correct vocalization. In response, we sought to show how lyrics relate to breathe control, accent defects, and good diction.

Research Sample

Twelve student volunteers in the Music Department of the Fine Arts Faculty at Erciyes University in Kayseri, Turkey, participated in the study. We determined pre- and post-test results by using the same oral readings ("Minnelied," meaning 'Mutluluk Sarkısı' in Turkish). Prior to the study, the students read song lyrics chosen by voice education specialists and that were translated and adapted into Turkish. We analyzed accent defects in the words "insan," "ormanda," "gezerken," "guzel," "oter," and "kopardığın" for intensity, intensity in air, amplitude, and pitch.

Research Instrument and Procedure

Researchers recorded participants' voices using a microphone in an isolated room in the Fine Arts Faculty with Goldwave sound editor (version 5.69) and analyzed them with Praat vocal analysis software both before and after vocal training instruction exercises performed regularly over a 2.5-month period in 1-h sessions with two participants each. We tested participants' respiratory volumes and capacities using a Vitalograph Alpha Model 6000 portable spirometer before and after the programmed vocal training exercises in terms of forced vital capacity (FVC), forced expiration volume during the first second (FEV1), and vital capacity (VC).

Data Analyze

Researchers evaluated results using the Statistical Package for the Social Sciences version 18.0, normalization using Shapiro tests, and comparisons of pre- and post-test significance using Mann-Whitney *U*-tests. We set significance at $p < .001$ and $p < .05$.

Validity and Reliability

Before experiments commenced, phoniatrists clinically observed participants to identify any pathological problems regarding their vocal tracts. A phoniatrist familiar with the voice analysis program recommended measureable parameters.

Results

After the voice training the *FEV1* (c) ($p < 0.05$) increased significantly whereas the *VC* (a) and *FVC* (b) did not change thus revealing that *FVC* had ascended however the volume of the expiration was prolonged in the first seconds.

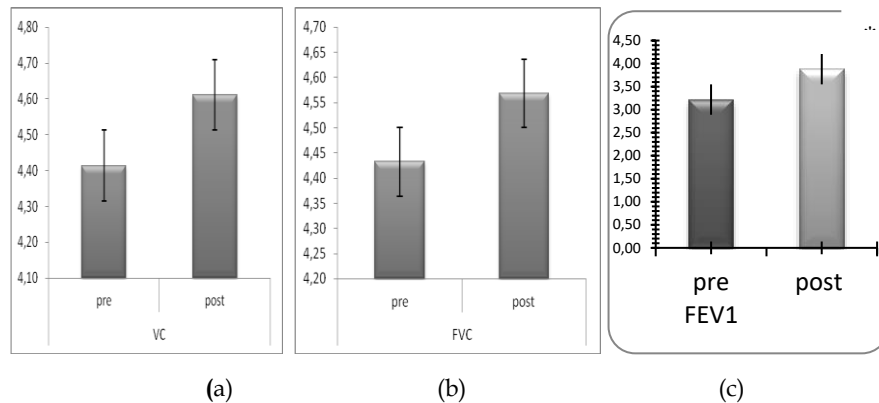


Figure 1. Respiratory volume and capacity changes before and after a programmed vocal training

(a): VC (Vital Capacity), (b): FVC: Forced Vital Capacity, (c): FEV1 (Forced Expiration Volume 1st sec) *: $p < 0.05$

When we compared the vocal analysis results after the conclusion the vocal training it was found that: *Amplitude* increased significantly for all 6 words, *Intensity* increased significantly for the “*ormanda*” and “*gezerken*” words. Intensity in air increased significantly for the “*guzel*”, “*oter*”, “*kopardıgun*” words and *duration* increased significantly only for the “*guzel*” word.

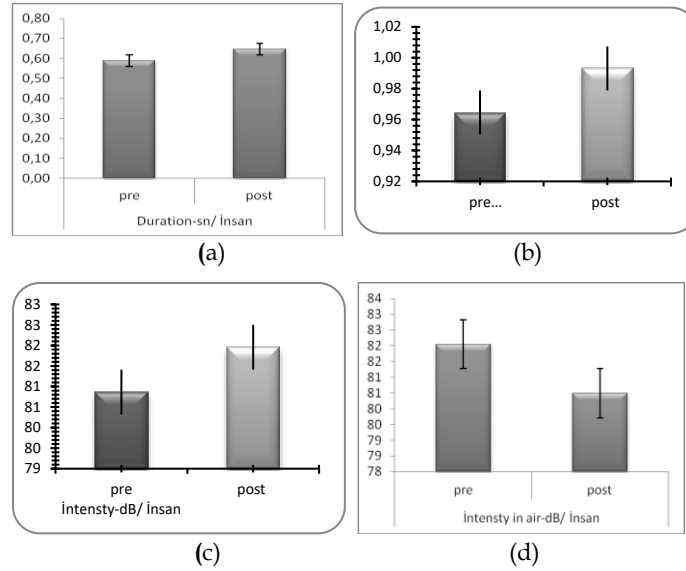


Figure 2. The duration (a), amplitude (b), intensity (c), intensity in air alterations after a programmed vocal training obtained from the “insan” word.*: $p < 0.05$

When we compared the vocal analysis results after the vocal training had been concluded, it was found that for the “insan” word only the amplitude ($p < 0.05$) increased significantly whereas the duration, intensity and intensity in air had not changed.

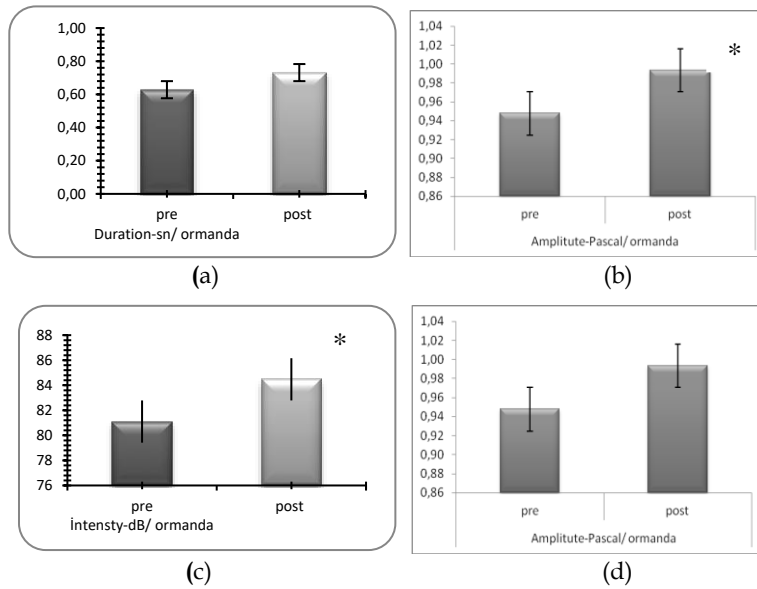


Figure 3. The duration (a), amplitude (b), intensity (c), intensity in air alterations after a programmed vocal training obtained from the “ormanda” word.*: $p < 0.001$

In relation to the words "ormanda", the intensity ($p < 0.001$) and amplitude ($p < 0.001$), increased significantly whereas the duration and intensity in air did not change.

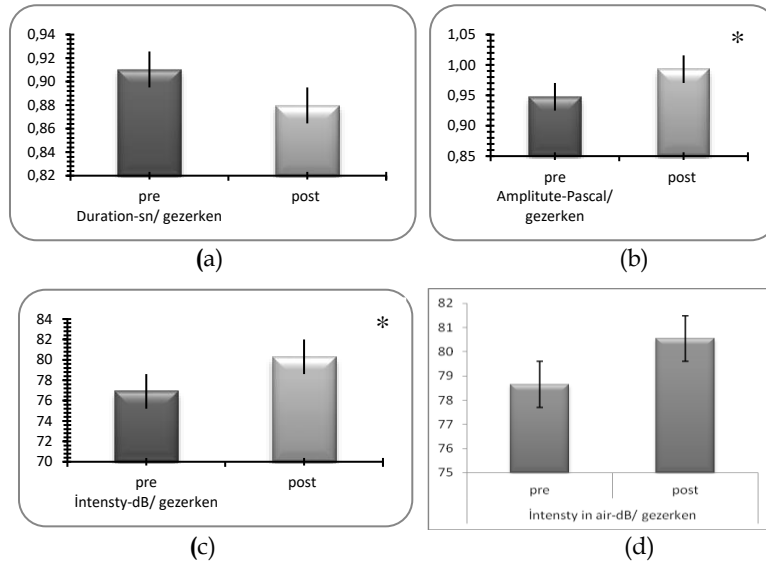


Figure 4. The duration (a), amplitude (b), intensity (c), intensity in air alterations after a programmed vocal training obtained from the "gezerken" word. *: $p < 0.001$

For the word "gezerken" the intensity ($p < 0.001$) and amplitude ($p < 0.001$), increased significantly whereas the duration and intensity in air did not change.

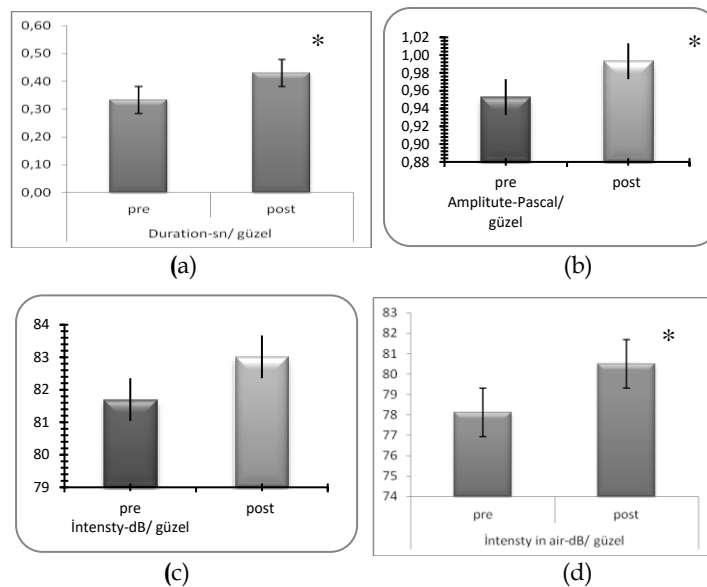


Figure 5. The duration (a), amplitude (b), intensity (c), intensity in air alterations after a programmed vocal training obtained from the "güzel" word. *: $p < 0.001$, **: $p < 0.05$

Turning next to the word “*guzel*” the *duration* and *amplitude* ($p < 0.001$), *intensity in air* ($p < 0.05$) increased significantly whereas the *intensity* did not change.

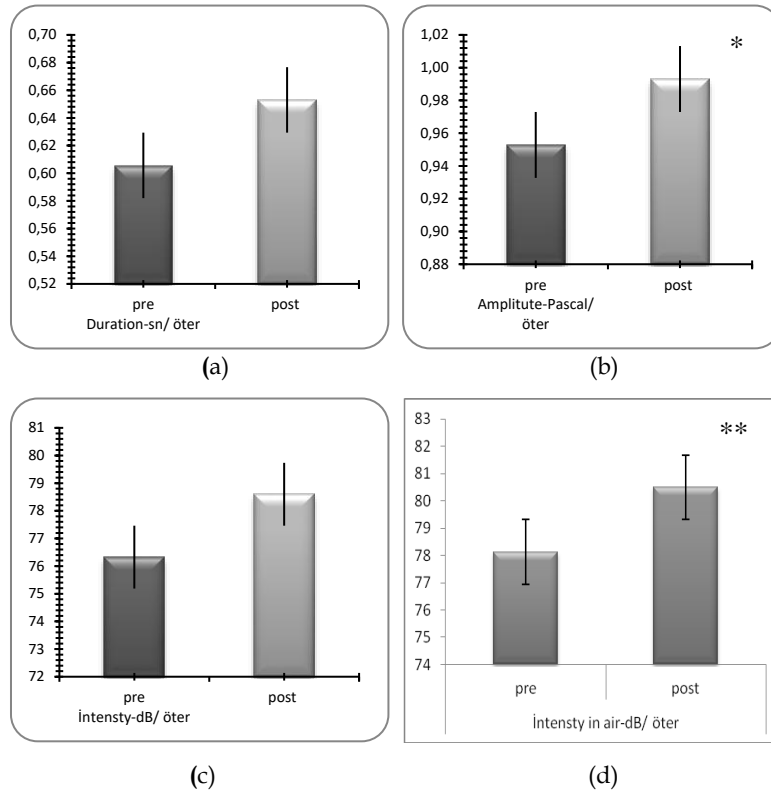


Figure 6. The duration (a), amplitude (b), intensity (c), intensity in air alterations after a programmed vocal training obtained from the “oter” word. *: $p < 0.001$, **: $p < 0.05$

The “oter” word showed that the *amplitude* ($p < 0.001$) and *intensity in air* ($p < 0.05$) increased significantly whereas the *duration* and *intensity* did not change.

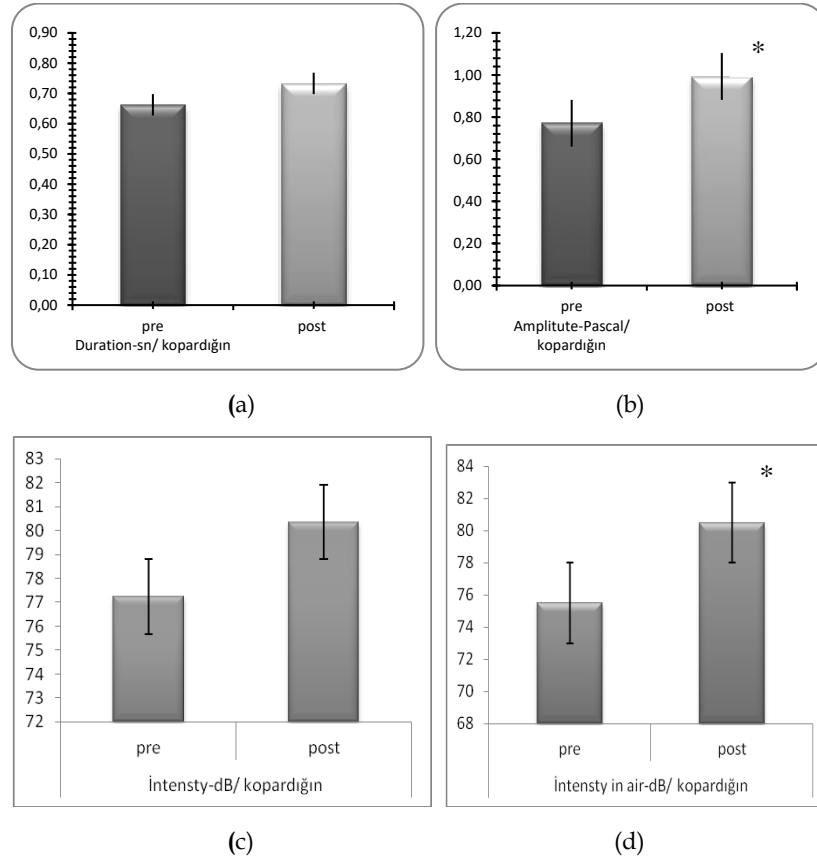


Figure 7. The duration (a), amplitude (b), intensity (c), intensity in air alterations after a programmed vocal training obtained from the "kopardigin" word.*: $p < 0.001$

The results relating to the "kopardigin" word indicated that the *amplitude* ($p < 0.001$) and *intensity in air* ($p < 0.001$) increased significantly whereas the *duration* and *intensity* did not change.

Discussion and Conclusion

Generally, *prosody* refers to the melody and rhythm of speech. Dysfunctional *prosody*, or *dysprosody*, exhibits alterations in *speech intensity*, *the timing of utterance segments*, *rhythm cadency*, and *intonation of words* (Ross, Edmondson & Burton Seibert, 1986; Turkbay & Conguoglu, 2007). *Prosody* also involves a process used to alter the

meaning (i.e., linguistic prosody) or emotional force (i.e., affective prosody) of a sentence. The components of prosody are rhythm, pitch, tone, and stress, all articulated by modulating the acoustic correlates of prosody: frequency, duration, and amplitude (Colin, Fitzsimons, Asenbauer & Staunton, 1999).

The study of vocal skill development provides teachers with strategies to enhance auditory processing and speech quality. Auditory processing enables individuals to perceive and produce distinct phonemes, inflections, and pitches and to sense the duration of sounds in language and music, all of which functions contribute to literacy (O'Herron, 2007). Indeed, research has revealed a link between musical perception and reading ability (Barwick, Valintine, Robert, & Wilding, 1989). Oral fluency includes prosody and the ability to put words together into natural speech rhythms in terms of intonation, inflection, and flow, while auditory perception relates to learning both music and language. Prosody also entails descending and ascending temporal measurement according to the musical vocal composition (Albuz, 1997). More broadly, *prosody* encompasses a range of features in speech and language, including pitch, volume, tempo, and rhythm (Cruttenden, 1997), which suggests that prosody moreover relates to duration, pitch, and vowel intensity.

The sound of spoken language involves the rise and fall of pitch as well as flow of time in speech, which in music are known as melody and rhythm, respectively (Pearl, 2004). Unlike in the English language, which is non-tonal, in some languages intonation changes meaning or expression, if not both. In fact, more than half of the world's population speaks tonal languages, including Mandarin and Thai, in which speaking with short intonation contours affects the meaning of words (Ross, 1986). In Turkish, also a tonal language, word placement is also important for pronouncing accents and is a component of intonation. In Turkish sentences, accentuated words tend to appear next to the verb, and melodic words and suprasegmental or prosodic features are subject to accent, intonation, caesura, and full stops. A word or sentence's intensity peak exhibits special features in Turkish, in which initial syllables have some intensity, middle ones far more intensity, and final ones the most intensity. However, accent placement changes vary depending on a particular word's function. For example, accent placement changes and is emphasized on the first syllable in adverbs and exclamations (Banguoglu, 1990).

Intonated words and sentences with fluctuating vocal pitches can reflect different meanings in Turkish. Sometimes, only one word or a sentence with an alternative intonation can express far more meaning and emotion (Banguoglu, 1990). As such, intonation and accent correlate in Turkish and are even inseparable. In both of two types of speaking—namely, tonal speaking and non-tonal speaking—this difference is relates directly with accent. Non-intonation does not involve a scope to improve accent efficiency. However, in the tonal language of Turkish, it is possible to change intonation by way of voice education. In traditional speech therapy, vocal production is situated in a special educational context, in which the voice can be studied perceptually, acoustically, and physiologically. Perceptually, the voice consists of three basic components—pitch, volume or intensity, and timber (Bele, 2008)—and the term *prosody*, or the melody and rhythm of speech, commonly refers

to a range of features in speech and language, including pitch, volume, tempo, and rhythm (Cruttenden, 1997).

Our study demonstrates that Turkish is a tonal language whose speakers can improve intonation by way of vocal education. However, our study suffered from the brevity of participants' vocal exercises and breathe management assignments. If the training program had been prolonged, then the accent defects might have improved even more significantly. Furthermore, participants' performances were limited in reading the text with intonation together with the musical melody. As a result, they focused more heavily on musical melody intonation (Aycan, 2012), as did a group of students selected randomly from Erciyes University's third-year classes in Turkish teaching. In our study, *Ataturk's Oration for Turkish Youth was the oral text chosen by speaking education instructors from the university's Faculty of Turkish Education. We chose one passage ("Birinci vazifen Türk İstiklalini, Türk cumhuriyetini ilebet muhafaza ve müdafaa etmektir. Mevcudiyetinin ve İstikbalinin yegane temeli budur")* and seven words from it – "*Türk,*" "*vazifen,*" "*mevcudiyetinin,*" "*istiklalini,*" "*istikbalinin,*" "*muhafaza,*" and "*mudafaa*" – all of which contain the vowel i, e, a, u, and ü, which we analyzed using PRAAT.

At post-test, the prosodic parameters of duration, intensity, and amplitude had significantly improved. However, the sample had little musical ability and had never played any musical instruments. Compared to the group with musical ability, the non-musical sample benefited from the techniques employed.

In sum, first-year students in the Music Department participated in programmed vocal training so that we could investigate potential improvements in their respiratory capacities and accent problems. The programmed training lasting 2.5 months significantly changed their respiratory capacities (e.g., FEV1), which shows that they began to be able to control their breath while speaking or reading. Furthermore, their vocal quality improved in terms of intensity, intensity in air, amplitude, and duration. With the aim to promote best practices in order to enhance students' speech, our study marks the first on programmed vocal training that has shown an improvement in participants' accent problems, evidenced by respiratory and vocal analysis.

We conclude that the vocal training methods applied can significantly improve students' accent defects, accent expressions, and breath management and can ultimately promote the correct expression of Turkish words.

In conclusion, The Music Department 1st year class students took part in programmed voice training and improvements for their respiratory capacities and accent problems as an investigative study. A programmed vocal training exercise for 2.5 months significantly changed their respiratory capacities eg *FEV1* reflecting that they started to be able to control their breath while speaking or reading. Furthermore, their voice qualifications also improved by testing: *intensity, intensity in air, amplitude* and *duration*. The aim of the study was to promote best practice to enhance the Music Department student's speech. This study is believed to be the first known study on programmed vocal training showing the improvement of the accent

problems evidenced by using respiratory and vocal analysis on the Music Department's students.

It was concluded from this study that when students have voice lessons in the Fine Arts Faculty Music Department, such vocal training methods significantly improve accent defects and such methodology proved to be helpful in improving accent expressions as well as assisting breath management. This methodology ultimately lead to the correct expression of Turkish words.

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Türkçe'de Vurgu Kusurlarının Düzeltilmesinde Ses Eğitimi Yöntemlerinin Etkisi

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Özet

Problem Durumu: Bu çalışma ses eğitimi yöntemleriyle Türkçe vurgu kusurlarındaki düzeltilmeleri veya iyileşmeleri değerlendirmek üzere kurgulanmıştır. Araştırmacılar bu amaç çerçevesinde en önemli problemin sadece nefes kontrolü çalışmaları ve ses egzersizlerinin birçok ses eğitimcisi tarafından önemsenmesi olduğunu gözlemlemişlerdir. Bu sebeple bu çalışmada müzik bestelerinin sözleri ile nefes kontrolü çalışmaları, vurgu kusurları ve doğru konuşma eğitimi arasındaki doğrudan ilişki gösterilmeye çalışılmıştır. Müzik bölümü öğrencileri eğer doğru konuşma alışkanlıkları kazanırlarsa ünsüzleri vurgulayarak nefeslerini etkili bir şekilde kontrol edebilirler ve ardından ünlüleri konuşarak dil ve dudaklarının esnek hareketleriyle çenelerini kullanırlar. Bunun yanında prozodi çalışmaları ile ses eğitimi ve tonlayarak metin okuma çalışmaları yapmak arasında direk bir ilişki vardır. Ses egzersizleri bu sebeple doğru perde üzerinde ses üretmek, bağırmadan konuşmak ve sesle ilgili kaslara konuşurken yük bindirmekten kaçınmak için yapılmaktadır. Bununla birlikte ses eğitimcileri bu durumu sağlamak için bireysel ses eğitimi çalışmalarında sadece nefes çalışmaları ve ünlü harfler üzerinde egzersizler yaptırılmaktadırlar. Ancak ses eğitimcileri nefes egzersizleri ile ünsüzlerin vurgulanması arasındaki ilişkiyi bilmemektedirler. Genel olarak ses eğitimcileri metin okuma çalışmaları ile prozodi çalışmaları (ses-söz uyumu) arasında doğrudan bir ilişki olduğunu bilmektedirler. Fakat bazı ses eğitimcisi şarkıların sözlerini konuşmaya önem verirken bazıları vermemektedir. Araştırmacılar bu sıkıntıyı gözlemlemiş şarkı sözlerinin doğru konuşulması ile nefes kontrolü, vurgu kusurları ve doğru tonlama arasındaki ilişkiyi göstermeye çalışmışlardır.

Araştırmanın Amacı: Bu çalışmanın yapılaş amacı ses eğitimi yöntemlerinin vurgu kusurlarına etkisinin nasıl olduğunu ortaya çıkartmak; çalışma grubunun müziksel işitme ve konuşma becerilerini geliştirecek en iyi teknikleri elde etmektir. Bu amaçla ses eğitimi çalışmaları Erciyes Üniversitesi, Güzel Sanatlar Fakültesi, Müzik Bölümü gönüllü 1.sınıf öğrencileriyle (n=12) uygulanmıştır. Öncelikle vurgu kusurları ses eğitimiyle iyileştirilmiş, ardından kaydedilmiş ve değerlendirilmiştir.

Araştırmanın Yöntemi: Kayıtlar ‘Vitalograph Alpha, Model 6000’ taşınabilir *spirometre* cihazı ve ‘PRAAT ses analiz programı’ ile alınmıştır. Çalışmaya katılan öğrencilerle uygulanan ses eğitimi analiz etmek için ses eğitimi uzmanları tarafından seçilmiş Türkçeye çevrilip, uyarlanmış bir *lied* çalışılmıştır. Çalışmanın öncesi ve sonrasında çalışmaya katılan öğrenciler bu *lied*’in sözlerini düz metin haliyle okumuşlardır. Vurgu kusurları bu *lied*’den seçilmiş ‘*insan*’, ‘*ormanda*’, ‘*gezerken*’, ‘*güzel*’, ‘*öter*’ ve ‘*kopardığın*’ kelimelerinde şiddet, soluk şiddeti, genlik ve perde değerleri üzerinden PRAAT programı ile analiz edilmiştir.

Araştırmanın Bulguları: Ses eğitimi sonrasında taşınabilir *spirometre* cihazından elde edilen FEV1 ($p<0.05$) değeri istatistiksel açıdan anlamlı bir şekilde artmış olmasına rağmen VC ve FVC değerleri anlamlı bir değişiklik göstermemiştir. Ses analizleri sonucunda ses eğitimi sonrasında Türkçeye çevrilip, uyarlanmış *lied*’den seçilmiş ‘*insan*’, ‘*ormanda*’, ‘*gezerken*’, ‘*güzel*’, ‘*öter*’ ve ‘*kopardığın*’ kelimelerinde genlik ($p<0.05$), ‘*Ormanda*’ ve ‘*gezerken*’ kelimelerinde şiddet ($p<0.05$ ve $p<0.001$) anlamlı bir şekilde artış görülmüştür. Ayrıca ‘*güzel*’, ‘*öter*’ ve ‘*kopardığın*’ kelimelerinde soluk şiddeti ($p<0.05$) istatistiksel açıdan anlamlı bir şekilde artmıştır.

Araştırmanın Sonuç ve Önerileri: Aycan (2012) yaptığı benzer bir çalışmada rastgele seçilen Erciyes Üniversitesi, Eğitim Fakültesi, 3. Sınıf Türkçe Öğretmenliği öğrencileri katılmıştır. Bu çalışmada konuşma eğitimi dersi uzmanları tarafından ‘Atatürk’ün Gençliğe Hitabesi’nden bir paragraf: ‘*Birinci vazifen Türk İstiklalini, Türk cumhuriyetini ilelebet muhafaza ve müdafaa etmektir. Mevcudiyetinin ve İstikbalinin yegâne temeli budur*’ seçilmiş ve ‘*i, e, a, u, u*’ ünlülerini içeren 5 kelime: ‘*Türk, vazifen, mevcudiyetinin, istiklalini, istikbalinin, muhafaza, müdafaa*’ seçilip PRAAT programıyla analiz etmiştir. Çalışma sonucunda ses eğitimi uzmanları tarafından seçilmiş unlu ve ünsüzlerden oluşan ses egzersizleri ve okuma parçalarındaki tonlama çalışmaları *prozodik* parametreler (*sure, şiddet ve genlik*) istatistiksel açıdan anlamlı çıkmıştır. Bununla birlikte çalışma grubundaki öğrenciler önceden hiçbir müzik enstrümanı çalmamış ve yeterli müzik kabiliyeti gösterememiştir. Bu çalışmadaki müzik kabiliyeti olmayan grupla hâlihazırda çalışılan müzik yeteneği olan gruptaki öğrencilerin durumları *prozodik parametreler* üzerinden karşılaştırıldığında uygulanan tekniklerin müzik kabiliyeti olmayan grupta daha başarılı olduğu görülmektedir. *Prozodi* üzerine yapılan çalışmalar ve tartışmalar Türkçe’nin bir ton dili olduğunu, ses eğitiminin tonlamayı değiştirebileceğini ya da iyileştirebileceğini göstermektedir. Bununla birlikte bu çalışma öğrencilerin ses egzersizleri ve soluk çalışmalarını yeterince çalışmamalarından olumsuz yönde etkilenmiştir. Eğer bu ses eğitimi çalışmaları daha uzun süre yapılırsa vurgu kusurlarının daha da anlamlı şekilde düzeleceği beklenmektedir. Bunun yanında çalışmaya katılan öğrencilerin algıları tonlayarak metin okuma konusunda sınırlıdır. Başka bir deyişle öğrenciler sadece müzikal açıdan tonlamayı önemsemektedirler. 2.5 aylık surede solunum kapasiteleri (örneğin FEV1 değerinde) istatistiksel açıdan anlamlı bir şekilde değişmiştir. Dolayısıyla çalışmaya katılan öğrenciler konuşup, şarkı söylerken soluklarını kontrol edebilmeye başlamışlardır. Ayrıca çalışmaya katılan öğrencilerin ses kaliteleri: ‘sesin şiddeti, soluk şiddeti, genliği ve suresi’ değişmiştir. Sonuç olarak bu yöntem Türkçe kelimelerin doğru ifade edilmesinde yol gösterici olmuştur. Müzik Bölümü

öğrencilerinin vurgu kusurlarını ne düzeyde iyileştirdiğini ve bunu ses ve soluk kullanımı analizleriyle de göstermesi sebebiyle de öncül bir çalışma olacağına inanılmaktadır.

Anahtar Sözcükler: PRAAT, bireysel ses eğitimi, prozodik problemler.

The Effect of Cooperative Learning Method and Systematic Teaching on Students' Achievement and Retention of Knowledge in Social Studies Lesson*

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Abstract

Problem Statement: Many effective instructional strategies, methods, and techniques, which were developed in accordance with constructivist approach, can be used together in social studies lessons. Constructivist education comprises active learning processes. Two active learning approaches are cooperative learning and systematic teaching.

Purpose of the Study: The present study was conducted to determine the effect of the cooperative learning method and the systematic teaching and constructivist learning approaches on student achievement and retention in teaching the social studies lesson unit "The Place We Live" in a 4th grade class at the elementary school level.

Method: The research was based on pretest-posttest control group experimental design. Accordingly, experiment group 1 received instruction based on the cooperative learning method, experiment group 2 received instruction based on the systematic teaching method, and control groups 1 and 2 were instructed through the constructivist learning approach. A total of 110 students were assigned to the experiment and control groups, and the paired samples t test and one-way ANOVA were used to analyze the data.

* This article is produced from Selma Korkmaz Toklucu's master thesis which was accepted at Ahi Evran University, Institute of Social Sciences in January 2013 and supervised by Asst. Prof. Dr. Bayram Tay.

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Findings: The results of the study suggested that the cooperative learning method and the systematic teaching and constructivist learning approaches are effective ways of enhancing students' achievement. Conversely, experiment and control group post test scores were not significantly different from each other. The cooperative learning method and the systematic teaching and constructivist learning approaches (control-1) were found to secure retention of knowledge, but failed to achieve retention of the knowledge among students in control group 2.

Conclusion and Recommendations: The study found that cooperative learning and the systematic teaching and constructivist learning approaches were effective in enhancing student achievement and retention in social studies lessons (except for control-2). Based on these results, it is recommended that in order to enhance academic achievement and retention of gains in social studies lessons, the cooperative learning method and systematic teaching can be used in addition to the constructivist learning approach. Moreover, failure of the constructivist learning approach to achieve retention in control group 2 can be based on different reasons. One reason can be the teachers' lack of knowledge about the basic philosophy and steps of constructivist approach. In this context, it is recommended that teachers should have in-service training about the constructivist approach.

Keywords: Social studies, cooperative learning method, systematic teaching, constructivist learning approach

Introduction

With the implementation of the 2005 curriculum in Turkey, the constructivist learning approach was employed to provide students with basic knowledge, skills, attitudes, and values regarding social life in social studies lessons. Constructivism is based on the idea that people learn better when they actively construct knowledge and associate new knowledge with previous knowledge (Smerdon, Burkam & Lee, 1999). Students who learn according to the constructivist approach discover knowledge and use it effectively in various situations (Perkins, 1999). In this context there are two principles of constructivism. First, knowledge cannot be acquired in passively. Knowledge is actively constructed and this constructed knowledge can differ from person to person. Second, there is not a single truth in the world. Since individuals try to understand the world through their own experiences, truth differs according to every individual's own perception (Wheatley, 1991). Furthermore, constructivism is not a theory of teaching but rather of learning (Richardson, 2003, p. 1629). Grennon Brooks and Brooks (1993, as cited in Brooks & Brooks, 1999, p. 20) define the five basic principles of constructivism as follows:

1. A constructivist teacher seeks for and cares about learners' viewpoints.

2. A constructivist teacher constructs (plans) the lessons to challenge the students' assumptions.

3. A constructivist teacher is aware that students need to make additions regarding the curriculum.

4. A constructivist teacher does not construct (plan) the lessons around small fragments of knowledge, but instead around great ideas.

5. A constructivist teacher does not evaluate the students' learning separately, but instead within the context of daily classroom research.

Though it has different definitions and procedures, the nature of constructivist lessons involves four well accepted components. These are:

1. Students construct meaning on their own.

2. New learning is constructed on previous knowledge.

3. Learning is consolidated with social interaction.

4. Meaningful learning develops through authentic tasks (Good & Brophy, 1994 as cited in Cooperstein & Kocevar-Weidinger, 2004).

These principles must be considered if the constructivist learning approach is to bring about meaningful learning and students' awareness (Unal, 2010). Another approach that can help achieve meaningful learning in social studies lessons is cooperative learning. Cooperative learning is the most remarkable and productive of all fields of practice, research, and theory in education (Johnson, Johnson & Stanne, 2000). Johnson & Johnson (1999, p. 68) state that cooperative learning is a versatile procedure and can be used for a variety of purposes. In other words, cooperative learning develops when students work together in order to achieve common learning goals (Johnson & Johnson, 1999 as cited in Johnson, Johnson & Stanne, 2000). Furthermore, cooperative learning is the cooperative work of students in order to achieve shared learning goals, including the completion of certain assignments and tasks in a period of several weeks (Johnson, Johnson & Smith, 1998). To succeed in these cooperative activities, basic principles of the cooperative learning method should be taken into consideration. These five basic principles include: positive interdependence, face-to-face interaction, individual accountability, social skills, and group process (Johnson, Johnson & Holubec, 1992).

Another approach to enhance learner achievement in social studies lessons is systematic teaching. Systematic teaching is based on the probability philosophy, which states that education can be arranged for every student, for certain groups, or even for all people. Moreover, teaching, learning, and evaluation activities can be handled in a similar vein with multi or single dimensional perspectives. How all activities are constructed changes according to the situation and conditions. As there is no single learning-teaching strategy, theory, method, technique, or tactic for now, there may be no strategy, theory, method, technique, or tactic that learners always use to acquire every kind of behavior. Many rationales can be employed. One may

prefer discovering, comprehending, using, and reproducing knowledge while acquiring knowledge, skills, affects, and intuitions (Sonmez, 2004).

Systematic teaching is based on discovering, making sense of, using, and reproducing knowledge by students. A teacher can only be a guide. Any kind of learning and teaching activity can generally be centered on the students. Teachers should generally arrange the settings and provide resources for the students to discover, comprehend, use, and reproduce knowledge. Students should discuss with pictures, slides, cases, dialogues, and dramatizations, and discover the principles and method themselves. Teachers should only provide cues, feedback, and correction (Sonmez, 2010). Educational games, contests, scientific research, time, love, reasoning, a democratic environment, and multidimensional evaluations are the major components of systematic teaching (Sonmez, 2010).

In this context, both cooperative learning and systematic teaching can be regarded as active learning methods. Considering the theoretical accounts above, it is assumed that social studies lessons conducted per the constructivist learning approach can be executed with the cooperative learning method and systematic teaching as well. The constructivist learning approach, cooperative learning method, and systematic teaching mainly suppose that students can access and internalize knowledge through different activities and participation in learning activities. In addition to this, considering that enriching the learning environment with different strategies, methods, and techniques enhances learning, the constructivist learning approach, the cooperative learning method, and systematic teaching are believed to be effective ways of instruction. The rationale behind this study was the pedagogical importance of investigating and comparing the contributions of the constructivist learning approach, the cooperative learning method, and systematic teaching to students' learning and retention of knowledge. It is also believed that this comparison will once again stress the necessity of using different activities, like the cooperative learning method and systematic teaching, beside those in the teacher's guide for a social studies course in order to enhance the retention of knowledge. It is thought that the findings of this study will contribute to increasing the efficacy and productivity of social studies lessons and serve as a reference to future research.

A review of relevant literature reveals there is research on cooperative learning for different grades, subject fields, and units, and cooperative learning has been generally compared with traditional teaching methods or the constructivist approach (Karaoglu, 1998; Ozkal, 2000; Celebi, 2006; Law, 2008; Eskitürk, 2009). Various research has been conducted about using systematic teaching for different grades, subject fields, and units, and it is generally compared with traditional teaching methods or the constructivist approach (Alacapinar, 2002; Cetin, 2003; Kocak, 2004; Memisoglu, 2004; Pas, 2004; Piji, 2006; Kapicioglu, 2006; Kucukoglu, 2007; Takkac, 2007; Ontas, 2010). No research has been found with the aim of comparing the efficacy of more than one approach in this subject field, unit, and grade. Therefore, the present research is regarded as important in providing resourceful findings for future research.

The Purpose of the Study

The present research aimed to investigate whether or not there is any statistically significant difference between the levels of achievement and knowledge retention of 4th class elementary students regarding "The Place We Live" unit taught in social studies using the cooperative learning method and the systematic teaching and constructivist learning approaches. In line with this major purpose the following hypotheses were tested:

Hypothesis 1: There are statistically significant differences between pre- and post-experiment achievement levels of students who were taught using the cooperative learning method (experiment-1) and the systematic teaching (experiment-2) and constructivist learning approaches (control group 1-2).

Hypothesis 2: There are no statistically significant differences between post-experiment achievement levels of students in experiment and control groups.

Hypothesis 3: There are no statistically significant differences between post-experiment achievement levels and knowledge retention levels of students in experiment and control groups.

Hypothesis 4: There is no statistically significant difference between knowledge retention levels of students in experiment and control groups

Method

Research Method

In line with the purpose of the study a quantitative approach was employed and pretest-posttest control group experimental design was used. The experimental method is based on experiments, defined as a test conducted under controlled conditions in order to investigate the truth of a hypothesis or to reconfirm an already known truth. The key element in this definition is control, which distinguishes experimental design from non-experimental designs (Muijs, 2004, p. 13).

Data Source

Data were collected from 4th grade students studying at two elementary schools in Kirsehir province during the 2011-2012 school year. Since four groups (two experiments and two controls) were involved in the study, a multi-stage sampling method was used. Multi-stage sampling requires using different sampling methods at every stage of sampling (Buyukozturk, Kilic Cakmak, Akgun, Karadeniz & Demirel, 2010). A convenience sampling method was used for the present study, which brings speed and ease to the research (Yildirim & Simsek, 2011). Accordingly, the sample was selected from the city where the researchers worked. In the second stage a simple random sampling method was used. Accordingly, the names of the elementary schools in Kirsehir province were written on pieces of paper, and one paper was selected randomly. In the third stage the purposive sampling method was used. Those schools similar to elementary school A (selected in the second stage) in

terms of socio-economic environment and school success were determined; i.e., a homogeneous sampling method was used. Next, the second school (B) was selected randomly from among the elementary schools selected according to the homogeneous sampling. Elementary school A had a total of five 4th classes and school B had eight 4th classes. All of these classes were administered the pre-test and, according to the results, three classes (two experiment and one control) were selected from school A and one class (control group) was selected from school B as the study groups. A total of 110 students were involved in these four groups. These four equivalent 4th classes were randomly assigned as experiment and control groups. Some descriptive are given in Table 1 below.

Table 1.

Descriptives for the Study Groups

School	Group	\bar{X}	S	Treatment	Class	Gender		Number of students
						Girl	Boy	
A	<i>Experiment -1</i>	13,03	4,48	<i>Cooperative learning</i>	4-A	13	15	28
A		10,91	3,41		4-B	17	15	32
A	<i>Experiment -2</i>	13,23	4,55	<i>Systematic teaching</i>	4-C	15	11	26
A	<i>Control-1</i>	13,53	5,12	<i>Constructivist learning</i>	4-D	11	17	28
A		14,71	3,63		4-E	13	19	32
B		22,15	1,94		4-A	16	18	34
B		10,52	3,58		4-B	15	14	29
B	<i>Control-2</i>	12,57	4,37	<i>Constructivist learning</i>	4-C	16	12	28
B		8,72	3,34		4-D	14	11	25
B		16,82	3,80		4-E	19	14	33
B		16,46	3,85		4-F	17	11	28
B		9,59	3,97		4-G	16	13	29
B		21,88	1,75		4-H	12	14	26

Of those 4th graders who participated in the study, 55 (50%) were boys and 55 (50%) were girls.

Instrument

In order to measure to what extent the students in the experiment and control groups gained the objectives of the unit, an achievement test developed by researchers was used. This test was administered on the participants three times as a pre-test, post-test, and retention test. The achievement test was developed according to the objectives of the "The Place We Live" unit in the curriculum of 4th grade Social studies lesson in line with the following steps:

1. First, a table of specifications was prepared for the achievement test.
2. After preparing the specifications table, 65 multiple-choice items were written for unit "The Place We Live", based on the 4th grade social studies curriculum, course books, student workbooks, teacher guide books, and reference books.
3. The draft test was consulted by an expert panel of three academicians from Ahi Evran University who specialized in teaching social studies; one social studies teacher and two classroom teachers. The test was revised based on their feedback. Next, an achievement test was administered to 196 fifth graders who had already studied the relevant unit. As a result of the pilot study, indices for difficulty and discrimination for each item and the reliability for the test in general were calculated. The final form of the achievement test comprised 25 items and the alpha reliability coefficient of the test was estimated to be .82.

Procedure

Necessary permissions were granted before implementing the study and the following actions were taken:

1. The instrument was developed. Using this instrument, study groups were assigned and the pre-test applied.
2. Lesson plans were prepared in accordance with the cooperative learning method and systematic teaching to be implemented in experiment groups 1 and 2, respectively. Lesson plans for systematic teaching were prepared based on the sample plans developed by Sonmez (2010). The cooperative learning method-based lesson plans were consulted by two academicians from Ahi Evran University who had written a thesis and articles about cooperative learning. Systematic teaching-based lesson plans were consulted by three academicians who specialized in curriculum development. Based on feedback from these academicians, lesson plans were revised.
3. As the social studies lesson plans are currently used based on the constructivist approach, no alternative lesson plans were prepared for the control groups. The lesson plans provided in teacher guides were used for these groups.
4. Before the treatment, students in experiment groups 1 and 2 were separately informed about the cooperative learning method and systematic teaching and the relevant activities used in these methods, respectively.

7. The treatment was done for five weeks between 1 November 2011 and 30 November 2011. The duration of the treatment, as assigned in the curriculum, was 15 lesson hours.

8. Students heterogeneously assigned into clusters during cooperative group work in experiment group 1, and scenarios were successively given to each cluster in accordance with the lesson objectives. Five distinct topics in the unit "The Place We Live" were taught using techniques from the cooperative learning method, including combining, ask together learn together, student team achievement parts, learning together, and group inquiry. The activities arranged in accordance with the basic principles and steps of these techniques were applied for five weeks. Each of these techniques and relevant tasks were introduced and explained to the students before the treatment. Students were given different tasks and thus engaged to the lesson activity. Group members were changed for each topic. The seats were rearranged before each lesson according to the techniques. Various resources and materials were used while teaching the unit and topics. Various worksheet and activities were prepared for the topics and revision tests were administered at the end of each week. Activities took place in the classroom.

9. Students in experiment group 2 were taught lessons using systematic teaching. Various resources and materials were used while teaching the topics. The behavioral objectives were determined and then teaching and learning processes were arranged. The lesson plans included proper and consistent activities regarding the behavioral objectives, and strategies, methods, and techniques suitable for these objectives. The questions to be asked to the students, and their correct answers, cues, corrections and feedback, and reinforcements were prepared. Questions were asked equally to all students in order to engage them in the lessons. Relevant pedagogical materials were prepared and used when necessary. Colored picture sets and sample cases were used to ensure that students could discover the knowledge and produce new knowledge based on what they had learned. During the development part of the lesson the teacher projected slides and used examples about the topic to contextualize verbal explanations. The teacher asked questions about the concepts taught. After explaining the topics, the teacher helped the students acquire the relevant knowledge thanks to colored pictures and sample cases. Students were asked to make short dramatizations (using puppets) about the topics. Summaries were provided from time to time. Supportive points were presented during transitional summaries, and main points were presented during the final summary. Relevant activities were prepared and revision tests were administered at the end of each week. Students were evaluated for their gains during the process.

10. Students in control groups 1 and 2 were taught the lessons according to the constructivist learning approach. The teacher used the methods as specified in the teacher guidebook in order to have the students achieve the objectives. She used the activities in the student workbook and adopted the lesson plan as suggested in the teacher guide book. The constructivist approach-based social studies curriculum was implemented accompanied with a main course book and a student workbook. Before transition to the main topic, the teacher made an introduction using the statements

from the lead-in part of the lesson plan, and then implemented the instructional activities following the directions in the teacher guidebook. Classroom teachers met before the lessons and exchanged their views about how to teach.

11. A social studies achievement test was administered twice following the completion of relevant lessons with all four groups, one as the post-test (2 December 2011) and the other as a retention test 4 weeks later (30 December 2011).

Data Analysis

While evaluating the social studies achievement test administered as the pre-test, post-test, and retention test, correct answers were scored with one (1) point, whereas wrong or unanswered items were scored as zero (0). Scores were recorded in a computer and analyzed using SPSS software. The data were analyzed using mean, standard deviation, paired samples *t* test, and one-way ANOVA. The level of significance was considered $p < 0.05$.

Results

One-way ANOVA was used to test the statistically significant differences between the pre-test scores of students in the experiment and control groups. The results are given in the table below.

Table 2.

Results of One-Way ANOVA Test regarding Pre-Test Scores of Experiment and Control Groups

Source of variance	Sum of squares	df	Mean squares	F	p
Between groups	13.690	3	4.563		
Within groups	2283.401	106	21.542	.212	.888
Total	2297.091	109			

According to Table 2, there is no significant difference between the pre-test scores of groups [$F_{(3-106)} = .212$; $p > 0.05$]. Based on this finding, the pre-test scores of the groups before the treatment can be said to be equivalent.

Hypothesis 1: There are statistically significant differences between pre- and post-test experiment achievement levels of students who were taught using the cooperative learning method (experiment-1) and the systematic teaching (experiment-2) and constructivist learning approaches (control group 1-2).

To test the first hypothesis a paired sample *t* test was used. The results are presented in the following table.

Table 3.

Results of Paired Samples T Tests Comparing Pre-Test and Post-Test Scores of Experiment And Control Groups

Group	Test	N	\bar{X}	S	df	t	P
Experiment-1	Pre-test	28	13.03	4.4843	27	-11.524	.000
	Post-test	28	21.17	2.6254			
Experiment-2	Pre-test	26	13.23	4.5546	25	-13.001	.000
	Post-test	26	19.80	4.1087			
Control-1	Pre-test	28	13.53	5.1170	27	-8.011	.000
	Post-test	28	19.07	2.8011			
Control-2	Pre-test	28	12.57	4.3667	27	-7.745	.000
	Post-test	28	19.25	4.4524			

An analysis of table 3 reveals that there are statistically significant differences between pre-test and post-test achievement scores of experiment and control groups [($t_{(27)} = -11.524$; $p < 0.05$); ($t_{(25)} = -13.001$; $p < 0.05$); ($t_{(27)} = -8.011$; $p < 0.05$); ($t_{(27)} = -7.745$; $p < 0.05$)]. Based on these findings, the first hypothesis of the research is proven. In other words, using the cooperative learning method (experiment-1) and the systematic teaching (experiment-2) and constructivist learning approaches (control groups 1 and 2) had a positive impact on student achievement.

Hypothesis 2: There are no statistically significant differences between post-experiment achievement levels of students in experiment and control groups.

To test the second hypothesis a one-way ANOVA was used. The results are presented in the following table.

Table 4.

Results of One-Way ANOVA Comparing Post-Test Scores of Experiment and Control Groups

Source of variance	Sum of squares	df	Mean squares	F	p
Between groups	76.465	3	25.488	1.994	.119
Within groups	1355.253	106	12.785		
Total	1431.718	109			

According to Table 4 there is no significant difference between the post-test achievement scores of the groups [$F_{(3-106)} = 1.994$; $p > 0.05$]. In other words, the second hypothesis was also proven. According to these findings, the post-test achievement scores of the groups are not statistically different from each other.

Hypothesis 3: There are no statistically significant differences between post-experiment achievement levels and knowledge retention levels of students in experiment and control groups.

To test the first hypothesis a paired sample *t* test was used. The results are presented in the following table.

Table 5

Results of Paired Samples T Tests Comparing Post-Test and Retention Test Scores of Experiment and Control Groups

Group	Test	N	\bar{X}	S	df	t	P
Experiment-1	Post-test	28	21.17	2.6254	27	.570	.573
	Retention	28	20.96	2.7282			
Experiment-2	Post-test	26	19.80	4.1087	25	.101	.921
	Retention	26	19.77	3.8813			
Control-1	Post-test	28	19.07	2.8011	27	.412	.684
	Retention	28	18.85	3.7978			
Control-2	Post-test	28	19.25	4.4524	27	3.126	.004
	Retention	28	16.60	5.2163			

The analysis of Table 5 reveals there are no statistically significant differences between post-test achievement scores and retention test scores of both experiment groups and the control group 1 [($t_{(27)} = .510$; $p > 0.05$); ($t_{(25)} = .101$; $p > 0.05$); ($t_{(27)} = .412$; $p > 0.05$)], whereas there is a statistically significant difference between post-test achievement scores and retention scores of control group 2 in favor of post-test scores ($t_{(27)} = 3.126$; $p < 0.05$). These findings suggest that the third hypothesis of the study is contradicted. In other words, while the teaching approaches used in experiment groups 1 and 2, and control group 1, secured the retention of knowledge the students learned, in control group 2 the constructivist learning approach failed to guarantee the retention of knowledge.

Hypothesis 4: There is no statistically significant difference between knowledge retention levels of students in experiment and control groups.

To test the fourth hypothesis a one-way ANOVA was used. The results are presented in the following table.

Table 6.

Results of One-Way ANOVA Comparing Retention Test Scores of Experiment and Control Groups

Source of variance	Sum of squares	df	Mean squares	F	p	Difference (Scheffe)
Between groups	284.168	3	94.723			
Within groups	1701.687	106	16.054	5.900	.001	1-4 2-4
Total	1985.855	109				

As seen in Table 6, a significant difference was observed between the retention scores of the experiment and control groups [$F_{(3-106)} = 5.900$; $p < 0.05$]. The post-hoc Scheffe test revealed there are significant differences between experiment group 1 and control group 2, and between experiment group 2 and control group 2, in favor of the experiment groups.

Discussion and Conclusion

According to the results of the research, there were no significant differences between pre-test scores of the experiment and control groups; i.e., the groups were equivalent in terms of achievement before the experiment.

It was concluded that the cooperative learning method (experiment-1) and the systematic teaching (experiment-2) and constructivist learning approaches (control groups 1 and 2) increased the level of student achievement significantly and positively. The relevant literature also suggests that the cooperative learning method (Karaoglu, 1998; Ozkal, 2000; Celebi, 2006; Eskitürk, 2009; Kus & Karatekin, 2009), systematic teaching (Sonmez, 2001; Kocak, 2004; Memisoglu, 2004; Pas, 2004; Takkac, 2007; Ontas, 2010; Sezginsoy & Akkoyunlu, 2011) and constructivist learning approach (Unal & Celikkaya, 2009) enhances learning success in social studies lessons. Moreover, it was reported that students' academic achievement in other lessons are enhanced through the cooperative learning method (Johnson, Johnson & Scott, 1978; Walker & Crogan, 1998; Johnson, Johnson & Stanne, 2000; Anderson, Mitchell & Osgood, 2005; Adeyemi, 2008) and through the systematic teaching (Alacapinar, 2002; Cetin, 2003; Kapicioglu, 2006; Piji, 2006; Kucukoglu, 2007) and constructivist learning approaches (Karasu & Unlu, 2006; Teyfur, 2010). Thus, it appears that the findings of the present study are in agreement with the results of previous research.

No significant difference was observed between post-test scores of the experiment and control groups. In other words, cooperative learning, systematic teaching, and constructivist learning approaches altogether increase the students' success without any superiority or inferiority to each other.

It was concluded that the cooperative learning method and the systematic teaching and constructivist learning approaches applied in both experiment groups 1

and 2, and control group 1, had a positive impact on the retention of the knowledge students learned. However, the constructivist learning approach applied in control group 2 had no significant effect on the retention of the knowledge students learned. The relevant literature suggests that the cooperative learning method (Karaoglu, 1998; Eskitürk, 2009) and the systematic teaching (Sonmez, 2001; Kocak, 2004; Memisoglu, 2004; Pas, 2004; Sezginsoy & Akkoyunlu, 2011) and constructivist learning approaches (Unal & Celikkaya, 2009) had a positive effect on the retention of knowledge in social studies lessons. The failure of the constructivist learning approach to achieve retention of knowledge does not concur with either the results for control group 1 or the results in the literature.

The research also revealed significant differences between the experiment and control groups' scores from retention tests 4 weeks after the completion of treatment. These significant differences were between experiment group 1 (where the cooperative learning method was used) and control group 2 (where the constructivist learning approach was used), and between experiment group 2 (where systematic teaching was used) and control group 2 (where the constructivist learning approach was used) in favor of experiment groups 1 and 2. Karaoglu (1998) and Eskitürk (2009) found that the cooperative learning method was more effective on the retention of academic achievement of the students compared to other methods. Likewise, Sonmez (2001), Alacapinar (2002), Cetin (2003), Kocak (2004), Memisoglu (2004), Pas (2004), Kapicioglu (2006), Piji (2006), and Sezginsoy and Akkoyunlu (2011) also found that systematic teaching was more effective in the retention of the academic achievement of the students compared to other methods. These findings support the findings of the present study. However, it was observed that although the constructivist learning approach achieved long-lasting learning in control group 1, it failed to do so in control group 2. This may stem from several different factors. For example, teachers may be inadequate in applying the constructivist approach in these groups. Furthermore, the fact that the constructivist learning approach was applied by teachers dependant on the teacher guide books (this is just an observation that needs to be investigated and proven) might have created an improper setting of constructivist learning environments.

Recommendations

This study concluded that both the cooperative learning method and systematic teaching were effective in enhancing student achievement and retention in social studies lessons. Based on these results, it is recommended that the cooperative learning method and systematic teaching be used to enhance academic achievement and retention of gains in social studies lessons.

According to the research results, the cooperative learning method and the systematic teaching and constructivist learning approaches were effective in enhancing student achievement and retention in social studies lessons (except for control group 2). Teachers teach social studies lessons - and all other lessons (though this needs research) - following teacher guide books. Based on the results of the present study, it is recommended that in order to enhance academic achievement and

retention of gains in social studies lessons, teachers should not confine their lessons only to the activities in the guide books. Instead, they should use other approaches, strategies, methods, and techniques, especially those using the cooperative learning method and systematic teaching.

It was found that while teaching social studies lessons with the constructivist approach increased achievement and secured retention in control group 1, it only increased achievement and failed to guarantee retention in control group 2. This may be for different reasons, such as the teacher factor. In the present study, lessons in experiment groups were conducted by the researchers, while lessons in control groups were conducted by classroom teachers. In the future, research lessons in experiment and control groups should be conducted by the researcher and the results should be retested.

It was concluded that using systematic teaching was effective in enhancing student achievement and retention in social studies lessons. In this context, considering its contribution to teaching social studies lessons, the systematic teaching approach should be taken into consideration in curriculum development procedures.

In this study five different techniques belonging to the cooperative learning method (combining, ask together learn together, student team achievement parts, learning together, and group inquiry) were used. These techniques were effective in increasing the success and retention of learning in social studies lessons. In future research, these different techniques should be used to determine their impact on learning success and retention. Moreover, the subjects in the teacher guide books that are compatible with cooperative learning be determined, and teachers can be informed in detail about which techniques to use to apply the relevant methods.

One finding of the present study was the failure of the constructivist learning approach in control group 2 to achieve the retention of knowledge. This result suggests that there may be some drawbacks in implementation of constructivism. In this context, it can be said that teachers need some in-service training.

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İşbirlikli Öğrenme Yöntemi ve Dizge Eğitimin Sosyal Bilgiler Dersinde Öğrencilerin Başarısına ve Bilgilerinin Kalıcılığına Etkisi

Atıf:

- Korkmaz Toklucu, S., & Tay, B. (2016). The effect of cooperative learning method and systematic teaching on students' achievement and retention of knowledge in social studies lesson. *Eurasian Journal of Educational Research*, 66, 315-334
<http://dx.doi.org/10.14689/ejer.2016.66.18>

Özet

Problem Durumu: Yapılandırmacı anlayışa göre hazırlanan sosyal bilgiler dersinde etkili öğrenme ve öğretmeyi sağlayacak pek çok strateji, yöntem ve teknik bir arada kullanılabilir. Yapılandırmacı anlayış aktif öğrenme süreçlerini kapsamaktadır. Aktif öğrenme yaklaşımlarından biri işbirlikli öğrenme ve bir diğeri de dizgeli eğitim olabilir. Yapılandırmacı öğrenme yaklaşımı, işbirlikli öğrenme yöntemi ve dizgeli eğitimin temelde öğrencilerin farklı etkinlikler yoluyla ve öğrenme etkinliklerine katılımlarıyla bilgiye ulaşabilecekleri, ulaşabildikleri bilgileri

bu yollarla kalıcı hale getirebilecekleri varsayılmaktadır. Bununla birlikte öğrenme ortamlarının farklı strateji, yöntem ve tekniklerle zenginleştirilmesinin öğrenmeyi olumlu yönde etkilediği düşüncesinden hareketle yapılandırmacı öğrenme yaklaşımının, işbirlikli öğrenme yönteminin ve dizgeli eğitimin bu bağlamda etkili olabileceği düşünülmektedir.

Bu araştırma ile yapılandırmacı öğrenme yaklaşımı, işbirlikli öğrenme yöntemi ve dizgeli eğitimin öğrenci başarısına ve bilginin kalıcılığına etkisinin karşılaştırılmasının eğitim öğretim açısından önemli olduğu düşünülmüştür. Bu karşılaştırma ile Sosyal Bilgiler derslerinin sadece öğretmen kılavuz kitaplarında yer alan etkinliklerle değil işbirlikli öğrenme yöntemi ve dizgeli eğitim gibi öğrencilere farklı aktiviteler yapmaya ve böylelikle öğrenilenlerin kalıcılığını artırmaya dönük etkinliklere yer verilmesi gerekliliği bir kez daha gözler önüne serilmesi düşünülmüştür. Araştırmanın sonuçlarının, Sosyal Bilgiler öğretiminin daha etkili ve verimli olmasına katkıda bulunacağı ve yapılacak araştırmalara kaynaklık edebileceği düşünülmektedir.

Araştırmanın Amacı: Bu çalışmada işbirlikli öğrenme yöntemi, dizgeli eğitim ve yapılandırmacı öğrenme yaklaşımına göre öğrenim gören 4. sınıf öğrencilerinin Sosyal Bilgiler dersinde "Yaşadığımız Yer" ünitesiyle ilgili başarı ve bilgilerinin kalıcılık düzeyleri arasında istatistiksel olarak anlamlı düzeyde bir farklılık olup olmadığı betimlenmeye çalışılmıştır. Bu temel amaç doğrultusunda aşağıdaki hipotezler test edilmiştir:

1. İşbirlikli öğrenme yöntemi (deney-1), dizgeli eğitim (deney-2) ve yapılandırmacı öğrenme yaklaşımlarına (kontrol-1 ve kontrol-2) göre öğrenim gören öğrencilerinin deneysel işlem öncesi ve sonrası başarı düzeyleri arasında istatistiksel olarak anlamlı düzeyde bir farklılık vardır.

2. Deney ve kontrol gruplarında öğrencilerinin deneysel işlem sonrası başarı düzeyleri arasında istatistiksel olarak anlamlı düzeyde bir farklılık yoktur.

3. Deney ve kontrol gruplarında öğrencilerinin son test başarıları ile edindikleri bilgilerin kalıcılık düzeyleri arasında istatistiksel olarak anlamlı düzeyde bir farklılık yoktur.

4. Deney ve kontrol gruplarında öğrencilerinin edindikleri bilgilerin kalıcılık düzeyleri arasında istatistiksel olarak anlamlı düzeyde bir farklılık yoktur.

Araştırmanın Yöntemi: Araştırmanın modeli öntest-sontest kontrol gruplu deneysel desendir. Deney-1 grubunda işbirlikli öğrenme yöntemi, deney-2 grubunda dizgeli eğitim, kontrol-1 ve kontrol-2 grubunda ise yapılandırmacı öğrenme yaklaşımı uygulanmıştır. Deney ve kontrol gruplarında toplam 110 öğrenci yer almış ve verilerin çözümlenmesinde bağımlı gruplar t testi ve tek yönlü varyans analizinden yararlanılmıştır.

Araştırmanın Bulguları: Araştırma sonunda elde edilen bulgulara göre, işbirlikli öğrenme yöntemi, dizgeli eğitim ve yapılandırmacı öğrenme yaklaşımlarının öğrencilerin akademik başarılarını artırmada etkili olduğu tespit edilmiştir. Deney ve

kontrol gruplarının akademik başarı son test puanlarının birbirinden anlamlı düzeyde farklı olmadığı bulgulanmıştır. İşbirlikli öğrenme yöntemi, dizgeli eğitim ve yapılandırmacı öğrenme yaklaşımlarının (kontrol-1) öğrencilerin edindikleri bilginin kalıcılığını sağlamada etkili olduğu ancak kontrol-2 grubunda öğrencilerin edindikleri bilginin kalıcılığını sağlamada etkili olmadığı tespit edilmiştir.

Araştırmanın Sonuçları ve Önerileri: Araştırmada işbirlikli öğrenme yöntemi (deney-1), dizgeli eğitim (deney-2) ve yapılandırmacı öğrenme yaklaşımlarının (kontrol-1 ve kontrol-2) öğrencilerin akademik başarılarını anlamlı ve olumlu düzeyde artırdığı, deney ve kontrol gruplarının sontest toplam puanları arasında anlamlı bir farklılık olmadığı tespit edilmiştir. Bir başka ifade ile işbirlikli öğrenme, dizgeli eğitim ve yapılandırmacı öğrenme yaklaşımları öğrenci başarısını olumlu düzeyde artırırken kendi aralarında öğrenci başarısını artırmada anlamlı düzeyde üstünlükleri ya da eksiklikleri bulunmamaktadır.

Bu araştırmada her iki deney grubu ve kontrol-1 grubunda uygulanan işbirlikli öğrenme yöntemi, dizgeli eğitim ve yapılandırmacı öğrenme yaklaşımlarının öğrencilerin edindikleri bilgilerin kalıcılığında olumlu düzeyde etkili olduğu sonucuna ulaşılmıştır. Fakat kontrol-2 grubunda uygulanan yapılandırmacı öğrenme yaklaşımının öğrencilerin edindikleri bilgilerin kalıcılığında etkili olmadığı tespit edilmiştir. Bununla birlikte, deney ve kontrol gruplarına deneysel işlemler bittikten 4 hafta sonra uygulanan kalıcılık testinden grupların aldıkları toplam puanlar arasında anlamlı bir fark olduğu sonucuna ulaşılmıştır. Bu anlamlı fark işbirlikli öğrenme yönteminin uygulandığı deney-1 grubu ile yapılandırmacı öğrenme yaklaşımının uygulandığı kontrol-2 ve dizgeli eğitimin uygulandığı deney-2 grubu ile yapılandırmacı öğrenme yaklaşımının uygulandığı kontrol-2 grupları arasında deney-1 ve deney-2 grupları lehine olmuştur.

Araştırmada hem işbirlikli öğrenme yöntemi hem dizgeli eğitim hem de yapılandırmacı öğrenme yaklaşımı Sosyal Bilgiler dersinde öğrencilerin başarılarını ve öğrenilenlerin kalıcılığını artırmada (kontrol-2 grubu hariç) etkili olduğu sonucuna ulaşılmıştır. Bu sonuçtan hareketle Sosyal Bilgiler dersi öğretiminde başarıyı artırmada ve öğrenilenlerin kalıcılığını sağlamada yapılandırmacı öğrenme yaklaşımının yanında işbirlikli öğrenme yöntemi ve dizgeli eğitim kullanılabilir.

Araştırma sonucuna göre kontrol-2 grubunda yapılandırmacı öğrenme yaklaşımı öğrenilenlerin kalıcılığını artırmada etkili olmamıştır. Bir araştırma sonucuna ihtiyaç duyulmakla birlikte öğretmenlerin tüm derslerde olduğu gibi Sosyal Bilgiler dersinde de öğretmen kılavuz kitaplarına bağlı kalarak ders işledikleri gözlenmekte ve bilinmektedir. Araştırma sonucuna bağlı olarak öğretmenlerin Sosyal Bilgiler dersinde sadece öğretmen kılavuz kitaplarında yer alan etkinliklerle sınırlı kalmayıp başta işbirlikli öğrenme ve dizgeli eğitim olmak üzere farklı anlayış, yaklaşım, yöntem ve teknikleri kullanmaları önerilebilir. Kontrol 2 grubunda ortaya çıkan bu durumun farklı nedenleri olabilir. Bu durumun bir nedeni olarak öğretmen faktörü düşünülebilir. Bu araştırmada deney gruplarında dersler araştırmacı tarafından, kontrol gruplarında ise sınıf öğretmenleri ile yürütülmüştür. Yapılacak diğer araştırmalarda deney ve kontrol gruplarında araştırmacı tarafından dersler

yürütülüp sonuçlar tekrar test edilebilir. Bununla birlikte bu sonucun yapılandırıcılığın uygulanmasında bazı aksaklıkların olduğunu da gösterdiği düşünülmektedir. Bu bağlamda öğretmenlerin hizmetiçi eğitime ihtiyaç duydukları söylenebilir.

Bu araştırmada dizgeli eğitimin Sosyal Bilgiler dersinde öğrencilerin başarılarını ve öğrenilenlerin kalıcılığını artırmada etkili olduğu sonucuna ulaşılmıştır. Bu bağlamda Sosyal Bilgiler öğretiminde dizgeli eğitimin katkısı göz önünde tutularak program geliştirme aşamalarında bu anlayışın da dikkate alınması önerilebilir.

Bu araştırmada işbirlikli öğrenme yöntemine ait beş farklı teknik (birleştirme, birlikte soralım birlikte öğrenelim, öğrenci takımları başarı bölümleri, birlikte öğrenme, grup araştırması) kullanılmıştır. Bu teknikler Sosyal Bilgiler dersinde başarıyı ve öğrenilenlerin kalıcılığını artırmada etkili olmuştur. Yapılacak diğer araştırmalarda işbirlikli öğrenme yöntemine ait birden fazla farklı teknik kullanılarak bu tekniklerin başarı ve kalıcılık üzerine etkisi belirlenebilir. Ayrıca öğretmen kılavuz kitaplarında hangi konuların işbirlikli öğrenmeye uygun olduğu belirlenebilir, belirtilen yöntemlerin hangi teknikle verileceği ayrıntıları ile açıklanarak uygulanabilir.

Anahtar Sözcükler: Sosyal bilgiler, işbirlikli öğrenme yöntemi, dizgeli eğitim, yapılandırıcı öğrenme yaklaşımı.

Novice Teachers' Experiences of Induction in Selected Primary Schools in Namibia¹

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Abstract

Problem Statement: Many schools use induction programmes with the aim of contributing to novice teachers' well-being and professional development. However, the content of induction programmes varies across schools and countries. Given that existing studies do not conclusively establish the programme components with the greatest potential to affect the quality and retention of novice teachers, more research is needed to explore the aspects of induction programmes that are most productive.

Purpose of the Study: This exploratory qualitative multi-case study aimed to gain more insight into how novice teachers in Namibia perceive and experience their induction support. The specific research question that guided this study was: *What is the current state of practice in Namibia to support novice teachers with induction programmes?*

Method: In order to answer the guiding research question, the inquiry followed a qualitative approach. The small sample of eight novice teachers who had finished the induction period and had taught for one to two years was purposefully selected from two primary schools to participate in the study. The schools were selected on the basis of the following criteria: (1) proximity to the researcher, since the researcher is a resident of Namibia; (2) the number of sites manageable in terms of time, distance

¹This paper is based on a Master's dissertation titled "Novice teachers' perceptions of school-based induction programmes at selected primary schools in Windhoek, Namibia" completed at the University of South Africa in the Department of Educational Leadership and Management under the supervision of Prof. Dr. Sello Mokoena in 2014.

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and cost; (3) availability of more than one novice teacher who graduated recently, making the sites relevant to the study; and (4) location of schools in different circuits to aim for different insights and experiences. Data collected through the focus group sessions were transcribed verbatim. An analysis followed an on-going and iterative non-linear process that identified common themes.

Findings: After analysis and interpretation of the literature and empirical findings, it was discovered that many schools in Namibia seem to use a form of induction programmes for novice teachers. However, based on the current study, it became apparent that some schools in Namibia use induction programmes with low-intensity activities, while others use induction programmes with high-intensity activities. Based on the interviews with the participants, the following themes in which induction programme activities differed were identified: the intensity/duration of the induction programme; resources offered in relation to induction programmes; the format/structure of support being used in the induction programme; the content of the induction programme; and lastly, the mentoring. Consequently, practical implications and recommendations to improve on these variations were offered.

Conclusions and Recommendations: In order to achieve its intended objectives, induction programmes have to be well organized and facilitated in schools. The study provides the following recommendations to establish this organization: there must be sufficient resources and mentors for all new teachers; mentors should be afforded opportunities to be capacitated so that they can offer professional guidance to novices; mentors and novice teachers should be afforded considerable time to spend on induction programme activities; timetables of mentors and novice teachers have to match with those of induction programmes; a physical space/office should be made available for meetings between mentors and novice teachers; and novice teachers should be allocated a reasonable teaching workload as compared to veteran teachers. Schools should use induction programmes with high-intensity activities in order to increase teacher effectiveness and retention.

Keywords: Novice teachers, experiences, low intensity induction programmes, high intensity induction programmes, Namibia.

Introduction

Becoming a teacher involves a transition from pre-service training into the profession of teaching. Such a transition brings about a shift in role orientation and an epistemological move from knowing about teaching through formal study to knowing how to teach by confronting the daily challenges of the school and classroom. Novice teachers require the development of a professional identity and

the construction of a professional practice. However, for most novice teachers, also referred to as beginner teachers, such a transition is seldom smooth. While undertaking their trainings at teacher training colleges or universities as student teachers, they are seldom exposed to real teaching challenges. During these sessions, student teachers concentrate mostly on pedagogy. Teaching, however, goes beyond the management of learners in a class and could include cases of truancy, theft, classroom organization, coping with difficult students, and adjusting to the new environment, to mention just a few.

Although there is a recognized need for support for novice teachers, it is a documented fact that some schools are not structurally aligned in a way that facilitates this. As a result, some novice teachers encounter difficulties during their first year of teaching, sometimes preventing them from adapting to such environments. Some of these teachers become demoralised, ill, depressed, or face teacher burnout, leading to some teachers deciding to abandon teaching as a profession. However, there are those who maintain an optimistic perspective; they remain resolute in their career of choice, reflecting and learning from the challenging experiences they come across while integrating their learning into various teaching approaches and strategies. Factors such as the responsibilities of teaching, inappropriate teaching assignments, curriculum instructional challenges, and a non-supportive school culture are liable to make the initial year of teaching difficult. It is often the type of support that teachers receive that is indicative of whether the teacher moves forward and develops his/her teaching career or chooses to leave the profession. Therefore, induction programmes have been shown to be effective strategies in reducing new teacher attrition and also as an appropriate mechanism to provide a foundation for professional development and support necessary to prepare beginner teachers entering the field of teaching (Beijaard, Buitink, & Kessels, 2010). As a result, an increasing number of schools across the globe tend to support novice teachers with induction programmes (Beijaard et al., 2010). However, the content of induction programmes varies across schools and countries. Namibia, the focus country for this study, has little documented knowledge available about the way novice teachers are supported with induction programmes. Therefore, this exploratory qualitative multi-case study aimed to gain more insight into how novice teachers perceive and experience their induction support. Again, given that existing studies do not conclusively establish the programme components that have the greatest potential to affect the quality and retention of novice teachers, more research is still needed to explore the aspects of induction programmes that are most productive and can increase teacher retention rates. The specific research question that guided this study was: *What is the current state of practice in Namibia to support novice teachers with induction programmes?* Generally, an answer to this question contributes to the international body of knowledge on how schools use induction programmes to support novice teachers. Specifically, this study is important and relevant for Namibia, where the education system is undergoing a rapid transformation. The information sourced from the study could serve as a basis for sensitizing policy designers and implementers about the significance of induction in the early career of a novice teacher. Also, it could help school management teams to

understand what is expected of them so that they may harness their expertise and resources for the benefit of the novice teachers. The findings of this study might also be useful to the Namibian Ministry of Education and school principals to enable them to review current policy and implement proper school-based induction programmes. Furthermore, this study will assist in deepening the current body of knowledge and understanding about novice teachers' perceptions of school-based induction, and in gaining an insight into the methods that support, assist, and affect the quality of the novice teacher's experience and their intention to continue in the teaching profession. This idea is based on the understanding that the study will assist in discovering new ways and means of assisting both the supervisors or mentors and novice teachers in order to easily undertake the process of integration of the latter.

Novice Teachers' Induction Programmes in Namibia

As a means to improve the capacity building of newly qualified teachers, the Minister of Education in Namibia made recommendations to develop and implement induction programmes for cohorts of these teachers (Namibia, 2009). Such a move eventually culminated in the development of an induction and mentoring programme by the Namibian Institute for Educational Development (NIED), in collaboration with regional education offices. The mandate for the Namibian Novice Teacher Induction Programme (NNTIP) for newly qualified teachers was officially implemented in 2011. The purpose is to support novices to be competent and professionally qualified after two years. According to NNTIP, all novices will receive induction for two years. The programme, tailored for the needs of novices, is to be delivered at school and at cluster levels. At the school level, mentor teachers, subject specialists, and principals of school are responsible for the programme. At the cluster level, cluster principals will organise out-of-school training workshops while subject facilitators will coordinate subject-related workshops. Strategies used to support novices include orientation, mentoring, observation, continuous professional development (CPD) opportunities, and evaluation. Principals formatively evaluate novices twice in semesters one and two, while two summative evaluations are done in term three (Namibia, 2009).

Other stakeholders involved include the regional education officers, who design annual mentoring plans appropriate for their region and gather mentor teachers. Designing manuals per region will result in inconsistencies, as each one of the thirteen regions will have its own induction manual, but this might allow for divergent views on how to implement the induction programmes. The University of Namibia (UNAM) undertakes regular follow-up on their graduates to determine their CPD needs for further improvements. This practice supports Britton, Raizen, Paine, and Huntley (2000) in that induction should not be an isolated phase but should be linked to teacher preparation. School principals facilitate the programme by working together with mentors, the cluster centre, and the regional education officers. The Namibian programme allows novices to own their induction by identifying their needs and participating in the design of a mentoring plan of action. The induction programme is benchmarked on the National Professional Standards for Teachers (NPST). The needs of novices are linked to the standards, which are in

turn spread over two years of induction and mentoring (Namibia, 2006). Despite the fact that novices are involved through identifying needs, the system is less facilitative and more directive in prescribing what novices should do and know. A directive approach does not guarantee more effective results than a more informal, facilitative approach. Given the time at which the formal induction programme was introduced in Namibia, it is not possible at this point to draw conclusions on how successful its implementation is. However, there is a need to assess the impact that these programmes are making in the professional development of the novice teachers by tapping on their views and experiences. Therefore, responses to the central research question guiding this study provided more insight into novice teachers' perceptions of their induction programme experiences in Namibian schools.

Theoretical Framework

The combined work of Camp and Heath (1998) as well as Stansbury and Zimmerman (2000, cited in Moore & Swan, 2008) was found appropriate and provided theoretical basis to this study. More especially the work of Stansbury and Zimmerman (2000) was found to be more appropriate and relevant and was used as the lens to investigate the extent to which novice teachers in Namibia are supported with induction programmes. Camp and Heath (1998) identified four contributor groups that should be involved in teacher induction programmes, namely: 1) an official of the state department, 2) teacher faculty members at institutions of higher learning, 3) the local school administrators, and 4) members of the profession. Elaborating on their roles, these authors argue that an official of the state department of education should provide direction, teacher faculty members at institutions of higher learning should provide a theoretical and research base, the local school administrators should provide support and assistance throughout, and lastly, members of the profession through their professional organisations should provide subject-specific assistance (Camp & Heath, 1998; cited in Moore & Swan, 2008). Stansbury and Zimmerman (2000) argue that within the description of their approach, Camp and Heath mentioned only the broad roles and responsibilities that each group should perform, not specific activities each group or contributor should be responsible for. Elaborating on the work of Camp and Heath (1998), Stansbury and Zimmerman (2000) posit a question: "What lifelines can be offered to novice teachers so that they will remain in the profession and develop into highly effective classroom teachers?" (p. 2). According to these authors, these lifelines come as either high-intensity or low-intensity teacher induction activities. High-intensity activities are those that require substantial funding and effort to develop and support novice teachers. These may include activities such as: selecting and training effective mentors, providing release time, roving substitutes releasing novices and mentors, mini courses tailor-made to address common challenges, examining evidence and developing reflective practice, and networking novice teachers into reflective practice groups (Stansbury & Zimmerman, 2000; cited in Moore & Swan, 2008). Although these activities require more effort and funding, they have been shown to improve teacher effectiveness (Stansbury & Zimmerman, 2000). Low-intensity activities are those that require little funding and less effort by all involved compared with high-

intensity activities. These may include activities such as: orientation of novice teachers, matching novice teachers and experienced teachers, adjusting working conditions, and promoting collegial collaboration (Stansbury & Zimmerman, 2000 cited in Moore & Swan, 2008). These activities have been shown to impact a reduction in attrition and higher job satisfaction (Stansbury & Zimmerman, 2000). In other words, low-intensity activities and efforts do not appear to develop teacher effectiveness, but address retention challenges in the teaching profession. Figure 1 illustrates the conceptual framework of high- and low-intensity activities for novice teacher induction programmes adapted from Stansbury and Zimmerman (2000) as cited in Moore and Swan (2008). This conceptual framework was adapted and contextualized and served as a basis to investigate the central research question for this study, as stated in the previous sections.

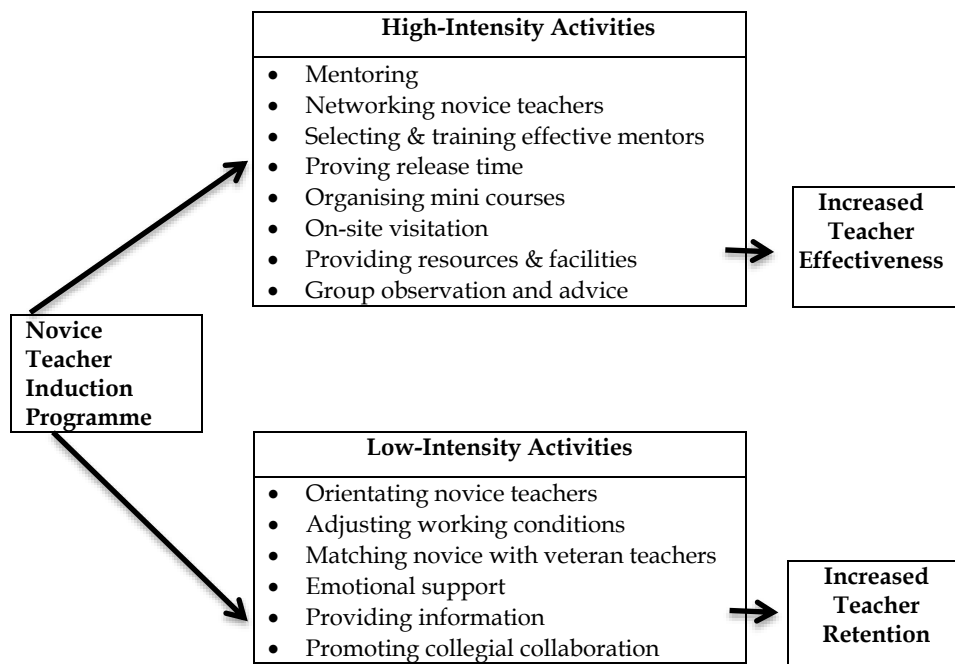


Figure 1. Framework of high- and low-intensity activities for novice teachers' induction

Source: Stansbury and Zimmerman, 2000; cited in Moore & Swan, 2008

Method

Research Design

A qualitative research approach was used in this study. Because the study aimed to gain more insight into novice teachers' experiences of their induction programmes, a case study design was used to investigate the phenomenon under study. The researchers decided to conduct a multi-site case study in order to obtain a deeper understanding of how people interpret their experiences, how they construct their worlds, and what meanings they attribute to their experiences (Creswell, 2013).

Research Sample

In order to answer the guiding research question, the researcher interviewed novice teachers from two primary schools in Namibia, Windhoek. These schools were selected on the basis of the following criteria: (1) proximity to the researcher, since the researcher is a resident of Namibia; (2) the number of sites manageable in terms of time, distance and cost; (3) the availability of more than one novice teacher who graduated recently, making the sites relevant to the study; and (4) the location of schools in different circuits to aim for different insights and experiences. In each school, a small sample of four novice teachers was purposefully selected to participate in the study. Purposeful sampling occurs when individuals are selected and possess the characteristics or attributes of interest to the study (Creswell, 2013). Merriam (2009) emphasises the importance of selecting a sample from which the "most can be learned" (p.12). The novice teachers who had finished their induction period and had taught for one to two years were selected to participate in this study.

Research Instrument and Procedure

The main technique used to collect empirical evidence was focus group interviews. However, a questionnaire was also used mainly to collect the participants' biographical information. In this study, the researcher conducted one session of focus group interviews at each school; the interviews lasted approximately 50-60 minutes. Focus group interviews were conducted during the afternoon hours to avoid interfering with day to day school programmes at the selected schools. Each group consisted of four novice teachers. Research studies have shown that when individuals are grouped together, they can contribute to a better understanding of the research problem (Newby, 2010). Sharing the same view, Greeff (2011) asserts that such group dynamics serve as a "catalyst for bringing large amounts of information to the fore" (p. 362). It is easy for individuals to express themselves freely when surrounded by others whom they perceive to be like themselves. For this reason, the researcher considered homogeneity in selecting novice teachers. However, the benefit of focus groups lies in the group dynamism of the participants. Creswell (2013) argues that a more open exchange of information occurs during focus groups and the method "opens up opportunities to gain collective perspectives

speedily thereby deepening understanding" (p. 159). Focus group discussions were recorded (with permission from the participants) using audio-tape recorder, and thereafter transcribed word by word after each group session. Since the researcher acted as a moderator at the same time, field and observation notes were taken immediately after the conclusion of each session to avoid loss of information.

Validity and Reliability

Credibility and transferability are concepts commonly used by qualitative researchers. Validity and reliability in qualitative design have been criticised by qualitative researchers as a result of their deductive reasoning (Willis, 2007; Corbin & Strauss, 2008). In this study, the researcher provided an audit trail of the decisions taken during data collection, analysis, and interpretation. The process of member-checking was also done at different stages of this study; interview transcripts were given to the participants to confirm the accuracy of the data capturing process, and the interpretation of the findings was also shared with the participants and their peers to confirm and reduce possible bias (Creswell, 2013).

Data Analysis

Data collected through focus group sessions were transcribed verbatim. Verbatim transcriptions provide more details and records of what has been said in an accurate manner. The method of Johnson and Christensen (2012) and Creswell (2007), which follows a bottom-up strategy while moving in analytical circles, was used in analysing data. According to this method, the researcher follows the core elements of qualitative data analysis, for instance: (1) preparing and organising the data, (2) reducing the data into segments and assigning names to each segment through the process of coding, (3) finding connections and relations between codes, (4) writing statements about each theme and linking its meaning to literature for corroboration, and (5) presenting the findings in the form of a discussion. This is done while incorporating participants' direct quotes. The researcher read and re-read all the transcriptions several times to become immersed in the data before breaking it into parts. The reading and writing of short memos spiralled into classifying data into smaller analytical units. The identified units were coded by means of abstract descriptive words or category names and symbols. The coding scheme was consistently re-evaluated to avoid making premature judgments and to stay open to organising the data in various ways.

Results

The study findings consist of the novice teachers' biographical information and their perceptions of their induction programme experiences. Before the discussion of findings is presented, it must be pointed out that it was not the purpose of this study

to generalise the findings, but to provide an in-depth view of the participants (novice teachers) regarding their experiences of induction programmes. Participants who gave their consent to take part in the study were given short questionnaires to fill in their details. No names appeared on the prompt cards. The main purpose of the questionnaire was to capture the demographic profiles of the novice teachers. The questionnaire included items such as age, gender, qualifications, and teaching experience. The researcher compiled the profiles of all the participants in table form, concealing their identities with letters of the alphabet as indicated in table 1 below. First, findings in relation to demographic data are presented in table 1, followed by an analysis of the interview data set.

Table 1.

Biographic Information of Novice Teachers

		<i>f</i>
Number of novice teachers		8
Gender	Female	5
	Male	3
Age Group	20 – 24	3
	25 – 29	4
	30 – 34	1
Subject Department	Class teaching	5
	Science and Mathematics	1
	Social Studies	2
Degree of Qualifications	First Degree + Profession	8
Teaching Experience	1 year	1
	2 years	7
Pseudonyms of participants and schools	Teacher A; B; C; D of School X	4
	Teacher E; F; G; H of School Y	4

Table 1 shows that a total of eight novice teachers (n=8) participated in this study, that is, four participants from each primary school. Of these, 5 were female and 3 were male. This unbalanced gender may be due to the notion that most men do not wish to enter the teaching profession (Mokoena, 2012). The ages of novice teachers were grouped into 5-year brackets. As expected, the majority of novice teachers were below 29 years (n=4). All of the novice teachers had a first degree in the teaching profession and additional specialisation in various fields. Lastly, the majority of them (n=7) had two years of teaching experience.

The findings from the interview data are presented under the headings of the five categories in which the induction programmes at the selected schools differed: (1) the duration or intensity of the programme; (2) the resources that were offered for induction activities; (3) the induction programme's structure; (4) the content of the induction programme; and, lastly, (5) mentoring. Using the theoretical framework of high- and low-intensity activities for novice teacher induction programmes in fig. 1, the following table 2, which categorises induction programme activities as high-intensity and low-intensity, was developed and subsequently used to guide the

discussion of the findings. The development of table 2 also drew from the work of Kessels (2010).

Table 2.

High and Low Induction Programme Activities

<i>High-intensity induction programme</i>	<i>Low-intensity induction programme</i>
<i>School X</i>	<i>School Y</i>
<i>Duration of the induction programme or intensity of the programme</i>	
Runs from one to two years (1-2 years)	Takes only a few days (1-3 days)
<i>Resources offered for induction activities</i>	
Several mentors responsible for induction programme	One mentor responsible for the induction programme
Preparation of a course which included the mentors	Ordinary preparation of intensive training for course for the mentors
Novice teachers allocated sufficient hours to participate in the induction related activities	Limited hours allocated to novice teachers to participate in the induction programme
<i>Structure or approach of the induction programmes</i>	
Introduction and orientation meeting which for 2 days	Introduction and orientation meeting lasted which run only for 2 hours
Mentoring which included class-visits, and recorded lessons took place throughout	Mentoring which included class-visits occurred twice year per year
Meeting for novice teachers included presentations, tailored training, and opportunity to share experiences(8 times a year)	Ordinary meeting for novices; aspects such as novice teachers to share experiences (3 times a year)
<i>Content of the induction programmes</i>	
Practical information which included school rules, notification of upcoming school events, and introduction of colleagues	Practical information: explanation of school rules and introduction to colleagues
Emotional support	Emotional support
<i>Mentoring</i>	
High degree of supportiveness and trustworthiness	Moderate degree of supportiveness and trustworthiness

The following section discusses the broad categories or themes as illustrated in table 2 that emerged from the data analysis of the responses given by the participants during the interviews.

Duration or Intensity of the Programme

The duration or intensity of the program refers to the amount of time allocated for the novice teachers to engage with induction programme activities. During the interviews, novice teachers gave various answers to the question about the time allocated to induction programme activities. According to the responses from the novice teachers, some were inducted for a few days, whereas some were inducted for close to a year or more. Novice teachers from school Y commented as follows:

"We were only part of a school-based induction programme activities for two days"

This could mean that after two days the novice teachers were left on their own to chart their way forward into the teaching profession. While at school X, it emerged that the duration of the induction lasted for a longer period. The novice teachers from school X commented as follows:

"Our school-based induction exercises run across the whole year or across the three terms with a formal discussion with the Head of Department or the school principal at the end of each term"

These scenarios give an obvious indication that the application of induction is not practised in the same way across all schools in Namibia or even across all departments at the same school.

Resources Offered for Induction Activities

It emerged from the interviews that the types of resources offered in schools for induction programmes correlated strongly with the duration of the induction programmes. For example, school X, which had a high-intensity induction programme, identified a few mentors (heads of departments) who were responsible for the support and guidance of novice teachers. They were allocated a considerable number of hours for their work in the induction activities. School Y, with a low-intensity induction programme, appointed only one mentor to be responsible for the support and guidance of the novice teachers. Moreover, only a limited number of hours were allocated for induction activities. While all mentors received some preparation for their job as mentors, at school X with the high-intensity induction programme, the preparation also included intensive training. Furthermore, school X also allocated specific time for novice teachers to participate in induction-related activities and took these activities into account in their work allocation as well.

The issue of resources thus seems to be a crucial factor that largely determines the attainability of induction programmes, as confirmed by the present study.

Structure or Approach of the Induction Programmes

During the interviews it emerged that both schools scheduled introduction and orientation meetings to welcome novice teachers as well as group meetings for novice teachers and individual meetings between the mentor and the mentee. Often these individual meetings were accompanied by class visits from the mentors. However, these induction activities differed in terms of frequency, duration, and approach. Novice teachers at school Y revealed that the introduction and orientation meeting consisted of two hours in which the novice teachers were briefly introduced to one another and school rules were explained, followed by a brief campus tour. At school X, the introduction and orientation meeting lasted for two to three days during which novice teachers were afforded time to share experiences, meet other staff members, and attend a workshop on how to start the first day. These induction activities were highly structured and strongly aimed at professional development.

The researcher also found similar differences in the individual meetings between the mentors and the novice teachers at both schools. For instance, at school Y, the discussion meeting with a mentor after a class visit took approximately 15 minutes during which time the mentor and the novice teacher discussed generally what had gone well and what could be improved. Novice teachers at school Y wanted more support, especially with regard to expectations of teacher performance, classroom management, and required paperwork. One teacher remarked as follows:

"I expected more from my mentor...I really expected more guidance from him...the pre-service training did not give enough of things that are happening in the field...we need guidance in whatever we are going to do"

At school X, the discussion meeting with the mentor after the class visit lasted for approximately one hour in which the mentor and the novice teacher thoroughly analysed the recorded lesson and discussed how it could be improved. According to the Namibian induction policy, novice teachers are supposed to have two mentors, one general mentor who did not necessarily teach in the same subject department, and another mentor from the same subject department. In practice, the researcher found that most novice teachers were supported by one mentor, especially at school Y. Other approaches which were used to support novice teachers included specific training courses and classroom observations of experienced teachers. These approaches were practised mainly in school X, which seemed to be implementing induction programmes with high intensity. It also emerged from school X that their induction programme included a day in which novice teachers visited another school to experience different teaching strategies. The novice teacher commented as follows:

"It is valuable to share ideas with teachers from other schools and see if they are experiencing things as we do"

Collaboration and networking are viewed to be essential, especially for new teachers, as these techniques may address some of the isolation and socialisation issues experienced by novice teachers.

Content of the Induction Programmes

From the interviews conducted with novice teachers at both school X and Y, it became clear that induction programmes at both schools included attention mainly on two areas: practical information and professional development. However, attention on professional development was found to be rather limited. In most cases the focus seemed to be skewed towards practical information, which included school rules, notification of upcoming events, and introduction to other colleagues. Especially at school Y with low-intensity programmes, mentors tended to focus on welcoming the novice teachers, making them feel at ease, and trying to include them in the school culture.

Mentoring

A mentor is perceived as a very important element of an induction programme. This became apparent when novice teachers at both schools were asked about their experiences of the induction programme and in answering often referred to their mentors. They did not value the programme much, but appreciated the manner in which they were welcomed by the mentors, mentors' enthusiasms, and their ability to differentiate between good and bad things. What also emerged was the fact that, when a novice teacher was not satisfied with the support from the induction programme, he or she criticised the mentor and not, for example, a lack of time or the resources that were provided. Based on the interviews with the novice teachers, the researchers identified two important characteristics of the mentors. The first characteristic that novice teachers spoke about related to the degree to which the mentors were able to create a base of trust and favourable environment that enabled novice teachers to feel at ease with their mentors and share whatever challenges they encountered in their work. Trust featured frequently in the discussion, and as such was labelled an important characteristic of a mentor. One novice teacher reported the following:

"I feel as though my mentor is concerned about my teaching career...he is concerned about me as a person and his actions match his words"

The second important characteristic which emerged during the interviews was the support that the novice teachers received from their mentors. Most novice teachers felt supported by their mentors. During the interviews, novice teachers very much appreciated the mentors' enthusiasm, positive attitudes, energy, personal interests, and degree of involvement. According to the novice teachers, these characteristics helped them to maintain their confidence and their own enthusiasm for their work and prevented them from becoming stressed, which may have resulted in them quitting their jobs. Novice teachers commented as follows:

"Just knowing that there was someone whom we could turn to made us feel supported and not struggling on our own"

The third characteristic of the mentor that emerged from the interviews was related to the degree to which a mentor can challenge the novice teacher in his or her professional development. A few novice teachers explicitly valued their mentors' ability to stimulate their professional development. These novice teachers spoke of their mentors' ability to observe things, to ask the right questions, and to get the teachers to really think about or realise something. On the other hand, this is an area that mentors were sometimes explicitly criticised for by the novice teachers. A few novice teachers found their mentors unable to help them in their specific subject area or stimulate their professional development. It emerged that mentors were found to be general in their comments, not clear and specific or just not helpful at all. One of the novice teachers from school Y commented as follows:

"Sometimes you need more clarity in a specific subject area and someone whom you ask is not dealing with that it will be hard for you to ask something"

Therefore, the need for more than one supporter is important, especially in offering subject-specific support.

Discussion and Conclusion

This small-scale research study reports on novice teachers' experiences of induction programme activities in selected primary schools in Namibia. Because of a lack of in-depth knowledge on the way novice teachers are supported with induction programmes, this topic was explored by means of an interview study. After analysis and interpretation of the literature and empirical findings, the researchers found that many schools in Namibia seem to use a form of induction programmes for novice teachers. This confirms that the Namibian Novice Teacher Induction Programme Institute (NNTIP) has been successful in their mandate to develop and implement induction programmes for such cohorts of teachers. However, the current study found that some schools in Namibia use induction programmes with low-intensity activities, while others use induction programmes with high-intensity activities (Stansbury & Zimmerman, 2000; cited in Moore & Swan, 2008). In other words, novice teachers in some schools in Namibia are only inducted for one to two days, while at other schools, their induction period runs from one to two years. This practice contradicts the mandate of the Namibian Novice Teacher Induction Programme (NNTIP) for newly qualified teachers, which states that all novice teachers will receive induction for two years (NNTIP, 2011). Stansbury and Zimmerman (2000, cited in Moore & Swan, 2008) maintain that novice teachers who were supported by a high-intensity programme (one year or more) experienced the support as valuable to their professional development, whereas those who were supported by a low-intensity induction programme (two days or more) generally viewed additional support as insufficient and did not add any value to their teaching practice. These authors further argued that extended exposure to induction expanded the competences of teachers more than those who received less or no induction at all. Sharing the same view, Cherubini (2007) and Glazerman, Isenberg,

Dolfin, Bleeker, Johnson, Grider, and Jacobus (2010) found that novice teachers who received intensive induction support felt more satisfied and more prepared for the job than those teachers who received minimal induction support. The quality and duration of induction is also found to stem the attrition rate (Britton, Raizen, Paine & Huntley, 2000; Hudson, Beutel & Hudson, 2008).

Considering the above literature studies, which suggest that novice teachers who were supported by high-intensity induction programme experienced the support as valuable to their careers while those who were supported by a low-intensity induction programme viewed additional support as burden, the current study recommends that novice teachers be supported with high-intensity induction programme, which will likely impact their teaching effectiveness and reduce their attrition rate. It may therefore be concluded that, for novice teachers to remain in the teaching profession, their induction period needs to be personally and professionally fulfilling (Kidd, Brown & Fitzallen, 2015).

Another important finding from this study pertains to the resources and facilities offered for induction programmes. Surely influential induction programmes generally include adequate resources and facilities, but most novice teachers, especially from school Y, reported only a few resources and facilities provided for induction programmes. This finding concurs with points of criticism by Feiman-Nemser (2003), who wrote about the induction programmes offered to novice teachers that often lack necessary resources. This author argues that the availability of relevant resources and facilities to a larger degree determines attainability in the development of all other elements of induction programmes. In other words, if facilities and relevant resources are made available, time can be invested in capacitating mentors and novice teachers in various topics of the induction programmes. It is therefore recommended that most schools create more resources for induction programmes. Induction programmes have to be well organised, and there must be sufficient mentors for all new teachers. Mentors should be afforded training opportunities so that they can offer professional guidance to novices, mentors and novice teachers should be afforded considerable time to spend on induction programmes activities, the timetables of mentors and novice teachers have to match with those of induction programmes, a physical space or office should be made available for meetings between mentors and novice teachers, and novice teachers should be allocated a reasonable teaching workload as compared to veteran teachers.

Another finding of this study related to the content of the induction programmes. Although it appeared that schools involved in this study provided support to novice teachers, the content of the induction programmes focused mainly on practical information in areas such as orientation, emotional support, location of instructional material, etc. However, support of professional development was found to be rather limited, if existent at all, in both schools. This finding concurs with a literature study on induction programmes' contents in the USA, which discovered limited support dedicated to novice teachers' professional development (Wang & Odell, 2002; Feiman-Nemser, 2001a; Little, 1990). A factor provided in the literature (Yusko &

Feiman-Nemser, 2008; Carver & Katz, 2004; Athanases & Achinstein, 2003) that helps to explain the often limited influence of induction programmes on novice teachers' professional development is a lack of inclusion of assessment procedures. Including assessment procedures and tools in induction programmes can help mentors identify crucial topics that may enhance novice teachers' professional development. Although assessment procedures may be considered threatening, Kessels (2010) argues that it is essential first to create a base of trust between a mentor and a novice teacher. A mentor that can be trusted is seen as one of the most successful goals of an induction programme (Kessels, 2010). Therefore, to achieve a safe base for assessment procedures, service providers such as the University of Namibia (UNAM) must be involved in order to monitor the continuous professional development (CPD) of their graduates for further improvement. This practice supports Britton, Raizen, Paine and Huntley's (2000) view that induction should not be an isolated phase but should be linked to the university teacher preparation programme. Although novice teachers have knowledge and skills, perhaps even new enriching knowledge, they have not yet mastered the art of being an effective teacher. As a result, CPD is essential for them as they endeavor to build their teaching career.

Another finding from the study that was perceived to be beneficial to novice teachers is mentoring. Mentoring is a common type of induction assistance and some of its aspects are viewed positively by novice teachers. Mentors help pre-service teachers and novice teachers build their teaching confidence through observation, constructive feedback, and support throughout the induction period and beyond (Kidd, Brown & Fitzallen, 2015). Although it emerged during the interviews that schools involved in this study provided mentors for their novice teachers, it became apparent that the level of support received from the mentors varied. For instance, the findings revealed that only one mentor was responsible for the induction programme at school Y, while at school X a few mentors were responsible for induction programmes. Britton et al. (2000) and Hellsten, Prytula, Ebanks and Lai (2009) assert that using multiple supporters makes mentoring practices more effective, as the coordinated induction activities of multiple providers then takes place. Therefore, the need for more than one supporter is important, especially in offering subject-specific support. It also emerged that at school Y, limited hours were allocated to novice teachers to participate in the induction programme, while at school X, novice teachers and mentors were allocated sufficient hours to engage in induction activities. However, this component (mentoring) has been described as important in the literature (Fulton, Yoon, & Lee, 2005; Moir, 2003; Wong, 2004). Furthermore, the level of benefit received from mentors also varied from participating schools, that is, from having a mentor for each area of teaching or specialisation, to having mentor of little or no benefit. This finding concurs with Wong's (2004) article, which states that a quarter of novice teachers received little or no support from their mentors. Novice teachers need mentors who have time to observe their teaching and are easily reachable (Wong, 2004) and who know how to mentor effectively and efficiently. Moore and Swan (2008) shared that the minimum criteria for selecting a mentor are that the mentor is a successful classroom teacher, can articulate their practice, and has a level of understanding of how long it takes to get the teaching level they themselves are at. However, it is not enough to simply identify potential mentors

from the teaching pool who meet certain criteria. Once the potential mentors have been identified, they must then be trained to serve as effective mentors. This training must consist of several elements such as observation skills, strategies for working with adults, cognitive coaching, how to collect evidence to improve teaching, how to identify and communicate beginning teacher strengths, and how to build on those strengths (Stanbury & Zimmerman, 2000; cited in Moore & Swan, 2008).

Considering the fact that mentoring is perceived as an important component of induction programmes, especially for novice teachers, three elements that might have a positive impact on the mentoring are therefore suggested by McCollum, (2014): 1) The mentor and mentee should be in close physical proximity to one another. Having the mentor right next door may lead to higher levels of perceived satisfaction than situations in which novice teachers had mentors are not located in close proximity. 2) The mentor and mentee should teach the same subject matter. It has been shown that this connection of having the same responsibilities produced greater perceived satisfaction than when the mentor and mentee had different teaching assignments. 3) The mentor and mentee should work with students of the same grade level (McCollum, 2014).

Limitations of the Study and Future Research

This is a small-scale, qualitative study focused on a few selected primary schools in Namibia. The advantage of the approach used in this research study is that the researcher was able to spend more time with the participants and gather more in-depth knowledge in terms of their experiences than would have been possible using a large-scale study. Although the current study provided more insight into the way novice teachers in Namibia are supported with induction programmes and their experiences thereof, the findings may not be generalisable. Therefore, a large-scale study would be desirable to show whether the current findings would be confirmed. Efforts to make a difference in the lives of novice teachers are needed. Continued research focusing on evaluating and assessing perceptions and outcomes of induction programmes and tracking, analyzing, and improving working conditions of novice teachers is warranted. The present research study adds to the body of knowledge on opinions of novice teachers about specific aspects of induction programmes.

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Value Orientations of Candidate Teachers in Knowledge Society

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Abstract

Problem Statement: Enormous changes over the last decades have led to evolving roles of schools, teachers and education itself. This new era of a knowledge society has broadened boundaries of schools, education and learning. Thus, the variables involved in education demand exploration. One of the essential components of education is the teacher. Various characteristics of teachers have been examined. In recent years, teachers' values have been one of the topics explored by educational researchers.

Purpose of the Study: The purpose of this study was to examine candidate teachers' values in a knowledge society and to determine whether their scores on values types differed according to a set of independent variables.

Method: Participants in this study were 192 students at Nigde University, Education Faculty. The sample consisted of 108 females (56.3%) and 84 males (43.8%). The Value Scale was used to measure value orientation of the participants. Data were collected using the "Values Scale." This self-report instrument consists of 38 items scored on a five-point Likert scale. The Values Scale has three sub-scales. Traditional, universal and hedonistic values subscales were determined based on a review of the literature related to values in a knowledge society. Data were analyzed using the Statistical Packages for Social Sciences (SPSS), version 22.

Findings: The findings showed that candidate teachers had high scores on traditional, universal and hedonistic values. Results showed significant gender difference in scores on traditional and hedonistic values. Significant differences in traditional values were found according to candidate teachers' place of longest residence. Candidate teachers' scores

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on value subscales differed according to whether or not they were involved in political activism. Candidate teachers' scores on traditional, universal and hedonistic values did not differ significantly according to the other independent variables applied in the study.

Conclusion and Recommendations: Overall, the findings of this study were unique. Therefore, more work with diverse populations and assessment instruments is required in order to further clarify relationships between candidate teachers' values and a variety of independent variables.

Keywords: Knowledge society, values, traditional values, universal values, hedonistic values, candidate teachers.

Introduction

During the last several decades, enormous changes in technologies and scientific knowledge have imbued "knowledge" with more immense power than ever before. The present days of human history are often referred to as the "information age" and today's societies as "information societies." Therefore, production of information and use of up-to-date information have become national priorities. Information societies have inevitably brought about the need for changes in education and socialization of new generations of youth. Today's young individuals are expected to be problem solvers, critical and creative thinkers. Furthermore, the abundance of information necessitates persons living in this age to be life-long learners.

With this new era of the information society, roles and functions of students, teachers, schools and education have changed. For example, today's students are expected to be good at searching, understand various methods of accessing information, eliminate/differentiate unnecessary/unneeded information, select and implement learning strategies, critique information, preferably produce new information, and evaluate learning outcomes (Savin-Baden and Major, 2004). Correspondingly, the teacher is no longer in the position of transmitting information to pupils, but rather serves as a mentor or guide who accompanies the student in the construction of knowledge. Teachers are expected to foster curiosity, encourage students toward searching and finding their own answers, as well as sustain their motivation and efforts to learn (Dalin & Rust, 1996; Hancock et al., 2003). School has also changed. Schools must now assume a guiding role for students, not only within the confines of their walls but everywhere else. In other words, the learning process has expanded beyond classrooms. Indeed, Rice (2006) noted that "it is now widely acknowledged that faculty no longer have full responsibility for the transfer of knowledge" (p.19). Basic characteristics of a "knowledge society is a society in which lifelong learning (including learning how to learn) is necessary" (Stock, 2011, p. 965). As such, as stated by Heidenreich in 2002, the definition and status of education and learning have evolved in the knowledge society (as cited in Stock, 2011). As such, education is more personalized than ever before.

Today's education takes into account individuals' needs, learning styles, learning pace, and other individual and contextual differences. As such, it is more inclusive of personal and cultural differences and the needs of students. Accordingly, in 2004 the National Ministry of Education of Turkey [MEB] initiated a reform process that assumes a student-centered, constructivist approach nationwide. The Ministry views the present time as "a time where information is rapidly produced and renewed;" therefore, the new generations of persons are expected to be equipped with competencies in accessing, using and producing information. Although this era puts such remarkable emphasis on information, it has a social function to it and is not value free (Caprile & Pascual, 2011; Drucker, 1996). Education functions as a means of acculturation of new generations. In other words, young generations are introduced to the traditions and values of a society through education. On the other hand, education is also supposed to prepare new generations in accordance with predictions of the future needs of a society, and as critical and creative thinkers, productive citizens and creators of the future. Put differently, today's education seeks a balance between familiarizing the youth with their roots and inviting and encouraging them to venture toward the unknown and innovation.

While education undertakes more complex roles than ever before, so do teachers as one of the primary actors in education. Like anybody else, teachers have values of their own. There is a remarkable body of research indicating the impact of teachers' values on student behavior (i.e., Brophy, 1986; Dar, 2015; Harbour et al., 2015). In order for today's education to be fruitful, various characteristics of teachers should be examined. One of these is their values. In recent years, investigations of value orientations of teachers in information societies (or, as some call them, "knowledge societies") have gained popularity. In Turkey, teacher training takes place via two different paths. One path is through a college faculty of education. The other, which is periodically embraced by politicians in power, is through short-term training programs provided by faculties of education to senior year students, or to graduates of faculties of letters and arts or faculties of science. These persons are provided with a Pedagogical Preparation Certificate Program that consists of both theoretical and practical coursework. Upon successful completion of this program, individuals attain equal credentials with graduates of faculties of education. There has been discussion about whether these persons can possibly attain similar values and attitudes to those whose training and preparation typically takes four to five years in faculties of education. There have been numerous studies examining the values of teachers-in-service and candidate teachers-in-training. However, no work was found that focused on candidate teachers participating in Pedagogical Preparation Certificate Programs. The current study intends to contribute to the literature on teachers' values by investigating this unique group of candidate teachers.

Thus, the main purpose of this study was to investigate the values orientations of candidate teachers participating in a Pedagogical Preparation Certificate Program. In fulfilling this main goal of the study, firstly, pre-service teachers' scores on value types were determined; secondly, relationships between values orientations of candidate teachers and the following variables were examined: gender, field of

study, age, level of education, type of high school attended, parental level of education, perceived socioeconomic status, place of longest residence, frequency of following the news, participation in political activism and political orientation.

Method

Research Design

The current research utilized the correlational research design. Such a design involves clarification of the potential relationship between the variables.

Research Sample

Participants in this correlational study were 192 voluntary students enrolled in the Pedagogical Preparation Certificate Program at Nigde University, Education Faculty, during the fall semester of the 2014-2015 academic year. The sample consisted of 108 females (56.3%) and 84 males (43.8%). Participants' ages ranged between 18 and 33 years, with a mean of 23.6 (SD=2.2). A majority of the participants' parents were primary school graduates (48% of mothers and 41% of fathers). In quantitative survey research, for instance, if population size is 10,000, assuming alpha level as .05, and the margin of error as .03, the required sample size would be 119 (Barlett, Kotrlik, & Higgins, 2001). Therefore, in this study, it (192) was considered to be a sufficient sample size to generalize findings from a drawn sample back to the population.

Research Instruments

Data were collected using the "Values Scale" developed by Altunay and Yalcinkaya (2011). This self-report instrument consists of 38 items scored on a five-point Likert scale, ranging from 1 (not important) to 5 (highly important). The Values Scale has three sub-scales. Traditional, universal and hedonistic values subscales were determined based on a review of the literature focused on values in a knowledge society.

A Personal Information Form was also included to gather information about participants' socio-demographic variables such as gender, field of study, age, level of education, type of high school attended, parental level of education, perceived socioeconomic status, place of longest residence, frequency of following the news, participation in political activism and political orientation.

Validity and Reliability

Altunay and Yalcinkaya (2011) administered the draft form of the scale to 400 candidate teachers and reported a Cronbach's alpha coefficient of .86 for traditional values subscales, .92 for universal values subscales and .75 for hedonistic values subscales. The authors tested construct validity of the scale by using confirmatory factor analysis that verified the three-factor structure of the Values Scale. In the current study, internal consistency of subscales was examined and Cronbach's alpha

coefficients of .82 for traditional values subscales, .90 for universal values subscales and .79 for hedonistic values subscales were found.

Data Analysis

The analysis of data was conducted in two stages. In the first stage, pre-service teachers' scores on value types were determined through descriptive statistics. In the second stage, MANOVA was conducted to test whether there were significant differences in value types of pre-service teachers according to the independent variables of gender, level of education, etc. The sub-scales of the Value Scale were taken as dependent variables. Gender, field of study, age, level of education, type of high school attended, parental level of education, perceived socioeconomic status, place of longest residence, frequency of following the news, participation in political activism and political orientation were the independent variables. Each of the 13 independent variables was entered into the MANOVA one at a time to ensure sufficient cell size. To control family-wise error rate (which is the problem with multiple comparisons or testing), a procedure developed by Benjamini and Hochberg (1995) and then recently modified by Benjamini and Yekutieli (2001) was used (the False Discovery Rate; FDR). While the modified FDR procedure, which is also referred to as the B-Y method, controls the experiment-wise α , this procedure also provides increased power according to Bonferroni correction (Benjamini & Hochberg, 1995; Benjamini & Yekutieli, 2001). In the B-Y method, the critical value is determined by:

$$\alpha / \sum_{i=1}^k (1/i)$$

where k is the number of hypothesis tests (Narum, 2006). Although an alpha level of .05 was selected, conducting 13 hypothesis (k) tests yielded an alpha level of 0.0157 per test. SPSS version 22 was used for all statistical calculations.

Results

The first purpose of the study was to determine scores of traditional, universal and hedonistic values of prospective teachers in a knowledge society (see Table1). Descriptive results showed that participants ranked each item most either as "important" or "highly important." Candidate teachers' scores on subscales are presented in Table 1 below.

Table 1.
Descriptive Statistics for Value Sub-scales

Values	Items	M	SD	Lowest and Highest Possible Scores		
				Min	Max	
Traditional values	Justice, trust, friendship, respect, commitment, responsibility, status, leadership, competence, appreciation, moral consistency	1-12	51.7	5.57	12	60
Universal values	World peace, commitment to knowledge, scientific inquiry, change, aesthetics, equality, open-mindedness, empathy, flexibility, openness to criticism, being different, creativity, regard for human rights, collaboration, team work, community participation, media literacy	13-32	85.1	9.55	20	100
Hedonistic values	Liberty, achievement, sensation, a comfortable life, aspiration, pleasure	33-38	26.6	3.26	6	30

In order to perform a parametric test, data were first screened for errors, missing data, outliers and fulfillment of test assumptions. There were no missing values or outliers. Normality tests indicated significant non-normality for dependent variables (traditional, universal and hedonistic values). Since MANOVA is fairly robust to non-normality (Mertler & Vannatta, 2002), and since group sample size was quite large, normality was assumed. Linearity of the three dependent variables was tested by calculating the Pearson correlation coefficients. Findings indicated the correlation coefficients were statistically significant ($r_{TU}=.706$; $r_{TH}=.681$; $r_{UH}=.757$, $p<.001$). Therefore, linearity assumption was also fulfilled. MANOVA was then conducted, and the homogeneity of variance-covariance matrices was tested within MANOVA. The Box's Tests were not significant for *gender* or *mothers' level of education* factors and indicated that homogeneity of variance-covariance was fulfilled except for *gender* and *mothers' level of education* factors. Mertler and Vannatta (2002, p. 126) stated, "If Box's Test is significant in such a situation, a more robust MANOVA test statistics, Pillai's Trace, is utilized when interpreting the MANOVA results." Therefore, while Pillai's Trace was used for *gender* and *mothers' level of education* factors, Wilks' λ was used as the test statistic for other factors.

One-way MANOVA was conducted to test whether candidate teachers' scores on "traditional," universal and "hedonistic" values differed significantly according to gender. Findings showed that gender did have a significant effect on the three dependent variables [Pillai's Trace=.084, $F(3,188)=5.755$, $p=.001$, partial $\eta^2=.084$]. In the second part of the analyses, follow-up tests were conducted for the effects of gender on each of the dependent variables. Univariate tests indicated that gender had a significant effect on the result of "traditional values" [$F(1,190)=9.995$, $p=.002$; partial $\eta^2=.050$] and "hedonistic values" [$F(1,190)=12.490$, $p=.001$; partial $\eta^2=.062$].

Regardless of whether there was a significant gender difference or not, females' scores on each of the three types of values were higher than males' (see Table 2).

Table 2.
Univariate Effects for Gender

Values	Gender	n	Mean	SD	df	dferror	F	p
Traditional values	Female	108	52.77	4.103	1	190	9.995	.002*
	Male	84	50.26	6.804				
Universal values	Female	108	86.14	8.629	1	190	3.234	.074
	Male	84	83.65	10.507				
Hedonistic values	Female	108	27.29	2.762	1	190	12.490	.001*
	Male	84	25.65	3.639				

MANOVA results revealed significant differences on the dependent variables [Wilks' $\lambda=.876$, $F(12, 489.755)=2.099$, $p=.016$; partial $\eta^2=.043$] according to place of longest residence. ANOVA was conducted on each dependent variable as a follow-up test to MANOVA. Differences according to place of longest residence were significant for "traditional values" [$F(4,187)=5.085$, $p=.001$, partial $\eta^2=.098$]. Scores on universal values [$F(4,187)=2.680$, $p=.033$, partial $\eta^2=.054$] and "hedonistic values" [$F(4,187)=3.098$, $p=.017$, partial $\eta^2=.062$] were not significant according to the place of longest residence. The Benferroni post hoc analysis showed that those whose longest place of stay were villages had significantly different scores on "traditional" values than those who lived in municipalities ($p=.001$). In addition, those whose longest place of stay were villages were significantly different than those who lived in provinces ($p=.005$). Table 3 presents means and standard deviations for values by place of longest residence. Table 3 illustrates that persons whose place of longest residence were municipalities had the highest and those whose longest place of residence were villages had the lowest scores.

Table 3.
Univariate Effects for Place of Longest Residence

Dependent Variable	Place of Longest Residence	n	Mean	SD	df	dferror	F	p
Traditional values	Village	17	47.53	6.728	4	187	5.085	.001*
	Municipality	12	55.83	2.406				
	District	55	51.47	5.624				
	Province	55	52.76	4.409				
	Metropolitan Area	53	51.13	5.903				
Universal values	Village	17	81.35	9.993	4	187	2.680	.033
	Municipality	12	89.67	7.451				
	District	55	83.76	10.541				
	Province	55	87.44	8.610				

Table 3 Continue

Dependent Variable	Place of Longest Residence	n	Mean	SD	df	dferror	F	p
Hedonistic values	Metropolitan Area	53	84.06	9.056	4	187	3.098	.017
	Village	17	24.76	3.364				
	Municipality	12	28.42	2.065				
	District	55	26.15	3.498				
	Province	55	27.18	2.919				
	Metropolitan Area	53	26.55	3.297				

Candidate teachers' scores on value subscales differed according to whether or not they were involved in political activism [Wilks' $\lambda=.927$, $F(3,188)=5.199$, $p=.002$]. Significant univariate effects were found on "traditional values" scale [$F(1,190)=9.553$, $p=.002$, partial $\eta^2=.048$] and "hedonistic values" scale [$F(1,190)=11.068$, $p=.001$, partial $\eta^2=.055$]. In other words, those who were not involved in political activism had higher scores on both traditional and hedonistic values (see Table 4).

Table 4.*Univariate Effects for Involvement in Political Activism*

Dependent Variable	Activism	n	Mean	SD	df	dferror	F	p
Traditional values	Yes	21	46.73	6.915	1	190	9.553	.002*
	No	171	51.98	5.377				
Universal values	Yes	21	81.33	9.689	1	190	1.950	.164
	No	171	85.30	9.517				
Hedonistic values	Yes	21	23.45	3.328	1	190	11.068	.001*
	No	171	26.75	3.181				

Candidate teachers' scores on "traditional", "universal" and "hedonistic" values did not differ significantly according to the following independent variables: age (Wilks' $\lambda=.942$, $p=.081$), field of study (Physical Education and Sport, History, Turkish Language and Literature, Mathematics, Chemistry) (Wilks' $\lambda=.929$, $p=.540$), their level of education (undergraduate student, bachelor's degree, master's degree) (Wilks' $\lambda=.995$, $p=.823$), whether they had already attained a bachelor's degree or not ($p=.727$), their mother's level of education (illiterate, literate, primary school graduate, middle school graduate, high school diploma, undergraduate degree) (Pillai's Trace=.110, $p=.282$), their father's level of education (illiterate, literate, primary school graduate, middle school graduate, high school diploma, undergraduate degree) (Wilks' $\lambda=.859$, $p=.133$), the type of high school attended (general/generic high school, Anatolian high school, occupational high school) (Wilks' $\lambda=.875$, $p=.257$), frequency of following daily news (every day, frequently, seldom, never) (Wilks' $\lambda=.983$, $p=.952$), perceived socioeconomic status (lower,

middle, higher) (Wilks' $\lambda=.938$, $p=.444$) and political orientation (liberal, conservative, socialist, social democrat, nationalist, other) (Wilks' $\lambda=.921$, $p=.230$). Candidate teachers' means and standard deviations on value sub-scales according to these independent variables are illustrated in Table 5 below.

Table 5.
Scores on Value Subscales according to Independent Variables

Variable	Categories	n	Traditional		Universal		Hedonistic	
			Mean	SD	Mean	SD	Mean	SD
Field of Study	PE	51	52.33	4.889	86.76	8.999	26.98	2.494
	History	52	50.83	6.255	85.25	9.711	26.83	3.179
	Sociology	12	52.67	3.447	87.25	6.877	27.08	2.275
	Turkish Lang. & lit.	45	51.40	6.436	83.42	10.467	26.18	4.002
	Chemistry	11	52.18	4.956	82.36	8.617	25.82	2.523
	Mathematics	21	51.90	4.857	84.05	10.122	25.90	4.194
Age	18 – 21	18	52.17	5.159	84.67	8.636	26.50	3.015
	22 – 25	145	51.67	5.476	85.08	9.549	26.81	3.072
	26 – 33	29	51.38	6.444	85.17	10.386	25.45	4.154
Level of Education	Undergraduate student	154	50.87	5.577	84.05	9.550	27.67	4.269
	Bachelor's	24	51.64	5.612	85.03	9.634	26.58	3.297
	Master's	14	52.80	4.382	86.00	6.164	26.20	2.168
University graduate	No	154	51.64	5.803	84.74	9.784	26.53	3.417
	Yes	38	51.82	4.614	86.32	8.540	26.76	2.614
Mother's Education	Illiterate	27	51.96	4.871	84.11	10.047	26.33	2.646
	Literate	14	48.64	6.990	76.64	12.413	24.00	5.129
	Primary School	87	51.93	5.987	85.89	8.940	26.78	3.210
	Middle School	32	52.22	4.331	87.03	8.921	27.22	2.859
	High school	20	50.60	5.020	84.30	7.270	26.60	2.703
	University	12	55.60	2.881	88.80	11,167	27.60	2.881
Father's Education	Illiterate	3	53,33	5,774	90,67	4,163	27,33	3,055
	Literate	7	50,00	4,082	76,29	8,558	26,43	2,573
	Primary School	79	51,87	6,233	84,57	10,391	26,41	3,481
	Middle School	33	53,03	4,187	88,52	8,078	27,64	2,560
	High school	45	49,98	5,711	83,13	8,869	25,87	3,435
	University	25	52,20	4,099	86,80	7,831	26,80	3,139
Type of High school	General	147	51.65	5.533	84.51	9.565	26.38	3.195
	Anatolian	26	51.75	6.361	86.21	10.147	26.71	4.112
	Occupational	19	53.83	1.722	87.33	7.367	27.50	1.378
Following news	Every day	40	51.50	5.119	84.65	8.903	26.45	.519
	Often	99	51.78	5.258	85.72	8.819	26.69	.330
	Seldom	53	51.53	6.613	83.80	11.342	26.35	.460
Perceived SES	Lower	29	49.97	6.560	82.21	9.785	25.31	3.526
	Middle	122	51.48	5.458	84.91	9.434	26.54	3.281
	Higher	41	53.46	4.770	87.49	9.344	27.56	2.757
Political Orientation	Conservative	42	52.29	4.261	85.71	7.617	26.60	2.759
	Socialist	31	50.23	6.140	84.10	9.743	25.70	3.914
	Social democrat	27	51.44	4.145	83.26	10.200	26.85	2.461
	Nationalist	72	51.49	6.659	84.10	10.412	26.39	3.515
	Other	20	52.40	4.235	89.35	7.922	27.60	3.169

Discussion and Conclusion

The purpose of this study was to examine candidate teachers' values in a knowledge society and to determine whether their scores on various value types differed according to a set of independent variables. The findings of the first part of this study showed that candidate teachers had high scores on "traditional", "universal" and "hedonistic" values. In their study with candidate teachers, Altunay and Yalcinkaya (2011) also reported relatively high scores on traditional, universal and hedonistic values. Oguz (2012) found that candidate teachers mostly agreed with value types like universalism, and they agreed with hedonism. In a similar study, Kolac and Karadag (2012) found that a majority of candidate teachers reported embracing universal values such as regard for human dignity and human rights, freedom of thought/speech, world peace and love. In another study of prospective teachers by Dilmac et al. (2008), participants valued universalism, security, benevolence and self-direction. Working with a sample of students from a faculty of theology, Arslan and Tunc (2013) reported benevolence, universalism, security and self-direction as the most esteemed values. A great number of studies found candidate teachers or teachers in service identifying with universal values (Kusdil & Kagıtcıbası, 2000; Memis & Gedik, 2010; Sahin-Firat & Acıkgoz, 2012; Ros et al., 1999). Given these findings, one can tentatively conclude that candidate teachers from a knowledge society appear to embrace the importance of world peace, a scientific attitude, openness to change and criticism, as much as the importance of traditional values or hedonistic values such as liberty, achievement, sensation, a comfortable life, aspiration and pleasure.

Findings showed significant gender difference in scores on traditional and hedonistic values. Female candidate teachers had higher scores on traditional values (justice, trust, friendship, respect, commitment, responsibility, status, leadership, competence, appreciation, moral consistency, etc.) and hedonistic values (liberty, achievement, sensation, a comfortable life, aspiration, pleasure, etc.). Although scores on universal values did not differ according to gender, female scores were still higher than male scores. Previous research reports mixed results regarding gender differences in values of candidate teachers. For example, while the findings of Altunay and Yalcinkaya (2011) found significantly higher female scores on all three value scales (traditional, hedonistic and universal), Dilmac et al. (2008) found significantly higher male scores on universal values and values related to self-direction. In another study conducted by Basciftci et al. (2011), while value preferences of prospective teachers in terms of gender showed significant differences in hedonism and universalism, they did not with respect to traditional values. On the other hand, in another study, the same author did find significant gender differences in traditional values. Bulut (2012) found that female candidate teachers had significantly higher scores on the values of compassion, conformism and security. In short, while some studies reported gender differences in some values, others found either no gender differences or differences in other values (Memis & Gedik, 2010; Sahin-Firat & Acıkgoz, 2012; Arslan & Tunc, 2013).

The female candidate teachers' higher scores on both traditional and hedonistic values raise curious questions. These two sets of values are quite contradictory to one another. As mentioned above, Sahin-Firat and Acikgoz (2012) reported similar findings. These authors interpreted their finding as indicating a value conflict among Turkish teachers. They went on to see this conflict as a reflection of Turkey's conflicting historical struggle with balancing Western and Eastern values. Given that Turkey has a highly patriarchal culture and females would be expected to adhere to traditional gender roles and traditional values, one could interpret females' higher scores on hedonistic values as an indication that some young women lean more toward Western values and challenge traditional gender roles that the culture imposes on them. However, a significant accumulation of further research is needed in order to draw any firm conclusions regarding female candidate teachers' values.

Another curious finding of this study was related to candidate teachers' place of longest residence. Individuals who lived in municipalities had the highest scores on all value subscales, while those who lived in villages had the lowest scores on those values. However, these differences were only significant as they related to traditional values. In other words, significant differences on traditional values were found between persons who lived in villages and those who lived in municipalities and between persons who lived in villages and those who lived in provinces. In a similar study, Dilmac et al. (2008) also found significant differences based place of longest residence; however, they also found significant differences only in traditional values. Their findings showed that persons whose longest place of residence were villages or municipalities had significantly higher traditional value scores than those who lived in districts or provinces.

Previous research has reported mixed findings regarding place of longest residence and values of candidate teachers. Some studies have reported more traditional values by persons living in smaller towns (villages and municipalities) and more hedonistic values by persons who lived in bigger towns (provinces and metropolitan areas). Other researchers have not found any differences in candidate teachers' values based on place of longest residence (Altunay & Yalcinkaya, 2011; Coskun & Yildirim, 2009). In Turkey, smaller places of residence are generally known to be stricter in traditional values, while larger places are relatively more accepting of individuality and of more diverse lifestyles/values. Findings of the current study do not fully conform with these common observation. For instance, a significant difference would not be expected between people who lived in villages and those who lived in municipalities, since they are both small towns and would be expected to be equally traditional. One might at least in part attribute this to the impact of university education, as well as to increased access to various sources of information in today's knowledge society. In other words, perhaps generalizations made for the general population of Turkey in terms of place of stay may not fully apply to persons who acquire university education and interact with cultures other than those found in their place longest stay.

Findings regarding political activism showed significant differences in traditional and hedonistic values scores. Persons who were not politically active had higher

scores on both of these scales. No other studies with Turkish candidate teachers' values and political orientation were found. Results of this study did not show any significant difference in candidate teachers' value scores according to parental levels of education or perceived socioeconomic status. Previous research on these variables also showed mixed results. While some studies found no significant differences in candidate teachers' value scores based on parental levels of education and perceived socioeconomic status (i.e., Altunay & Yalcinkaya, 2011), others only found no significant difference in terms of parental level of education (i.e., Coskun & Yildirim, 2009). There have also been studies reporting partial differences based on parental levels of education and perceived socioeconomic status (i.e., Bulut, 2012; Dilmac et al., 2008). One could expect both parental level of education and socioeconomic status to have a significant impact on a person's life and thus on their values. Finding no significant differences in teachers' values based on these variables can be interpreted in various ways. One could attribute the similarities these individuals have to their level of development and relatively similar college experiences. In other words, these persons may come from families of origin with differing socioeconomic and other qualities, but they are also at similar ages with similar developmental concerns, and relatively similar academic and personal experiences during their university years. Further research is needed, however, to draw any tangible conclusions.

Although there have been studies (i.e., Aktay 2008; Sahin-Firat & Acikgoz, 2012) showing differences in candidate teachers' value scores according to their age, the current study did not find any significant differences. Although not significant, persons younger than 25 years had relatively higher scores on traditional and hedonistic value scales and lower scores on universal value scale than those over 25. In other words, a negative weak correlation was observed between traditional values and age. This finding is partially consistent with findings by You and Penny (2011) who conducted a longitudinal study with university students. These authors noted "there was a significant increase in students' post-conventional moral reasoning scores between freshmen and seniors and a significant decrease in students' pre-conventional moral reasoning scores between freshmen and seniors."

Research findings regarding values and their relationship to the type of high school attended have been mixed. Some studies did not find any significant differences in individuals' values according to the type of high school they had attended (Ozkul, 2007), while others have found partial differences. For example, Altunay and Yalcinkaya (2011) found that persons who graduated from general high schools were more likely to subscribe to traditional and hedonistic values than those who graduated from teachers' high schools. Likewise, Bulut (2012) found that candidate teachers' scores on universal values, conformism and security differed according to the type of high school they attended. One should keep in mind that Turkish literature on candidate teachers often involves studies with students at faculties of education and not as many persons in Pedagogical Preparation Certificate Programs. Therefore, comparisons or differences between findings of the current

study and the findings of studies of students attending to faculties of education should be interpreted with caution.

Candidate teachers' scores on three types of values scales did not differ based on their areas of study or their level of education (undergraduate student, bachelor's degree and master's degree). Some studies have found differences in teachers' values according to their areas of study (Donmez & Comert, 2007; Sahin-Firat & Acikgoz, 2012). Candidate teachers' scores on subscales did not differ by their political orientation or the frequency with which they followed daily news.

The findings showed that candidate teachers had high scores on traditional, universal and hedonistic values. Results showed significant gender difference in scores on traditional and hedonistic values. Significant differences on traditional values were found according to candidate teachers' place of longest residence. Candidate teachers' scores on value subscales differed according to whether or not they were involved in political activism. In other words, those who were not involved in political activism had higher scores on both traditional and hedonistic values. Candidate teachers' scores on traditional, universal and hedonistic values did not differ significantly according to the following independent variables: age, perceived socioeconomic status, field of study, level of education, whether they had already attained a bachelor's degree or not, their mothers' level of education, their fathers' level of education, the type of high school attended, frequency of following daily news, and political orientation.

Candidate teachers' values did not differ according to the majority of independent variables of this study. This could in part be due to limitations of the study. For one, *the Value Scale* used in this study is relatively newly developed and may need further refinement. Likewise, considering that the mean age of the participants was 23.6, and the existing literature on young adult development (Belenky et al., 1986; Chickering & Reisser, 1993; Perry, 1970), the participants may still be in the process of forming their values. Therefore, the sets of values these persons have may not be established yet. Furthermore, the majority of these students (trainees) were not employed. One could also assume that young adults who have not tested their values in the workplace (as active participants in the society) may not have enough opportunities to test their existing values. In short, there could be a host of reasons for the particular findings of this study. Therefore, further work with diverse populations and with different instruments is needed in order to clarify the relationships between candidate and in-service teachers' values and the independent variables of this study.

Note

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Öğretmen Adaylarının Bilgi Toplumunda Değer Yönelimleri

Atf:

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Özet

Problem Durumu: Çağımızın modern toplumu bilgi toplumu olarak nitelendirilmektedir. Bilgi toplumuna geçişle birlikte bilginin üretimi ve geçerli bilginin kullanılması ülkeler için önemli bir güç haline gelmiştir. Bilgi toplumu, problem çözebilen, eleştirel ve yaratıcı düşünebilen bireylere ihtiyaç duymaktadır. Bilgi toplumunda öğrenme yaşam boyu devam eden bir süreçtir. Bilgi toplumu olgusuyla beraber eğitimin, okulun, öğretmenin ve öğrencinin tanımı da yeniden yapılandırılmıştır. Öğrenci, araştıran, bilgiye ulaşma yollarını bilen, sonuca ulaşmada gereksiz bilgileri göz ardı edip bilgiyi ayıklayarak kullanabilen, bilgiye sorgulayıcı, eleştirel yaklaşabilen ve yeni bilgiler üretebilendir. Öğretmen ise, bilgi aktaran konumundan çıkıp öğrenciye bilgiyi yapılandırmasında rehberlik eden bir özelliğe bürünmüştür. Okul bu süreçte bireye yön veren bir kurum işlevi görmekte, okul dışında da öğrenme devam etmektedir. Eğitim ise bireye özgün bir yapı taşımak

zorunda kalmıştır. Öğrencilerin öğrenme ihtiyaçlarına, hızlarına ve öğrenme biçimlerine göre eğitim sürecinin düzenlenmesi gereği ortaya çıkmıştır. Nitekim, Türkiye milli eğitim sistemi de öğretim programlarında 2004 yılında bu gelişmeler doğrultusunda öğrenci merkezli ve yapılandırmacı yaklaşımı temel alan köklü bir değişime ve yeniliğe yönelmiştir. İçinde bulunduğumuz çağ, “bilginin hızla yenilenecek üretildiği çağ” olarak nitelendirilmiş ve bu özelliklere bağlı olarak toplumun bireylerinin sahip olmaları gereken özellikler “bilgiye ulaşma, bilgiyi kullanma ve üretme” olarak ortaya konulmuştur. Her ne kadar eğitim, çağımızın yükselen değeri “bilimsel bilgi”yi merkeze koyan bir anlayışa sahip olsa da, bilgi toplumunda eğitimin sosyal bir işlevi de vardır ve bu işlev değerden bağımsız değildir.

Araştırmanın Amacı: Geleceğin öğretmenleri olarak öğretmen adaylarının bilgi çağında değer yönelimlerinin belirlenmesinin önem kazandığı gerçeğinden hareketle bu çalışma gerekli görülmüştür. Bu nedenle bu çalışmanın amacı öncelikli amacı bilgi toplumunda öğretmen adaylarının değer yönelimlerinin belirlenmesi olarak ortaya konmuştur. İkinci amacı da öğretmen adaylarının değer yönelimlerini cinsiyet, bölümlerine, yaş, eğitim düzeylerine, üniversite mezuniyet durumlarına, mezun olunan lise türüne, anne-baba eğitim düzeyine, algılanan sosyo-ekonomik düzeye, en uzun yaşanan yerleşim birimi, güncel olayları takip etme, siyasi anlamda aktif olma ve politik yönelim değişkenlerine göre incelemek olarak belirlenmiştir.

Araştırmanın Yöntemi: Bu araştırma, genel tarama modellerinden ilişkisel tarama türünde bir araştırmadır. Araştırmanın katılımcılarının Niğde Üniversitesi Eğitim Fakültesi pedagojik formasyon sertifika programına kayıtlı 192 gönüllü öğretmen adayı oluşturmaktadır. Katılımcıların 108’i kadın (56.3%) ve 84 ‘ü erkektir (43.8%). Yaşları ise 18 ila 33 arasında değişmektedir. Öğretmen adaylarının değer yönelimlerinin belirlenmesinde Altunay ve Yalçınkaya tarafından geliştirilen geleneksel, evrensel ve hedonistik alt ölçeklerinden oluşan “Değerler Ölçeği” kullanılmıştır. Ayrıca katılımcılara ait yaş, cinsiyet, bölüm, okul türü vb bilgilerin sorulduğu araştırmacı tarafından geliştirilen kişisel bilgi formu hazırlanmıştır. Araştırmaya katılım tamamen gönüllülük esasına dayalı olarak gerçekleştirilmiştir.

Araştırmanın Bulguları: Araştırmanın ilk alt amacı doğrultusunda öncelikle değer yönelimleri incelenmiş ve bilgi toplumunda öğretmen adaylarının geleneksel, evrensel ve hedonistik değerlere ait ifadeleri “önemli” ve “çok önemli” düzeyde belirttikleri ortaya çıkmıştır. Araştırma sonucunda öğretmen adaylarının geleneksel ve hedonistik değerlerinin cinsiyete göre farklılaştığı ve bütün değer alt boyutlarında kadınların daha yüksek puanlara sahip oldukları belirlenmiştir. Öğretmen adaylarının geleneksel değerlerinin en uzun yaşadıkları yerleşim birimine göre farklılık gösterdiği belirlenmiş; ayrıca bütün değer alt boyutlarında en uzun süre beldede yaşayanların yüksek puanlara sahip olduğu, köyde yaşayanların da en düşük puanlara sahip oldukları gözlenmiştir. Öğretmen adayları içerisinde siyasi olarak aktif olmayanların geleneksel ve hedonistik değerler alt ölçek puanlarının daha yüksek olduğu belirlenmiştir.

Öğretmen adaylarının “geleneksel”, evrensel ve “hedonistik” değerlerinin yaş

kategorilerine, bölümlerine (beden, tarih, türk dili, matematik, sosyoloji, kimya), eğitim düzeylerine (lisans öğrencisi, lisans mezunu veya yüksek lisans mezunu), üniversite mezunu olup olmamalarına, anne eğitim düzeyine (okur yazar değil, okur yazar, ilkokul mezunu, orta okul mezunu, lise mezunu, lisans mezunu), baba eğitim düzeyine, öğrencilerin mezun oldukları lise türüne (genel lise, anadolu lisesi, meslek lisesi), güncel olayları takip etme durumu (hergün, sıklıkla, nadiren, hiç), algılanan sosyo-ekonomik düzeye (alt, orta, üst) ve politik yönelim (liberal, muhafazakar, sosyalist, sosyal demokrat, milliyetçi, diğer) durumuna göre manidar bir farklılık göstermediği bulunmuştur.

Araştırmanın Sonuçları ve Önerileri: Bu araştırma sonuçları değerlendirildiğinde, yeni nesil öğretmenlerin bilgi toplumunu gerektirdiği niteliklere sahip dünya barışını, bilimsel tutumu, değişim ve eleştiriye açık olmayı önemseyen evrensel değerlere sahip bireyler olduğu kadar geleneksel değerleri ve özgürlük, heyecan, rahat bir yaşam, hurs, zevk gibi hedonistik değerleri de önemseyen bireyler oldukları ifade edilebilir. Kadın öğretmen adaylarının geleneksel (*adil olmak, güven, dostluk, saygı, sadakat, sorumluluk, statü, tanınma, liderlik vb.*) ve hedonistik değerlerinin (*özgürlük, başarı, heyecan, rahat bir yaşam, hurs, zevk vb.*) daha yüksek olduğu ortaya çıkmıştır. Bu bulgular değerlendirildiğinde, kadınların birbirine zıt denebilecek hem geleneksellik hem de hedonistik değerlerinin daha yüksek olması çelişkili bir duruma dikkati çekmektedir. Literatürde de kendine yer bulan bu bulgu “Batı-Doğu ikilemi yaşayan Türkiye kültürünün kadın öğretmenler üzerine bir yansıması” olarak değerlendirilmektedirler. Nitekim, toplum cinsiyet rollerine gereği olarak kadınların geleneksel değerlere daha bağlı olması beklenir. Ancak, bununla birlikte kadın öğretmen adaylarının hedonistik değerlerinin de önemli görmesi kadın öğretmen adaylarının bakış açısı ve rolünde bazı değişiklikler olduğuna da dikkati çekmektedir.

Bu çalışmanın bazı sınırlılıkları da bulunmaktadır. Bunlardan ilki çalışmada elde edilen sonuçlar sadece kişilerin bildirimleri üzerine dayanmasıdır. Kişinin daha objektif yöntemlerle değerlendirilmesi ortaya konan ilişkilerin geçerliğini artırabilir. Ayrıca bu çalışma kesitsel bir çalışmadır. Kişinin değerlerindeki değişimlerin zaman içinde izlenmesi ve bu değişimlerin bazı değişkenlerle ilişkisinin boylamsal bir çalışmada değerlendirilmesi önemli sonuçlar ortaya koyabilir. Ayrıca çalışma grubunun sayısının azlığı ve sadece bir üniversitedeki formasyon öğrencilerinden oluşması da bir sınırlılıktır. Benzer çalışmalar daha geniş örneklerde tekrarlanabilir.

Anahtar Kelimeler: Bilgi toplumu, değerler, geleneksel değerler, evrensel değerler, hedonistik değerler, öğretmen adayları.

Influence of School Managers' Ethical Leadership Behaviors on Organizational Culture: Teachers' Perceptions¹

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Abstract

Problem Statement: Frequently researched, organizational effectiveness is influenced by leadership, organizational culture and climate, organizational commitment, and job satisfaction; additionally, for effective, sustainable management, ethical leadership, which also influences organizational culture, is emphasized. To our knowledge, no previous studies exist on the relationship (and predictiveness) between ethical leadership and organizational culture. Therefore, this study's general purpose was to identify the influence of school managers' ethical leadership behaviors on organizational culture as perceived by teachers.

Purpose of the Study: The general purpose of this study is to identify the influence of ethical leadership behaviors of school managers on organizational culture as perceived by teachers. It thus aims to fill a scientific gap in this field and make a contribution by sharing results and suggestions based on our findings.

Method: Based on the relational screening model, this descriptive study's participants were 3302 teachers serving in 323 schools in the city of Duzce and its districts during the 2013-2014 school year. The Ethical Leadership Scale (ELS) and the Organizational Culture Scale (OCS) were used as data collection tools. Ethical leadership (and its sub-dimensions) was considered the independent variable, while organizational culture (and its

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sub-dimensions) was the predicted dependent variable. Regression analysis was performed to discover to what extent these variables were predicted.

Findings: We found a fairly high level of positive significant correlation between ethical leadership and organizational culture. Regression analysis showed that ethical leadership is a strong predictor of organizational culture.

Conclusion and Recommendations: We found a moderate-to-high positive significant correlation between ethical leadership and organizational culture. Regression analysis showed that ethical leadership strongly predicts organizational culture. Our findings revealed a positively significant correlation between ethical leadership behaviors and organizational culture; ethical leadership is a strong predictor of organizational culture. The more ethical leadership behaviors managers display, the more teachers' perceptions of organizational culture positively increase. Recommendations are to implement social and distributional justice among teachers and the fair distribution of awards and punishments, along with transparent inspection.

Keywords: Management, Leadership, Ethical Leadership, Organization, Organizational Culture.

Introduction

Organizations arise as a result of the actions taken by people and construct their own structures. These structures create their environments through activities. That means organizations play an active role in building the environment that deals with itself (Tsoukas & Chia, 2013). The effectiveness of an organization mostly depends on the effectiveness of its management. Organizational effectiveness appears to be one of the most fundamental management problems of our time because many studies have been conducted to determine factors that increase it. By drawing upon employees' limited but diverse skills, each organization ensures that its employees complement one another (Aydin, 2010). But the fact that leadership, organizational culture and climate, organizational commitment, and job satisfaction—in addition to employees— influence organizational effectiveness is reported by both foreign (Mintzberg, 2014; Lunenburg & Ornstein, 2013; Robbins & Judge, 2013; Hoy & Miskel, 2010) and Turkish (Elci, Sener & Alpkın, 2012) researchers. A person working alone does not need any coordination mechanism because he or she can simply consider what is needed and adjust appropriately. When two or more persons are involved, however, the situation changes, and coordination among thoughts and considerations must be accomplished. This is where leaders and leadership are needed (Mintzberg, 2014). Furthermore, organizational management is not only the management of visible resources but also of organizational members' "meaning worlds" (Sisman, 2011). In other words, the science of management relates directly to human behaviors. According to current management understanding, however,

analyzing only procedural organizational structure or human behaviors does not suffice for understanding an organization (Basaran, 2008). Just as each human fingerprint differs, in cultural terms, each organization is unique in its formation and operation. This ensures or requires each organization to develop its own unique leadership role (Yukl, 2002).

This understanding of uniqueness has also shaped leadership approaches. Initially, based on the theory of characteristics, leaders were considered to possess innate characteristics. Subsequently, however, the theory of human behavior has revealed that leadership is more about displayed behaviors and actions taken in the course of such behaviors (Baron & Greenberg, 2000). Finally, the theory of contingency has shown that no series of best leadership characteristics or behaviors actually exists and that effective leadership depends on the conditions of a given organization (Lunenburg & Ornstein, 2013). Thus, the understanding that leadership skills are not innate but learnable and improvable has been adopted (Haq, 2011). In addition, leadership necessitates high ethical and moral standards (Eisenbeiss, 2012) because ethical principles ensure that managers not only abstain from disputable actions but also avoid approaches that are not right but only appear attractive. Such principles also serve as an important compass showing others what is right and what is not. Therefore, Ozbag (2016) concluded in his research that ethical leadership is mentioned in two important dimensions as a personal moral dimension and moral administration. While its first dimension reflects personal properties such as honesty and reliability, its second dimension aims to reduce the probability of involvement in the unethical behaviors of workers by being a role model in moral relationships between administrators and workers. Brown, Trevino and Harrison (2005) defined ethical leadership as interpersonal relationships, the demonstration of normatively appropriate conduct through personal actions, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making. On the other side, Riggio, Zhu, Reina, and Maroosis (2015) determined the motivations behind leaders' ethical behaviors and focused on "cardinal virtues". Yet, rather than focusing on the intent or motivation of ethical leaders, most research on ethical leadership draws on Brown et al.'s (2005) work that defined ethical leadership in terms of behavior. Thus, the importance of ethical values has been steadily increasing for both leaders and organizations. Furthermore, ethical leadership or its absence can influence the formation and development of organizational culture.

The researchers could not locate any studies on the relationship (or predictiveness) between the two important concepts of ethical leadership and organizational culture. Therefore, this study aims to fill a scientific gap in the field and make a contribution by sharing results and suggestions based on teachers' perceptions of the influence of school managers' ethical leadership behaviors on organizational culture. It is hoped that the current study will help educational organizations create an effective culture and shed light on school managers' active roles in this process.

Method

Research Design

This is a descriptive study based on the relational screening model. Descriptive-relational screening studies describe a situation or event as it is and show the relations between variables that caused the situation, their effects and rates (Kaya, Balay & Gocen, 2012).

Research Sample

Study participants were 3302 teachers who served in 323 schools in the city of Duzce and its districts during the 2013–2014 school year. Table 1 displays schools in the city center and districts and the number of teachers involved.

Table 1.
Distribution of Schools and Teachers in Duzce City Center and Its Districts

<i>Districts</i>	<i>No. of Schools</i>	<i>No. of Teachers</i>	<i>No. of Schools that Received</i>	<i>No. of Teachers that Received</i>	<i>Number of Returned</i>
Central	231	2118	38	905	446
Akcakoca	19	395	13	335	250
Cumayeri	13	136	13	112	68
Cilimli	8	106	8	106	89
Gumusova	8	108	8	108	76
Golyaka	21	149	16	95	64
Kaynaslı	14	146	14	146	105
Yigilca	11	144	11	144	81
Total	325	3302	121	1843	1179

Because all of the provinces of Duzce differ in socioeconomic status and geographic features, etc., but people living in the same province have similar characteristics, a non-random purposive sampling procedure is employed to achieve maximum heterogeneity among respondents while representing all residents of Duzce to the fullest extent possible. Considering that the study participants were heterogeneous or that they had different ideas and thoughts, values of $p=0.5$ and $q=0.5$ were adopted, and the sample was calculated to be 807, according to the formula by Yazicioglu and Erdogan (2004). Data obtained relating to participating teachers are shown in table 2. A total of 1179 scales are returned. After excluding 122 forms that failed to follow the instructions, 1057 teachers' opinions are included in the research.

Table 2.
Data Relating to the Participating Teachers

	Frequency (N)	Percentage (%)
<i>Branch</i>		
Class Teacher	359	33.87
Branch Teacher	698	66.13
<i>Marital Status</i>		
Single	307	29.04
Married	750	70.96
<i>Sex</i>		
Female	568	53.74
Male	489	46.26
<i>Age</i>		
30 or below	378	35.76
31 to 40	432	40.87
41 to 50	190	17.98
51 or above	57	5.21
<i>School Type</i>		
Primary School	359	33.96
Secondary School	344	32.54
High School	354	33.49
<i>Seniority in years</i>		
9 or below	518	49.01
10 to 19	375	35.48
20 or above	164	15.51
<i>Total</i>	1057	100

Research Instruments and Procedure

The Ethical Leadership Scale (ELS) and the Organizational Culture Scale (OCS) were employed as data collection tools in this research. The ELS was developed by Yilmaz (2006) and includes 44 items in four domains. The OCS was developed by Firat (2006) and includes 48 items in four dimensions. Both researchers reported Cronbach's alpha value (α) as the reliability evidence as .98 for the ELS and .95 for the OCS.

Validity and Reliability

As evidence of structural validity, we found in our research that 61.139% of the total variance in responses to the ELS is explained in four dimensions. The first dimension explained 21.525% of the total variance; the second dimension explained 14.208% of the total variance; the third dimension explained 14.638% of the total variance; and the last dimension explained 10.798% of the total variance. The reliability evidence was obtained by calculating Cronbach's alpha value (α) for the overall responses and each dimension. The overall Cronbach's alpha value (α) value was .98. The Cronbach's alpha (α) values for each of the four dimensions as

Communicational Ethics, Climatic Ethics, Decision-Making Ethics, and Behavioral Ethics were .96, .91, .91, and .94, respectively.

Moving to the validity and reliability evidences for the OCS, we found in our research that 40.08% of the total variance in responses to the OCS is explained in four dimensions. The first dimension explained 27.556% of the total variance; the second dimension explained 5.65% of the total variance; the third dimension explained 3.75% of the total variance; and the last dimension explained 3.13% of the total variance. The reliability evidence was obtained by calculating Cronbach's alpha values (α) for the overall responses and each dimension. The overall Cronbach's alpha (α) value was .91. Cronbach's alpha values (α) for each of the four dimensions, as Democratic Management and Participation, Cooperation, Support and Trust, School-Environment Relationship, and Integration and Belonging were .77, .67, .87, and .71, respectively.

Data Analysis

Ethical leadership (and its sub-dimensions) was considered the independent variable, while organizational culture (and its sub-dimensions) was the predicted dependent variable. Regression analysis was performed to find these variables' levels of prediction. Regression analysis determined whether an independent variable or variables significantly predicted a dependent variable or, in the case of multiple independent variables, their relative significance to the variable (Buyukozturk, 2009). Information about predictive and predicted variables is shown in figure 1.

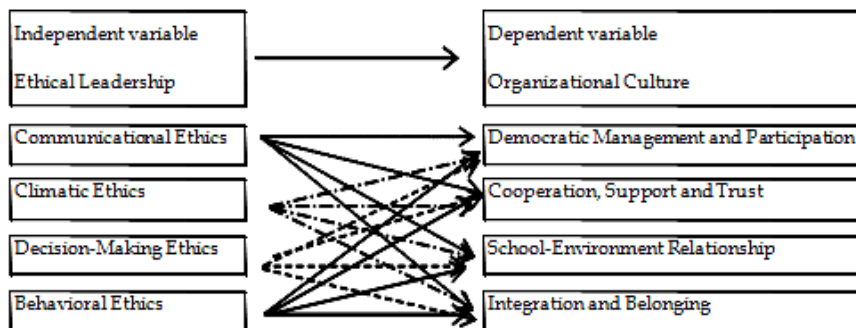


Figure 1. The model of the relationship and predictiveness between ethical leadership and organizational justice

Results

Teachers' perceptions, gathered to determine the influence of school managers' ethical leadership behaviors on organizational culture, from the Ethical Leadership and Organizational Culture Scales' sub-dimensions are presented in Table3.

Table 3.

The Arithmetic Mean Values of the General Ethical Leadership and Organizational Culture Scales and Their Sub-Dimensions

<i>Ethical Leadership \bar{X}</i>		<i>Organizational Culture \bar{X}</i>	
Communicational Ethics	3,96	Democratic Management and Participation	3,79
Climatic Ethics	3,86	Cooperation, Support and Trust	4,00
Decision Making Ethics	4,07	School-Environment Relationship	3,55
Behavioral Ethics	4,03	Integration and Belonging	3,99
General Ethic Leadership	3,98	General Organizational Culture	3,83

Table 3 shows that the arithmetic mean relating to ethical leadership is $\bar{X} = 3.97$; this mean corresponds to the perception "I agree" on the ELS range-value scale. Accordingly, teachers serving in Duzce can be said to consider their managers ethical leaders. As for data on mean and standard deviation values relating to sub-dimensions, the following mean values were found: communicational ethics, $\bar{X} = 3.96$; climatic ethics, $\bar{X} = 3.86$; decision making ethics, $\bar{X} = 4.07$; and behavioral ethics, $\bar{X} = 4.03$. According to these values, teachers perceived all dimensions relating to school managers in the range of "I agree" but perceived them at a higher level in the sub-dimension of "decision making ethics" and at a lower level in the sub-dimension of "climatic ethics."

Furthermore, table 3 shows that the arithmetic mean relating to organizational culture is $\bar{X} = 3.86$; this mean corresponds to the perception of "I agree" in the range-value scale. Accordingly, teachers serving in Duzce seem to consider their school cultures to be high. As for data on the mean and standard deviation values relating to sub-dimensions, the following mean values were found: democratic management and participation, $\bar{X} = 3.79$; cooperation, support, and trust, $\bar{X} = 4.00$; school environment relationship, $\bar{X} = 3.55$; and integration and belonging, $\bar{X} = 3.99$.

The question "According to teacher perceptions, is there a correlation between ethical leadership and its sub-dimensions, on the one side, and organizational culture and its sub-dimensions, on the other?" was analyzed within this study's scope. Pearson correlation analysis, symbolized by the letter "r", was conducted to answer the question and show the size of correlation between the two variables, its direction and significance. This coefficient ranges from $r = -1$ to $r = +1$; as it draws near 1, the correlation between two variables becomes stronger (Erdogan, 1998). Thus, $+1.00$ indicates a perfectly positive correlation; -1.00 indicates a perfectly negative correlation; and $.00$ indicates no correlation. In terms of range, $.00$ to $.30$ indicates a low level; $.30$ to $.70$ indicates an average level; and $.70$ to 1.00 indicates a high level (Buyukozturk, 2009). The data obtained in this study are shown in table 4.

Table 4.

Correlation Analysis Scores Relating to Ethical Leadership and Its Sub-Dimensions and Organizational Culture and Its Sub-Dimensions

	1	2	3	4	5	6	7	8	9	10
1.gen.ELS	1									
2.gen.OCS	.654***	1								
3.dim1ELS	.969***	.614***	1							
4.dim2ELS	.947***	.646***	.885***	1						
5.dim3ELS	.928***	.626***	.857***	.853***	1					
6.dim4ELS	.951***	.601***	.902***	.865***	.871***	1				
7.dim1OCS	.697***	.917***	.677***	.683***	.638***	.639***	1			
8.dim2OCS	.595***	.947***	.551***	.585***	.587***	.548***	.814***	1		
9.dim3OCS	.421***	.779***	.373***	.447***	.411***	.377***	.605***	.689***	1	
10.dim4OCS	.553***	.908***	.513***	.536***	.546***	.516***	.767***	.857***	.632***	1

*P< .050, ** P<.010, ***P<.001 (N=1057)

NOTE:genELS: Ethical leadership general value; genOCS: Organizational culture general value; dimension1ELS: Communicational ethics dimension of ethical leadership; dimension2ELS: Climatic ethics dimension of ethical leadership,dimension3ELS: Decision making ethics dimension of ethical leadership; dimension4ELS: Behavioral ethics dimension of ethical leadership; dimension1OCS: Democratic management and participation dimension of organizational culture; dimension2OCS: Cooperation, support and trust dimension of organizational culture; dimension3OCS: School-environment dimension of organizational culture; dimension4OCS: Integration and belonging dimension of organizational culture.

Table 4 shows significant differences with positive (+) Pearson correlation coefficient (r) scores at P<.001 in both the ELS and OCS and in their sub-dimensions. In general terms, a positive and significant correlation at r=.654 was found between ethical leadership and organizational culture, and this "r" score indicates a moderate-to-high correlation. A positive and significant correlation at r=.697 was found between ethical leadership in general and the democratic management and participation dimension of organizational culture; this rate indicates an average correlation but is even closer to a high level. Positive and significant correlations were found between ethical leadership in general and the cooperation, support, and trust dimension (r=.595); between ethical leadership in general and the school-environment relationship dimension (r=.421); between ethical leadership in general and the integration and belonging dimension (r=.553) of organizational culture—all three rates indicating average correlation. These findings show positive, significant, and average correlations between ethical leadership in general and all sub-dimensions of organizational culture. However, the least correlation (r=.421) was found between ethical leadership in general and the school-environment relationship dimension of organizational culture, while the highest (r=.697) was found between ethical leadership in general and the democratic management and participation dimension of organizational culture.

Findings regarding the question, "According to teacher perceptions, to what extent is organizational culture predicted by the communicational ethics, climatic ethics, decision making ethics, and behavioral ethics dimensions of managers?" are presented in table 5. Multiple regression analysis, a statistical method to determine

explanation of multiple independent variables (Balci, 2002), was performed to obtain these data.

Table 5.

Multiple Regression Analysis Results Relating to Organizational Culture in Terms of the Communicational Ethics, Climatic Ethics, Decision-Taking Ethics, Behavioral Ethics Behavioral Dimensions of Managers As Perceived by Teachers

Predictor Variable (Ethical Leadership Behaviors)	Predicted Variable (Organizational Culture)			
	Dimensions	β (Beta)	t	P
	General Ethical Leadership	.654	28,071	.000***
	Communicational Ethics	.085	1,375	.169
	Climatic Ethics	.368	6,703	.000***
	Decision Making Ethics	.249	4,773	.000***
	Behavioral Ethics	-.011	-0,175	.861
R ² (R Squared) =.440		R= .663	P=.000***	
R ² (Adjust R ²) =.437		F=206,328		

*P< .050, ** P<.010, ***P<.001

Table 5 shows data on the prediction rates of perceptual levels of organizational culture by teachers' perceptions of their school managers in terms of ethical leadership and its sub-dimensions, including communicational ethics, climatic ethics, decision making ethics, and behavioral ethics. Ethical leadership in general and its four sub-dimensions predicted organizational culture at 44% (R²=.440). As for specific sub-dimensions of ethical leadership, climatic ethics and decision making ethics significantly predicted organizational culture (P< .001), but communicational ethics and decision making ethics did not. β (Beta) and t points were assessed to determine sub-dimensions that best predicted organizational culture. Accordingly, these were climatic ethics with β (Beta)=.368 and t=.703 and decision-taking ethics with β (Beta)= .249 and t = 4.773. The behavioral ethics sub-dimension of ethical leadership did not appear to provide any significant influence in accounting for organizational culture (for P< .050, P<.010 and P<.001).

Discussion and Conclusions

According to the study's findings, teachers perceived their managers' ethical leadership behaviors at high levels. According to Dhar (2016), ethical leadership behaviors encourage employees' performances and innovative behaviors in an organization. Specifically, however, perceptions about behaviors in the ethical leadership sub-dimension "creating a positive climate in school" were at a lower level, while those in the "decision-making ethics" sub-dimension were highest. Thus, according to these findings, school managers in the city of Duzce display ethical behaviors in "decision making" but need to expend effort regarding behaviors for

“creating a positive climate in their schools.” When the general arithmetic mean of the ethical leadership behaviors scale of teachers’ perceptions was compared with other studies, it was found to be higher than those by Turhan (2007), Karagoz (2007), and Aktoy (2010), but lower than that by Ugurlu (2009). In addition to those studies, various correlational studies are also performed regarding the relationship between ethical leadership and numerous variables. Akdogan, Arslan, and Demirtas (2016) concluded in their research that there is no significant relationship between ethical leadership and social responsibility. Chen and Hou (2016) concluded in their research that ethical leadership and creating an innovative and creative work climate have a small positive relationship. Finally, Kelidbari, Fadaei, and Ebrahimi (2016) mentioned that ethical leadership has an indirect effect on workers’ performance.

When the results of teachers’ perceptions on the OCS were examined, all sub-dimensional means corresponded to the “I agree” range, but no data were obtained for “I completely agree”. Therefore, none of the OCS’s four sub-dimensions elicited completely positive perceptions. The lowest among them was “school-environment relationship.” Subsequently, based on these findings, schools experience difficulty in school-environment relationships in organizational culture. The highest sub-dimension was “cooperation, support, and trust,” suggesting that teachers perceive that they can establish communication and cooperation; in other words, they have a high level of confidence in the decisions that are made. When the general arithmetic mean of OCS sub-dimensions was compared with other studies, it was at a much higher level than the mean found by Firat (2007).

Based on the results obtained to the question, “According to teacher perceptions, is there a correlation between ethical leadership and its sub-dimensions, and organizational culture and its sub-dimensions?” Pearson correlation coefficient (r) scores showed an average level of correlation. Therefore, ethical leadership significantly and positively influenced organizational culture. In this context, we can conclude that any positive increase in teachers’ perceptions of ethical leadership also positively increased their perceptions of organizational culture; conversely, any negative perceptions of ethical leadership also caused perceptions of organizational culture to change negatively. As for comparison of these findings with those of other studies, Firat (2007) found significantly positive correlations between teachers’ perceptions of organizational culture and other value systems, while Yuksel (2009) found significantly positive correlations between teachers’ perceptions of organizational culture and their perceptions of organizational trust. Turhan (2007) found positive, significant correlations between ethical leadership and social justice, Onen (2008) between ethical leadership and emotional intelligence, Ugurlu (2009) among ethical leadership, organizational justice, and organizational commitment, Yildirim (2010) between ethical leadership and organizational justice, and Kursun (2011) between ethical leadership and organizational image. In addition to these studies, ethical leadership positively affect organizational identification, justice and self-sufficiency (Walumbwa, Mayer, Wang, Wang, Workman, & Christensen, 2011) and organizational social responsibility, organizational ethical values and organizational behaviors (Aslan & Sendogdu, 2012). As a result of these findings, we

can conclude that behaviors of leaders and employees directly influence organizational culture.

With regard to findings regarding the question, "According to teacher perceptions, to what extent is organizational culture predicted by managers' ethical leadership behaviors?" the independent variable of "ethical leadership behaviors of managers" predicted the dependent variable of organizational culture at 43%. Accordingly, managers' ethical leadership behaviors influence organizational culture almost by half, and these findings were found significant at both $P < .050$ and $P < .001$. When these findings are compared with other studies, we see that Yılmaz (2006) found, in an analysis of the power of ethical leadership in explaining organizational trust, that ethical leadership significantly explained organizational trust in all sub-dimensions; Ugurlu (2009) found that ethical leadership explained organizational justice at a significant and high level; and Yildirim (2010) showed that, in some sub-dimensions, ethical leadership accounted for organizational justice at a significantly high level.

Consequently, although ethical leaders are described as intractable, stable, and intransigent persons and ethical leadership behaviors are required as a result of employees' perverted behaviors (Stouten, van Dijke, Mayer, De Cremer & Euwema, 2013), the more leaders develop their ethical characteristics and display those characteristics as behaviors, the more they can positively influence organizational culture. The fundamental reason that, recently, almost all organizations have wanted to strengthen and improve their ethical codes and principles through certain regulations and incentives is that doing so helps create the desired organizational culture and level of effectiveness. The validity and accuracy of this is supported by the current study's findings. Teachers have raised their expectations for educational leaders to meet their standards of trust, impartiality, and justice. The most effective way of doing so is to ensure that leaders understand the importance of ethical leadership and create sufficient awareness of its principles.

Those with the power to affect school management should implement policies and leadership that will enable social and distributional justice among teachers, fair distribution of awards and punishments, and participative and cooperative decision making. In addition, such implementations should undergo transparent inspection. Finally, it is recommended that researchers analyze organizational culture and leadership approaches to compare their influences, correlations, and predictions with those of ethical leadership.

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Öğretmen Algılarına Göre Okul Yöneticilerinin Etik Liderlik Davranışlarının Örgüt Kültürü Üzerine Etkisi

Atf:

Toytok, E. H., & Kapusuzoglu, S. (2015). Influence of school managers' ethical leadership behaviors on organizational culture: Teachers' perceptions. *Eurasian Journal of Educational Research*, 66 373-388
<http://dx.doi.org/10.14689/ejer.2016.66.21>

Özet

Problem Durumu: İnsanlar var oluşlarından bu yana yaradılışları gereğince birlikte yaşama ve çalışma gereksinimi duymaktadırlar. Çünkü ne kadar birlikte olurlarsa o kadar güçlü olacağını bilirler. Grup içerisinde her birey özelliği ve gücü nispetinde katkı sağlar ve bu katkılar tümleşik bir yapıda bir amaç etrafında doğru koordine edilirse hatırı sayılır bir değerde güç oluştururlar. Zaten birlikte yaşama ve işbirliği yapılması altında yatan amaçta budur. Bu durum formal ya da informal örgüt ve yönetim yapılanmalarının temelini oluşturmaktadır. Bu anlamda bakıldığında örgüt ve yönetim birlikte var olan iki kavramdır. Formal örgüt bir yapı olarak kabul edilirse, yönetim bu yapının harekete geçirilmesi sürecidir. Belli amaçları gerçekleştirmek üzere oluşturulan formal bir örgütün amaçları, örgütteki insan ve maddi kaynakların amaçlar doğrultusunda yönlendirilmesi, denetlenmesi ve değerlendirilmesi gibi eylemlerle gerçekleştirilir. Bu eylemler bütünü, yönetim kavramı ile açıklanabilmektedir. Yönetimin özünde temel unsur olarak insanı etkilemek yatar. Yani herhangi bir yerde bulunan kişileri etkilemek için başvurulan yaklaşımlar, o yerin yönetiminin özünü oluşturur. Bu nedenle yönetim bilimi insan davranışları ile doğrudan ilişkili bir bilimdir. Yönetim alanında en çok araştırılan konular arasında yer alan örgütlerin etkiliği konusu günümüzün en temel problemlerinden biri olarak karşımıza çıkmaktadır. Bu nedenle bir çok araştırmanın örgütlerin etkililiğini arttırmak için etken olan yapıları belirlemek amacıyla yapıldığını görmekteyiz. Örgütlerin etkililiği üzerinde liderlik, örgüt kültürü ve iklimi, örgütsel bağlılık, iş doyumu gibi yapıların oldukça etkili olduğu bilinmektedir. Bunlara ek olarak son zamanlarda bir diğer öne çıkan kavram olarak etik değerleri görmekteyiz. Bu nedenle olumlu bir örgüt kültürü yaratmada etik ilkelerin bir örgütte hayata geçmiş olmasının önemi her geçen gün daha da hissedilir derecede artmakta olduğu görülmektedir. Hele birde son zamanlarda yönetici yerine liderlik kavramının öne çıkması ile artık örgütlerde yönetici yerine lider anlayışına geçilmiş olup ve Lider - örgüt arasında ilişki yapılan birçok araştırmada kendisini göstermiştir. Araştırmacının dikkatini çeken örgüt kültürü-liderlik-etik kavramları araştırılmış, bu konularla ilgili araştırmalar ve çalışmalar incelenmiştir. Liderlik

yapıları içerisinde birçok liderlik yaklaşımları olduğu görülmüş olup, bu yaklaşımlardan özellikle 2000'li yıllarda değer yapısının öne çıkması ile etik liderlik kavramı popüler olmuştur. Günümüzde etik liderlik kavramı ve diğer kavramlarla ilişkisi halen çalışılmaya araştırılmaya devam etmektedir. Etik liderlik ve örgüt kültürü gibi bu iki önemli kavram arasındaki ilişki ve bunların yordayıcılığına dayalı olarak alanda, araştırmacının ulaşabildiği kaynaklar çerçevesinde herhangi bir araştırmaya rastlanmamıştır.

Araştırmanın Amacı: Bu araştırmanın genel amacı, öğretmen algılarına göre okul yöneticilerinin etik liderlik davranışlarının örgüt kültürü üzerine etkisini belirlemektir. Bu araştırmada sonucunda elde edilen bulgular; örgütün etkililiğini ve veriminin arttırması, örgüt sağlığının korunması ve gelişmesinin sağlanması, iş görenlerin örgüte bağlılığının ve iş doyumunu arttırması, örgütsel adalet algılarının kuvvetlenmesi, etik değerlerin önemi ve etkisinin algılanması için ışık tutabilecek bulgulara ulaşmasını sağlama açısından önemlidir. Bu sayede alanda bir bilimsel boşluğu doldurmayı, bulgulara dayalı sonuçlar ve öneriler getirerek alana katkı yapmayı amaçlamaktadır.

Yöntem: Araştırma betimsel nitelikte ilişkisel tarama modelinde bir çalışmadır. Araştırmanın evrenini, Düzce ilinde ve ilçelerinde 2013-2014 Eğitim-Öğretim yılında 323 okulda görev yapan 3302 öğretmen oluşturmaktadır. Araştırmada Etik liderlik ve alt boyutları bağımsız değişkeni yordayıcı değişken olarak, örgüt kültürü ve alt boyutları bağımlı değişkeni yordanan değişken olarak alınmış, bu değişkenleri ne kadar yordandığına bakmak için regrasyon analizi yapılmıştır. Bu araştırmada okul yöneticilerinin etik liderlik özelliklerini belirlemek için Etik Liderlik Ölçeği (ELÖ) ve örgüt kültürü düzeylerini belirlemek içinde Örgüt Kültürü Ölçeği (ÖKÖ) kullanılmıştır. ELÖ güvenilirlik analizi için öncelikle Cronbach Alpha (α) katsayısını kullanmıştır. Aynı zamanda Cronbach Alpha (α) iç tutarlılık katsayısını hem ölçeğin tümü hem de alt boyutlar için ayrı ayrı hesaplamış ve güvenilirliğin bir ölçütü olarak belirlemiştir. Ölçeğin toplamında güvenilirlik katsayı olarak Cronbach Alpha (α) değerini .98 olarak bulmuştur. Ölçeğe ilişkin dört alt boyuta ilişkin güvenilirlik analizinde Cronbach Alpha (α) değerleri sırasıyla iletişimsel etik .96, iklimsel etik .91, karar vermede etik .91 ve davranışsal etik .94 olarak bulunmuştur. ÖKÖ güvenilirlik analizi için Cronbach Alpha (α) iç tutarlılık katsayısını hem ölçeğin tümü hem de alt boyutlar için ayrı ayrı hesaplamış ve güvenilirliğin bir ölçütü olarak belirlemiştir. Ölçeğin toplam güvenilirlik katsayısını .94 bulmuştur. Dört alt boyutun kendi içlerinde hesaplanan güvenilirlik katsayıları; Demokratik yönetim ve katılım alt boyutunda .89; İşbirliği, destek ve güven alt boyutunda .88; Okul-çevre ilişkisi alt boyutunda .79 ve Bütünleşme ve aidiyet alt boyutunda ise .82 olarak bulunmuştur. Bu bulgular bize her iki Ölçeğin güvenilirliğinin olduğunun bir göstergesidir.

Bulgular: Araştırmada elde edilen bulgulara göre etik liderlik ve örgüt kültürü arasında neredeyse yüksek düzeyde pozitif yönde ve anlamlı bir ilişki olduğu görülmüştür. Regrasyon analizi sonucunda etik liderliğin örgüt kültürünün güçlü bir açıklayıcısı olduğu görülmüştür.

Sonuç ve Önermeler: Araştırmada elde edilen sonuçlara göre yöneticilerin etik liderlik davranışları ile örgüt kültürü arasında pozitif yönde anlamlı ilişkisi olduğu ve etik liderliğin örgüt kültürünün güçlü bir yordayıcısı olduğu görülmüştür. Yöneticiler ne kadar yüksek oranda etik liderlik davranışları sergilerlerse, öğretmenlerin örgüt kültürü algılarının da o düzeyde artış gösterebileceği söylenebilir. Uygulayıcılara okullarda, öğretmenler arasında sosyal ve dağıtımsal adaletin sağlanması, ödül ve cezaların adil şekilde dağıtılması gibi uygulamaların şeffaf bir şekilde yapıp denetlenebilmesi sağlanabilir.

Anahtar Kelimeler: Yönetim, Liderlik, Etik Liderlik, Örgüt, Örgütsel Kültür.

Examination of the TIMSS 2011 Fourth Grade Mathematics Test in Terms of Cross-Cultural Measurement Invariance¹

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Abstract

Problem Statement: Student achievement is considered an indicator of the quality of education, and achievement tests are applied to assess student achievement. International tests are adapted into different languages and cultures with the aim of assessing student achievement on an international level and comparing the achievements of different countries. In our country, a number of tests at the national and international levels are conducted to assess student achievement. One of the tests conducted in our country is called Trends in International Mathematics and Science Study (TIMSS). Countries structure their curricula and education policies based on the results of these studies. However, in order for these comparisons to be meaningful, the constructs measured by the tests should be equivalent. When the relevant literature was examined, it was observed that the number of studies on cross-cultural invariance in Turkey was low and that these studies did not involve TIMSS 2011.

¹This study was presented at the International Eurasian Educational Research Congress (Istanbul University & EJER, 24-26 April 2014).

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Purpose of the Study: The purpose of this study was to examine the measurement invariance of TIMSS 2011 mathematics test in terms of different cultures.

Method: Aiming at examining the intercultural measurement invariance of the TIMSS 2011 mathematics test, this is a survey model that tries to describe an existing situation as it is. The study sample was composed of 1,987 fourth graders from Turkey, England, Japan and the USA. This study was conducted on the data obtained from the TIMSS 2011 mathematics test. Model invariance was examined through multi-group confirmatory factor analysis. LISREL 8.80 for Windows software was used for performance of data analysis.

Findings and Results: The study of measurement invariance was conducted in four steps. It was found that the proposed model was confirmed for all countries, and configural invariance was ensured in the first step, while metric invariance was not ensured in the second step. Therefore, we did not start the scalar invariance or strict invariance analyses. After this step, metric invariance was tested through binary and trilateral combinations in order to determine in which country the invariance was collapsed. It was found that the reason why the metric invariance wasn't ensured was that it was not sourced from only one country.

Conclusions and Recommendations: According to the findings, the invariance across four countries was ensured only in the configural invariance step. Therefore, the items causing the model not to have measurement invariance can be determined, as well as whether the items demonstrated DIF across groups. The items determined to demonstrate DIF can be examined in terms of bias of sources, depending on the expert opinions.

Keywords: Measurement invariance, Multiple-group confirmatory factor analysis, Structural equation modeling

Introduction

Education bears such responsibilities as producing enough quality for a society to maintain its existence and development, preventing the existing values from disappearing, and reconciling the new and old values (Varış, 1998). Education not only ensures social continuity through cultural transmission, but also creates a labor pool that will add novel gains to the cultural heritage and move the society one step forward (Hotaman, 2009). As a result, student achievement is considered as an indicator of the quality of education, and achievement tests are applied to assess student achievement. These tests can be both at the national and international levels. International tests are adapted into different languages and cultures in order to assess student achievement at an international level and compare the achievements of different countries.

In our country, a number of tests at the national and international levels are conducted to assess student achievement. One of the tests conducted in our country is called the Trends in International Mathematics and Science Study-TIMSS, which is organized by the International Association for the Evaluation of Educational Achievement (IEA) whose center is in the Netherlands. TIMSS is a survey focusing on the assessment of student math and science knowledge and skills. It monitors the trends in student achievement in these fields and reveals the differences between national education systems in order to allow education and instruction to be improved. Within the scope of this research, information about education systems, instructional programs and students, teachers and school characteristics are collected, along with data on student performances in mathematics and science (Milli Eğitim Bakanligi [MEB], 2015).

Achievement tests and questionnaires involving items aimed at measuring the performance of fourth and eighth graders in math and science took place in TIMSS 2011. In each grade level, there were 14 test booklets. The mathematics tests for fourth graders involved the learning domains of numbers, geometrical shapes, measurement and data display, while for eighth graders, it involved the learning domains of numbers, algebra, geometry, data and probability. The science achievement tests for fourth graders involved the learning domains of life science, physical science and earth sciences, while for eighth graders, it involved the learning domains of biology, chemistry, physics and earth sciences (MEB, 2011). Conducted for the first time in 1995, TIMSS was carried out in 1999, 2003, 2007, and 2011, with the last study in 2015. Table 1 shows the Number of Participating Countries and Turkey's Success Ranking in TIMSS 1999-2015.

Table 1.

Number of Participating Countries and Turkey's Success Ranking in TIMSS 1999-2015

Year	Grade 4			Grade 8		
	Number of Countries	Turkey's Success Ranking		Number of Countries	Turkey's Success Ranking	
		Mathematics	Science		Mathematics	Science
1999	-	-	-	38	31	33
2003	-	-	-	-	-	-
2007	-	-	-	49	30	31
2011	50	35	36	42	24	21
2015	49	36	35	39	24	21

(MEB, 2003, 2011, 2014a, 2014b, 2016)

Aiming at assessing the achievements of students from different cultures and languages in the disciplines of mathematics and science, in TIMSS, the structures that is measured by the tests is required to be equivalent in order for the comparison to be meaningful. In other words, the basic assumption in intercultural comparisons is that

the tests have measurement invariance (Gierl, 2000). Therefore, the Standards for Educational and Psychological Testing (American Educational Research Association [AERA], American Psychological Association [APA] & National Council on Measurement in Education [NCME], 1999) and Guidelines on Adapting Tests (Hambleton, 1994; International Test Commission [ITC], 2005) require researchers in intercultural studies to provide evidences of comparability of scores obtained using tools in different languages.

Measurement invariance means that examinees of equal standing with respect to a specific latent structure should on average earn the same test score from items and subscales, irrespective of group membership (AERA, APA, & NCME, 1999). For a test to have measurement invariance, it is required for individuals from different groups whose similar characteristics are measured to have an equal chance of getting a specific score (Millsap, & Kwok, 2004). In other words, a measurement model should have the same construct in different groups, and the tool should have the same items, factor loadings, correlation between factors, and error variance (Jöreskog, & Sörbom, 1993).

Multiple-Group Confirmatory Factor Analysis (MG-CFA) is one of the most preferred methods in testing measurement invariance across groups. MG-CFA involves the simultaneous analysis of a CFA model in more than one group (Brown, 2006). MG-CFA tries to ensure parameter invariance by making comparisons between the least limited models and the most limited models (Horn, & McArdle, 1992, as cited in Uzun-Başusta, 2010). In MG-CFA, the parameters of the measurement model are estimated simultaneously in all groups and are tested as to whether these parameters significantly differ from each other (Jöreskog, & Sörbom, 1993).

Measurement invariance is tested in four steps. These steps are (Meredith, 1993):

1-Configural Invariance: This is the most basic level in measurement invariance. In this first step, whether the groups have the same factor construct is examined. Basic model construct is invariable for the groups. In this model, invariance limitation is not conducted over the estimated parameters. In other words, the groups are permitted to have different parameter values. The configural invariance model has a critical importance because the data will not support the more limiting models if the data do not support the similarity of constant and inconstant parameter pairs across groups (Bollen, 1989).

2-Metric invariance: In this step, whether the different groups respond to the items similarly is examined. It is a limiting model. In this model, factor loadings are limited across groups.

3-Scalar invariance: In this step, whether the obtained regression constant is similar across the groups is examined when the factor score of the groups is zero. In this model, there is constant value/coefficient limitation in addition to the factor loading limitation.

4-Strict invariance: In this last step, whether the error variances differ across the groups is examined. While the strict invariance in the measurement model is tested, error variances are limited along with all parameter limitations.

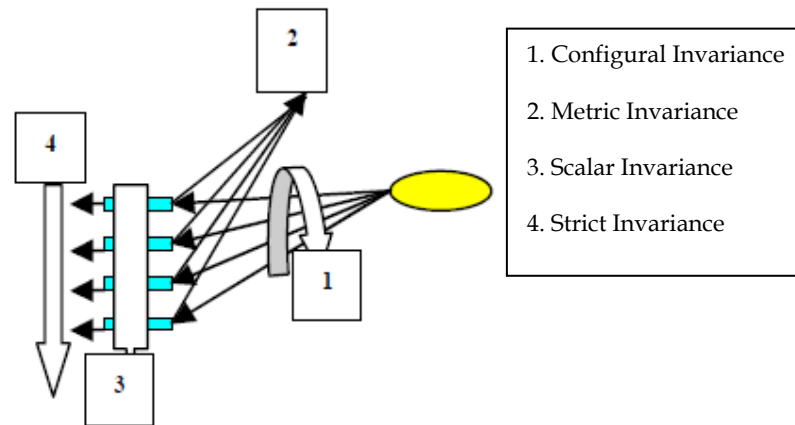


Figure 1. Analysis steps for measurement invariance

Source: Başusta, 2010

Vanderberg and Lance (2000) suggested that the evaluation of measurement invariance can be achieved using a systematic approach. This is achieved through a step-by-step process which assesses hypotheses based on their hierarchical order. Every hypothesis is directly related to the specific step in this hierarchical order. Since the steps are in hierarchical order, the structures of the hypothesis are also hierarchical. Therefore, when measurement invariance is not present in one step, there will be no need to evaluate the hypothesis in the next step. Meredith (1993) especially emphasized that full equivalence is a necessary step for a fair and valid comparison. However, full measurement equivalence is generally not used in practice.

Countries structure their curriculums and education policies based on the results of international education studies. However, in order for these comparisons to be meaningful, the constructs measured by the tests should be equivalent. When the relevant literature was examined, it was observed that the number of studies on cross-cultural invariance in Turkey was low (Ogretmen, 2006; Akyildiz, 2009; Asil ve Gelbal, 2012; Asil & Brown, 2015), and none of these studies involved TIMSS 2011. Moreover, it was also determined that measurement invariance was not completely ensured. As a result, it was considered necessary to investigate the cross-cultural measurement invariance of the construct measured by using the TIMSS 2011 mathematics test so that the comparisons would be much more valid and sound. TIMSS is an exam the results of which have an influence on education policy in various countries, and the test also enables countries to compare their levels of education. It is important to determine whether TIMSS shows intercultural

measurement invariance since it is an important cross-cultural exam. There are several advantages of examining the intercultural measurement invariance of TIMSS. The reliability and validity of conclusions derived from TIMSS results will be uncovered. Furthermore, it will enable us to determine how to solve the issues and what the reasons for the problem may be, if any. All of these reasons constitute the necessity to undertake this research.

In this context, the main purpose of this study was to examine the measurement invariance of the TIMSS 2011 mathematics test in terms of different cultures. Within this general purpose, the following questions were examined:

Is there any evidence of TIMSS 2011 in terms of;

- a) Configural Invariance
- b) Metric Invariance
- c) Scalar Invariance
- d) Strict Invariance

Method

In this section, information about the research model, population and sample, data collection tool and data analysis are presented.

Research Design

Aiming at examining the intercultural measurement invariance of the TIMSS 2011 mathematics test, this is a survey model since it tries to describe an existing situation as it is.

Research Sample

The target population of TIMSS 2011 consists of all of the fourth and eighth graders in participating countries. The basic sampling model used by TIMSS to obtain a precious and interpretive sample is the two-stage stratified cluster sampling model. The first stage is composed of the selection of schools, while the second stage is composed of selection of classes in those schools.

The population of this study was composed of 50 countries, which participated in TIMSS 2011 at fourth grade level. However, the sample of this study was composed of 1.987 fourth graders from Turkey, England, Japan and the USA, who were selected using purposive sampling methods. The purpose of this selection is that the mother tongues of two countries (England and the USA) are English and the mother tongue of the other two countries (Turkey and Japan) is not English. The element of language, which is one of the most important intercultural differences, has been effective in the selection of countries.

Table 2.*Distribution of Participants by Country*

Country	f	%
Turkey	531	26.7
England	250	12.6
Japan	313	15.8
United States of America	893	44.9
Total	1987	100.0

When Table 2 is examined, it can be seen that 531 (26.7%) of the participants are from Turkey, 250 (12.6%) of the participants are from England, 313 (15.8%) from Japan, and 893 (44.9%) from the USA.

Data Collection Tools

This study was conducted using the data obtained from the TIMSS 2011 mathematics test. These data were obtained from <http://timssandpirls.bc.edu/timss2011/international-database.html>. The math questions in TIMSS were limited by numbers, geometrical shapes, measurements and data representation in terms of content. The questions were assessed in three classifications, which are knowledge, application and reasoning in the cognitive domain. TIMSS 2011 Mathematic tests were composed of 14 parallel booklets. The study was carried out using 21 items on a numbered form. Cognitive domain dimensions of items and the number of item in each dimension can be seen in Table 3.

Table 3.*Frequency and Percentage of Fourth Grade Mathematic Items in terms of Cognitive Domain Dimensions*

Cognitive Domain	f	%
Knowledge	7	33
Application	6	29
Reasoning	8	38

When Table 3 is examined, it can be seen that 33% of the items were at the knowledge level, 29% were at the application level, and 38% were at the reasoning level.

Data Analysis

LISREL 8.80 for Windows software was used for the data analysis. LISREL was used to create a model and examine invariance across models. Model invariance was examined through multi-group confirmatory factor analysis.

In order to obtain an accurate result from the data, the data set, the data structure and the assumptions of analyses were examined before starting the analysis.

Missing values. First, the missing values were examined since they could lead to great differences in analysis results. The cases having missing values were excluded from research.

Outliers. After missing values, the existence of univariate outliers was examined. It was observed that none of the z scores in any of the cases were within the ± 3 limit. Being a prerequisite for confirmatory factor analysis, multivariate residuals were tested using Mahalanobis Distance. These distances refer to the chi-square distribution whose degree of freedom is the sample size, and they evidence the multivariate outlier observation when the $p < 0.001$ (Kline, 2005; Stevens, 2009). The results showed no multivariate outliers in the data.

Normality. It is difficult to test multivariate normality in Structural Equation Modeling since it requires testing of many linear combinations. In such situations, examination of univariate normality for each observed variable is recommended (Weston & Gore, 2006). Skewness and kurtosis values of each variable, and the ratio of mean to the standard deviations (coefficient of variation), were examined to determine the normality of the data. The results demonstrated normal distribution. Graphs about the residuals were examined, and they were decided to be normally distributed. The independence of residuals from each other was examined through Durbin Watson statistics and no test statistic outside the range between 0 and 4 was observed. In this situation, it could be said that the errors were independent of each other (Tabachnick, & Fidell, 2007).

Multicollinearity. The relationship of items to each other and the multicollinearity problems among the items were examined. It was observed that items had low level of relation to each other in each factor. The tolerance values were as expected, while variance inflation factor (VIF) values were below 10 and condition index (CI) values were below 30. These results showed that there was no multicollinearity problem among the items.

Results

The study of measurement invariance was conducted as sequence of testing four steps. The first step is configural invariance, which is the most basic level in measurement invariance, and it examines whether the groups have the same factor construct. The second step is metric invariance in which the different groups respond to the items similarly, and therefore the comparison of different groups' scores can be meaningful. The third step is scalar invariance which expresses that the value of the same subjects has the same value both in latent construct and observed construct. The last step is strict invariance in which the contextual responses given to the factors have invariance.

Meredith (1993) emphasized that strict invariance is required for a fair and valid comparison. However, obtaining the strict invariance is difficult in practice. Therefore, measurement invariance should be expressed gradually. Although there is no language union in this gradation three types of measurement invariance can be determined:

Weak Invariance: for the situation where factor constructs are the same and other parameters are free; Strong Invariance: for the situation where factor constructs and loadings are the same and the error variances are free; Strict Invariance: for the situation where the factor constructs, loadings and error variances are the same (Byrne, Shavelson, & Muthen, 1989).

Does the TIMMS 2011 mathematics test have intercultural measurement invariance?

Configural invariance. In this step, the construct presented in the path diagram in Figure 2 was tested whether to be confirmed or not for the four countries.

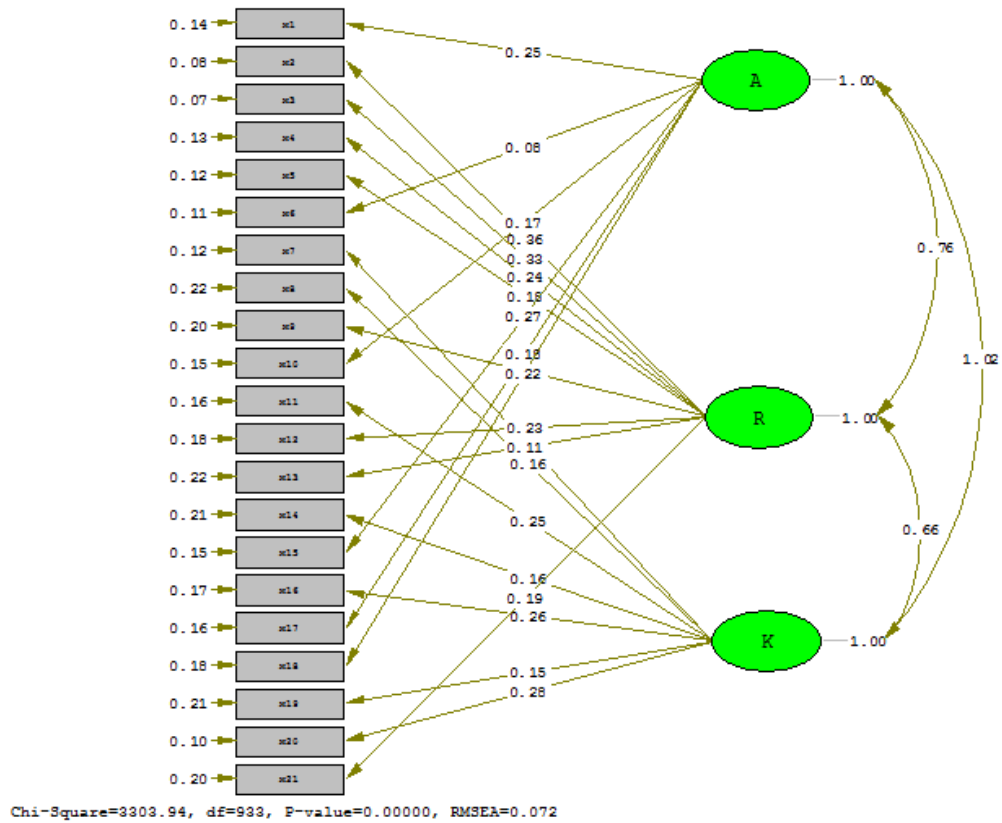


Figure 2. The measurement model of responses given to the mathematics test TIMMS 2011 by students from Turkey, the United States of America, England and Japan

As can be seen in Figure 1, three latent variables were determined related to the construct tested, which were Knowledge (K), Application (A), and Reasoning (R).

There were 7 indicators of Knowledge latent variable (items 7, 8, 11, 14,16,19,and 20), 6 indicators of Application latent variable (items1, 6, 10, 15, 17,and 18), and 8 indicators of Reasoning latent variable (Items 2,3,4,5,9,12,13,and 21).

Confirmatory factor analysis and configural invariance goodness of fit indexes about the countries are presented in Table 4.

Table 4.

Fit Coefficients of Model about Mathematics Test

Country	χ^2 / df	RMSEA	CFI	GFI	RMR	NNFI
Turkey	1.54	0.042	0.97	0.92	0.011	0.96
England	1.22	0.036	0.98	0.89	0.011	0.97
USA	1.84	0.036	0.97	0.95	0.007	0.96
Japan	1.47	0.044	0.96	0.91	0.010	0.95
Configural Invariance	2.44	0.065	0.89	0.86	0.023	0.88

When the Table 4 is examined, it can be seen that the results of confirmatory factor analyses conducted separately for each country showed good fit and the goodness of fit indexes of structural equivalence are at acceptable level ($\chi^2 / df < 3$, RMSEA < 0.08, CFI > 0.90, GFI > 0.90, RMR < 0.05, NNFI \geq 0.95). In this area, it can be said that the proposed model was confirmed for all countries and the configural invariance, which is the first step of measurement invariance, was ensured.

Metric invariance. The examination of metric invariance began after the configural invariance was ensured. In the model proposed in this step, factor loadings were fixed for each country, and testing was performed to determine whether the difference between the first situation and the new model was significant. χ^2 values of the first two steps, degrees of freedom and the differences between them are presented in Table 5.

Table 5.

Fit Coefficients of Metric Invariance Analysis Results by Countries

Step	χ^2	df	$\Delta \chi^2$	Δdf
1. Step	1823.20	748	-	-
2. Step	2206.70	808	383.5	60

As can be seen in Table 5, since $\Delta \chi^2 > 79.08$, the difference between the goodness of fit indexes were significant when the factor loadings were fixed. In other words, metric invariance wasn't ensured. We didn't start the scalar invariance and strict invariance analyses at a step where the metric invariance wasn't ensured since the analysis of measurement invariance is a hierarchical procedure. However, after this

step, metric invariance was tested through binary and trilateral combinations in order to determine in which country the invariance was collapsed.

In order to determine in which country the invariance was collapsed, the metric invariance between three countries was checked after the factor loadings of countries were set free, one by one, respectively. $\Delta\chi^2$ and Δdf values with trilateral combinations are presented in Table 6.

Table 6.

Fit Coefficients of Metric Analysis Results by Trilateral Combinations of Countries

Combinations of Countries	χ^2	df	$\Delta \chi^2$	Δdf
TUR-USA-JPN	2294.02	788	470.82	40
TUR-JPN-ENG	2292.59	788	469.39	40
TUR-USA-ENG	2274.68	788	451.48	40
USA-ENG-JPN	2196.57	788	373.37	40

As can be seen in Table 6, since $\Delta\chi^2 > 65.76$, it was observed that metric invariance was not ensured in trilateral combinations of countries. In other words, the reason why the metric invariance was not ensured is not rooted in only one country.

After the metric invariance as not ensured in trilateral combinations of countries, the metric invariance of the four countries was examined in pairs. Fit values, $\Delta \chi^2$ and Δdf values of pairs are presented in Table 7.

Table 7.

Fit Indexes of Metric Invariance Analysis Results by Binary Combinations of Countries

Combinations of Countries	χ^2	df	$\Delta \chi^2$	Δdf
TR-JPN	2211.77	768	388.57	20
TR-USA	2236.67	768	413.47	20
TR-ENG	2201.94	768	378.74	20
USA-ENG	2129.82	768	306.62	20
ENG-JPN	2176.72	768	353.52	20
USA-JPN	2145.98	768	322.78	20

As can be seen in Table 7, since $\Delta \chi^2 > 31.41$, it was observed that the metric invariance wasn't ensured in binary combinations. This finding can be interpreted to show that the relationships between characteristics measured and the dimensions of the scale are not similar. In this situation, it can be expressed that the countries did not respond to the items in a similar manner, and making comparison between these scores obtained from these groups is not meaningful.

The configural invariance for the proposed model of the cognitive levels to which the items belonged was ensured. In this step, the differences between the groups can be stated to stem from the measurement tool itself. Therefore, making comparisons across groups may not be accurate. As a result, it can be said that the invariance across countries is weak invariance. This source of this situation is considered to stem from a variety of translation problems and cultural differences. Moreover, it can also be an indicator of Differential Item Functioning (DIF). In the study "Psychometric Properties of Tests for Reading Parts in PIRLS 2001: Turkey and the United States of America (USA)," Ogretmen (2006) determined that the tests did not show any configural invariance among the relevant samples. Their study focused on the intercultural and linguistic invariance of the PISA 2006 student questionnaire. In their study focusing on the intercultural and linguistic invariance of PISA 2006 student questionnaire, Asil and Gelbal (2012) found that some items had differential item functioning across the countries as a result of multiple-group confirmatory factor analysis. As the linguistic and cultural differences increased across countries, it was observed that items demonstrating DIF also increased. The reasons behind the items demonstrating DIF were concluded to be translation problems and cultural differences. In his study focusing on the equivalence of PIRLS 2001 tests across 35 countries, Akyildiz (2009) found that the invariance was ensured at medium level. In a similar study focusing on the examination of TIMMS-R invariance in terms of gender in a Turkish sample, Uzun and Ogretmen (2010) stated that the invariance was ensured except for the metric invariance and that it had a medium level invariance. In the study "The investigation of psychometric properties of the test of progress in international reading literacy (PIRLS) 2001: The model of Turkey-United States of America," Ogretmen (2006) determined that the tests did not show any configural invariance among the relevant samples. As can be seen in similar studies in literature, along with the difficulty of ensuring strict invariance, it was found that metric invariance was mostly ensured, but the equivalence was overruled in scalar invariance, and the medium level invariance was generally ensured. Within the scope of this study, it was observed that only configural invariance was ensured and that it was at a weak level.

Discussion and Conclusion

In this section, the conclusions and recommendations are presented.

Conclusion

In this study, analyses related to the invariance of the model demonstrating the cognitive levels of the TIMMS 2011 mathematics test in Turkey, the USA, England and Japan were conducted. According to the findings, the invariance across four countries was ensured only in the configural invariance step. Metric invariance was tested through binary and trilateral combinations in order to examine in which country the invariance was collapsed in detail, and it was determined that the invariance was not ensured in any combination. Therefore, the invariance across countries was determined to be weak. In this direction, it was concluded that making

comparisons across countries would not be appropriate, the structure of the data should be examined, and troublesome points in terms of culture should be determined.

Recommendations

- Only four countries were selected for this study based on mother tongue. These analyses can involve other countries.
- The items causing the model not to have measurement invariance can be determined, as well as whether the items demonstrated DIF across groups. The items determined to demonstrate DIF can be examined in terms of bias of sources, depending on expert opinions.
- This study took only the language variable into consideration in the cultural comparisons. Other variables may also be included in the research.
- Ensuring the invariance in international examinations such as TIMMS, PISA, and PIRLS is very important for cultural comparisons to be made. Whether there are similar issues in other international examinations can be investigated.

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TIMSS 2011 Dördüncü Sınıf Matematik Testinin Kültürlerarası Ölçme Değişmezliğinin İncelenmesi

Atf:

- Karakoc Alatlı, B., Ayan, C., Polat Demir, B., & Uzun, G. (2016). Examination of the TIMSS 2011 Fourth Grade Mathematics Test in terms of cross-cultural measurement invariance. *Eurasian Journal of Educational Research*, 66, 389-406
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Özet

Problem Durumu: Eğitim; bir yandan yeni ve eski değerleri bağdaştırarak kültürel aktarımla toplumsal devamlılığı sağlarken; diğer yandan toplumun yaşamasını ve kalkınmasını devam ettirebilecek ölçüde ve nitelikte değer üreterek, kültürel mirasa

yeni kazanımlar ekleyecek insan gücünü yetiştirerek aynı toplumu bir adım ileriye götürmesini sağlamaktadır. Eğitim sonucunda ise öğrenci başarısı, eğitimin niteliğinin bir göstergesi olarak ele alınmakta ve öğrenci başarısının değerlendirilmesinde de başarı testleri uygulanmaktadır. Bu testler ulusal ve uluslararası düzeyde olabilmektedir. Uluslararası düzeyde öğrenci başarılarını değerlendirmek ve farklı ülkelerin başarılarını karşılaştırmak amacıyla hazırlanan uluslararası düzeydeki testler ise farklı dillere ve kültürlere uyarlanmaktadır.

Türkiye’de de öğrenci başarısının değerlendirilmesinde ulusal ve uluslararası düzeyde testler uygulanmaktadır. Uygulanan uluslararası testlerden biri de merkezi Hollanda’da bulunan Uluslararası Eğitim Başarılarını Değerlendirme Kuruluşu tarafından düzenlenen Uluslararası Matematik ve Fen Eğilimleri Araştırması (TIMSS)’dir. Öğrencilerin matematik ve fen bilimleri alanlarındaki kazandıkları bilgi ve becerilerini değerlendirmek, eğitimi ve öğretimi geliştirmek amacıyla ülkelerin eğitim sistemleri hakkında karşılaştırmalı veri toplamak TIMSS’in amaçları arasında yer almaktadır. Bu karşılaştırmanın anlamlı olabilmesi için testlerin ölçtüğü yapıların eşdeğer olması yani kullanılan testlerin ölçme değişmezliği/eşdeğerliğinin sağlanmış olması gerekir. Bu bağlamda testlerin, psikometrik bir özellik olarak ölçme değişmezliğine sahip olması, kültürlerarası karşılaştırmalarda, temel bir varsayımdır.

Bir testin ölçme değişmezliğini karşılayabilmesi için, farklı gruplardan gelen fakat benzer yapıları ölçülen bireylerin, belirli bir puanı alma olasılığı eşit olmalıdır. Başka bir deyişle ölçme değişmezliğinin sağlanabilmesi için bir ölçme modelinin birden fazla grupta aynı yapıya sahip olması yani ölçme aracının maddelerinin, faktör yüklerinin, faktörler arası korelasyonlarının ve hata varyanslarının aynı olması gerekir. Ölçme eşdeğerliliği ise dört aşamada test edilir. Bunlar;

1. *Yapısal değişmezlik:* Bu aşamada grupların aynı faktör yapısına sahip olup olmadığı incelenir. Bu modelde kestirilen parametreler üzerinde gruplar arası değişmezlik sınırlandırması yapılmaz yani grupların farklı parametre değerleri almalarına izin verilir.
2. *Metrik değişmezlik:* Bu aşamada, farklı grupların maddelere aynı biçimde cevap verip vermediği incelenir. Bu modelde faktör yükleri gruplar arasında sınırlandırılır.
3. *Skalar değişmezlik:* Bu aşamada özel faktör ortalamalarının yani grupların faktör puanı sıfır olduğunda elde edilen regresyon sabitinin gruplar arasında benzer olup olmadığı incelenir. Bu modelde faktör yükleri sınırlandırmasının yanında sabit değer/katsayı sınırlamasına gidilir.
4. *Tam değişmezlik:* Bu son aşamada hata varyanslarının gruplarda farklılaşarak farklılaşmadığı incelenir. Ölçme modelindeki katı değişmezlik test edilirken bütün parametre sınırlamaları ile birlikte hata varyansları sınırlandırılır

Sonuçları ülke eğitim politikalarına yön vermede ve eğitim programlarının yeniden yapılandırılmasında büyük öneme sahip uluslararası eğitim araştırmalarına dayalı olarak karşılaştırmalar yapabilmek için kullanılan testlerin ölçtüğü yapıların eşdeğer olması gerekmektedir. Literatür incelendiğinde ise kültürlerarası değişmezliğin

incelendiği çalışmaların Türkiye örnekleme için oldukça az olduğu ve bu yapılan çalışmaların TIMSS 2011 uygulamasını kapsamadığı görülmüştür. Bu bağlamda hem testlere dayalı yapılan çıkarımların gerekli ve güvenilir olduğunu belirlemek hem de sorunlar varsa kaynaklarını bulup gidermek açısından TIMSS 2011 uygulamasında yer alan testlerin farklı kültürlerdeki ülkeler arasında ölçme değişmezliğinin sağlanıp sağlanmadığının incelenmesine ihtiyaç duyulmuştur. Bu nedenle TIMSS 2011 Türkiye örnekleminin, anadili İngilizce olan ve olmayan farklı başarı düzeyinde ülkelerle ölçme değişmezliği açısından karşılaştırılması, varsa sorunların belirlenmesi ve daha geçerli güvenilir sonuçlar elde edebilmek ve karşılaştırmalar yapabilmek için yapılabilecek olası çözüm yollarının tartışılması gerekli görülmektedir. Bu amaçla çalışmada, TIMSS 2011 kapsamında yer alan Matematik testinin farklı kültürlerde kültürlerarası ölçme değişmezliği gösterip göstermediği incelenmiştir.

Araştırmanın Amacı: Bu çalışmanın amacı TIMSS 2011 kapsamında yer alan Matematik testinin farklı kültürler göre ölçme değişmezliğinin incelenmesidir. Bu genel amaç doğrultusunda bu çalışmada şu sorulara yanıt aranmıştır;

TIMSS 2011'in kültürler arası;

- a) Yapısal değişmezliğine,
- b) Metrik değişmezliğine
- c) Skalar değişmezliğine ve
- d) Tam değişmezliğine ilişkin kanıt bulunmakta mıdır?

Araştırmanın Yöntemi: TIMSS 2011 kapsamında uygulanan matematik testinde yer alan yapıların kültürlerarası değişmezliğini incelemeyi amaçlayan bu araştırma, var olan bir durumu olduğu şekliyle araştırma söz konusu olduğundan tarama modelindedir. Araştırmanın evrenini TIMSS 2011 uygulamasına 4. Sınıf düzeyinde katılan 50 ülke oluşturmaktadır. Araştırmanın örneklemini ise TIMSS 2011 uygulamasına katılan 50 ülkeden amaçlı örnekleme yöntemi ile belirlenen Türkiye, İngiltere, Japonya ve Amerika Birleşik Devletleri'nden 1987 4. Sınıf öğrencisi oluşturmaktadır. Araştırmaya bu ülkelerin alınmasının amacı iki ülkenin (İngiltere ve Amerika Birleşik Devletleri) anadilinin İngilizce ve diğer iki ülkenin (Türkiye-Japonya) anadilinin İngilizce olmamasıdır. Kültürlerarası en önemli farklılıklardan biri olan dil ögesi, araştırmanın amacı doğrultusunda ülkelerin araştırmaya dahil edilmesinde etkili olmuştur. Araştırma TIMSS 2011 kapsamında uygulanan matematik testi sonuçlarından elde edilen veriler üzerinden yürütülmüştür. Çalışma için gerekli olan veriler <http://timssandpirls.bc.edu/timss2011/international-database.html> adresinden alınmıştır. TIMSS 2011 Matematik testleri 14 paralel kitapçıktan oluşmaktadır. Araştırma bir numaralı formda yer alan 21 madde ile yürütülmüştür. Maddelerin %33'ü bilme, %29'u uygulama, %38'i ise akıl yürütme alt boyutunda yer almaktadır. Modelin değişmezliği çok gruplu doğrulayıcı faktör analizi ile incelenmiştir. Verilerden doğru bir sonuç çıkartılabilmesi açısından analizlere başlamadan önce veri seti, veri yapısı ve verilerin analizlere ilişkin

varsayımları karşılayıp karşılamadığı incelenmiş, varsayımların karşılandığı sonucuna ulaşılmıştır.

Araştırmanın Bulguları: Bu araştırma kapsamında TIMMS 2011 Matematik maddelerinin bilişsel düzeylerini gösteren modelin Türkiye, Amerika, İngiltere ve Japonya olmak üzere seçilen dört ülkede ölçme değişmezliğinin sağlanıp sağlanmadığına ilişkin analizler yürütülmüştür. Bu anlamda ülkeler arasında hiyerarşik 4 adımdan oluşan değişmezlik kontrolleri yapılmıştır.

1.Yapısal Değişmezlik: İlk adımda kurulan yapının seçilen dört ülke için doğrulanıp doğrulanmadığı test edilmiştir. Kurulan modelin tüm ülkeler için doğrulandığı ve dolayısı ile değişmezliğin ilk adımı olan yapısal değişmezliğin sağlandığı bulgusuna ulaşılmıştır.

2. Metrik Değişmezlik: Bu adımda kurulan modelde faktör yükleri her ülke için sabitlenmiş ve ilk durum ile yeni modelde elde edilen indeksler arasındaki farkın manidarlığı test edilmiş ve fark manidar bulunmuştur. Yani, metrik değişmezlik sağlanmamaktadır bulgusuna ulaşılmıştır. Değişmezlik analizi hiyerarşik bir yapı gösterdiğinden, metrik değişmezliğin sağlanmadığı adımda analize son verilmiş, skalar değişmezlik ve tam değişmezlik kontrollerine geçilmemiştir. Ancak bu adımdan sonra değişmezliğin hangi ülke ile ilgili olarak bozulduğunu belirleyebilmek adına ülkelerin ikili ve üçlü kombinasyonları arasında metrik değişmezlik incelenmiş ve sağlanmadığı bulgusuna ulaşılmıştır.

Araştırmanın Sonuç ve Önerileri: Araştırma sonucunda, ülkeler arası değişmezliğin zayıf değişmezlik seviyesinde olduğu belirlenmiştir. Bu aşamada yapılan karşılaştırmalarda, gruplar arasındaki farklılıkların ölçme aracından meydana gelebileceği düşünülebilir. Bu doğrultuda, ülkeleri karşılaştırmanın çok uygun olmayacağı, kültürel anlamda sorun çıkarabilecek noktaların tespitinin yapılması gerektiği düşünülmektedir. Bu çerçevede modelin ölçme değişmezliğinin sağlanmamasına neden olan maddeler belirlenerek, gruplar arasında maddelerin DMF (değişen madde fonksiyonu) gösterip göstermediği incelenebilir. DMF gösterdiği tespit edilen maddelerin uzman görüşü alınarak olası yanlışlık kaynakları belirlenebilir.

Anahtar Sözcükler: Ölçme eşdeğerliği, Çok gruplu doğrulayıcı faktör analizi, Yapısal eşitlik modeli.

Ministry of National Education Inspectors' Adoption Level of Risk-Based Inspection Model and the Consideration of Its Applicability at Schools

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Abstract

Problem Statement: The new regulations for the last ten years in terms of educational inspection in the Ministry of National Education reveal the requirement of setting up a new inspection model that will focus on compliance with statutory regulations and improving the quality of education. In this context, this study is significant, assuming that the risk-based inspection model implemented by the Netherlands in 2007 should contribute to the studies conducted by the Directorate of Counseling and Inspection and in the field.

Purpose of the Study: This study aimed to determine the Ministry of National Education Inspectors' adoption level of a risk-based inspection model and their consideration of its applicability at schools. The model consisted of elements necessary to establish a risk-based inspection model with risk analysis and quality improvement subdimensions. The subdimensions of the model were examined according to the subjects' level of adoption and of its applicability together with the variables of gender, the school they graduated, degree, seniority in the position, age and subject taught at school in order to see if there were differences.

Method: The population of the study consisted of 319 assistant inspectors, inspectors and chief inspectors. No sample was chosen because the population was accessible within the framework of this study. The response rate of the survey was 50,15%, and the data collected from 160 Ministry of National Education Inspectors was analyzed with mean, standard deviation, frequency, Mann Whitney U and Kruskal Wallis H tests.

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Findings: The inspectors completely adopted the ideas in the subdimension of necessary elements to establish risk-based inspection model and found them highly applicable at schools. The inspectors completely adopted the ideas in the subdimension of risk analysis and found them highly applicable at schools. The inspectors completely adopted the ideas in the subdimension of quality improvement and found them highly applicable at schools.

Conclusions and Recommendations: The risk-based inspection model was generally adopted by Ministry of National Education Inspectors and was found applicable at schools. However, in order to put this model into practice, the quality standards according to each school type should be set with the participation of the representatives from educational institutions and the e-inspection system should be established by specialist inspectors as a priority. On the other hand, since inspectors should take a significant role in the application stage of this model, the inspectors' competencies should be developed in areas such as risk analysis, the use of information and communication technologies, etc.

Keywords: Risk-based inspection model, risk analysis, quality improvement.

Introduction

Recently, many countries in Europe have re-examined their inspection systems in order to improve the quality of evaluation in education and under the influence of New Public Management (Wilcox, 2000). In this context, school inspection practices are frequently on the agendas for and at the centre of nearly all education quality improvement policies and strategies in most countries (De Grauwe & Naidoo, 2004; Whitby, 2010; Remi, 2011).

In European countries such as England, Ireland, Scotland, Belgium, the Netherlands and the Czech Republic, two approaches to evaluation at schools – internal and external – are put into practice (Eurydice, 2004). Internal evaluation is especially at the centre of quality improvements at the school level. In this context, school self-evaluation and quality assurance have become important themes in educational policy-making and they have been given increased attention in research (Janssens & Van Amelsvoort, 2008). In internal evaluation, schools are responsible for monitoring, evaluating and improving the quality of education they provide and they are required to give an account to all stakeholders concerning the quality of education they provide (Scheerens, Van Amelsvoort & Donoughue, 1999). In external evaluation, schools are monitored to improve the quality of education they provide and policy-makers or governments provide a public account of the quality of education at the school level and education in general by providing reliable information to related units (Janssens & Van Amelsvoort, 2008).

In the light of improvements in educational inspection in parallel to New Public Management, the Educational Inspection Act (WOT) in the Netherlands came into force in 2002. This act underlined a new approach to school inspections and redefined the tasks, responsibilities and roles of the Inspectorate (SICI, 2012). With this new act proportional inspection in which the amount and frequency of inspection varies according to the performance of schools came to agenda. In parallel to the proportional inspection approach to improving the quality of education provided by the schools, the Inspectorate developed and implemented a risk-based inspection model in 2007 (Ehren, Leeuw & Scheerens, 2005; Blok, Slegers & Karsten, 2008; Ehren & Honingh, 2011). This model also was implemented in England, Portugal, Flanders, in some regions of Spain and to a certain extent in Scotland, Wales and some regions of Germany, although it has similarities and differences in terms of practices (SICI, 2009; Remi, 2011; Ofsted, 2011).

The risk-based inspection model starts with a risk analysis conducted by the Dutch Inspectorate of Education between certain dates every year. The school boards are obliged to prepare results and annual documents in accordance with statutory regulations and school signals are analyzed between certain dates after the students' exam results are published (Eurydice, 2009; Inspectorate of Education The Netherlands, 2010; Ehren & Honingh, 2011; SICI, 2012; Ehren & Swanborn, 2012; Ehren, Altrichter, McNamara & O'hara, 2013). Results consist of the students' academic performances on the subjects at school exams and the results on the central national examinations or tests set by the CEVO (The National Commission for the Examinations in Secondary Education and set by CITO (the National Institute for Educational Measurement) plus vocational exams or tests (Ehren & Honingh, 2011; SICI, 2012; Ehren & Swanborn, 2012). Annual documents the legally required school plan, school guide, special needs provision plan, financial report and the school's internal quality evaluation report (self-evaluation report). These documents are called accountability documents because the school boards are required to give an account to the Inspectorate concerning the quality of education offered at schools by these documents (SICI, 2012). Lastly, signals consist of complaints by students, teachers, parents and other stakeholders, articles or news in newspapers (print media) or on the internet (visual/internet media) and the findings of thematic inspections (Inspectorate of Education The Netherlands, 2010; SICI, 2012).

At the end of the risk analysis phase, quality inspections are conducted in high-risk schools to investigate the quality standards and indicators that may be at risk at the school. Therefore, the focus of the quality inspection is determined by the nature and gravity of the risks detected. According to the results of the risk analysis and quality inspections, schools are judged with regard to the quality of the education they provide and their compliance with the statutory regulations. That way, the next year's inspection programme is arranged in which the amount and frequency of inspection varies according to the school's performance (Inspectorate of Education The Netherlands, 2010; Van Bruggen, 2010; SICI, 2012). In other words, schools that have no risks or shortcomings are judged as "sufficient/good" with regard to the quality of the education they provide and their compliance with the statutory

regulations and are not included into the next year's inspection programme. However, these schools are placed in the basic inspection programme and they are visited at least once every four years, even though no risks may have been detected. These short visits focus on a selection of quality standards that is relevant given the previous results of risk-analysis of the schools or the agenda of the Inspectorate (Eurydice, 2009; Inspectorate of Education The Netherlands, 2010; Van Bruggen 2010; Ehren & Honingh, 2011; SICI, 2012; Ehren et al., 2013).

On the other hand, schools that have high-risks are judged as "unsatisfactory/weak" with regard to the quality of the education they provide and their compliance with the statutory regulations. These schools are included in the next year's inspection programme and tailored inspections are conducted for no more than two years based on risks or shortcomings called "quality improvement inspection" [QII]. The intensity of the inspection is proportional to the gravity of the risks or shortcomings (Inspectorate of Education The Netherlands, 2010; SICI, 2012).

Within the reconstructing process in the field of education in Turkey, the law-amending ordinance entitled No: 652, Organization and Duties of Ministry of National Education published in 14.09.2011 redefined the duties of the Directorate of Counseling and Inspection. Therefore, the Directorate is obliged to fulfill inspection services considering not only the legislation but also the predetermined goals, objectives, performance criteria and quality standards (Ministry of National Education [MoNE], 2011). The 2010-2014 Strategic Plan of the Ministry of National Education aimed to establish a more effective counseling and inspection system and carry out studies ensuring the quality, efficiency and productivity (MoNE, 2009). Article 602 related to enhancing the educational system of Ninth Development Plan (2007-2013) approved by Turkish Grand National Assembly on 28.06.2006 with Law No: 877 emphasized that with the aim of spreading opportunities for a quality education, quality assurance systems will be set up in education institutions and quality standards will be determined and made widespread (DPT, 2006).

These regulations reveal the requirement for a new inspection model to focus on compliance with statutory regulations and improving the quality of education. In this context, the stages of case analysis (diagnosis), evaluation, correction and improvement (Basar, 2000; Aydin, 2008) should be reviewed within the framework of contemporary educational inspection. Indeed when the previous school inspection system was evaluated, it was found that the criteria upon which schools were evaluated was not clear, the main focus of those inspections was compliance with the statutory regulations and the inspection monitoring for quality improvement was insufficient. Therefore, the new inspection model is expected to increase the quality in accordance with the predetermined quality standards using case analysis and fulfilling inspection services that focus on the risks detected. Also when the amount and frequency of inspection practices is determined in the light of objective criteria and evaluation, inspectors will be able to focus on rapid improvement of "unsatisfactory/weak" schools. This will ensure the quality, efficiency and productivity of inspection services. In this context, this study is significant, assuming that the risk-based inspection model implemented by the Netherlands in 2007 will

contribute to the studies conducted by the Directorate of Counseling and Inspection and in the field. As a result, this study aimed to determine the MoNE Inspectors' adoption level of the risk-based inspection model and their consideration of its applicability at schools. The model consisted of elements necessary to establish risk-based inspection model, risk analysis and quality improvement subdimensions. The subdimensions of the model were examined according to subjects' level of adoption and their applicability together with the variables of gender, the school they graduated, degree, seniority in the position, age and subject taught at school in order to see if there were differences or not.

Method

Research Design

This study used a survey (descriptive) model. According to Karasar (2005), survey models aim at describing and explaining a past or present case as it is. The case, individual or thing is explained within its own conditions and as it is.

Research Sample

The population of the study consisted of 319 assistant inspectors, inspectors and chief inspectors working in the MoNE, Directorate of Counseling and Inspection at the time of the survey. No sample was chosen because the population was accessible within the framework of this study. Responding was voluntary and the response rate of the survey was 50,15%. The data collected from 160 Ministry of National Education Inspectors were analyzed in this study. The data were collected in the in-service training seminar of the MoNE, Directorate of Counseling and Inspection in February 2013 by the researcher. Eighty-five percent of the MoNE Inspectors who participated in the study were male and 11,9% were female, while 20,9% were assistant inspectors, 58,8% were inspectors and 20,6% were chief inspectors. Nearly 37% (36,3%) of inspectors were between the ages of 30-40, 44,4% were between the ages of 41-50 and 17,5% were 51 and over. According to the school from which they graduated, 70% of the Ministry of National Education Inspectors had graduate degrees and 28,8% had post-graduate degrees. According to the seniority in the position, 83,1% of the Ministry of National Education Inspectors had between 1-15 years of seniority, 10% had between 16-25 and only 6,3% had 26 or more years of seniority.

Research Instrument and Procedure

The researcher developed a data collection tool based on the risk-based inspection model implemented by the Netherlands, with three subdimensions—“Necessary Elements to Establish Risk-based Inspection Model,” “Risk Analysis” and “Quality Improvement.” Six academicians checked the draft tool and seven questions on demographic variables and 33 statements about the model were included in the final version of the tool, in accordance with the academicians' opinions.

The data collection tool was developed in the form of a Likert scale. In the tool, the options for the adoption level of the statements about the risk-based inspection model were placed on the left and the options about its applicability level at schools was on the right. Agreement ratings were designed as a 5-point scale including (5) completely agree, (4) mostly agree, (3) moderately agree, (2) slightly agree and (1) completely disagree.

Validity and Reliability

160 Ministry of National Education Inspectors involved in this study answered the scale considering the adoption and applicability of the risk-based inspection model. For this reason, the applicability level was taken into consideration in the validity-reliability analysis, because no sample was chosen and the whole data collected from 160 Ministry of National Education Inspectors were analyzed. Exploratory Factor Analysis (EFA) was used to validate the construct of the risk-based inspection model scale. Additionally, Cronbach's Alpha coefficient and item-total correlations were used for the reliability of the scale.

The risk-based inspection model scale consisted of three subdimensions: necessary elements to establish the risk-based inspection model with 12 items, risk analysis with 13 items and quality improvement with 12 items. Based on the results of EFA, the first subdimension (necessary elements to establish risk-based inspection model) explained 22.30, the second subdimension (risk analysis) explained 20.12 and the third dimension (quality improvement) explained 17.11 percent of the total variance. Finally, the EFA result with the scale explained 59.29 of the total variance. Cronbach's Alpha coefficient for the first subdimension (necessary elements to establish risk-based inspection model) was .89 and Cronbach's Alpha coefficient for the second subdimension (risk analysis) and third subdimension (quality improvement) was .92. Cronbach's Alpha coefficient for the total scale was .96. According to these results, it is possible to say that a valid and reliable scale was developed in terms of applicability.

Data Analysis

The data were collected during the in-service training seminar of MoNE, Directorate of Counseling and Inspection arranged for MoNE Inspectors in February 2013. Permission was obtained from MoNE, Directorate of Counseling and Inspection. The personal information of 160 MoNE Inspectors was analyzed by percentage and frequency. Mean and standard deviation were used in the analysis of subdimensions of the risk-based inspection model in terms of adoption level and consideration of its applicability. The assessment of the participants' responses in terms of mean was based on these agreement ratings: (1,00-1,79) completely disagree, (1,80-2,59) slightly agree, (2,60-3,39) moderately agree, (3,40-4,19) mostly agree, and (4,20-5,00) completely agree.

Results

The mean, standard deviation and relative rank values for the MoNE Inspectors' adoption level of the subdimension necessary elements to establish risk-based

inspection model and their consideration of its applicability at schools are shown in Table 1.

Table 1.

Responses of Inspectors on "Necessary Elements to Establish Risk-Based Inspection Model" Subdimension

Adoption			Questionnaire Statements	Applicable		
M	S	Imp. Rank		M	S	Imp. Rank
4,67	,62	1	U_1. The quality standards according to all levels of education (preschool, elementary, middle, high, vocational and technical schools should be set down by MoNE.	3,99	1,00	4
4,54	,78	4	U_2. MoNE should cooperate with the Directorate of Counseling and Inspection while setting down the indicators for each quality standard.	4,15	1,02	3
4,56	,71	2	U_4. "e-Inspection System" providing continuous and fast data flow between the Directorate of Counseling and Inspection and the provinces, districts and schools should be established.	4,16	,94	2
4,55	,76	3	U_5. "Monitoring and Evaluation Unit" should be set up in order to monitor the performances of the schools.	4,29	,92	1
4,55	,74	3	U_3. While the indicators are set up by MoNE and the Directorate of Counseling and Inspection, there should be a cooperation with the representatives of educational institutions.	3,94	,95	5
4,50	,70	5	U_6. In schools, the establishment of quality assurance systems to monitor the quality of education continuously and give an account to all stakeholders of education should be provided by MoNE.	3,87	1,05	7
4,32	,93	6	U_7. Schools should be obliged to prepare "quality monitoring and evaluation report" at the end of each academic year.	3,73	1,05	8
4,12	,89	7	U_22. At the end of risk analysis and quality inspection, according to their performance on the basis of quality standards, schools should be judged as "unsatisfactory/weak/sufficient/good"	3,90	,96	6
Total				Total		
35,81				32,0		
				7,89		

As seen in Table 1, the inspectors completely ($\bar{X} = 4,48 / 35,81$) adopted the ideas in the subdimension of necessary elements to establish risk-based inspection model and found them highly ($\bar{X} = 4,48 / 35,81$) applicable at schools.

The mean, standard deviation and relative rank values for the Ministry of National Education Inspectors' adoption level of the subdimension risk analysis and their consideration of its applicability at schools are shown in Table 2.

Table 2.

Responses of Inspectors on "Risk Analysis" Subdimension

Adoption			Questionnaire Statements	Applicable		
M	S	Imp. Rank		M	S	Imp. Rank I
3,77	,94	11	U_9. In risk analysis phase, national and international examinations/tests results of the students should be analyzed as primary indicators.	3,58	,99	10
3,80	1,06	10	U_12. In risk analysis phase, articles or news in newspapers (print media) or on the internet (visual/internet media) about schools should be analyzed	3,36	1,02	12
4,23	,90	7	U_15. In risk analysis phase, the findings taken from "Performance Management System" which will be established by MoNE should be analyzed.	3,79	1,00	9
4,38	,84	4	U_13. In risk analysis phase, the findings of "thematic inspections" should be analyzed.	3,96	,95	2
4,21	,80	8	U_10. In risk analysis phase, "quality monitoring and evaluation report" which will be prepared by schools at the end of each academic year should be analyzed.	3,80	,95	8
4,45	,79	1	U_14. In risk analysis phase, the findings of "basic inspections" should be analyzed.	4,07	,90	1
4,35	4,23	5	U_11. In risk analysis phase, all complaints by different groups should be analyzed.	3,55	1,27	11
4,44	,72	2	U_19. In "quality inspection" phase, the quality standards and indicators which may be at high risk should be investigated in detail and within school.	3,94	,98	3
4,35	,88	5	U_17. In risk analysis phase, the Directorate of Counseling and Inspection should cooperate with measurement and evaluation specialists.	3,85	,92	4

Table 2 Continue

Adoption			Questionnaire Statements	Applicable		
M	S	Imp. Rank		M	S	Imp. Rank
4,12	,96	9	U_21. At the end of "quality inspection", the inspectors should prepare the inspection report in cooperation with the school.	3,85	1,03	4
4,39	,74	3	U_20. In "quality inspection" phase, high-risk areas of the schools should be closely evaluated by interviews with stakeholders such as students, parents, teachers etc. and observations.	3,84	,93	5
4,35	,79	5	U_8. Every year the Directorate of Counseling and Inspection Monitoring and Evaluation Unit should conduct risk-analysis in cooperation with the inspectors in order to identify the areas at risk and evaluate the performances of the schools.	3,82	,98	7

As seen in Table 2, the inspectors completely ($\bar{X} = 4,23 / 55,11$) adopted the ideas the subdimension of necessary elements to establish risk-based inspection model and found them highly ($\bar{X} = 3,78 / 49,24$) applicable at schools.

The mean, standard deviation and relative rank values for the Ministry of National Education Inspectors' adoption level of the subdimension quality improvement and their consideration of its applicability at schools are shown in Table 3.

Table 3.

Responses of Inspectors on "Quality Improvement" Subdimension

Adoption			Questionnaire Statements	Applicable		
M	S	Imp. Rank		M	S	Imp. Rank
4,21	0,90	10	U_26. "Quality improvement inspection" should be conducted in order to improve "unsatisfactory/weak" schools in a maximum two years period.	3,74	0,97	6

Table 3 Continue

Adoption			Questionnaire Statements	Applicable		
M	S	Imp. Rank		M	S	Imp. Rank
4,33	0,89	6	U_30. "Quality inspection" should be conducted in " <i>unsatisfactory/weak</i> " schools in order to evaluate the " <i>quality improvement inspection</i> " phase by the Directorate of Counseling and Inspection.	3,71	1,10	7
4,45	0,87	3	U_29. The Directorate of Counseling and Inspection should monitor the " <i>unsatisfactory/weak</i> " schools continuously by interim inspections.	3,86	1,05	4
4,26	0,92	8	U_25. In " <i>unsatisfactory/weak</i> " schools tailored inspections based on areas at high risk called " <i>quality improvement inspection</i> " should be conducted.	3,76	1,06	5
4,22	1,04	9	U_24. Only " <i>unsatisfactory/weak</i> " schools should be included into that year's inspection programme by the Directorate of Counseling and Inspection.	3,96	1,05	3
4,35	1,07	5	U_23. At the beginning of each academic year "annual inspection programme" for school inspections should be prepared by the Directorate of Counseling and Inspection.	3,98	1,12	2
4,58	0,79	1	J_31. At the end of " <i>Quality inspection</i> ", the inspection proposal for the desired measures prepared by the inspectors of Directorate of Counseling and Inspection sent to Minister of Education and related directorate	4,31	0,90	1
4,31	0,92	7	J_16. During the inspection phase, Directorate of Counseling and Inspection Monitoring and Evaluation Unit should be in constant communication with the schools to exchange data.	3,68	1,08	8
4,41	0,82	4	U_27. At the beginning of " <i>Quality improvement inspection</i> " phase " <i>unsatisfactory/weak</i> " schools should be obliged to formulate a "quality improvement plan" in high-risk areas.	3,96	0,94	3
4,17	1,02	11	U_32. If " <i>unsatisfactory/weak</i> " schools can't increase their performance as " <i>sufficient/good</i> " in a maximum two years period MoNE should impose sanctions.	3,65	1,18	9

Table 3 Continue

Adoption			Questionnaire Statements	Applicable		
M	S	Imp. Rank		M	S	Imp. Rank
4,48	0,82	2	U_28. "Unsatisfactory/weak" schools should be obliged to put the " quality improvement plan" in high-risk areas into practice.	3,98	1,00	2
4,10	1,12	12	U_33. The inspection reports prepared by the group of inspectors of Directorate of Counseling and Inspection should be published both in writing and electronic form on the website to public.	3,58	1,19	10
<i>Total</i>				<i>Total</i>		
51,87	11,18			46,17	12,64	

As seen in Table 3, the inspectors completely ($\bar{X} = 4,32 / 51,87$) adopted the ideas in the subdimension of necessary elements to establish risk-based inspection model and found them highly ($\bar{X} = 3,84 / 49,24$) applicable at schools.

Findings about the Independent Variables

Independent Mann Whitney-U test was used to see if there were significant differences according to gender and the school from which they graduated. Kruskal Wallis H was used to see if there were significant differences according to degree, seniority in the position, age and subject taught at school. Non-parametric tests were used because the p-value was less than 0,005 according to Kolmogorov-Smirnov test. This means that the distribution of points differ significantly.

The results of Mann Whitney-U test were used to see if there were significant differences in MoNE Inspectors' adoption level of risk-based inspection model and their consideration of its applicability at schools according to gender are shown in Table 4.

Table 4.

Comparison of MoNE Inspectors' Adoption Level of Risk-Based Inspection Model and Their Consideration of Its Applicability at Schools According to Gender

<i>The Subdimensions of Risk-based Inspection Model According to Adoption Level</i>	<i>Group</i>	<i>n</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>	<i>U</i>	<i>p</i>
<i>Necessary Elements to Establish Risk-based Inspection Model</i>	Female	19	103,29	1962,50	792,5	.00
	Male	136	73,87	9972,50		
<i>Risk Analysis</i>	Female	19	95,95	1823,00	932	.054
	Male	136	74,90	10112,00		
<i>Quality Improvement</i>	Female	19	98,34	1868,50	886,5	.02
	Male	136	74,57	10066,50		
<i>The Subdimensions of Risk-based Inspection Model According to Applicability Level at Schools</i>	<i>Group</i>	<i>n</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>	<i>U</i>	<i>p</i>
<i>Necessary Elements to Establish Risk-based Inspection Model</i>	Female	19	96,03	1824,50	949,5	.06
	Male	136	75,48	10265,50		
<i>Risk Analysis</i>	Female	19	99,45	1889,50	884,5	.02
	Male	136	75,00	10250,00		
<i>Quality Improvement</i>	Female	19	99,55	1891,50	882,5	.02
	Male	136	74,57	10066,50		

As seen in Table 4, in MoNE Inspectors' adoption level of risk-based inspection model according to gender there was significant difference in the subdimensions of necessary elements to establish risk-based inspection model ($U=792,5$, $p<.05$) and quality improvement ($U=886,5$, $p<.05$). On the other hand, there was no significant difference in the subdimension risk analysis ($U=932$, $p>.05$). In both necessary elements to establish risk-based inspection model and quality improvement, female inspectors reported more positive views than male inspectors. In MoNE Inspectors' consideration of its applicability at schools of risk-based inspection model according to gender there was significant difference in the subdimensions of risk analysis ($U=$

884,5, $p < .05$) and quality improvement ($U=882,5$, $p < .05$). On the other hand, there was no significant difference in the subdimension of necessary elements to establish risk-based inspection model ($U=949,5$, $p > .05$). In both subdimensions, risk analysis and quality improvement, female inspectors reported more positive views than male inspectors.

The results of Kruskal Wallis H test used to see if there were significant differences in Ministry of National Education Inspectors' consideration of risk-based inspection model's applicability at schools according to degree are shown in Table 5.

Table 5.

Kruskal Wallis H test

The Subdimensions of Risk-based Inspection Model According to Applicability Level at Schools		Group	n	Mean Rank	sd	χ^2	p
Necessary Elements to Establish Risk-based Inspection Model	Assistant Inspector		33	100,45	2	9,353	.00
	Inspector		94	78,39			
	Chief Inspector		33	66,55			
Risk Analysis	Assistant Inspector		33	85,61	2	0,943	.62
	Inspector		94	80,78			
	Chief Inspector		33	74,59			
Quality Improvement	Assistant Inspector		33	95,73	2	4,506	.10
	Inspector		94	76,69			
	Chief Inspector		33	76,12			

As seen in Table 5, there was no significant difference in the subdimensions of risk analysis [$\chi^2(2)=0,943$, $p > .05$] and quality improvement [$\chi^2(2)=4,506$, $p > .05$]. On the other hand, there was a significant difference in the subdimension of necessary elements to establish risk-based inspection model [$\chi^2(2)=9,353$, $p < .05$]. Considering the rank mean of the groups, assistant inspectors reported more positive views than inspectors and chief inspectors. In MoNE Inspectors' adoption level of risk-based inspection model according to seniority in the position there was no significant difference in necessary elements to establish risk-based inspection model [χ^2

(2)=3,545, $p>.05$], risk analysis [$\chi^2(2)=0,081$, $p>.05$] or quality improvement [$\chi^2(2)=1,369$, $p>.05$].

The results of Kruskal Wallis H test used to see if there were significant differences in MoNE Inspectors' consideration of risk-based inspection model's applicability at schools according to seniority in the position are shown in Table 6.

Table 6.

Kruskal Wallis H test

<i>The Subdimensions of Risk-based Inspection Model According to Applicability Level at Schools</i>	<i>Group</i>	<i>n</i>	<i>Mean Rank</i>	<i>Sd</i>	<i>χ^2</i>	<i>p</i>
<i>Necessary Elements to Establish Risk-based Inspection Model</i>	1-15 Years	133	83,29	2	7,245	
	16-25 Years	16	50,69			
	26 Years and Above	10	83,15			
<i>Risk Analysis</i>	1-15 Years	133	82,12	2	4,079	
	16-25 Years	16	58,22			
	26 Years and Above	10	86,65			
<i>Quality Improvement</i>	1-15 Years	133	80,09	2	1,776	
	16-25 Years	16	70,06			
	26 Years and Above	10	94,75			

As seen in Table 6, there was no significant difference in the subdimensions of risk analysis [$\chi^2(2)=4,079$, $p>.05$] and quality improvement [$\chi^2(2)=1,776$, $p>.05$], while there was a significant difference in the subdimension of necessary elements to establish risk-based inspection model [$\chi^2(2)=7,245$, $p<.05$]. Inspectors with 1-15 years working experience reported more positive views than the inspectors with 16-25 years and 26 years or more working experience. In Ministry of National Education Inspectors' adoption level of risk-based inspection model according to seniority in the position there was no significant difference in necessary elements to establish risk-based inspection model [$\chi^2(2)=4,659$, $p>.05$], risk analysis [$\chi^2(2)=1,296$, $p>.05$] or quality improvement [$\chi^2(2)=0,906$, $p>.05$].

In Ministry of National Education Inspectors' adoption level of risk-based inspection model and their consideration of its applicability at schools according to the school they graduated there was no significant difference in necessary elements to establish risk-based inspection model ($U=2558,5$, $p>0,05$), risk analysis ($U=2055$, $p>0,05$) or quality improvement ($U=2478$, $p>0,05$).

Similarly, in Ministry of National Education Inspectors' adoption level of risk-based inspection model according to age, there was no significant difference in necessary elements to establish risk-based inspection model [$\chi^2(2)=3,299$, $p>0,05$], risk analysis [$\chi^2(2)=0,271$, $p>0,05$] or quality improvement [$\chi^2(2)=1,471$, $p>0,05$]. In Ministry of National Education Inspectors' consideration of its applicability at schools according to age, there was no significant difference in necessary elements to establish risk-based inspection model [$\chi^2(2)=1,719$, $p>0,05$], risk analysis [$\chi^2=0,409$, $p>0,05$] or quality improvement [$\chi^2(2)=0,228$, $p>0,05$].

Finally, in Ministry of National Education Inspectors' adoption level of risk-based inspection model according to subject taught at school, there was no significant difference in necessary elements to establish risk-based inspection model [$\chi^2(2)=0,431$, $p>0,05$], risk analysis [$\chi^2(2)=0,152$, $p>0,05$] or quality improvement [$\chi^2(2)=1,675$, $p>0,05$]. In Ministry of National Education Inspectors' consideration of its applicability at schools according to age there was no significant difference in necessary elements to establish risk-based inspection model [$\chi^2(2)=1,803$, $p>0,05$], risk analysis [$\chi^2=1,117$, $p>0,05$] or quality improvement [$\chi^2(2)=3,033$, $p>0,05$].

Discussion and Conclusion

Considering the research findings, the Ministry of National Education Inspectors highly adopted the establishment of an e-inspection system to provide continuous and fast data flow between the Directorate of Counseling and Inspection and the provinces, districts and schools and setting up a monitoring and evaluation unit to monitor the schools' performances and found applicable. At this point, in February 2013 when the data was collected, within the reconstructing process in the field of education in Turkey, setting up a monitoring and evaluation unit within the Directorate of Counseling and Inspection was on the agenda and studies were being carried out about the establishment of an e-inspection system. Therefore, these studies may be effective for the view of the Ministry of National Education Inspectors. Similarly, by the units of risk assessment in England and preliminary enquiry in Flanders (the Dutch-speaking part of Belgium) where the risk-based inspection model was implemented, information and documents from the databank have been analyzed and the school's performances have been monitored. In Holland, England, Flanders, Scotland, the Czech Republic, and Ireland databanks were established by different units of Inspectorates and those databanks have been constantly updated with new information. By these databanks, necessary documents have been taken from schools in the electronic forms and a set of reports have been prepared for inspectors and schools (Standaert, 2000).

Also, in light of the research findings, the Ministry of National Education Inspectors highly adopted setting down quality standards according to all levels of education (preschool, elementary, middle, high, vocational and technical schools) by MoNE and cooperating with the Directorate of Counseling and Inspection while setting down the indicators for each quality standard. A common framework consisting of predetermined inspection areas and a set of indicators according to every educational stage and school type has been used in England, Ireland, Flanders (the Dutch-speaking part of Belgium), the Czech Republic, etc., related with their educational systems (Van Bruggen, 2010). Considering the researches in Turkey, the research findings of Bilir (1993), Kayikci and Sarlak (2009) showed that the current inspection model is insufficient and there is a need to implement a new model in order to improve the the quality of education. As a result, the views of Ministry of National Education Inspectors can be said to be supportive and parallel to the literature and related research.

Risk analysis has been found highly adopted and applicable at schools by Ministry of National Education Inspectors in general. Indeed in Holland, Flanders and England where the risk-based inspection model was implemented, it can be said that risk-analysis is one of the most important phases of the model. Risk-analysis plays a key role in determining the amount and frequency of inspection carried out at schools. The views of the Ministry of National Education Inspectors are similar to Aydin's views (2009). Aydin (2009) said that in the current inspection model the focus is on standard evaluation, not on needs. The schools' and teachers' performances are evaluated in a standard way and time whether their performances are adequate or not, while the inspectors can have the chance to allow more time to schools and teachers that need more help, they have been spending more time and resources to inspect the schools and teachers that have been above a level of performance.

On the other hand, considering the research findings, the statements, in risk analysis phase, all complaints by different groups and in risk analysis phase, national and international examinations/tests results of the students should be analyzed as primary indicator found adopted and applicable at schools by the inspectors the least. According to Dutch Inspectorate of Education, signals consisting of articles or news in newspapers (print media) or on the internet (visual/internet media) and complaints about schools are seen as an indicator of the decline in the quality of education offered by the schools. These signals reveal more current information about the problems at schools (Inspectorate of Education The Netherlands, 2010; SICL, 2012). As inquiry is considered to be one of the tasks of Ministry of National Education Inspectors, the results of the inquires may be analyzed within the databank. An analysis of exam results in the risk-analysis phase is on agenda and has been frequently discussed in Europe. In this context, the findings of Ehren and Swarborn (2012) showed that both before and after the introduction of the risk-based school inspections, schools exhibited limited strategic behaviours about the exams, like cheating and reshaping the test pool. There was no significant difference between "*sufficient/good*" schools and "*unsatisfactory/weak*" schools in this context.

Since there were no interviews with the school management, teachers or students during the research, the factors under the strategic behaviours could not be found and this fact was one of the shortcomings of the research. Therefore, it is not possible to generalize the findings of this research since the model is new and this is the first research according to Ehren and Swanborn (2012). Thus additional research may shed more light on this issue. In the general assembly of SICI (The Standing International Conference of Inspectorates) held in 2007 in Belgium, it was pointed out that exam results are important indicators. However, inspectors should not only focus on the outcome indicators such as exam results but also look at processes and input. Inspection should be a part of quality improvement. It is needed to know where schools stand and about the learning outcome of students in amore general framework (Schatteman, 2008).

Lastly, "The inspection reports prepared by the group of inspectors of Directorate of Counseling and Inspection should be published both in writing and electronic form on the website to public," was found adopted and applicable at schools by the inspectors the least. Although the research findings put forward that parents make only very limited use of inspection reports in order to motivate schools to improve the quality of education they have offered (Ehren et al., 2013), according to Schatteman (2008) and Rijcke (2008), inspection reports should be published whether they are positive or critical toward the schools involved. In many countries there is hesitation with regard to public reporting, but school reports are critical documents that create pressure on schools and inspectors. Public reporting should bring about positive practices in the long term. Public reporting should improve the inspectors since they should be more responsible for writing a balanced inspection report, presenting tested evidence and careful analysis. Thus this will result in an improvement of the quality of the documents used in the long term (Schatteman, 2008; Rijcke, 2008). In light of the discussions in the general assembly of SICI (The Standing International Conference of Inspectorates) in 2007, the publication of reports has been mostly considered positive although it is still sensitive in many countries. It is expected that school management will react better in the future. This will also result in a positive effect on the position of inspectors since Inspectorates will base their judgments more on observation and investigation (Schatteman, 2008). Discussions about public reporting are on agenda, in recent years not only in Holland in Europe, but also in England, Ireland, Flanders and in the Czech Republic where inspection reports have been started to be published both in writing and electronic form on the website.

The inspectors completely adopted the ideas in the subdimension of necessary elements to establish risk-based inspection model but found them highly applicable at schools. The inspectors completely adopted the ideas in the subdimension of risk analysis but found them highly applicable at schools. The inspectors completely adopted the ideas in the subdimension of quality improvement and found them highly applicable at schools.

As a result, it can be said that risk-based inspection model was generally adopted by MoNE Inspectors and was found applicable at schools. However, in order to put

this model into practice, the quality standards according to each school type should be set down with the participation of the representatives from educational institutions and an e-inspection system should be established by specialist inspectors as a priority. Also, since the inspectors should take a significant role in the application stage of this model, the inspectors' competencies should be developed in the areas such as risk analysis, the use of information and communication technologies, etc.

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Milli Eğitim Denetçilerinin Risk Odaklı Denetim Modelini Benimseme ve Uygulanabilir Bulma Düzeyleri

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Özet

Problem Durumu: Yeni kamu yönetimi anlayışına paralel olarak eğitim denetiminde yaşanan gelişmeler ışığında Hollanda'da 2002 yılında yürürlüğe giren eğitim denetimi yasası (WOT) ile birlikte, yeni bir denetim yaklaşımının altı çizilmiş ve Hollanda Eğitim Denetimi Kurulu'nun görev, rol ve sorumlulukları yeniden tanımlanmıştır (SICI, 2012, 9). Bu yasayla birlikte, Hollanda'da standart süre ve şekilde yürütülen okul denetimi uygulamaları yerine okulların performanslarıyla orantılı olarak farklı sıklık ve ağırlıkta denetim uygulamalarını işaret eden orantılı denetim yaklaşımı gündeme gelmiştir. Bu bağlamda, okullarda sunulan eğitimin "kalitesinin geliştirilmesi" amacıyla "orantılı denetim" yaklaşımı çerçevesinde de

2007 yılından beri “risk odaklı denetim modeli” adı altında bir model uygulamaya konmuştur (Ehren, Leeuw ve Scheerens, 2005, 64; Blok, Slegers ve Karsten, 2008, 380; Ehren ve Honingh, 2011, 239). Ayrıca, bu denetim türü, uygulama şekli açısından ülkeden ülkeye benzerlik ve farklılıklar taşımakla birlikte, bugün İngiltere, Portekiz, Belçika Flaman Bölgesi, İspanya’nın bazı bölgeleri ve belli bir düzeyde İskoçya, Galler ile Almanya’nın bazı eyaletlerinde uygulanmaktadır (SICI; 2009, 1; Remi, 2011, 11; Ofsted, 2011, 4).

Türkiye’de eğitim alanında yeniden yapılanma süreci içinde, “652 sayılı Milli Eğitim Bakanlığının Teşkilat ve Görevleri Hakkında Kanun Hükmünde Kararname” ile birlikte Rehberlik ve Denetim Başkanlığının görevleri yasal olarak yeniden düzenlenmiş, bu bağlamda başkanlık denetim hizmetlerini mevzuatla birlikte önceden belirlenmiş amaç, hedef, performans ölçütleri ve kalite standartlarını göz önünde bulundurarak yerine getirmekle yükümlü kılınmıştır (MEB, 2011). Bu amaçla, Milli Eğitim Bakanlığının “2010-2014 Stratejik Planı”nda daha etkin bir rehberlik ve denetim sisteminin oluşturulması ve bu bağlamda denetim hizmetlerinde kalite, etkinlik ve verimliliği sağlamaya yönelik çalışmalar yapılması amaçlanmıştır (MEB, 2009). Diğer yandan, Türkiye Büyük Millet Meclisi’nin 28.06.2006 tarih ve 877 sayılı kararı ile kabul edilen “Dokuzuncu Kalkınma Planı (2007-2013)”nın eğitim sisteminin güçlendirilmesine ilişkin 602. maddesinde; kaliteli eğitim olanaklarının yaygınlaştırılması amacıyla eğitim kurumlarında kalite güvence sisteminin oluşturulması ve kalite standartlarının belirlenerek yaygınlaştırılmasına vurgu yapılmaktadır (DPT, 2006).

Tüm bu düzenlemelerin Türkiye’de okul denetimlerinde özellikle çağdaş denetim yaklaşımı çerçevesinde, durum saptama, değerlendirme ile düzeltme ve geliştirme aşamalarının (Basar, 2000, 41; Aydın, 2008) yeniden gözden geçirilerek, okul denetimlerinde sadece yasal düzenlemelere uyum düzeyinde değil, aynı zamanda sunulan eğitimin kalitesini geliştirmeye odaklanacak yeni bir denetim modelinin oluşturulması gerekliliğini ortaya koyduğunu söylemek mümkündür. Nitekim eğitim alanında yeni yapılanma süreci öncesindeki denetim sistemi incelendiğinde; denetlenen okulların hangi ölçütlere göre saptandığına ilişkin belirsizliğin bulunduğu, gerçekleştirilen denetimlerin ağırlıklı olarak okulların yasal düzenlemeleri yerine getirip getirmediğini kontrol etmeye odaklandığı ve bu bağlamda gerekli önlemlerin alınması yoluna gidildiği, denetim sonrasında ise okullarda geliştirmeye yönelik izlemenin eksik olduğu görülmektedir. Dolayısıyla, önceden belirlenecek kalite standartları doğrultusunda okulların mevcut durumunun saptanarak performanslarının değerlendirilmesi ve eksiklik görülen alanlarda geliştirme odaklı denetimlerin gerçekleştirilmesi yoluyla eğitimde kalitenin geliştirilebileceği düşünülmektedir. Bununla birlikte, nesnel değerlendirmeler ışığında okullarda yürütülecek denetim uygulamalarının sıklık ve ağırlık düzeyi saptandığı takdirde, denetçiler özellikle zayıf veya yetersiz performans gösteren okulların daha hızlı bir şekilde gelişimine odaklanabilir. Bu şekilde de, denetim hizmetlerinde kalite, etkinlik ve verimlilik sağlanabilir. Bu bağlamda, Hollanda’da 2007 yılından beri uygulanmakta olan risk odaklı denetim modelinin gerek Rehberlik ve Denetim Başkanlığının yürüteceği çalışmalara, gerekse eğitim denetimi alanına katkı sağlayacağı varsayımından hareketle, bu araştırma önemli görülmektedir.

Araştırmanın Amacı: Bu çalışmada Milli Eğitim Denetçilerinin risk odaklı kurum denetim modelini benimseme ve okullarda uygulanabilir bulma düzeylerinin saptanması amaçlanmıştır. Ayrıca Milli Eğitim Denetçilerinin bu modeli benimseme ve okullarda uygulanabilir bulma düzeyleri cinsiyet, öğrenim durumu, unvan, kıdem, yaş ve branş değişkenlerine göre incelenmiştir.

Araştırmanın Yöntemi: Bu çalışmada tarama modeli (betimsel) kullanılmıştır. Araştırmanın evrenini veri toplama aracının uygulanması aşamasında Milli Eğitim Bakanlığı Rehberlik ve Denetim Başkanlığında görev yapan toplam 319 Başdenetçi, Denetçi ve Denetçi Yardımcısı oluşturmuştur. Bu araştırma çerçevesinde evrenin tamamı ulaşılabilir olduğu için tüm evrene ulaşılması hedeflenmiş, bu bağlamda örneklem seçimine gidilmemiştir. Ancak, gönüllülük ilkesine dayalı olarak tüm evrene uygulanan veri toplama aracının geri dönüş oranı %50,15 olmuştur. Dolayısıyla, bu çalışmada istatistikî analizler toplam 160 Başdenetçi, Denetçi ve Denetçi Yardımcısı görüşüne dayalı olarak yapılmıştır. Araştırmanın verileri, 2013 yılı şubat ayında Milli Eğitim Bakanlığı Rehberlik ve Denetim Başkanlığı tarafından tüm Milli Eğitim Denetçilerine yönelik düzenlenen hizmet içi eğitim seminerinde toplanmıştır. Araştırmaya katılan Milli Eğitim Denetçilerinin %85'i erkek, %11,9'u kadındır. Ünvanlara göre % 20,9'u Denetçi Yardımcısı, % 58,8'i Denetçi ve % 20,6'sı Başdenetçidir. Araştırmaya katılan Milli Eğitim Denetçilerinin %36,3'ü 30-40, %44,4'ü 41-50 yaşları arasında olup; %17,5'i de 51 yaş ve üstü yaşa sahiptir. Öğrenim durumları değerlendirildiğinde; Milli Eğitim Denetçilerinin %70'i lisans eğitimine sahipken, %28,8'i lisans üstü eğitime sahiptir. Kıdemlerine göre de %83,1'i 1-15 yıl kıdeme sahipken, 16-25 yıl kıdeme sahip Milli Eğitim Denetçisinin oranı %10, 26 yıl ve üstü kıdeme sahip Milli Eğitim Denetçisinin oranı ise sadece %6,3'tür. Araştırmacı tarafından geliştirilen ölçme aracıyla toplanan veriler, SPSS kullanılarak aritmetik ortalama, standart sapma, frekans, ilişkisiz Mann Whitney U ve Kruskal Wallis H testleri ile analiz edilmiştir.

Araştırmanın Bulguları: Risk odaklı kurum denetim modelinin kurulması için gerekli unsurlar alt boyutunu Milli Eğitim Denetçileri "tamamen" benimsemekteyken; "büyük ölçüde" okullarda uygulanabilir bulmuşlardır. Risk analizi alt boyutunu Milli Eğitim Denetçileri "tamamen" benimsemekteyken; "büyük ölçüde" okullarda uygulanabilir bulmuşlardır. Kalite geliştirme alt boyutunu Milli Eğitim Denetçileri "tamamen" benimsemekteyken; "büyük ölçüde" okullarda uygulanabilir bulmuşlardır.

Araştırmanın Sonuçları ve Önerileri: Sonuç olarak, Milli Eğitim Denetçilerinin genel olarak risk odaklı kurum denetim modelini benimsediği ve okullarda uygulanabilir bulunduğu söylenebilir. Ancak, bu modelin uygulamaya konması için öncelikle eğitim kurumlarının temsilcilerinin de katılımıyla her okul türüne göre kalite standartları belirlenmeli, uzman denetçilerden oluşan bir "e-denetim sistemi" kurulmalıdır. Diğer yandan, modelin uygulanma sürecinde denetçilerin başrolde olduğu düşünüldüğünde; risk analizi, bilgi ve iletişim teknolojileri kullanımı gibi alanlarda denetçi yeterliklerinin geliştirilmesi gerekmektedir.

Anahtar Kelimeler: Risk odaklı denetim modeli, risk analizi, kalite geliştirme.

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		<p>p. 445). It was precisely this level of apparent certainty, however, which led to a number of subsequent challenges to the techniques used to process the data (Jones & Wayne, 2002, p. 879). There were a number of fairly obvious flaws in the data: consistencies and regularities that seemed most irregular, upon close scrutiny (Aarns, 2003; West, 2003, p. 457).</p> <p>With studies by two authors, always include both author names: (Anderson & Bjorn, 2003)</p> <p>As Anderson and Bjorn (2003) illustrated in their recent study</p> <p>As recently as 2003, a prominent study (Anderson & Bjorn) illustrated</p> <p>When a study has 3, 4, or 5 authors, include the names of all the authors the first time the work is cited: (Anderson, Myers, Wilkes, & Matthews, 2003)</p> <p>For all subsequent citations of this work, use "et al.": (Anderson et al., 2003)</p> <p>When a work has 6 or more authors, use et al.: (Bell et al., 2003)</p> <p>For unsigned works, include the title, enclosed in parentheses. Put quotation marks for short work titles, and italicize the titles of reports, books, and other significant works: ("Recent Developments," 2004) (Dictionary of Tetrathalocigistic Diseases, 2004)</p> <p>Metin içindeki atıfları üstte verilen örneklere uygundur.</p>
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