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Investigating Multicultural Education Phenomena in Minority and Public High Schools in Turkey: A multiple case study *

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ABSTRACT

Purpose: Upon inspection of Turkish national programs, it is seen that today they incorporate more universal values and principles such as democracy and pluralism. In order to design systems and curricula for multicultural societies, it is of great importance to thoroughly understand the phenomenon of multicultural education in minority and public high schools in Turkey; since the number of qualitative studies conducted on this topic remains inadequate. The aim of this study is to investigate the perceptions and implementations of multicultural education among different participants from a minority high school and two public high schools in Istanbul, Turkey.
Method: The methodology of this study was grounded in the principles of qualitative study. The maximum variation sampling method of purposive sampling methods was used. The data for the study was collected via triangulation during the 2014-2015 academic years. Particularly, an interview study method was employed.
Findings: Participants indicated that multicultural education could contribute to more opportunities and equal education rights for all. Participants also expressed that multicultural education was required by different people from various cultures to live with equal rights and for society to be a more fair and democratic ground for people from all walks of life. **Implications for Research and Practice:** The research demonstrates that teachers need to receive a comprehensive training on multicultural education. As participants reported, teachers should use examples and content from a variety of cultures and groups to show key concepts, principles, generalizations, and theories in their subject area or discipline.

* This article has been produced from Aylin (Yavas) Akinlar's PhD thesis.

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Introduction

Since the Ottoman Empire, Turkey has enjoyed a rich diversity with a variety of people from different linguistic, ethnic, religious, cultural and educational backgrounds. More than 100 years ago, many schools were established by Armenian, American, French, Italian, British, Greek, Jewish and German people. The Lozan Treaty secured minorities' right to receive an education and establish schools. State-run TRT radio and television broadcasts minority language programs and elementary schools offer minority language classes as well.

"Multicultural education" relates to the provision of equal opportunity in education to all the students in a society. According to Banks and Banks (2013a), it encompasses language, class, religion, ethnicity, gender, and "exceptionality" (a term applied to the students with specialized needs or disabilities). Multicultural education is predicated on the principles of equality, social justice, mutual respect and understanding (Baptiste, 1979).

The term of "multicultural education" was first used by Horace Kallen in the context of adult education in 1915. It was explained by Alain Locke in a detailed way (Johnson-Bailey & Drake-Clark, 2011). It evolved out of the Civil Rights Movement in the United States of America in 1960s. It began with the African-American community. Later, it included other groups who were subject to discrimination. Instructionally, it entails the use of more representative materials, texts, examples, etc. with students from different cultural backgrounds and plays a role in educational reform. In the United States of America, there were demands that course materials be updated to reflect diversity in the classroom. This process started with the demand for educational equity for all students. (Banks & Banks, 2013a, pp. 5-6). Upon inspection of current Turkish national programs, it is seen that they incorporate more universal values and principles. Issues such as multiculturalism, pluralism, and diversity play a significant part in attempts to render educational institutions and their programs more democratic.

The multicultural education in this study is considered under the basic principles of Turkish National Education. The Basic Law of National Education numbered 1739 issued in 1973 includes the basic principles of Turkish National Education as (MEB, 1973):

1. generality and equality (educational institutions are open to all regardless of race, sex, or religion);
2. meeting the needs of the individual and society;
3. orientation (individuals are directed towards programs or schools based on their interests, talents, and abilities);
4. ensuring that everybody enjoys the right to basic education;
5. providing equal opportunities;

6. continuity (it is essential that the general and vocational education of individuals lasts for a lifetime);
7. conformity with Atatürk's reforms and principles, and Atatürk's Nationalism;
8. democracy education;
9. secularism;
10. the scientific approach;
11. planning;
12. co-education;
13. school-family co-operation;
14. education everywhere.

Malala Yousafzai — Pakistani activist for female education and the 2014 Nobel Prize laureate for Peace — said "With guns you can kill terrorists; with education you can kill terrorism." In Turkey and in the world, in order to establish peace and democracy, everyone should have right to education regardless of color, language, religion, etc., which can be given through multicultural education. Multicultural education aims for all students to develop their academic capacities while feeling equal, safe and comfortable. It advocates equal opportunity in education for all the students regardless of gender, religion, language, ethnical background, social status, etc. Today, multicultural education is an educational system which can provide solutions for the various social problems we face, since multicultural education aims to eradicate problems that result from ethnic and social class prejudice through equal opportunities in education (Banks, 2006). Multicultural education ensures that students accept differences and have a knowledge of equality, justice and democracy (Manning & Baruth, 2009).

There have been many studies in the field of multicultural education in Turkey over the last ten years. Every study in this field is crucial for Turkey. In this research, qualitative multiple case study approach was chosen to examine three different schools in Istanbul (one Armenian high school in Beyoğlu, one bilingual high school in Fatih, and one public high school in Bakırköy). The number of qualitative studies conducted on this topic in Turkey remains inadequate. The "cases" inspected in this study were multicultural education perceptions of different participants from different types of schools that had rich diversity and multicultural education. The maximum variation sampling method from the field of purposive sampling methods was used. The data for the study was collected by triangulation (semi-structured interviews, observations and document analysis).

Multicultural Education in a Turkish Context

As the world has become a global village, topics such as pluralism, democracy and multicultural education have gained importance. In parallel with these, this study aims to contribute to multicultural curriculum studies in Turkey. Turkey has a rich diversity in terms of language, religion, socio-economic background. Additionally, there are around three million Syrian refugees living in Turkey. Their integration into the Turkish educational system and their potential contribution to the socio-economic life of Turkey play an important role in terms of multicultural education. Furthermore, there are minorities in Turkey. On the one hand, they may go to minority schools in their elementary, primary and high school education together with the students from their own ethnicity. On the other hand, they may have to attend universities with more diverse populations. Afterwards, they have to participate in military service with people of all other ethnic groups living in Turkey.

Turkey is a full member of the Bologna Process; in other words, it has been a a European Higher Education Area since 2001. In the process of gaining full membership in the European Union, there have been some steps taken for democratization. One of these steps was in the field of multicultural education in Turkey. Through the democratization package explained in September, 2013, ethnic groups were given right to education in their native language. For example, there are some selective language courses both in the schools and in the language centers. Furthermore, one of the major purposes of the Council of Higher Education is to attract many international students from almost any country in the world.

Dissertations and articles on multicultural education have been produced regularly throughout the world so far. Similarly, over the last decade, there has been an increase in the number of studies in Turkey that look at teachers’, academicians’, and students’ views on and attitudes towards multicultural education: Ar-Toprak, 2008; Basarir, Sari & Cetin, 2014; Basbay & Bektas, 2009; Basbay, Kagnıcı & Sarsar, 2013; Demir, 2012; Damgacı, 2013; Demircioglu, Ozdemir, 2014; Demirsoy, 2013; Esen, 2009; Gurel, 2013; Keskin & Yaman, 2014; Kilicoglu, 2014; Ozdemir & Dil, 2013; Polat, 2012; Seban & Uyanik, 2016.

There is too much prejudice against multicultural education and a lack of knowledge about other ethnic and religious groups in society, some legal and political concerns. Additionally, the academic infrastructure for addressing the different needs of students from different backgrounds is poor. For that reason, it is of great importance to thoroughly understand the multicultural education phenomenon in minority and public high schools in Turkey in order to design systems and curricula for multicultural societies.

One of the pioneering studies on teachers’ attitudes towards multicultural education was carried out by Ar-Toprak (2008). This is a Turkish adaptation of Ponterotto et al.’s (1998) “Teacher Multicultural Attitude Survey”, which also reveals the validity and reliability of the scale. Esen’s (2009) study aims to analyze how teachers who work at primary state schools in Turkey manage diversity. The study mainly focuses on the following four issues: "1-attitudes of primary school teachers towards diversity, 2- how teachers manage diversity in the absence of multicultural education policies, 3- how teachers evaluate current curriculum and school culture in terms of diversity, and 4- how teachers perceive their competence levels in terms of managing diversity". Research findings indicate that teachers have not received pre-service or in-service diversity management training despite not having received such training and have developed their own methods for managing diversity and any problems arising therefrom.

A study by Polat (2012) aimed to determine school principals' attitude levels concerning multiculturalism. Its findings revealed that a majority of school principals had a positive attitude towards multiculturalism. According to school principals, providing in-service and sensitivity trainings about multiculturalism could contribute to better management of diversity at school. Demirsoy (2013) aimed to investigate pre-service teachers' beliefs about and approaches to multiculturalism. The findings revealed that pre-service teachers saw multiculturalism as a conglomeration of more than one culture, different cultural groups, and people with different cultural traits; and they considered multicultural education to be the incorporation of different cultures, culture groups and cultural traits into the curricula and educational institutions. Evaluating multiculturalism in terms of its relationship with globalism, and their competence, pre-service teachers also shared their views on factors that hinder multicultural education.

In her study Damgaci (2013) inspected the attitudes of educational faculty in Turkey with regard to multicultural education. The research revealed that academics had a high level positive attitude towards multicultural education. Academicians (92%) saw multicultural education as an advantageous type of education for Turkey; however, they believed that the disadvantages of multicultural education could arise from multicultural education being provided by unqualified people; and felt that it was necessary to incorporate multiculturalism into undergraduate classes of prospective teachers who would eventually be providing multicultural education.

Most of these studies are quantitative studies. Deeper understanding of multicultural education in minority and public high schools is an issue of concern, since there are not many qualitative case studies. In order to develop multicultural education in Turkey, there should be studies investigating current situation.

The purpose of this study is to investigate the perceptions of multicultural education by different participants (principals, vice-principals, teachers, and students) from a minority high school and two public high schools in Istanbul, Turkey. The opinions and suggestions with regard to multicultural education are thought to make an important contribution to the academic literature and curriculum development studies on this topic. The following research question governed this study;

What are the viewpoints of different stakeholders (principals, vice-principals, teachers and students) regarding multicultural education? How is multicultural education seen in observation and document analysis?

Method

Research Design

The methodology of this study was grounded in the field of qualitative study. A multiple case study approach was chosen to examine the schools. The "cases" inspected in this study were multicultural education perceptions of different participants from different types of schools that had rich diversity in multicultural education.

Participants and Recruitment Procedures

The research was conducted in Istanbul since the city is cosmopolite and the researcher lives in Istanbul. Maximum variation sampling method of purposive sampling methods was used. Purposive sampling method is used for greater understanding (Patton, 2002).

The study was conducted with the participation of 44 stakeholders from three different high schools. These high schools were selected in the Beyoglu, Fatih and Bakırkoy districts of Istanbul and include a minority high school, a bilingual high school and a public high school. The stakeholders are comprised of administrators (principals and vice-principals), teachers and students. Of the stakeholders, seven are administrators, 28 are teachers, and nine are students. Of the stakeholders, 21 are females and, 23 are males: Of the administrators participating in the study, two are females, five are male, of the teachers participating in the study, 13 are females, 15 are males, of the students participating in the study, six are females and three are males. The stakeholders are aged between 17 and 61. The average of age is 39. The administrators are aged between 36 and 61; the teachers are aged between 28 and 61, and the students are aged between 17 and 19.

A minority high school. This minority high school is located in Beyoglu. Established during the Ottoman Empire, it is one of the oldest schools in Turkey. All the students are Armenians. Of 11 stakeholders, seven are females and four are male. They include one principal, one vice-principal, six teachers and three students. They are aged in the range of 18 and 61. The average of age is 37. Eight of them are Armenian, two are Turkish and one is Kurdish. Seven participants' native language is Armenian and Turkish, two participants' native language is Turkish, one participant's mother tongue is Armenian, and one participant's native language are Kurdish and Turkish. Two participants do not know any foreign languages. Seven participants know only English, one participant knows Ottoman Turkish, Arabic, Persian, Armenian and Greek, and one participant knows English and Spanish.

A bilingual high school. This bilingual high school is located in Fatih. It is the only state bilingual high school with dual curricula. It was established during the Ottoman Empire. It is one of the pioneering high schools in Turkey with 43 Turkish and 35 German teachers, modern laboratories, an Abitur program, etc. Of 16 participants, seven are female and nine are male. They include one principal, two vice-principals, 11 teachers and two students. They are aged in the range of 19-56. The average of age is 44. Seven of them are Turkish, two are German, four are German and Turkish, one is German, Turkish and Circassian, one is Abkhazian and Turkish, and one is Kurdish. Eight participants' native language is Turkish, two participants' native language is German, four participants' native language is German and Turkish, one participant's native language is Abkhazian and Turkish, and one participant's mother tongue is Kurdish and Turkish. One participant does not know any foreign language. Six participants knows English, three participants know English and German, one participant knows English, German and French, one participant knows Arabic, Russian, Bosnian, Bulgarian and English, one participant knows English, Greek and Arabic, one participant knows Zazaish and Kurdish, and one participant knows English, French and Turkish.

A public high school. This school is of a lower social economic status than the other two schools. It is located in Bakırkoy. Of 17 participants, eight are female and nine are male. They are two vice-principals, 11 teachers and four students. They are aged in the range of 17-51. The average of age is 36. Thirteen of them are Turkish, one of them is Turkish and Kurdish, two are Kurdish, and one is French and Turkish. Thirteen participants' native language is Turkish, three participants' mother tongue is Kurdish and Turkish, one participant's native language is Chaldean. Three participants do not know foreign language. Ten participants knows English, one participant knows English, Turkish and French, one participant knows Arabic and English, one participant knows English and German, and one participant knows English and Italian.

Research Instruments and Procedures

Semi-structured interview form. A semi-structured interview form was prepared and submitted for an expert opinion regarding its their content validity. According to the evaluation of the experts, necessary amendments were made.

The data for the study was collected by *triangulation* (semi-structured interviews, observations, document analysis, and field notes) during the 2014-2015 academic years. The researcher spent two days in the schools as a participant observer, conducted semi-structured interviews, and took field notes and pictures. Some documents about the socio-cultural activities of the schools were submitted to the researcher by the vice-principals.

Particularly, the following interview study method was employed: 44 high school participants were interviewed for 10-40 minutes. After the interviews were fully transcribed, the gathered data was content analyzed. The setting and procedures were discussed in detail. A codebook was created by three interpreters.

In the research, three academics and three graduate students gave feedback to the researcher. The peer-reviewer helped the researcher reflect the about which processes to use, how to collect, and analyze data, findings and conclusions (Guba & Lincoln, 1989). Guba and Lincoln (1989) argued that peer review is one of the most important techniques for establishing credibility and occurs during the process of data analysis.

Data Analysis

In qualitative studies, it is not possible to standardize data analyses methods; otherwise, this would restrict the qualitative researcher as suggested by Strauss (1987). Miles and Huberman (1994, as cited in Merriam, 2013) describes the data analyses period in three phases: data reduction, data display, and drawing conclusion and verification. In this framework, after data collection, the interviews were transcribed. The content of the interviews was analyzed. Major themes were discovered. Next, the statements were categorized under the themes, and then the data was analyzed in the light of the conclusions drawn from field notes and observations (Creswell, 2012). In parallel with this framework, the strategy of peer review was employed. One peer and two field experts independently read and analyzed the data. Necessary amendments were made according to their feedback.

Validity and Reliability

The terms of "credibility, transferability, dependability, and confirmability" in qualitative studies correspond to the terms "internal validity, external validity, reliability, objectivity" in quantitative studies (Guba & Lincoln, 1989). In qualitative studies based on the interpretivist paradigm, strategies such as data triangulation, member checking, the role of the researcher, peer review, expert opinion, thick description, and maximum variation are employed to develop validity and reliability (Merriam, 2013).

Internal Validity

Long term interaction and in-depth data collection. The researcher spent two days in the schools as a participant observer, conducted semi-structured interviews, and took field notes and pictures. The researcher also participated in lunch and student club activities.

Expert opinion and peer review. During the study, one peer and two field experts independently read and analyzed the data. Necessary amendments were made according to their feedback.

Member checking. The interviews were recorded and transcribed. The transcripts were checked by the participants of the study.

Data triangulation. The data for the study was collected by data triangulation (semi-structured interviews, observations, document analysis, etc.) and investigator triangulation as suggested by Denzin (1978).

External Validity

Thick Description. The schools and participants of the study were described in a detailed way as emphasized by Lincoln and Guba (1985, p. 125), which was supported with quotations from one on one conversations.

Reliability

Internal reliability. The data was presented with no changes made. Data triangulation and inspector triangulation were employed. Expert opinions and peer reviews were also sought out.

External reliability. The role of the researcher and the background of the researcher relating to the study were explained. The theoretical framework of the study, the participants, the data collection and analyses, findings and conclusion were described in a detailed way.

Results

The data for the study was collected by triangulation (semi-structured interviews, observations, document analysis, etc.) during the 2014-2015 academic years. Particularly, the interview study method was employed. The researcher developed a semi-structured interview form and 44 high school participants were interviewed. After the interviews were fully transcribed, the gathered data obtained from the interviews, observations and examination of the documents was content analyzed. Then the data was organized under main themes. These were "Equal Opportunity in Education and Education for All" and "Metaphors Related to the Notion of Multicultural Education".

The views of the participants were shown as P1, P2, P3, etc. Additionally, further information about the date of the interview and the participant was given in the form of acronyms: MHS: Minority High School, BHL: Bilingual High School, AHS: Anatolian High School, P: Principal, VP: Vice-Principal, T: Teacher, S: Student, F: Female, M: Male.

Theme One: Equal Opportunity in Education and Education for All

Equal opportunity in education means that all the students should have the same opportunity to develop their skills (Musgrave, 1965, p. 76). It means that everyone should be provided with the same opportunities regardless of gender, language, religion, race, color or nationality. This topic was stressed 189 times by the participants in the interviews.

A male vice principal of the Minority High School (P1), defines multicultural education in the following:

> Multicultural education is the provision of equal opportunity in education for all students regardless of race, ethnical background or social group. I feel

> that multicultural education can help peace and tranquility, which can bring human values to the forefront. (May, 2015: P1, MHS, VP, 42, M)

"Multicultural education" is the delivery of equal learning opportunities in schools to everyone regardless of language, social class, religion, ethical background, or ability (Banks & Banks, 2013a). In order to establish multicultural education in schools, educational systems should be restructured. For that reason, teacher training systems and curricula should be designed with multicultural education dimensions in mind.

A female student from the Minority High School (P3) said:

> Multicultural education is education for everyone regardless of religion, language, race, etc. Everyone should have right to education. (May, 2015: I3, MHS, S, 18, F)

As student (P3) said, every student should have the right to an education regardless of language, religion, ethnicity, gender, etc. In this context, diversity consciousness and cross-cultural competence should be delivered through the educational curriculum. Multicultural education aims to help students acquire positive behavior traits such as showing respect and tolerance to others, and developing the ability to empathize (Sinagatullin, 2003).

A male student from the Minority High School (P4) reported:

> I think everybody should receive a multicultural education, since it develops you in many ways from your interpreting to your thinking style. (May, 2015: P4, MHS, Ö, 19, M)

The student emphasizes that multicultural education helps students think critically. Multicultural education is essential for students to acquire reading, writing and mathematical skills, which are necessary for becoming global citizens (Banks, 2006).

Banks (2010) argues that "multicultural education is at least three things: an idea or concept, an educational reform movement and a process. It is equal opportunity in education for all students regardless of gender, social class, and ethnical, racial or cultural feature." Multicultural education fights for the right to education for everyone. A male teacher from the Anatolian High School (P43) told the researcher:

> What I understand from multicultural education is that it is an educational movement for everyone. It gives students a chance to feel as they are; not to be ashamed of whom they are in the classroom. It is an educational system that respects them and welcomes them as they are. (June, 2015: P3, AHS, T, 35, M)

As claimed by Gay (2015) noted above, such an educational system should be established through culturally responsive teaching, which promotes a culturally responsive learning environment and where everyone can feel equal.

A female teacher from the Anatolian High School (P41) defines multiculturalism as the opportunity that gives students from different cultural backgrounds the chance to receive education together:

> In my view, thanks to a multicultural education, culturally different students can be in the same classroom to receive education. (June, 2015: P41, AHS, T, 51, F)

Another male teacher from the Anatolian High School (P42) thinks:

> I feel that multicultural education is a kind of global education which teaches you more than national values. In other words, I believe that today a society has no more specific education to itself; all the children from the world should have right to education, which is at the same cultural level. (June, 2015: P42, AHS, T, 30, M)

A male teacher from the Bilingual High School (P24) has a similar opinion:

> Multicultural education means that all the students can be in the same learning environment regardless of their cultural background, language, race, etc. It is an equal learning opportunity for everyone. It means pluralism. It means tolerance. It means the reflection of cultural diversity in the curriculum. It is the diversity in the content, methods, strategies, etc. in the curriculum for everyone including handicapped people; visually-impaired people, etc. (April, 2015: P24, BHS, T, 44, M)

Figure 1. Open Book Stand

As seen in the observations, Open Book Stands are available in the minority school so that every student has equal and easy access to books.

Nieto and Bode (2011) state that "Multicultural education is a comprehensive school reform for all the students, which is against all kinds of discrimination." In parallel with Nieto's statement, a female teacher from the Anatolian High School (P43) describes multicultural education as an education for all:

> What I understand from multicultural education is that it is a kind of education for everybody which respects everybody and a kind of educational system which accepts them as they are. (June, 2015: P43, AHS, T, 35, F)

If students have equal access to in education and can feel themselves equal to others, they can be successful. The vice-principal of the Minority High School (P1) argues:

> Multicultural education is a new concept in the educational curriculum and instruction in our country. If it is reflected in learning environments, the targeted success can be achieved. (May, 2015: P1, MHS, VP, 42, M).

Theme Two: "Metaphors Related to the Notion of Multicultural Education"

Twelve participants of the study described multicultural education by using metaphors such as "rainbow, mosaic, to get wet under the same cloud and richness".

Rainbow. A male teacher from the Bilingual High School (P25) said:

> I feel that multicultural education is like a rainbow. You learn new stuff from each culture. (May, 2015: P25, BHS, T, 48, M)

A female teacher from the Bilingual High School (P18) reported:

> I am teacher of visual arts. It is selective. In my classes, I ask my students "Isn't it controversial for you to be only in one color while there are many colors in a rainbow?" Multicultural education is like a rainbow. For that reason, I would be glad if I could change their attitude and if they could think out of the box. (May, 2015: P18, BHS, T, 45, F)

Mosaic. A male vice-principal from the Bilingual High School (P12) said:

> I believe that each country has some values. On the condition that they are protected, I feel that multicultural education is like a mosaic. We should benefit from it. (May, 2015: I12, BHS, VP, 46, M).

A male student from the Anatolian High School (P31) reported:

> First of all, I can say that multicultural education is a mosaic composed of different kinds of people with different opinions. I really wish that people would have such multicultural attitudes, since Anatolia is the cradle of cultures and civilizations. I am very proud of being in this cradle. (June, 2015: P31, AHS, S, 17, M)

A female teacher from the Anatolian High School (P41) said:

> Multicultural education resembles a mosaic. It can develop different attitudes and diversities. It is color, which adds value to the human life. (June, 2015: P41, AHS, T, 51, F)

To get wet under the same cloud. A male teacher from the Anatolian High School (P35) reported:

> This is a good question. As a country, we are a mosaic. Each student comes from a different culture. We are trying to find a middle ground for all different kinds of students. In the name of geography, we are all getting wet under the same cloud. (June, 2015: P35, AHS, T, 35, M)

Richness. A male vice-principal from the Bilingual High School (P12) argued:

> When we think about multicultural education, we should first think about the scale of Turkey. There are many different cultures in the scale of Turkey. First of all, we need to preserve our common values. Turkey is like a mosaic in the North, South, East and West. We need to consider this mosaic as richness. It is colorfulness. (May, 2015: P12, BHS, VP, 46, M)

A female teacher from the Bilingual High School (P23) said:

> I think that to learn about a different culture is a plus and richness. (May, 2015: P23, BHS, T, 42, F)

A female vice-principal from the Anatolian High School (P29) reported:

> I feel that multicultural education is richness. When the students come together, we can also see this richness. We can see this big richness in their studies, activities, ideas, conversations, behaviors, etc. Istanbul is a very multicultural city, which is also reflected in the schools. (June, 2015: P29, AHS, VP, 40, F)

A male teacher from the Anatolian High School (P35) told the researcher:

> In my point of view, multicultural education is richness like diversities. Each culture can make a contribution to us, which has many advantages. (June, 2015: P35, AL, T, 35, M).

Another male teacher from the Anatolian High School (P34) believes:

> I believe that multicultural education is like the flowers in a garden. We teach that each of the flowers has different smell and color. (June, 2015: P34, AHS, T, 55, M).

Discussion and Conclusion

The first theme "Equal Opportunity in Education and Education for All" was discussed by more participants in the minority high school. As stated by the vice-principal of the minority high school, "multicultural education should be reflected in learning environments". All diverse students should feel equal and have the right to education. This theme was discussed by the teachers of the bilingual high school more than the others in that school. As a teacher (P41) emphasized that all the students should have right to education regardless of their gender, socio economic background, religion, race, etc. Education for all should be the main purpose for all involved in multicultural education. The second theme "Metaphors Related to Multicultural Education" was more often used by the participants from the bilingual high school and public high school.

As participants reported, teachers should use examples and content from a variety of cultures and groups to demonstrate key concepts, principles, generalizations, and theories in their subject area or discipline. Teachers should help students to comprehend, investigate, and determine how the implicit cultural assumptions, biases, etc. within a discipline influence the ways in which knowledge is constructed. Additionally, students' attitudes should be modified by teaching materials and methods. Teachers should change their teaching to ways and means that will facilitate the academic achievement of students from diverse cultural, racial and social-economic groups by using a variety of teaching styles. School culture should be created so that all the students will experience educational equality and empowerment (Banks, 2013b). Multicultural education is a field that has the capacity to improve (1) content integration, (2) the knowledge construction process, (3) prejudice reduction, (4) an equity pedagogy, and (5) an empowering school culture and social structure (Banks, 2013b).

Since the 2012-2013 academic year, Kurdish and Arabic courses have been added to the curriculum as "selective courses" in addition to Turkish, English and German (MEB, 2012), which can be evaluated as a step towards multicultural education in Turkey.

Exchange programs should be designed to develop multicultural education.

A female student from the Minority High School (P3) said:

> Exchange programs like Erasmus can pave the way for multicultural education. (May, 2015: P3, MHS, S, 18, F).

Teachers should be included in curriculum development studies.

A male teacher from the Minority High School (P7) reported:

> On the one hand, we want the Turkish educational system changed. On the other hand, teachers do not have much chance to design the curriculum. Teachers should have more rights to change the curriculum. We as teachers

> exchange ideas as much as possible. But many teachers at some other schools only lecture at school and go home. (May, 2015: P7, MHS, ÖN, 44, E)

The content of the books should include tolerance to others, since they play important roles. The instructional materials should show events, situations, and concepts from the perspectives of a range of cultural groups. A female teacher from the Minority High School (P8) told the researcher:

> Due to the political reasons, minority schools are kept in the background. Many people do not know about them. A person on the street does not know about a Jewish school on the street. Then it becomes otherization. Everybody should be able to say hello in Armenian, Greek, Kurdish and Turkish. Why not? (May, 2015: P8, MHS, T, 36, F)

A major goal of multicultural education is to create equal opportunities in education for students regardless of gender, language, religion, or social-economic status (Banks, 2013b). In Turkey, the gaps in academic achievement of social-economic status are enormous in some parts of the country. In order to close these gaps, more studies should be conducted and implemented.

Two millions of the current three million immigrants in Turkey are children. The most important issue regarding them is their education (Arman, 09.07.2017). For that reason, the current curriculum should be designed under multicultural education. Course materials should be prepared according to the needs of culturally diverse students. Additionally, books such as Diversity Consciousness (Bucher, 2015) and Affirming Diversity (Nieto & Bode, 2011) should be studied in teacher training programs (Yavas, 2013). Also, courses like "multicultural education" should be given and multicultural education curriculum should be designed.

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Türkiye'de Azınlık ve Devlet Liselerinde Çokkültürlü Eğitim Olgusunun İncelenmesi: Çoklu Örnek Olay Çalışması

Atıf:

Akinlar, A. & Dogan, S. (2017). Investigating multicultural education phenomenon in minority and public high schools in Turkey: A multiple case study. *Eurasian Journal of Educational Research*, 71, 1-20, DOI: 10.14689/ejer.2017.71.1

Özet

Problem Durumu: Günümüzde ulusal programlara bakıldığında, gittikçe daha fazla evrensel değerler içerdiği görülmektedir. Çokkültürlülük, çoğulculuk ve farklılık/çeşitlilik gibi konular, eğitim kurumlarını ve programlarını daha demokratik hale getirmek için önemli rol oynayabilir. Dünyada çokkültürlü eğitime ilişkin yüzlerce tez ve makale yayımlanmıştır. Son 10 yılda Türkiye'de akademisyenlerin, öğretmenlerin ve öğrencilerin çokkültürlü eğitime ilişkin görüşlerini ve tutumlarını inceleyen araştırmaların arttığı görülmektedir. Dünyanın teknolojik olarak küresel bir köy haline gelmesiyle, çoğulculuk ve çokkültürlülük tartışmaları da yoğunluk kazanmıştır. Bu tartışmalar devam ederken; tasarlanıp uygulanacak olan eğitim programlarına katkı getirmeye hedefleyen bu çalışma; idarecilere, öğretmenlere, öğrencilere ve karar vericilere program geliştirme ve öğrenme alanları tasarlama gibi konularda öneriler sunmaktadır.

Araştırmanın Amacı: Bu araştırmanın amacı; İstanbul'da bulunan azınlık ve devlet liselerindeki farklı katılımcıların (okul müdürleri, okul müdür yardımcıları, öğretmenler ve öğrenciler) çokkültürlü eğitime ilişkin bakış açılarını derinlemesine incelemektir.

Araştırmanın Yöntemi: Araştırma, nitel örnek olay deseniyle tasarlanmıştır. Okulları incelemek için çoklu örnek olay seçilmiştir. Amaca yönelik örneklem ile çokkültürlü eğitim ve azınlık eğitimi alanlarında, zengin ve farklı bağlamlara sahip olan okullar seçilerek maksimum çeşitlilik örneklemi kullanılmıştır. Araştırmanın verilerinin toplanmasında, veri çeşitlemesine gidilmiştir. Bu veri çeşitlemesinde; bire bir görüşmeler, gözlemler, doküman analizi ve alan notları kullanılmıştır. Araştırma, 2014-2015 akademik yılında gerçekleştirilmiştir. Araştırmacıya okullarda bir araştırmacı daha eşlik etmiştir. Araştırmacı tarafından geliştirilen ve üç uzman görüşü alınan yarı-yapılandırılmış görüşme formu ile 44 katılımcıyla görüşme yapılmıştır. Görüşmeler, yazıya dökülmüş ve toplanan tüm verilere içerik analizi yapılmıştır. Araştırmanın süreç ve işlemleri detaylı olarak yazılmıştır. Temaların ortaya çıkarılmasında, üç araştırmacı tüm verileri incelemiş ve kod defteri oluşturularak ortak temalara karar verilmiştir.

Bulgularda ortaya çıkan temalar: "Eğitimde Fırsat Eşitliği ve Herkes İçin Eğitim, Metaforik Tanımlar, Kültürel Farkındalık / Farkındalık Bilinci Kazandırma (Alt

Temalar: Kültürleşme, Kendini Geliştirme, Dünya Vatandaşlığı), Eşitlik (Alt Temalar: Birlikte Yaşama ve Çoğulculuk, Hoşgörü), Çokkültürlü Eğitim / Program/ı Eksikliği, Anadili Eğitimi ve Eğitim Öğretim Birliği/Tevhidi Tedrisat, Çokkültürlü Eğitimin Dezavantajları, Katkılar Yaklaşımı ve Etnik İlaveler Yaklaşımı, Önyargılar, Farklı Kültürlerden İnsanlarla Etkileşimdeki Sorunlar, Çokkültürlü Eğitim Programı Eksikliği ve Ders Kitaplarının Yazılması"dır.

Araştırmanın Sonuçları ve Önerileri: Öğretmenlerin çokkültürlü eğitim alanında eğitim alması gerektiği görülmektedir. Katılımcıların ifade ettiği gibi, öğretmenler konu alanlarında ya da disiplinlerinde çeşitli kavramlar, prensipler, genellemeler ve teoriler göstermek için çok çeşitli kültürlerden ve gruplardan örnekler kullanmalıdırlar. Öğretmenler kültürel değerlere uyumlu öğretim yapmalıdırlar. Eğitimde fırsat eşitliği sağlanmalı ve farklı sosyo-kültürel gruplardan gelen öğrencilerin akademik başarılarının sağlanması için öğretimde farklı yöntem ve teknikler kullanılmalıdır. Okul kültürü, öğrencilerin eğitimde fırsat eşitliği ve güçlendirme yaşamaları için tasarlanmalıdır.

Türkiye'de mevcut üç milyon mültecinin iki milyonu çocuktur. En ivedi sorunun da onların eğitimi olduğu söylenebilir. Bu çocuklara Türkçe öğretecek öğretmenlerin yabancı dil olarak Türkçe öğretiminde eğitiminin olması ve Arapça konuşabilen öğretmenlerin olması mevcut dil sorunlarının çözümüne katkı sağlayabilir. Buna ek olarak, çokkültürlü eğitim materyallerinin tasarlanması gerekmektedir. Profesör Selçuk Şirin'in 'Umut Projesi' adında yürüttüğü proje gibi teknolojiyi kullanarak oyun bazlı öğrenme modelleri geliştirilebilir. Bu proje çocuklar, oyun oynayarak Türkçelerini ilerlettikleri, 200'den fazla kelime, kodlama öğrendikleri, bir ayın sonunda 1800 satır kod yazmayı öğrendikleri; en önemlisi de 'yönetsel becerilerini' kullanmayı öğrendikleri gözlemlenmiştir [Arman, 09.07.2017].

Anahtar Sözcükler: Çokkültürlü Eğitim, Nitel Çoklu Örnek Olay.

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Opinions of the Class Teachers towards "Privacy" and its Violation *

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ABSTRACT

Purpose: The aim of this study is to reveal the opinions of teachers in terms of the right to privacy at school, both in the class and individually, and the violation of this right.

Research Methods: Data was collected using a qualitative interview method. 21 teachers from state schools and 15 from two private schools, in total 36 class teachers, in Aydın, who taught in the 2015-2016 academic year participated, and the data was analyzed via content analysis.

Findings: The conclusion was reached that the private lives of the school, class, and teachers was violated. It was concluded that parents and teachers violated the school's private life, parents and students violated the class's private life, and teachers violated other teachers' private life at the state primary school. Parents were generally the ones who violated the private life of the school, class, and teachers, at private primary schools.

Implications for Research and Practice: In accordance with these results, it would be beneficial to inform teachers, administrators, students, and parents about the right of privacy and about the scope and limits of the school's, class's and teacher's right to privacy. It would be useful to study, performed using a qualitative approach, in other educational institutions using quantitative research techniques.

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Introduction

The only thing given equally to all human beings is life itself. Although some activities are shared with others, other activities are contained in an individual's private space where the individual chooses to exclude others. This is defined as the individual's private life. Societies have legally protected the individual freedom to maintain secrecy regarding a person's private life. The right to privacy is also an important issue in the workforce. Organizations have also made regulations to protect the privacy of their employees' private lives. In this section, we will explain the concepts of private life and the right of privacy are explained, outline the national and international legal basis of this freedom, and then, discuss the teachers' rights to privacy and the violation of this right based on research conducted at the state primary school and private primary schools.

The Concepts of Private Life

"Private life" as a concept is defined as "The individual's own idiosyncratic way of life, life style and his attitude and behavior concerning himself" in the dictionary of Turkish Language Society (2015). In Oxford Dictionary (2015), it is defined as "not being disturbed and watched by others, being alone". A person's name, surname, gender identity, ethnic identity, image, honor and reputation, physical and psychological integrity, sexual life, and personal passages are included in private life (Yutsever, 2015). Inness (1992) argues that private life is confidential, and it is to control life itself. There are four dimensions of private life: loneliness, the state of being alone and not being noticed; confidentiality, having confidential relationships with others within small social groups; hiding oneself, the ability to not be recognized among people and keeping silent so as not to be recognized; and timidity, protecting personal information and putting up psychological barriers (Tang & Dong, 2006). In their article, "The Right of Privacy", published in the Harvard Law Review in 1890, Warren and Brandeis became the first researchers to term the right of privacy as a concept and share this concept to large masses. In a related article, they analyzed such topics as securing general rights for every individual, the right to choose in what way individuals will express thoughts, feelings, and emotions to others, and the right of loneliness (Kosseff, 2008). People's living space is divided into three dimensions: "common space, private space and hidden space". Common space is the area that everybody sees and knows, in which everyday things happen. Private space refers to the place and time that people choose to only share with their friends and close relatives. Hidden space consists of secret events, information, and documents which are necessary or desired to be kept secret (Bates, 1964; Aydin, 1998). One can act and think freely in his hidden space, and it is only possible to learn about a person's hidden space when the individual grants permission and access. The hidden space includes an individual's unshared thoughts and beliefs, health problems, special moments, and emotional connections. The individual's "right to be alone" is also included in this hidden space (Karaman-Kepenekci & Taskin, 2011; Tierney & Koch, 2016).

The right of privacy is a fundamental right that guarantees freedom and respect for the individual's private and family life. With the development of technology, the protection of this right has become increasingly tenuous, and the use of such devices as cameras, recording devices, etc., has become a threat contributing to the violation of privacy (Aras, 2010). The 1982 Constitution, Turkish Criminal Law, and Turkish Civil Law both directly and indirectly relate to the right of privacy and protection of private life. Individual rights to privacy are also protected under international law.

The Freedom of the Teachers' Privacy

According to Mawdsley (2004), private life for teachers is separated into four areas: first, the private personal life of the teachers; second, physical private life in regards to life and property safety; third, educational private life which includes their knowledge and skills in an educational environment; and finally, relational private life defined as the freedom to engage in relationships with the students and other faculty or staff outside the workplace and includes the level of private life with the students both in and out of school. According to Horn (2008), the classes are part of the individual private space of teachers and thus are included in the context of teachers' private lives. Teachers protect the private life of the class when they refrain from disclosing any events that occur while teaching or during classroom activities outside of the classroom. Although, sharing these events with other outside the classroom may not constitute a crime, they represent a violation of the private life of the class. In some schools today, the teachers' school lives are being recorded by security cameras. In some schools, even parents are able to watch their children, their class, and their teachers over the internet. In a sense, this is a violation of the private life of the class (Spencer & Hoffman, 2001). However, Chanin (1970) argues that if a teacher's attitudes and behaviors are dangerous, harmful, or unprofessional to students, other teachers, or staff, those attitudes and behaviors cannot be included within the scope of the teachers' private life in class; those who exhibit such behaviors can be excluded from the teaching profession.

There are some events that happen in the school that only the school staff should know about; these constitute the private life of the school. Sharing confidential situations with others is a violation of the privacy of school life (Imber & Geel, 2010; Kauffman & Lane, 2014; Mawdsley, 2004). According to Imber & Geel (2010), problems with confidentiality at schools cause conflict between the administration of the school and teachers. These problems often arise when the administration focuses on controlling teachers' personal life style choices and behaviors and when administrators try to obtain information about teachers' private lives.

The claim has been made that teachers who share their professional or private considerations, practices, materials etc., with colleagues threaten the secrecy culture in schools even if they are known as good colleagues at school. When teachers share private events in class with other teachers, they are in fact unconsciously violating the private life of the class (Rosenholtz, 1985; Szczesiul, 2007). On the other hand, by interviewing teachers from 16 different state and private elementary schools, McLaughlin (1992) found that teachers who felt they did not receive any help and support from their colleagues and who were more inclined to conceal their private lives were more nervous. McLaughlin (1992) further determined that teachers who attach great importance to privacy in their personal lives are rule-makers and tend to view their work as being routine, highly bureaucratic, and unchangeable. In interviews with 10 branch teachers, Kauffman & Lane (2014) reported that teachers expressed that the development of standard rules and criterions for the storage of private information at schools, the establishment of a confidentiality culture, the mutual determination to not exceed confidentiality limits, and the placement of boundaries within relationships are key principles to protecting privacy. Little (1990) found in his study that interactions between teachers did not threaten the confidentiality of their private lives and professional solidarity.

Based on this research, it is clear that teachers have lives at school, in the classroom itself, as well as their own individual private lives. In order to preserve their privacy in all three areas, teachers have a set of legal rights and freedoms. However, these rights and freedoms can sometimes be violated. There is very little research mentioned in the literature that examines these violations of privacy in school settings, which significantly increases the significance of the research. Therefore, this study is thought to be a pioneer for future studies. This study was conducted to examine the opinions of class teachers regarding the scope of "the freedom of private life" and "the violation of private life" at school, both in the class and individually. Our general objective ans problem statement is: "What are class teachers' opinions regarding 'the privacy of private life' and 'its violation'"? Based on this primary objective, the following sub-objectives were also examined:

1. What are the opinions of class teachers in terms of situations that are regarded as private to the school, class, and individual?

2. What are the opinions of class teachers in terms of situations that violate the privacy of the school, class, and individual?

Method

Research Design

This study is designed as a descriptive study (Karasar, 1991) and gives a detailed description of the subject the researchers aim to cover (Buyukozturk, Cakmak, Akgun, Karadeniz & Demirel, 2008). We adopted a qualitative research approach as it allows us to work on deep and detailed subjects, study fewer people and situations, and provides more and more detailed information (Patton, 2014). This particular study is a case study. A case study requires the investigation and description of a specific situation within the current environment in the real world (Creswell, 2016). In a case study, existing situations are interpreted and defined. The case in this study is a violation of privacy and private life.

Research Sample

The study group is composed of a total of 36 teachers. 21 of the teachers work at a state school and the other 15 worked at two private schools for the 2015-2016 academic year in Aydın. The study group was determined on a voluntary basis. When the study group was selected, purposeful sampling method was used (Monette, Sullivan & Dejong, 1990). It is accepted that the purposefully selected sample will represent the population (Tavsancil & Aslan, 2001). The demographics of the participants are given in Table 1.

Table 1

Descriptive Statistics of the Sample

School	Variables									
	Gender		Age					Work in this school		
	F	M	20-30	31-40	41-50	51-60	60+	1-5	6-10	11+
State	12	9	1	9	10	1	-	15	6	-
Private	6	9	1	1	2	9	2	11	-	4
Total	18	18	2	10	12	10	2	26	6	4

According to Table 1, 12 female and 9 male class teachers from the state primary school; 6 female and 9 male class teachers from the private primary school participated in the research. 10 teachers were 31-40 ages, 12 teachers were 41-50, 10 teachers 51-60 and 2 teachers were older than 60 ages. 26 teachers worked in this school in 1-5 years, 6 worked in 6-10 years and 4 worked 11 and more.

Research Instrument and Procedure

A semi-structured interview form was developed by the researchers following a review of the literature. The final interview form was approved by two expert academicians and by the pre-application with two teachers. Face-to-face interviews were conducted and voice recordings were taken and later transcribed. Some of the participants did not want their interviews recorded, so their answers were any voice recordings, their opinions were noted down in the interview itself. The opinions of the participants were presented by giving a code. In this study, in order to provide validity, "analyzer triangulation, participant validation and direct citation" was used (Creswell, 2016; Merriam, 2013; Patton, 2014; Yildirim & Simsek, 2006). The Miles & Huberman (1994) formula was used to calculate the reliability of the analyses. In this study, the inter-researcher reliability was calculated as 95%. Hall & Houten (1983) states that there must be at least 70% consensus between the researchers in coding qualitative research. The transcribed interview responses were analyzed using content analysis methods (Kus, 2007; Mason, 2002; Patton, 1990; Rubin & Rubin, 1995; Yildirim & Simsek, 2006). Codes were given to identify participations and their real names were changed (State School Teacher: ST, Private School Teacher: PT; Participant 1 Male: Ahmet; Participant 1 Female: Asli etc.).

Results

In this section, findings related to teachers' reports of situations which are regarded as the private life of the school, class, or teacher as well as situations regarding the violation of private life are given.

Findings Related to the Situations Regarded As the Private Life of the School

The distribution of the state primary and private primary school teachers' opinions are given in Table 2.

Table 2

Distribution of the Private Life of the School

Categories	Sub-categories	State		Private		Total	
		f	%	f	%	f	%
Inter-personal relation ships	Teacher-administration relationship	13	24	3	11	16	20
	Teacher-student relationship	12	22	1	3	13	16
	Teacher-parent relationship	8	15	6	22	14	17
	Teacher-teacher relationship	6	11	10	36	16	20
	Administration-parent relationship	4	7	3	11	7	9
	Student-student relationship	2	4	1	3	3	4
	Administration-administration relationship	1	2	-	-	1	1
Total		46	85	24	86	70	86
Group Activities	School social activities	4	7	3	11	7	9
	School meetings	1	2	1	3	2	2
Total		5	9	4	14	9	11
Problems	Problems with service personnel	1	2	-	-	1	1
	Problems with canteen personnel	1	2	-	-	1	1
	Problems with school environment	1	2	-	-	1	1
Total		3	6	-	-	3	3
General Total		54	100	28	100	82	100

According to Table 2, the for the purposes of this study, the schools private life were divided into three sub-categories: "interpersonal relationships", "group activities", and "problems". The vast majority of participants categorized interpersonal relationships at school as within the scope of the school's private life. Participants then argued that group activities in the school and problems in the school were also encompassed within the scope of the private life of the school. When opinions were compared and analyzed between teachers at the state school and private school, we found that 85% of the responses from participants in the state primary school were about interpersonal relations, 9% were about group activities, and 6% were about problems experienced at school; whereas, 86% of the opinions of the participants in the private primary school were about interpersonal relationships, 14% were about group activities, and none of the responses from the private school setting were in regards to problems opinions were in the category of problems experienced at school. The examples to the responses of the teachers:

- *"The activities performed in the school, private situations related to the staff and students are the private life of the school" (ST Ecesu).*
- *"When the point is the private life of school, what comes to my mind is the school meetings. We have to attend these meetings and keep what is spoken during the meetings secret" (PT Ali).*

Findings Related to the Situations Regarded As a Violation of the Private Life of the School

While 52% of the class teachers working at state primary schools thought that the school's private life was violated, the remaining 48% believed that it was not violated. 67% of private primary school teachers thought that the school's private life was violated and 33% believed that it was not. The examples to the responses of the teachers:

- *"Especially because of the fact that technological devices have become widespread, students or parents give away what happened at school and even in class through for example 'whatsapp'" (ST Ahmet).*
- *"I don't think the private life of the school is violated. I have never heard something like that" (PT İlke).*

The class teachers working in the state primary schools thought that the private life of the school was most often violated by teachers and parents, followed by the administrators, the students, and finally, the canteen owners. In contrast, teachers at the private school believed that the private life of the school was violated most often by parents, followed by teachers, administrators, and finally students, respectively. The examples to the responses of the teachers:

- *"Teachers gossip the dialogues of other teachers to school administration and other teachers" (ST Ayse).*
- *"Parents share everything with each other. They write everything from especially 'whatsapp' to each other" (PT Hasan).*

In the state primary school, the teachers stated that what was experienced at school was transferred from teachers to her teachers, from parents to other parents, from parents to neighbors, from parents to teachers, from parents to administrators, from administrators to teachers, from students to other students, and from students to parents, respectively. In private primary schools, it was determined that school experiences were transferred from parents to other parents, from teacher to teacher, from parents to administrators, from parents to teachers, and from teachers to administrators and from administrators to teachers, respectively.

Findings Related to the Situations Regarded As the Private Life of the Class

The participants were asked to identify what situations fall within the scope of the class's private life, and their responses were divided into three sub-categories: "interpersonal relationships", "group activities", and "the problems experienced". The distribution of the state primary and private primary school teachers' responses are given in Table 3.

Table 3
Distribution of the Private Life of the Class

Categories	Sub-categories	State		Private		Total	
		f	%	f	%	f	%
Inter-personal relationships	Teacher-student relationships	12	20	4	14	16	18
	Teacher-parent relationships	9	16	8	28	17	20
	Student-student relationships	8	14	3	10	11	13
Total		29	51	15	52	44	51
Group activities	Sharing activities in the course	13	22	6	21	19	22
	Student status in the course	1	2	1	3	2	2
	Teacher's course style/ methods etc.	2	3	2	7	4	4
Total		16	27	9	31	25	28
Problems	Student-family problems	9	16	2	7	11	13
	Private problems of students	4	7	3	10	7	8
Total		13	23	5	17	18	21
General Total		58	100	29	100	87	100

According to Table 3, the vast majority of participants thought that interpersonal relationships at school were within the scope of the class's private life, and 51% were reported for this sub-category. Participants then argued that group activities in the class and the problems experienced in the class were within the scope of the private life of the class. When the distribution of responses in terms of state and private primary schools related to the situations regarded as the private life of the class were analyzed and compared between state and private schools, we found that 51% of responses from the participants in state primary school were about interpersonal relations, 27% were about group activities, and 23% were about problems experienced in class whereas, 52% of responses from the private primary school were about interpersonal relationships, 31% were about group activities, and 17% were about problems experienced in class. The examples to the responses of the teachers:

- *"Events experienced in the class are privacy of the class, but it is not possible to keep them secret. The private school parents make tactics to get words about what happened in the class when the child comes home in the evening" (PT Nejat).*

- *"The jokes we make in the class, tensions, attitudes and behaviors of the teacher during the lesson, the emotions of a distressed student, the attitudes of the teachers and the students to the situation, our sharing" (ST Elif).*

Findings Related to the Situations Regarded As the Violation of the Private Life of the Class

While 86% of teachers working at state primary schools thought that the class's private life was violated, 14% believed that it was not violated. All the private primary school teachers thought that the class's private life was violated. The examples of the responses of teachers:

- *"The administration of the school can share with other teachers, and is spread afterwards. The vice principal told me that X teacher's class was infested with lice" (ST Mehmet).*
- *"Yes, I think that parents violate. They share everything on 'whatsapp'…" (PT Murat)*

The class teachers working in the state primary schools thought that the private life of the class was violated most often by parents and students, followed by teachers, and least often by administrators and neighbors. Teachers at the private primary schools believed that the class's private life was violated most often by parents followed by students, teachers, and administrators, respectively. The examples of the responses of teachers:

- *"The fact that parents bring their pupils breakfast as they hadn't had at home, and that they ask the situation of the student in the middle of the lesson" (ST Ahmet).*
- *"I've heard that teachers smoke in teachers' room, drink tea and talk on the phone in the lesson, and that the class was infested with lice etc." (ST Mehmet)*

In the state primary school, the teachers stated that what was experienced in the class was transferred from students to their parents, from parents to other parents, teachers among themselves and to other teachers, from students to teachers, from administrators to teachers, from parents to teachers, from teachers to administrators, from administrators to other administrators, and from parents to administrators. In private primary schools, it was determined that information about private life was transferred from parents to other parents, from students to their parents, from parents to teachers, and from teachers to parents.

Findings Related to the Situations Regarded As the Private Life of the Teacher

The class teachers working at state and private primary schools were asked to identify situations that fall within the scope of the teacher's private life and their responses were divided into three sub-categories: "physical condition/equipment", "the behaviors and relationships of teachers", and "the problems experienced". The distribution of the state primary and private primary school teachers' responses are given in Table 4.

Table 4
The distribution of the teacher's views of private life

Categories	Sub-categories	State		Private		Total	
		f	%	f	%	f	%
The physical condition of the teacher's equipment	Teacher's class	5	12	5	22	10	16
	Teacher's cupboard	-	-	3	13	3	5
	Teacher's bag	-	-	2	9	2	3
	Teacher's drawer	-	-	2	9	2	3
	Teacher's table	-	-	6	27	6	10
	Teacher's bookcase	-	-	1	5	1	2
	Teacher's computer	-	-	1	5	1	2
Total		5	12	20	90	25	41
Teacher's behaviors/ relations	Teachers attitudes	9	23	-	-	9	15
	Teachers teaching style	4	10	1	5	5	8
	Relationship between student, parent, teacher and administration	6	15	1	5	7	11
Total		19	48	2	10	21	34
Problems/ special cases	Problems in school	7	17	-	-	7	11
	Teacher's marital status	4	10	-	-	4	6
	Teacher's financial status	2	5	-	-	2	3
	Teacher's personality	2	5	-	-	2	3
	Teacher's clothes	1	3	-	-	1	2
Total		16	40	-	-	16	25
General Total		40	100	22	100	62	100

According to Table 4, the vast majority of participants thought that the physical condition/equipment belonging to the teachers were within the scope of the teacher's private life. 21 participant responses were categorized as the behaviors and relationships of teachers, and 16 responses were categorized as relating to the problems experienced/special occasions. By analyzing and comparing the distribution of responses between state and private primary schools, we found that 12% of the responses from participants in state primary schools were about the physical condition/equipment belonging to the teachers, 48% were about the behaviors and relationships of teachers, and 40% were about problems experienced/special occasions. Among the private primary school teachers, 90% of the responses were about physical condition/equipment belonging to the teachers and 10% were about the behaviors and relationships of teachers. The examples to the responses of the teachers:

- *"My attitudes towards the events experienced at school and in the class, my style of teaching, my sharing in terms of the relationships with the students, parents and teachers" (ST Ayse).*

- *"My private life is my students in my class. I fictionalize my day, hours and even my life at home according to my students" (PT Ali).*

Findings Related to the Situations Regarded As the Violation of the Private Life of the Teacher

While 64% of the participants thought that teachers private lives were violated, 36% believed they were not. While 38% of state primary school teachers thought that teachers private lives were violated, 62% believed that they were not. In contrast, all the private primary school teachers thought that the teacher's private life was violated. The examples to the responses of teachers:

- *"A topic discussed in teachers' room with my colleagues can be conveyed to administration in a different way. I've stated that day watch was not properly organized; and then I've felt that our administrators have heard it later" (ST Selda).*
- *"As a teacher, I don't feel like my private life has been violated." (ST Erkan).*

The state primary school teachers thought that the private lives of teachers were violated by other teachers most often, followed by parents and students, and finally, administrators. Private primary school teachers believed that the teachers' private lives were violated most often by parents, administrators, teachers, and students, respectively. The examples of the responses of the teacher's:

- *"We have teachers who think that they are perfect, and that they have the permission to criticize others. Teachers grouped with each other are transferring to each other" (ST Asli).*
- They feel pleasure to convey home when you get angry with a pupil or others, or other occasions" (PT Sema).

In the state primary school, it was stated that information about private life was transferred from students to their parents; teachers among themselves and to other teachers; from administrators to teachers, from parents to other parents; and from students to other students, parents and teachers, respectively. In private primary schools, it was determined that the information about the teachers' private life was transferred from students to parents and from parents to other parents; from teachers among themselves and to other teachers and from teachers to administrators, respectively.

Discussion and Conclusion

Just as people have private lives, the school, class, and individual teachers also have private lives. The private life of the school is a situation that is peculiar to the school, belongs to the school, and must be kept confidential. The private life of the class is a field that contains many things that occur within the class, ranging from student and teacher relations to classroom climate and relations with the parents. The individual private life of the teacher encompasses all that concerns only the teacher, for example, a teacher's choice of clothes, table, closet, teaching methods, and techniques etc. The private life of the school, the class, and the teacher must be protected, and private information about these areas should not be shared with others. However, in places where there are other people involved, a violation of private life is sometimes inevitable.

Although Little (1990) revealed that relationships and communication among teachers did not produce results that would affect teachers' private lives, our study shows that in both private and state primary schools, the private life of the school and class is primarily composed of interpersonal relationships (teacher-student, teacher-parent, teacher-teacher etc.). Even when it came to the private life of the class, nearly all the teachers in state primary school and all the teachers in private primary schools claimed that the private life of the class was violated.

While the teachers in the state primary school viewed the teacher's group activities and interpersonal relationships as within the private life of the teacher, the teachers working in private primary schools included everything that falls within the context of the physical condition and equipment of the class, such as the teacher's closet, suitcase, drawer in the teacher's private life. While more than half of the teachers working in the state primary school thought that the private life of the teacher was not violated, all the teachers working in private primary schools thought that the private life of the teacher was violated. In state primary schools, the private life of the school and the teacher was usually violated by other teachers; whereas the private life of the class was violated by the parents and students. In private primary schools, parents usually violated the private life of both the school and the class and the teacher. Private primary school teachers expressed that they shared all kinds of information in 'whatsapp' groups they created, that nothing was kept secret, and that everything experienced at school and in the classroom, including those falling within the private life of the parents or anything about the teacher, was transmitted to one another in this way. Spencer & Hoffman (2001) reported that the most important factor violating the privacy of schools is security cameras, but such a conclusion was not reflected in the teachers' responses in this study. This can be interpreted by the fact that the schools included in this research did not use security cameras and even if they had, studies indicate they would not cause any disturbing problems in terms of violating private life. Although cameras can be seen to violate a school's private life, they are very important elements in the school security (Kiral & Kizilkaya, 2016; Kiral & Yildiz, 2016).

McLaughlin (1992) interviewed teachers in 16 different public and private elementary schools and found that teachers who were making an effort to keep their private lives secret were more prescriptive and fixed-minded. Horn (2008) also reported that teachers' private areas have categories, and that the things they do and speak in this area and their behaviors are private. In particular, the private primary school teachers in this study expressed opinions consistent with the results of Horn's research. In parallel with the results of this research, in interviews with ten branch leaders, Kauffman and Lanen (2014) also found that teachers expressed opinions asking for an increase in the teachers' limits of personal confidentiality at schools and a desire for their relationships to be more distant.

Within the literature over the past years, research has primarily examined the result of increase social media (facebook, Instagram etc.) on the violation of the private life of the students (Acilar & Mersin, 2015; Celik, 2017; Dogan & Karakas, 2016; Kiral, 2016; Kulcu & Henkoglu, 2014; Oz, 2014). But there are no studies directly related to ours. The study is different from others. In this study where the private life of the school, the class and the teacher and their violation was investigated, all of the private primary school teachers and a majority of state primary school teachers were in the view of the fact that private life of the class and the teacher was violated. When the results related to the violation of the school's private life were examined, most of both state and private primary school teachers were in the view of a violation. As a result of this research, we can assume that similar results would exist in other schools. A situation that can be generalized by most of the participants was the fact that the private life of the school, the class and the teacher was violated. It would be beneficial for teachers, administrators, students, and parents to be informed about both the freedom of privacy in general and the scope and in particular, the limits of the private life of the school, the class. Seminars should be organized to ensure that parents of private schools are especially educated about the private life of the school, the class, and the teacher. It is necessary that continuous warnings should be made so that parents comply with scheduled times for parental interviews, and that parents who come to meet the teachers should wait for them in specially designated areas for parents. For this, lounges should be prepared, parents should be informed of interview hours should be informed to parents from on the school websites as well as written communication, via short messages and in written form, and the school guidance service should be in constant contact with the parents whenever necessary. In order to generalize the conclusions of this research, which was conducted using a qualitative approach, and to be able to make comparisons, further research about the privacy of private life can be conducted via quantitative data collection tools in other educational institutions.

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Sınıf Öğretmenlerinin Özel Hayatın Gizliliği ve İhlaline İlişkin Görüşleri

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Özet

Problem Durumu: İnsanın hayat alanı "ortak alan, özel alan ve gizli alan" olarak üçe ayrılmaktadır. Ortak alan, herkesin görüp bildiği, günlük işlerin gerçekleştiği alandır. Özel alan; kişilerin arkadaşları ve yakın akrabaları ile paylaştığı yer ve zamanı ifade etmektedir. Gizli alan ise hiç kimsenin bilmesi istenmeyen ve gerekmeyen gizli olaylar, bilgiler ve belgelerden oluşmaktadır (Bates, 1964, 430; Aydın, 1998, 187). Özel hayatın gizliliği özgürlüğü ise bireylerin özel hayatına ve aile hayatına dokunulmaması ve saygı gösterilmesini sağlayan en temel haktır (Aras, 2010, 30).

Türkiye'de bu konu ile ilgili en temel yasal dayanağın 1982 Anayasasının 20 ila 27. maddeleri ile, 32. ve 35. maddeleri olduğu, bu maddelerin doğrudan ve dolaylı olarak özel hayatın gizliliğini ilgilendirdiği görülmektedir. 5237 sayılı Türk Ceza Kanununun 132 ila 136. maddelerinde bu suçları işleyenlerin belirli cezalar alacakları yazmaktadır. Türk Medeni Kanunu'nun 23 ila 25. maddeleri de "Kişiliğin Korunması" başlığı altında olup; bireylerin kişilik haklarını korumaya almaktadır. Bireylerin özel hayatlarının gizliliği, uluslararası hukukta da korunma altına alınmıştır. İnsan Hakları Evrensel Bildirgesi'nin 12. maddesinde kimsenin özel hayatına, ailesine, konutuna ya da haberleşmesine keyfi olarak karışılamayacağı, şeref ve adına saldırılamayacağı belirtilmekte olup; karışma ve saldırılara karşı bireyin yasa tarafından korunmaya hakkı olduğu ifade edilmektedir. Avrupa İnsan Hakları Sözleşmesi'nin 8. maddesi özel hayatın ve aile hayatının korunması ile ilgilidir. Çocuk Haklarına Dair Sözleşme'nin de 8. maddesinde bu sözleşmeye taraf devletlerin çocuğun kimliğine; tabiiyetine, ismine ve aile bağları da dâhil, koruma hakkına saygı göstermeyi ve bu konuda yasa dışı müdahalelerde bulunmamayı taahhüt etmektedir. 16. maddede hiçbir çocuğun özel yaşantısına, aile, konut ve iletişimine keyfi ya da haksız bir biçimde müdahale yapılamayacağı gibi, onur ve itibarına da haksız olarak saldırılamayacağı, çocuğun bu tür müdahale ve saldırılara karşı yasa tarafından korunmaya hakkı olduğu belirtilmektedir.

Tüm meslek gruplarında çalışan bireylerin iş yerinde sahip oldukları iş hayatları ve bunun yanında bireysel özel hayatları varken; öğretmenlerinse okulda, sınıfta ve bireysel olarak üç farklı hayatı bulunmaktadır. Öğretmenlerin sahip olduğu bu hayat alanlarının gizliliğinin korunmasında bir takım hak ve özgürlükleri vardır. Ancak, öğretmenlerin sahip oldukları bu hak ve özgürlükler bazen ihlal edilebilmektedir.

Yapılan bu araştırmanın problemi okulda, sınıfta ve bireysel olarak öğretmenlerin özel hayatlarının kapsamına giren durumlar ile özel hayatlarını ihlal eden durumların neler olduğudur.

Amaç: Bu araştırma, sınıf öğretmenlerinin okulda, sınıfta ve bireysel olarak özel hayatın gizliliğinin özgürlüğü kavramına ve bunun ihlaline ilişkin görüşlerini ortaya çıkarmak amacıyla yapılmıştır.

Yöntem: Bu araştırmada, derin ve ayrıntılı konularda çalışmaya imkân vermesi, çok az sayıda kişi ve durum üzerinde çalışmalar yapılması, daha fazla ve detaylı bilgi elde edilmesini sağlaması nedeniyle araştırmada nitel araştırma yaklaşımı benimsenmiştir (Patton, 2014). Yapılan çalışma durum çalışmasıdır. Durum çalışması, gerçek yaşamda var olan, güncel ortamın içindeki özel bir durumun araştırılmasını ve betimlenmesini gerektirmektedir (Creswell, 2016). Durum çalışmasında bir veya birkaç durumu kendi sınırları içinde bütüncül olarak analiz etmek amaçlanmaktadır. Var olan durumlar tek olarak ve/veya tanımlanarak yorumlanmaktadır (Yıldırım ve Şimşek, 2006; Merriam, 2013). Bu çalışmada, devlet ve özel okulda çalışan sınıf öğretmenlerinin okulun, sınıfın ve öğretmenlerin özel hayatı ile özel hayatının ihlaline ilişkin görüşleri betimlenmeye çalışıldığı için durum çalışması kullanılmıştır (Yıldırım ve Şimşek, 2006; Patton, 2014; Creswell, 2016). Çalışma grubu seçilirken, amaçlı örnekleme yöntemi kullanılmıştır. Katılımcıların amaçlı olarak tercih edilme nedeni araştırmaya katkı getireceği düşüncesindendir (Monette, Sullivan ve Dejong, 1990). Amaçlı olarak seçilen örneklemin evreni temsil edeceği kabul edilmektedir (Tavşancıl ve Aslan, 2001). Araştırmada 2015-2016 akademik yılında Aydın'da bir devlet ilkokulundan 21 ve iki özel ilkokuldan 15 olmak üzere amaçlı rastgele örnekleme yöntemi ile toplam üç ilkokuldan 36 sınıf öğretmeni ile görüşme yapılmıştır. Araştırmada geçerliği sağlamak için "analizci üçgenlemesi, katılımcı doğrulaması ve doğrudan alıntılar" yapılmıştır. Analizlerin güvenilirliğini hesaplamak için Miles ve Huberman (1994) formülünden yararlanılmıştır. Bu çalışmada araştırmacılar arası güvenirlik %95 olarak hesaplanmıştır. Veriler içerik analizi yöntemi ile analiz edilmiştir.

Bulgular: Okulun özel hayatı sayılan durumlar üç kategoride incelenmiştir. Bunlar: kişilerarası ilişkiler, grup faaliyetleri ve yaşanan sorunlardır. Hem devlet ilkokulunda hem de özel ilkokulda görevli öğretmenler en çok kişilerarası ilişkiler kategorisinin okulun özel hayatına girdiğini düşünmektedirler. Devlet ilkokulunda görevli sınıf öğretmenlerinin %52'si okulun özel hayatının ihlal edildiğini düşünürken; özel ilkokul sınıf öğretmenlerinin %67'si okulun özel hayatının ihlal edildiğini düşünmektedir.

Sınıfın özel hayatı sayılan durumlar kişilerarası ilişkiler, grup faaliyetleri ve yaşanan sorunlar olarak üç kategoride incelenmiştir. Araştırmaya katılan devlet ve özel ilkokul öğretmenlerinin büyük bir çoğunluğu kişilerarası ilişkiler kategorisinin sınıfın özel hayatı kapsamına girdiğini düşünmektedirler. Devlet ilkokulunda görevli sınıf öğretmenlerinin %86'sı sınıfın özel hayatının ihlal edildiğini düşünürken; özel ilkokul sınıf öğretmenlerinin tümü sınıfın özel hayatının ihlal edildiğini düşünmektedirler.

Öğretmenin özel hayatı sayılan durumlar öğretmenin eşyalarının fiziki durumu/donanım, öğretmenin davranışları/ilişkileri ve yaşanan sorunlar/durumlar olarak üç kategoride incelenmiştir. Devlet ilkokulunda çalışan öğretmenler en çok öğretmenin davranışları/ilişkileri kategorisinin öğretmenin özel hayatı kapsamında olduğunu düşünürlerken; özel ilkokulda görevli öğretmenlerse öğretmenin eşyalarının fiziki durumu/donanımın öğretmenin özel hayatı olduğunu düşünmektedirler. Devlet ilkokullarında çalışan öğretmenlerin %38'i öğretmenin özel hayatının ihlal edildiği görüşünde iken; özel ilkokullarda çalışan sınıf öğretmenlerinin tamamı öğretmenin özel hayatının ihlal edildiğini düşünmektedirler.

Sonuç ve Öneriler: Araştırmanın sonuçlarına göre okulun, sınıfın ve öğretmenin özel hayatının ihlal edildiği sonucuna varılmıştır. Devlet ilkokulunda okulun özel hayatının ihlalini velilerin ve öğretmenlerin; sınıfın özel hayatının ihlalini velilerin ve öğrencilerin; öğretmenin özel hayatını ise diğer öğretmenlerin ihlal ettiği sonucuna ulaşılırken; özel ilkokullarda ise okulun, sınıfın ve öğretmenin özel hayatını ihlal edenin genellikle veliler olduğu sonucuna ulaşılmıştır. Araştırmadan elde edilen sonuçlar doğrultusunda öğretmenlerin, yöneticilerin, öğrencilerin ve velilerin özel hayatın gizliliği özgürlüğü, okulun, sınıfın ve öğretmenin özel hayatının kapsamı ve sınırlılıkları konusunda bilgilendirilmesinin yararlı olacağı, nitel yaklaşımın benimsendiği bu çalışmanın nicel araştırma yöntemleri ile farklı eğitim kurumlarında da yapılabileceği önerilebilir.

Anahtar Kelimeler: Özel hayat, özel hayatın ihlali, özel okul, devlet okulu.

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Using Group Work as a Remedy for EFL Teacher Candidates' Listening Anxiety

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ABSTRACT

Problem Statement: The ubiquity of anxious teacher candidates (TCs) for English as a foreign language (EFL) in listening classes and their needs for understanding aural input call for deep concern by foreign-language (FL) teacher educators.
Purpose of Study: As a teacher educator, in my undergraduate-level listening classes, I have frequently observed anxious TCs who are training to be language teachers. The study aligns with the humanistic techniques of work as a remedy for anxious TCs.
Methods: The convergent parallel mixed method used in the study aimed to trace the impact of group-work design on a group of TCs' FL listening anxiety with the help of two scales, the Foreign Language Listening Anxiety Scale (FLLAS) and the Foreign Language Classroom Anxiety Scale (FLCAS) and with pre- and post-instruction interviews conducted at the beginning and end of an academic semester.
Findings and Results: According to the analysis of the quantitative data, the use of group activities in a listening class was not observed to contribute to the reduction of either learning- or listening-anxiety levels significantly, but TCs' views collected through interviews indicated a decrease in their stated causes and effects of FLLA in the final interviews. In regard to the causes of listening anxiety, the TCs' past FL education, their failure to understand the spoken form of some words, their lack of concentration, and number of unknown words were the most frequently stated causes. In regard to the effects of foreign-language listening anxiety, the participating TCs frequently referred to their poor listening comprehension, fear of speaking, and fear of listening. For coping with their listening anxiety, all of the participants emphasized that the only remedy was to improve their listening.
Conclusions and Recommendations: Overcoming listening anxiety requires long periods of practice with a FL. Fortunately, learners today have numerous opportunities to access aural and visual contexts.

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Introduction

Researchers have experimented with various instruments in order to measure foreign-language (FL) learning anxiety in a valid and reliable manner. FL learning anxiety is believed to manifest itself through such linguistic factors as "distortions of sounds, inability to reproduce the intonation and rhythm of the language, 'freezing up' when called on to perform, and forgetting words or phrases just learned or simply refusing to speak and remaining silent" (Young, 1991, p. 430). For listening in a FL, the picture is no brighter. Unarguably, listening is a complex skill, and students' complaints about the difficulties of listening stem mostly from their feelings of inadequacy or anxiety (Dunkel, 1991). As Horwitz, Horwitz, and Cope (1986) pointed out, FL learning anxiety is most closely associated with listening and speaking anxiety.

Foreign Language Listening Anxiety Research

Although developing effective listening skills is essential for FL learners' successful acts of communication, listening-anxiety research is scant. In an early study, Vogely (1998) provided an analysis presenting both the sources of and the solutions for reducing listening anxiety in a university-level Spanish course. In another study, by collecting statistical data from the Foreign Language Classroom Anxiety Scale (FLCAS) and the Foreign Language Listening Anxiety Scale (FLLAS), Elkhafaifi (2005) indicated that FL learning anxiety and listening anxiety were separate but related phenomena and that both negatively correlated with student achievement in an Arabic-language course. Innami (2006) investigated the effects of test anxiety on listening-test performance. The results revealed that test anxiety did not influence listening-test performance in the English-language studies of Japanese university students. In addition, with the participation of university-level Japanese learners of English, Kimura (2008) found that one's university major but not one's gender had a statistically significant effect on the level of emotionality, a dimension of FLLAS.

Among the most recent studies, exploring the possible causal relationships between FL listening anxiety and language performance of 300 first-year English majors in China, Zhang (2013) emphasized that FL listening anxiety could affect FL listening performance, but FL listening performance did not affect FL listening anxiety. In another study, Tsai (2013) investigated the effects of listening-strategy training on a group of high school students in Taiwan, another English as a Foreign Language (EFL) context, and found that when the degree of listening anxiety was reduced, listening-strategy levels improved. Similarly, with a focus on the connection between FL listening anxiety and listening-strategy use, Liu (2016) found that anxiety and strategy use are two closely interrelated and important factors in language learning. Finally, in another FL listening-anxiety study, similar to the data collection tools used in the present study, Serraj and Noordin (2013) employed the FLLAS and the FLCAS to investigate the correlations among listening comprehension, FL learning anxiety, and FL listening anxiety of 210 Iranian EFL learners. The results revealed a negative correlation between FL listening anxiety and listening comprehension and also between FL learning anxiety and listening comprehension.

Finally, in one of the few studies with a focus on the relationship between anxiety and pair/small-group work, Andrade and Williams (2009) found no correlation between certain variables related to anxiety and pair/small-group work. Since some degree of anxiety was observed to affect 75% of all learners in their study, they aptly warned that "[t]o optimize learning for all learners, teachers should be aware of anxiety-provoking situations and take steps to minimize their negative impact" (p. 12).

Listening-Anxiety Research with Teachers/Teacher Candidates

Studies on anxiety and teachers are scant. In one of these, Ohata (2005) carried out in-depth interviews with seven experienced ESL/EFL teachers to trace their perspectives on their students' anxiety in L2 learning. As stressed in the study, although teachers' efforts to sensitize themselves to their students' anxiety might not produce the desired effect, these efforts can still "provide a basis for creating a comfortable, learning-conducive environment in the classroom" (p. 152). In a study closer to the scope of the present study in regard to its choice of participants and data-collection tools, Bekleyen (2009) investigated the listening anxiety of EFL TCs. With that purpose in mind, she used the adapted versions of the two questionnaires (the FLCAS and the FLLAS), open-ended interviews, and listening-test scores. The results indicated that the participants had high FLLA levels, and these stemmed mainly from their previous foreign-language education and their failure to recognize the spoken form of some words.

As a teacher educator, I have frequently observed highly anxious TCs who are training to become language teachers in my undergraduate-level listening classes. In their first year in an ELT program, most TCs find listening to be the most difficult skill to master (Bekleyen, 2007). After high school, candidates take the University Entrance Exam (UEE), which is highly competitive. The English-language component of the UEE contains multiple-choice items that test mainly reading comprehension, translation, and grammar, and it presents a language content at approximately the C1 level of proficiency. Candidates' listening, speaking, and writing skills are not tested at all in this exam. As a result, since many English-language teachers at high schools prepare their students for the UEE, they ignore these students' communicative needs in a foreign language (Bekleyen, 2007). The result or the backwash effect of this situation is the ubiquity of anxious TCs, especially in their first year in ELT programs. The prevalence of such TCs and the caveat that "[t]he impact of these (or any) corrective practices on foreign language anxiety … must, of course, be studied in the classroom" (Horwitz et al., 1986, p. 131) have urged me to trace the anxiety levels of my students in our educational setting.

Furthermore, in order to reduce the anxiety levels of my students, I decided to follow several of the humanistic techniques of Community Language Learning (CLL), in which learners' emotions and feelings as well as their linguistic knowledge are taken into account to reduce anxiety (Curran, 1972). In CLL, learners are grouped for all communicative acts. The aim of group work is to enable learners to learn through interacting with the community, as learning is not viewed as an individual accomplishment but as a collaborative achievement.

In line with the need to establish learner-centered and low-anxiety classroom environments, I decided to use group work as a remedy to support highly anxious TCs in my listening course. To observe the possible effects of group work on the anxiety levels of my students, I decided to gather and analyze their pre-instruction and post-instruction anxiety scores together with their views on their FLLA. Unlike previous FLLA studies, in which some quantitative data were collected at one point in time, in the present study, two sets of data (i.e., before instruction and after instruction) were collected both quantitatively and qualitatively in order to derive a more comprehensive picture of the phenomena than could be obtained from each data set alone. The research questions posed were as follows:

1. How does group work affect the FLLA level of these TCs?
2. How does group work affect the FLCA level of these TCs?
3. Does FLLA correlate with FLCA?
4. What changes are traced in the TCs' initial and final views regarding the possible causes and effects of their listening anxiety and their ways of coping with it?

Methods

Research Design

In essence, the purpose of this study was fourfold. First, I aimed to capture and compare the initial and final FLLA scores of a group of EFL TCs. Second, I made a similar comparison between the initial and final FLCA scores of the TCs. Third, although the learning anxiety of these TCs was not the main concern of the study, following prominent FLLA studies (Bekleyen, 2009; Elkhafaifi, 2005; Serraj & Noordin, 2013), I included these scores in order to be able to see a possible correlation between the two (i.e., FLLAS and FLCAS scores). Fourth, to achieve a more elaborate understanding of my students' listening anxiety, I decided to collect pre- and post-instruction qualitative data. Semi-structured interviews that I conducted aimed to probe the three components of listening anxiety: (1) causes of listening anxiety, (2) effects of listening anxiety, and (3) how these TCs cope with their listening anxiety. In summary, I used one of the procedures of mixed methods, a convergent parallel mixed method, in which "[o]ne database could help explain the other database, and one database could explore different types of questions than the other database" (Creswell, 2014, p. 15), to be able to better interpret the results obtained from two data types.

Participants

In order to be a language teacher in Turkey, TCs must have a university degree, and the core institutions educating teacher candidates are four-year programs within faculties of education (Akyel, 2012). The study group for this research consisted of 93 volunteers varying in age from 18 to 21 years among the first-year students (i.e., TCs) taking a compulsory listening course in an ELT program. The three-hour listening course is among the first-year compulsory courses that are mainly centered on the improvement of four skills. The researcher was their course instructor, and convenience sampling was used.

Instruction

The goal of any listening instruction is to prepare students to understand genuine speech so that they can communicate with others as members of the English-speaking community (Rost, 2002). Recent models view listening as an active and interpretive process in which listeners shape meanings through the act of interpreting rather than receiving them intact. Teachers also have enormous responsibilities, such as assisting learners in this process by providing support and by suggesting ways to ease comprehension difficulties. In line with the humanistic techniques of CLL, one of the ways of supporting learners is having them work in groups (Nation & Newton, 2009). Group work allows learners to negotiate with others and, at some points, provides help for "those who are getting left behind to keep up with what is going on" (p. 47).

Traditionally, in the CLL method, no syllabus or textbook is followed and language-learning activities basically incorporate translation, transcription, and recording. However, we used the *NorthStar High Intermediate Listening and Speaking* book to improve the TCs' listening skills as well as their speaking and pronunciation. All the comprehension exercises in this textbook aimed to provide practice with predicting, identifying main ideas and details, interpreting, and note taking. The TCs did all these exercises in groups of three or four, and the group members were self-selected. In other words, in order to create a sense of community among TCs, encourage interaction, and prioritize their feelings, with the role of a counselor and a paraphraser, I avoided pushing the TCs to do any of the listening tasks individually and instead asked them to share their ideas with group members first in a stress-free environment. In summary, following the main tenets of CLL, I acted as a counselor helping my clients understand their FL listening anxieties, and I blended their feelings and group-work design into my listening classes to provide a possible remedy for their anxieties (Curran, 1972).

Data Collection

In a convergent parallel mixed method research design, the two data types (i.e., quantitative and qualitative) should be collected at the same moment in time if the purpose is to delve into the interpretation or analysis of the research problem (Creswell, 2014). Following this, first, I administered two instruments, the FLCAS and FLLAS, at the beginning and end of the semester. Right after I administered the scales, I conducted interviews, again at the beginning and at the end of the semester. A total of 93 students (67 females and 26 males) voluntarily completed the scales, and 24 of them (16 females and 8 males) and 21 of them (14 females and 7 males) volunteered to take part in the initial and final interviews, respectively. The same TCs attended the initial and final interviews, but three of them failed to attend the final interviews. I shared several of their statements using pseudonyms. This study employed the following data-collection tools:

The Foreign Language Classroom Anxiety Scale (FLCAS). The FLCAS (Horwitz et al., 1986) consists of 33 items that are indicative of communication apprehension, test anxiety, and fear of negative evaluation in the foreign-language classroom. Responses range from "strongly agree" to "strongly disagree," and the scale has demonstrated internal reliability achieving an alpha coefficient of .93. The reliability and validity of this scale were computed by Aydın (1999) to ensure that it can be used in Turkish EFL settings, and one item was removed as a result of the reliability and validity studies. The internal consistency of this version was .91.

The Foreign Language Listening Anxiety Scale (FLLAS). This scale was developed by Kim (2005) and adapted for Turkish use by Bekleyen (2009). Since none of the items required modifications, no changes were made. The FLLAS showed high reliability with a score of .93 (Kim, 2005), and the internal consistency of its adapted version was .90.

Background questionnaire. I prepared a background questionnaire to gather demographic information about the participants' age, gender, the high school they graduated from, the number of years of their language study, and the listening instruction they received in high school and in the prep year at university.

Semi-structured interviews. Having perused the interview questions used in previous FL anxiety research (Andrade & Williams, 2009; Aydın, 1999; Bekleyen, 2009; von Wörde, 2003), I designed semi-structured interview questions to learn more about the participants' listening anxiety. Another colleague carried out the final interviews, and all interviews were recorded with the TCs' consent and were held in Turkish to facilitate the data-gathering process.

Data Analysis

For the analysis of the quantitative data, I analyzed the TCs' answers to the items in the FLLAS and FLCAS with SPSS Statistics; therefore, I obtained the mean, mode, median, frequencies, percentages, and standard deviations. To test the significance of the possible changes between the pre- and post-instruction scores of the FLLAS and the FLCAS, I used t-tests. In addition, to assess and interpret possible correlations between TCs' initial FLLAS and FLCAS scores and final FLLAS and FLCAS scores, I conducted Pearson product-moment correlations.

For the analysis of qualitative data, first I translated the interview data into English. Second, I carried out a qualitative content analysis that "involves the counting of instances of words, phrases, or grammatical structures that fall into specific categories" (Dörnyei, 2007, p. 245). Before I conducted the interviews, I explained what my purpose was with the interview questions and consulted the opinions of two experts in the field of language education concerning the validity of these questions. For inter-rater reliability (i.e., different interviewers giving similar ratings when observing the same performance), half of the content analysis (i.e., coding of the statements) was conducted by two scholars including the researcher, and an agreement of 92% was reached.

Results

Quantitative Results

First of all, I analyzed the TCs' initial and final FLLA (i.e., pre-instruction and post-instruction) scores statistically. As shown in Table 1 below, no significant difference was found at the level of .05 between the TCs' initial and final listening-anxiety levels, which means that the intervention provided (i.e., TCs' classroom listening experiences with a group-work design) did not significantly influence their listening-anxiety levels.

Table 1

Descriptives Using a t-test for Initial and Final FLLA and FLCA Scores

	Pre-instruction		Post-instruction			
	M	SD	M	SD	*t*	p
FLLA	105.15	14.22	105.96	15.00	-.65	.52
FLCA	92.31	19.58	89.97	23.42	1.50	.14

*p>.05

To trace the effects of group-work activities performed in listening classes on the FLCA levels of the TCs, I also analyzed the initial and final FLCA (i.e., pre-instruction and post-instruction) scores, as shown in Table 1 above. Again, no significant differences were observed at the level of .05, suggesting that TCs' learning-anxiety levels did not increase or decrease as a result of their exposure to classroom listening activities performed in groups.

Furthermore, I compared the TCs' initial FLLA and FLCA scores with Pearson product-moment correlation to assess the relationship between TCs' listening anxiety and learning anxiety at the beginning of the semester. As shown in Table 2 below, a significant positive correlation (r=0.65, p<0.01) was found, which means that the TCs with higher levels of FLLA tended to have higher levels of FLCA and vice versa. The shared variance (r^2) was .42. Similar to the correlation between the initial scores, a significant positive correlation (r=0.74, p<0.01) was obtained in the comparison of the final FLLA and FLCA levels of the TCs. The shared variance was .55. Another point to be made is that not only were these correlations significant but they were also strong, except for .48, which is moderate (Cohen, 1988).

Table 2

Pearson Product Correlation Matrix

Variables	1	2	3	4
1-IFLLA	-	.65**	.65**	.48**
2-FFLLA		-	.62**	.74**
3-IFLCA			-	.77**
4-FFLCA				-

**p<.01

Qualitative Results

Causes of FLLA: In regard to the causes of their listening anxiety, initially, all TCs stated that they felt anxious while listening in English and referred to the inadequacy of their previous education and their failure to understand the spoken form of some words as the two main causes.

Table 3

Initial Views on Causes of FLLA

No	Stated causes	*frequency*
1	Inadequacy of previous education	13
2	Failure to understand the spoken form of some words	10
3	Lack of concentration	4
4	Unknown words	4
5	Lack of topical knowledge	3
6	Noise	3
7	High rate of speed of the speech	2
8	When the speaker is a native speaker	2
9	Poor quality of the listening material	2

As reflected in Table 3 above, lack of concentration, the existence of some unknown words in the text, lack of topical knowledge, noise, the high rate of speed or poor quality of the listening material, and the native speakers' speech were the other less commonly stated causes of listening anxiety for these TCs. As noted earlier, EFL students at high schools in Turkey receive language instruction based on reading and grammar mainly in order to pass the UEE; therefore, TCs have great difficulty in skill classes other than reading in their first year of education at an English-medium program like ELT. Listening, especially, becomes a nightmare for such students because of the disparity between what they study in high school and what they are expected to achieve as TCs who aim to become language teachers. Some of these issues were stated as follows:

> Since I did not do any listening at high school and did tests only to pass the UEE, I feel myself highly incompetent in listening and writing classes. (Rana)

> I am planning to improve my listening this year as it is the first time I take a real listening class. (Beyaz)

Table 4

Final Views on Causes of FLLA

No	Stated causes	*frequency*
1	Fear of missing some parts in listening texts	7
2	Losing face in front of others	3
3	Inadequacy of previous education	3
4	High rate of speed of the speech	3
5	Fear of making mistakes	2
6	Unknown words	2
7	Noise	2
8	Lack of topical knowledge	1

However, in their final views, I realized that some of the TCs stated how comfortable they started to gradually feel in their listening classes. While eight of them still felt anxious from time to time about listening in English, nine TCs said that they had been anxious at the beginning but were feeling much more comfortable, and four of them found themselves neither anxious nor comfortable while listening. In addition, the final stated causes of FLLA were fewer than the initial ones (see Table 4). After their one-semester experience in a university-level listening class, they mostly referred to their fears of missing some parts in listening texts, as exemplified in the following interview excerpt:

> If I miss some words, I feel stressed and sometimes cannot concentrate on the coming parts. (Esin)

Effects of FLLA: In regard to the effects of listening anxiety, I observed a difference between the TCs' initial and final statements. Initially, poor listening comprehension was commonly stated as the main effect (see Table 5). Interestingly, while poor listening comprehension was mentioned as an effect of FL listening anxiety, a parallel concept, failure to understand the spoken form of some words, emerged as a cause of FLLA in initial interviews (see Table 3).

Table 5

Initial Views on Effects of FLLA

No	Stated effects	*frequency*
1	Poor listening comprehension	16
2	Fear of speaking	5
3	Fear of listening	4
4	Lack of concentration	4
5	Paying more attention	3

The TCs believed that their listening anxiety caused comprehension problems, fear of speaking, fear of listening, lack of concentration, and, as a positive effect, paying closer attention to catching the important words. Some of their statements were similar to the following one:

> Since I do not feel comfortable while listening in English, this affects my listening. (R: How?) I am afraid of doing listening. (Behiye)

Similar to the decrease in the number of stated causes of FLLA, at the end of the semester, the TCs stated fewer effects, and these were focused mainly on a decrease in their participation in classroom activities and paying more attention so as not to miss words (see Table 6). Although some of the TCs stated that they still felt anxious and sometimes missed some words while listening, more than half stated that they felt confident, as they were better able to understand the whole text.

Table 6

Final Views on Effects of FLLA

No	Stated effects	*frequency*
1	Decrease in participation into activities in class	7
2	Paying more attention so as not to miss words	5
3	Loss of concentration	3
4	Feeling uncomfortable in listening classes	3
5	Decrease in motivation	1

In summary, when asked about the possible effects of their feelings of anxiety in listening at the end of the semester, while more than half of the TCs (13 participants) stated that they did not suffer from listening anxiety any longer, eight TCs stated that they still had listening anxiety from time to time, and that it affected their participation in class activities, their concentration, and their motivation, and urged them to pay closer attention so as not to miss words. Some of the statements were similar to the following one:

> (R: How did you feel in listening classes this semester?) I was nervous at the beginning, but my anxiety decreased in time and I feel OK now. (Hasan)

Ways of coping with FLLA: When asked about their ways of coping with their listening anxiety at the beginning of the semester, all of the participants emphasized that the only way to cope was to improve their listening. As identified in Table 7 below, while 16 participating TCs suggested strategies such as watching films and serials, eight believed in putting more effort into listening. Listening to songs by paying attention to lyrics, practicing listening on several websites, and speaking with foreign friends were the other ways stated by the participating TCs.

Table 7

Initial Views on Ways of Coping with FLLA

No	Stated ways	*frequency*
1	Watching films/serials (with or without subtitles)	16
2	Putting more effort into listening	8
3	Listening to songs by paying attention to lyrics	5
4	Practicing listening on several websites	5
5	Speaking with foreign friends	3

Some TCs stated that they forced themselves to understand the scripts without subtitles. Similarly, while listening to songs, either they followed the lyrics at the same time or checked their comprehension right after listening to the song. Some also referred to online listening websites, as the following statements illustrate:

> I listen to music in English a lot, and I write down the lyrics as much as I can, and then I check my notes with the original lyrics to see how I performed. (Sema)

> There are some websites to do online listening and I use them. (R: Such as what?) For instance, I do listening on ESL/EFL conversations of ESL/Listening English as a Second Language or on ESL Cyber Listening Lab. (Aliye)

The TCs' initial and final ways of coping with their listening anxiety did not vary to a great extent (see Table 7 and Table 8), but the participants added new strategies at the end of the semester, such as reading books (probably because many teachers in the program emphasize the importance of a large vocabulary, which can be achieved mainly through reading), taking notes, and trying to catch all the important words in a listening text (probably due to the task requirements in listening classes).

Table 8

Final Views on Ways of Dealing with FLLA

No	Stated ways	*frequency*
1	Watching films/serials (with or without subtitles)	12
2	Listening to songs by paying attention to lyrics	10
3	Practicing listening on several websites	5
4	Putting more effort into listening	5
5	Reading books	5
6	Speaking with foreign friends	4
7	Taking notes	2
8	Paying closer attention to catch all the important words	2

In the final interviews, I also asked for TCs' views on working in groups in listening classes, and they stated unanimously that they found it highly beneficial, edifying, and fun. They believed that performing in groups completed each other's missing knowledge, helped them to learn from each other, enabled them to compare themselves with others, provided more talking time, built greater confidence in oneself, offered different opinions and corrective feedback when needed, and also created a less stressful talking environment compared to talking directly with the teacher. They also stated that, with the help of groups, they improved their existing friendships and had more fun compared to individual study. Several of their statements follow:

> I believe I have improved myself a lot in group activities. (R: Why do you think so?) Because it is a lot stress-free compared to talking to teacher in front of the whole class. (Merve)

> Working in groups was fun and more beneficial than individual study. (R: Why?) I was able to get different opinions from my friends and learn different things. (Nadire)
>
> If I could not understand a thing that day, my friends in the group helped me with it. I believe we completed each other's missing knowledge in groups. (Hilmi)

Discussions and Conclusion

First of all, in this study, a significant difference was not observed between the initial and final anxiety levels of this group of TCs. It can be claimed that the use of group activities in listening classes did not contribute to the reduction of their anxiety in a statistically significant way. Similarly, in the only study reviewed with a focus on the relationship between pair/small-group work and FL learning anxiety, Andrade and Williams (2009) found no correlation between the two. The lack of a contributing effect of group work might be interpreted in several ways. It is possible that the participating TCs in this study needed more exposure than they could receive in an academic year to listening activities in groups in order to be able to have lower levels of FLLA. Moreover, even if anxiety levels had been reduced significantly, this would not have been directly related to group-work design used because the participants were exposed to different teaching methods and techniques in other classes. Besides, positive correlations were found between TCs' initial and final levels of listening anxiety and learning anxiety. Corroborating previous FL listening-anxiety research (Bekleyen, 2009; Elkhafaifi, 2005; Serraj & Noordin, 2013), these findings provide further support for the existence of a clear relationship between FL listening anxiety and FL learning anxiety as related phenomena.

In the analysis of the qualitative data, however, there was a visible difference between the TCs' initial and final statements. Although the participating TCs' listening- and learning-anxiety scores did not differ significantly, a decrease was observed in their stated causes and effects of FLLA. Nearly half of the participating TCs stated that they were feeling much more comfortable about listening at the end of the semester.

In regard to the causes raised in initial interviews, the TCs referred mainly to their past FL education and their failure to understand the spoken form of words. These were among the commonly raised causes of listening anxiety by the TCs in Bekleyen's (2009) study. Thus, Bekleyen (2009) aptly pointed out that the competitive UEE, in which speaking and listening skills are totally ignored, creates a backwash effect and, as a result, learners find themselves incompetent in listening- and speaking-skills courses at English-medium programs like ELT at Turkish universities. Therefore, this one-shot exam needs to be redesigned to include all four skills in a balanced way. In their final views on causes, the TCs referred to their fears of missing some parts while listening and losing face because of misunderstandings. As for these causes, it can be concluded that they were parallel to the sources of listening-comprehension anxiety in Vogely's study (1998), some of which were the nature of speech (i.e., fast speech, poor enunciation, different dialects, etc.), level of difficulty, lack of practice in the past, and fear of failure. These and other related causes stem from the fact that anxiety reaction impedes learners' ability to perform successfully in language learning, as it presents an obstacle to be overcome (Horwitz et al., 1986).

In regard to the effects of listening anxiety, Horwitz et al. (1986) refer to subjective feelings, psycho-physiological symptoms, and behavioral responses and go on to say that anxious FL learners exhibit avoidance behavior. In a similar vein, in this study, decreased participation in class activities, fear of speaking, fear of listening, lack of concentration/motivation, and feeling uncomfortable in listening classes were among the stated effects raised in initial and final interviews. In addition, in Williams and Andrade's study (2008), the most commonly stated emotional reaction to FL anxiety was that either participating EFL learners' minds went blank or they lost their concentration.

In regard to coping with FLLA, the TCs suggested several strategies, such as watching films, listening to songs, practicing listening on websites, speaking with foreign friends, and putting more effort into listening. These corroborate students' suggestions for reducing listening-comprehension anxiety in Vogely's study (1998), which included note-taking, combining listening with other skills, and creating out-of-class time for listening. Finally, in regard to the impact of group-work design on anxiety, a word of caution is due. Although no significant differences were found between the TCs' initial and final levels of anxiety and no statistically significant contribution of being engaged in group activities in class was observed, the participants' views on studying in groups were highly positive in the final interviews.

The facts that cannot be brushed aside are that listening comprehension is at the heart of FL learning and, fortunately, learners today have numerous opportunities to access aural and visual contexts. Despite the immense impact of listening skills on communication, "L2 listening remains the least researched of all four language skills" (Vandergrift, 2007, p. 191). In other words, there is a "relative paucity of research into listening compared with the skills of speaking, reading or writing" (Graham, 2017, p. 107). FL learners encounter various kinds of listening difficulties and, unarguably, many show high levels of listening anxiety (Bekleyen, 2007; Elkhafaifi, 2005; Kimura, 2007; Serraj & Noordin, 2013; Zhang, 2013); therefore, a huge responsibility is placed on their teachers. "[L]istening environments in which individuals are sufficiently motivated and stimulated need to be designed within learning environments". Teacher educators should also follow an attentive approach to the design of such learning environments in their contexts in order to gain a better understanding of TCs' listening difficulties, which will result, in turn, in better pedagogy and learning. Finally, as Tsai (2013) and Liu (2016) remind us, listening anxiety in L2 and strategy use are highly connected; therefore, the use of active listening strategies should be mediated at all levels of language learning.

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Grup Çalışmasının İngilizce Öğretmen Adaylarının Dinleme Endişelerine Bir Çözüm Önerisi Olarak Kullanımı

Atıf:

Yayli, D. (2017). Using group work as a remedy for EFL teacher candidates' listening anxiety. *Eurasian Journal of Educational Research,* 71, 41-58, DOI: 10.14689/ejer.2017.71.3

Özet

Problem Durumu: Endişe seviyesi yüksek öğretmen adaylarının yaygınlığı ve onların dinlediğini anlamaya yönelik ihtiyaçları öğretmen eğitimcilerini çok daha duyarlı olmaya yönlendirmektedir.

Araştırmanın Amacı: Dinleme derslerimdeki endişe seviyesi yüksek öğretmen adaylarının sıklığı ve yabancı dildeki endişeyi düzeltici çalışmaların sınıf içinde uygulanması yönündeki öğütlere kulak vererek sınıfımdaki öğretmen adaylarının endişelerini izlemeye karar verdim. Endişeyi azaltmak için önerilen teknikler öğrenciyi duygu ve tepkileriyle bir bütün olarak ele alan Toplulukla Dil Öğrenimi (Community Language Learning) yönteminde sıklıkla karşımıza çıkar ve öğrencilerin bütün iletişimsel eylemleri grup içinde bir topluluk üyesi olarak yapması öğütlenir.

Öğrenme merkezli ve az endişeli bir sınıf yaratma amacıyla dinleme derslerimdeki bütün etkinlikleri öğretmen adaylarının gruplar halinde yapacağını duyurdum ve ders etkinliklerini bu yönde şekillendirdim. Dinleme derslerinin grupça yapılmasının endişe üzerindeki muhtemel etkisini araştırmak için ise dönemin başında ve sonunda iki ölçek yardımı ile öğretmen adaylarının endişe seviyelerini istatistiksel olarak belirledim. Bu nicel veriyi daha iyi yorumlamak ve sorunu daha net inceleyebilmek için ise hem dönem başında hem dönem sonunda gönüllü öğretmen adaylarından yarı yapılandırılmış yüz-yüze görüşmeler yoluyla nitel veri topladım.

Araştırmanın Yöntemi: Karma araştırma deseni kullanılan bu çalışmada bir grup İngilizceyi yabancı dil olarak öğretecek öğretmen adayının yabancı dilde dinleme endişelerini sağlıklı bir şekilde değerlendirmek için iki ölçek kullanılmıştır: (1) yabancı dilde dinleme endişesi ölçeği ve (2) yabancı dil öğrenme endişesi ölçeği. Çalışma deseninin ilk adımında bu iki ölçek dönem başında gönüllü olan birinci sınıf öğrencisi 93 öğretmen adayına (67 kız ve 26 erkek) uygulanmıştır. Daha sonra aynı ölçekler dönem sonunda tekrar aynı gruba uygulanarak olası etki ve değişimleri gözlemek hedeflenmiştir. Bu iki ölçek yardımıyla elde edilen verileri öncelikle SPSS istatistiklerini kullanarak analiz ettim. T-testler yardımıyla dönem başı ve sonundaki yabancı dilde dinleme ve öğrenme endişesi verilerini ayrı ayrı kıyaslayabildim. Ayrıca dönem başı ve sonundaki dinleme ve öğrenme endişesi verilerini Pearson-product-moment korelasyonları yaparak aralarındaki olası kolerasyonları gözlemeyi hedefledim.

Bu ölçeklerin yanı sıra öğretmen adaylarından 24 tanesi (16 kız ve 8 erkek) dönem başındaki ve bunların 21 tanesi (14 kız ve 7 erkek) ise dönem sonundaki görüşmelere katılmaya gönüllü olmuştur. İlgili alan-yazını dikkatli okumalarımdan sonra bir grup görüşme sorusu hazırladım ve bu sorular ile öğretmen adaylarının dinleme endişelerinin sebeplerini, bu endişenin kendi üzerlerinde gözledikleri etkilerini ve bununla baş etmek yöntemlerini paylaşmalarını hedefledim. Ayrıca dönem sonundaki görüşmelerde grup çalışmaları ile ilgili fikirlerini de topladım. Nitel verilerin analizini nitel içerik analizi yöntemi ile yaptım. Soruların geçerliğini artırmak için alanda uzman olan iki kişinin fikirlerini aldım ve sorularda önerilen değişiklikleri yaptım. Güvenirlik için ise nitel verinin yarısının analizini bir meslektaşımla ayrı ayrı yapıp kıyasladık. İçerik analizlerimizde %92 oranında benzerliğe eriştik.

Araştırmanın Bulguları: Dönem başı ve sonundaki yabancı dilde dinleme ve öğrenme endişesi verilerinin istatistiki incelemesi sonucunda grup çalışmasının katılımcı öğretmen adaylarının dinleme endişesi ve öğrenme endişesi seviyelerinde önemli bir fark yaratmadığını gözledim (Bkz. Tablo 1). Bunların yanı sıra dönem başı ve sonundaki dinleme ve öğrenme endişe puanları arasında kolerasyona baktığımda ise her ikisinde de istatiki açıdan önemli ve olumlu kolerasyon buldum (Bkz Tablo 2). Bunun yorumu ise dinleme endişesi yüksek olan öğretmen adaylarının öğrenme endişesinin de yüksek olduğudur.

Görüşmelerle elde edilen nitel veriler öğretmen adaylarının dinlemedeki endişelerinin esas sebepleri olarak geçmişteki (lisedeki özellikle) İngilizce dersleri, bazı kelimelerin telafuzunu tanımamaları, konsantrasyon eksiklikleri ve bilmedikleri kelimeler olarak gördüğü söylenebilir. Dinleme endişesinin etkileri olarak ise dinlediğini anlamayı başaramamayı, konuşma ve dinlemeden korkmalarını sıralamışlardır. Dinleme endişesiyle baş etme yolları ile ilgili ise en sıklıkla vurguladıkları dinlemelerini geliştirme gereksinimleridir.

Tartışma ve Sonuç: Dönem başı ve sonundaki dinleme endişesi ve öğrenme endişesi seviyelerinde grup çalışmasının önemli bir fark doğurmamasının birçok sebebi olabilir. Andrade ve Williams'ın (2009) çalışmasında da ikili ve grup çalışmalarının endişeyi azaltmada etkisi gözlenmemiştir. Muhtemel sebeplerden biri bir dönem boyunca yapılan ders içi çalışmaların katılımcıların endişe seviyelerine etki edecek uzunlukta ve yoğunlukta olmayışıdır. Dinleme ve öğrenme endişesi arasındaki önemli olumlu kolerasyonlar ise alan yazını desteklemektedir (Bekleyen, 2009; Elkhafaifi, 2005; Serraj ve Noordin, 2013), ve bu ikisinin çok yakından ilişkili olduğu ve beraber çalışılması gerektiği gerçeğini bize hatırlatır niteliktedir.

Nicel verilerde istatistiki bir fark gözlenmese de dönem sonunda yaptığım görüşmelerde öğrencilerin dinleme endişesinden daha az yakınır olduğunu fark ettim. Dinleme endişeleri ile ilgili dönem sonunda daha az sebep ve etki belirttiklerini ve kendilerini daha iyi hissettiklerini belirtmeliyim. Geçmiş eğitimlerini suçlamaları ve bazı kelimelerin telaffuzunu tanımamaları Bekleyen'in (2009) çalışmasına katılan benzer katılımcılar tarafından da dile getirilmiştir. Dinleme endişesinin etkileri öznel duygular, psikolojik, fizyolojik ve davranışsal tepkiler ve konsantrasyon kaybı olarak özetlenebilir. Buna benzer biçimde katılımcılar dinleme endişesinin etkileri olarak dinlediğini anlayamama, konuşma ve dinlemeden kaçınma ve konsantrasyon kaybına vurgu yapmışlardır.

Dinleme endişeleriyle baş etme yolları olarak katılımcı öğretmen adayları yabancı dilde film izlemeyi, şarkı dinlemeyi, websiteler yardımıyla dinleme çalışmayı, yabancı arkadaşlarla sohbet etmeyi ve dinleme dersinde daha fazla çaba göstermeyi sıralamışlardır. Bunlar alanyazındaki dinleme endişesini azaltma için öğrenci önerilerine paralellik göstermektedir. Sonuç olarak günümüzde ders dışı dinleme olanaklarına erişimin kolay olduğu teknoloji çağında dinlemeyi geliştirmek ve iletişimde daha başarılı olmak tüm öğretmen adaylarının hedefi olmalıdır.

Anahtar Sözcükler: Dinleme endişesi, Öğrenme endişesi, yabancı dil olarak İngilizce, Öğretmen adayları.

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The Relationship between Student Motivation and Class Engagement Levels *

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ABSTRACT

Purpose: Student engagement and interest in class are important conditions for active learning. For this they must be highly motivated. In other words, students who have high motivation make an effort to be engaged in class. Thus, knowing students' motivation level is important for active engagement in class. The aim of the present study is to study the relationship between class engagement and motivation levels among high school students.
Research Methods: We conducted our study using a relational research model. The study population comprised students attending high schools in the Ankara central district. Some 500 high school students selected by simple random sampling in Ankara province were administered the scale. Of the scales responded to, 322 were included in the study.
Findings: When students' learning orientations were examined, they were seen to have adopted mastery-oriented learning mostly, followed by performance-avoidance oriented and performance-approach oriented learning. When the results of the analysis were viewed according to variables, there is a significant difference in terms of gender, school type, and grade. The result of the present study suggests that mastery-oriented learning is a significant predictor of all dimensions of class engagement.
Implications for Research and Practice: The research has revealed that motivation level is related to class engagement, that vocational school students are affected more by motivational factors and that motivation level decreases as grade level increases. Also, mastery-oriented learning is a significant predictor of all dimensions of class engagement. There is yet more research needed on the gender variable. Along this line it may be suggested that use of intrinsic drives may increase success rates of vocational school students. Teachers and school administrators must use more motivational tools for vocational school students. Also, in-class activities may be planned to make high school seniors more engaged in class. It is believed that the future research must focus on the gender variable and investigate the relationship between the roles of teachers in class and student motivation levels.

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Introduction

Students must be actively engaged and show interest in classes to achieve effective learning in school. For this they must be highly motivated and interested in classes. What is expected from students during the teaching-learning process is to have intrinsic motivation and authentic engagement in classes. To achieve this, students' motivation levels must first be identified and activities must be planned to promote their active engagement in classes. Therefore, teachers must be aware of their students' motivation levels and employ motivation strategies to ensure their authentic engagement in classes.

Student engagement, a phenomenon that cannot be directly observed (Schlechty, 2002), is a process that facilitates learning (Turner & Patrick, 2004) and increases academic success (Marks, 2000). Engagement is an important predictor of success. The more students engage themselves in academic activities, the more they will be successful (Harboura, Lauren, Chris & Lindsay, 2015). The fact that students focus on assignments and subjects means that teachers have achieved their intended purpose and students are actively engaged in the learning process. An engaged student dedicates himself to the subject and performs with enthusiasm and care during the learning process because he attributes a value to it. Even when faced with challenges while doing the assignment, a student continues to study and finds a personal value and meaning in his assignment (Schlechty, 2002). Student engagement also means a student's enthusiasm to engage in the learning process gives him a need to learn, voluntary engagement in learning, and the will to succeed (Bomia, Beluzo, Demeester, Elander, Johnson, & Sheldon, 1997, p. 294).

Student engagement has three dimensions, which are emotional, behavioral, and cognitive (Fredricks, Blumenfeld, & Paris, 2004). A review of the literature shows that these dimensions are associated with different concepts. Table 1 below depicts the dimensions of student engagement and the concepts associated with them.

When Table 1 is examined, students who exhibit behavioral engagement are seen to have good school attendance, partake in school activities, and adhere to school rules. Students who exhibit emotional engagement feel that they belong with the school, show interest in classes and learning and develop positive or negative emotions toward academic and social factors in school. Students who exhibit cognitive engagement are enthusiastic about learning, do not avoid challenging tasks, are aware of their goals and accomplishments, and are able to control themselves. According to Schlechty (2002), a student attributes a value to what he does and shows different levels of engagement based on this value during the process. These levels are examined in five dimensions, namely, authentic engagement, ritual engagement, passive compliance, retreatism, and rebellion.

Table 1

Dimensions of Student Engagement

Dimensions	*Exemplified in the following elements*	*References*
Behavioral	• Participation • Presence • On task • Behavior • Compliance with rules • Effort, persistence, concentration, attention, rates of/quality of contribution • Involvement in school-related activities	Fredricks, Blumenfeld, & Paris (2004) Tyler & Boelter (2008)
Emotional	• Positive and negative reactions to teachers, classmates, • Academic activity and school • Student attitude (thoughts, feelings, outlook) • Perception of the value of learning • Interest and enjoyment • Happiness • Identification with school • Sense of belonging within a school	Fredricks, Blumenfeld, & Paris (2004) Tyler & Boelter (2008), Patrick et al. (2007), Johnson (2008), Hulleman et al. (2008), Walker & Greene (2009), Wentzel et al. (2004), Libbey (2004), Shin et al. (2007), Martin & Dowson (2009), Tsai et al. (2008), Shernoff & Schmidt (2008), Gottfried et al. (2001)
Cognitive	• Volition learning (learning by choice) • Investment and willingness to exert effort • Thoughtfulness (applying the processes of deep thinking) • Self-regulation • Goal setting • Use of meta-cognitive strategies • Preference for challenge • Resiliency and persistence • Mastery orientation • A sense of agency	Fredricks, Blumenfeld & Paris (2004), Tyler & Boelter (2008), Walker & Greene (2009), Bandura et al. (1996), Bacchini & Magliulo (2003), Martin & Dowson (2009), Zimmerman & Cleary (2006), Dembo & Eaton (2000), Nota et al. (2004), Schunk (2008), Caprara et al. (2008), Joseph (2006), Dinsmore et al. (2008), Long et al. (2007), Bong (2004), Anderson et al. (2005), Gottfried et al. (2001), Joselowsky (2007)

Reference: Gibbs and Poskitt, 2010.

In authentic engagement, students find a personal meaning in their activities, have a high level of interest and do not retreat in the face of a challenge. In ritual engagement, students do what is required, but do not attach a personal meaning to the assignment. In passive compliance, students expend minimum effort merely to avoid negative consequences and pay little attention to the details. In retreatism, students reject class activities, learning objectives, and tools and methods to achieve these objectives, and emotionally disengage themselves. In rebellion, students reject class activities and objectives and substitute them with their own new objectives and tools (Schlechty, 2001). Although class engagement level is addressed in five dimensions in the literature, a study conducted by Nayir (2014; 2015) on high school students suggested there are three dimensions of class engagement. Nayir (2014; 2015) examined class engagement level by adhering to the three dimensions in the literature, including "engagement at rebellion level", "authentic engagement", and "ritual engagement". The present study discusses class engagement level in three dimensions of authentic engagement, ritual engagement and rebellion using the scale developed by Nayir (2014). According to Ryan and Deci (2009), student engagement level is related to student motivation because motivation is an important prerequisite of student engagement in the learning process.

Defining motivation, being the determinant of individuals' behaviors, according to the self-determination theory, Ryan and Deci (2000) suggests that individuals feel the need to be autonomous, competent, and related. 'Autonomy' refers to an individual's choosing his own behaviors, 'competence' refers to his adapting to the environment, and 'relatedness' means his being close to others (Ryan & Deci, 2000). In other words, individuals perform actions to satisfy these three needs. Failure to satisfy them results in a lack of motivation. Therefore, an individual has different levels of motivation according to his level of need.

Motivation levels are examined under three headings: lack of motivation, extrinsic motivation, and intrinsic motivation. Lack of motivation is a condition in which no meaning is attributed to actions. In extrinsic motivation, individuals demonstrate a specific behavior due to an external influence, for reward expectations or to satisfy their own ego. In intrinsic motivation, on the other hand, individuals demonstrate a specific behavior due to enjoyment or interest in it, or to their instinct to succeed (Reeve, Deci, & Ryan, 2004). At this point, what motivational factors influence students, how these factors should be used, and how motivational level influences student engagement are important. The research suggests that students with intrinsic motivation demonstrate authentic engagement; those with extrinsic motivation demonstrate ritual engagement, passive compliance, and retreatism; and students lacking motivation demonstrate engagement at the rebellion level (Saeed & Zyngier, 2012). The research also suggests that students with intrinsic motivation have a high level of academic success and a low level of concern, and are engaged more than those with extrinsic motivation (Wigfield & Eccles, 2002; Wigfield & Waguer, 2005). In other words, the self-determination theory suggested by Ryan and Deci (2000) is related to the student class engagement level suggested by Schlechty (2002). Figure 1 below shows the relationship between student motivation and class engagement levels.

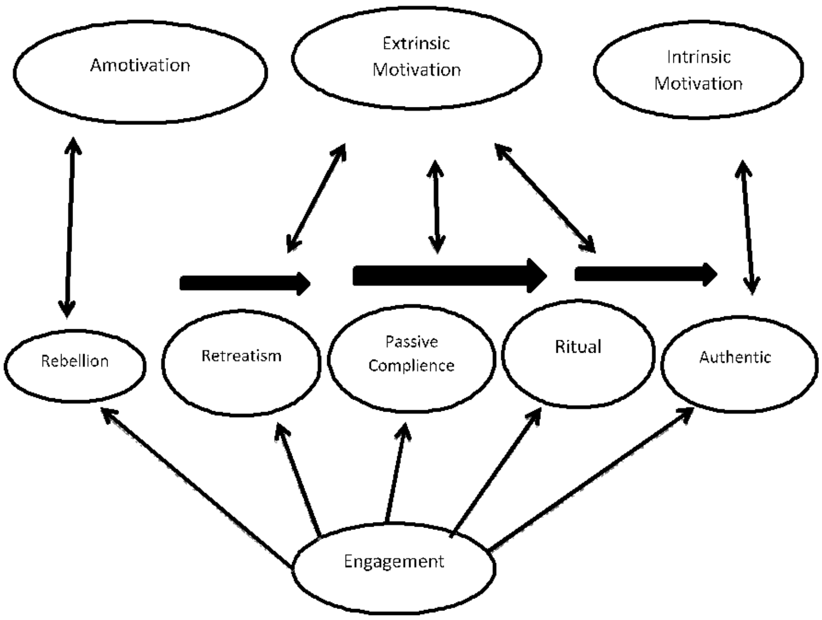

Figure 1. Relationship between motivation and student engagement

(Saeed & Zyngier, 2012, p. 256)

As seen in Figure 1, students' motivation levels are related to their class engagement levels. Students lacking motivation are engaged in classes at rebellion level; those with extrinsic motivation are engaged in classes at retreatism, passive compliance, and ritual engagement levels; and those with intrinsic motivation are engaged at an authentic engagement level. At this point, what is important is to promote intrinsic motivation among students.

According to the self-determination theory, individuals define a target and their degree of achievement of this target defines their motivation (Ryan & Deci, 2002). In other words, it may be suggested that students' intrinsic motivation is related to the meaning they attribute to learning. In other words, student motivation varies based on the learning objective. Pintrich and Schunk (1996) explain this situation with the goal-orientation theory. According to this theory, individuals are intrinsically motivated when they become success oriented. Midgley et al. (2000) studied goal orientation in three dimensions: mastery goal orientation, personal performance-approach goal orientation, and personal performance-avoidance goal orientation.

Learners with mastery goal orientation are individuals who are aware of their competences, focused on self-development, and willing to attain new knowledge and skills (Elliot & Dweck, 1998). Those with performance-approach orientation are individuals who compare themselves to others and want to show themselves more intelligent and successful than others. Those with performance-avoidance goal orientation are individuals who try to hide their failures, are afraid of making mistakes, and have low self-expectations (Elliot & McGregor, 2001). The research suggests that there is a significant positive relationship between mastery goal orientation and intrinsic motivation (Chan, Wong & Lo, 2012; Pintrich, 2000) and between performance-avoidance goal orientation and extrinsic motivation (Özkal, 2013). Performance-approach goal orientation, on the other hand, is related to both intrinsic and extrinsic motivation (Elliot & Murayama, 2008). Accordingly, students with intrinsic motivation tend to demonstrate authentic engagement, and those with extrinsic motivation tend to demonstrate ritual engagement. The present study aims to determine the relationship between students' engagement and motivation levels based on the self-determination theory suggested by Ryan and Deci (2000) and the student engagement levels suggested by Schelechty (2001). Knowing how to use intrinsic and extrinsic motivation tools and their relationship with student engagement in classes will help create a supportive learning environment for students (Marsh, 2000). The aim of the present study is to study the relationship between class engagement and motivation levels among high school students. For this purpose, answers to the following questions were sought:

1. What are students' motivation levels at the mastery goal orientation, performance-approach goal orientation, and performance-avoidance goal orientation dimensions?

2. Does student motivation vary based on gender, grade, and school type?

3. Is there a significant relationship between students' motivation level and class engagement level?

Method

Research Design

Conducted using a relational research model, the present study attempted to identify the relationship between motivation level and class engagement level among high school students.

Research Sample

The study population comprised students attending high schools in Ankara central district. Selected by simple random sampling in Ankara province, 500 high school students were administered the scale. Of the scales responded to, 322 were included in the study.

Research Instruments and Procedures

The Pattern Adaptive Learning Scale (PALS) developed by Midgley et al. (2000) was adapted to Turkish and used to determine students' motivation levels. This is a 5-point likert-type scale comprising 14 items. The scale comprises three factors: mastery goal orientation, performance-approach goal orientation and performance-avoidance goal orientation. During the adaptation of the scale, a traditional approach was observed. First, the authors' consent was obtained to translate the scale into

Turkish. Later, it was translated into Turkish and translated back into English. The translations were sent to three experts in the field who spoke both English and Turkish for review of their consistency. It was revised based on the opinions of the experts. The scale's language equivalence was examined by first sending its English version and then its Turkish version to nine bilingual persons. The correlation coefficient was found as .97 in the correlation analysis. This indicates that there is a strong relationship between the English and Turkish scales. In other words, the scale's language validity is high.

The scale was developed by Midgley et al. (2000) in three dimensions. Therefore, confirmatory factor analysis (CFA) (Brown, 2006) was conducted first to confirm the scale's three dimensions. As a result of the analysis, the fit indices are IFI= .95, RFI = .90, RMR = .056, GFI = .92, AGFI = .89, CFI = .95, NNFI = .92, NFI = .94, and RMSEA = .069, particularly chi square is $\chi 2$= 188.57; p= 0.00, sd=74, $\chi 2/sd$ = 2.55. The factor structure of the scale and its standardized values are provided in Figure 2 below.

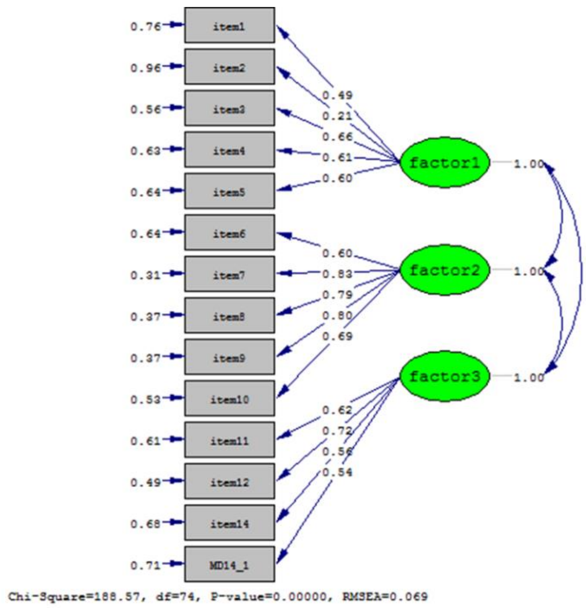

Figure 2. PALS' Factor Analysis Model (Standardized Values)

"Student Class Engagement Scale" (SCES) developed by the researcher as a three-factor scale was used to determine student engagement levels (Nayir, 2015). When the fit indices of the confirmatory factor analyses are examined, the values are seen to be within acceptable limits. Brown (2006, p. 87) and Kline (2005, p. 139) state that an RMR and RMSEA value is acceptable if it is between .05 and .08. Similarly, AGFI, GFI and CFI values greater than .80 and NFI, NNFI, IFI, and RFI values greater than .80 are deemed to be within acceptable limits. Harrington (2009, p. 54) also said that $\chi 2/sd$ must be smaller than approximately 4.

The Cronbach's alpha coefficient was calculated for the PALS's reliability. According to this, the Cronbach's alpha coefficient for the entire scale and each factor are, respectively, .81, .63, .86, and .70. The Cronbach's alpha coefficient for each factor in the original scale was calculated as .85, .89 and .74 (Midgley at al., 2000). For SCES, the Cronbach's alpha coefficient for the entire scale and each factor are, respectively, .76, .85, .80, and .81. The previous analysis results for the scale were, respectively, .78, .86, .83, and .81 (Nayir, 2015).

Data Analysis

Extreme value analysis was conducted first for data analysis, and no extreme value was found for the data set comprising 322 data points. An examination of the distribution normality for the data set showed that the distribution was normal. Arithmetic mean, t-test, ANOVA, correlation analysis, and regression analysis were used in data analysis. Regression analysis was conducted using the stepwise method.

Results

Arithmetic mean of the student views varied between 3.44 and 4.12 in mastery-oriented learning; between 2.58 and 3.58 in performance-approach oriented learning and between 3.15 and 3.70 in performance-avoidance oriented learning. Weighted arithmetic mean of the dimensions was calculated, respectively, as 3.84, 2.97 and 3.48.

T-test analysis, conducted to see whether or not student views varied based on gender and school type variables, are provided in Table 2 below.

Table 2

T-test Results for Views on Learning Level based on Gender and School Type Variables

Dimension	*Variables*	*Groups*	*N*	*M*	*SD*	*df*	*T*	*P*
Mastery goal oOrientations	Gender	Male	149	18.78	3.97	320	2.10	.038
		Female	173	19.66	3.46			
Performance-approach goal orientation	Gender	Male	149	14.43	5.61	320	1.31	.19
		Female	173	15.25	5.58			
Performance-avoidance goal orientation	Gender	Male	149	13.89	4.04	320	.61	.95
		Female	173	13.93	4.44			
Mastery goal orientations	School Type	Anatolian H.S.	96	18.13	4.30	320	-3.95	.000
		Vocational H.S.	226	19.73	3.34			
Performance-approach goal orientation	School Type	Anatolian H.S.	96	13.16	5.53	320	-3.65	.000
		Vocational H.S.	226	15.60	5.48			
Performance-avoidance goal orientation	School Type	Anatolian H.S.	96	12.33	4.53	320	-4.50	.000
		Vocational H.S.	226	14.59	3.95			

According to the analysis result in Table 2, student views vary in the mastery-oriented learning dimension based on gender variable [$t_{(320)}$= 2.10; p<0,05]. Female students exhibit more mastery-oriented learning than male students. There is no significant variance in the views in performance-approach and performance-avoidance oriented learning dimensions. Student views vary in mastery [$t_{(320)}$= 3.95; p<0,05], performance-approach [$t_{(320)}$= 3.65; p<0,05] and performance-avoidance [$t_{(320)}$= 4.50; p<0,05] oriented learning dimensions based on school type. Vocational school students' views are more positive than Anatolian high school students' in all dimensions.

Results of ANOVA conducted to see whether or not student views vary based on grade variable are provided in Table 3 below.

Table 3

ANOVA Eesults for Learning Levels based on Grade Variable

Factor	*Grades*	*N*	*M*	*SD*	*df*	*F*	*P*	*Significant Difference (LSD)*
Mastery goal orientations	1. Grade 9	60	19.16	3.64	3;318	3.48	.016	2-4
	2. Grade 10	111	19.78	3.05				
	3. Grade 11	121	19.29	4.02				
	4. Grade 12	30	17.33	4.38				
Performance-approach goal orientation	1. Grade 9	60	15.03	5.48	3;318	2.23	.085	2-3
	2. Grade 10	111	14.07	5.38				
	3. Grade 11	121	15.79	5.78				
	4. Grade 12	30	13.84	5.56				
Performance-avoidance goal orientation	1. Grade 9	60	13.96	3.79	3;318	2.68	.047	3-4
	2. Grade 10	111	13.51	4.34				3-2
	3. Grade 11	121	14.62	4.17				
	4. Grade 12	30	12.46	4.76				

According to the analysis results in Table 3, student views vary significantly in the mastery [$F_{(3\text{-}318)}$= 3.48; p<.05], performance-approach [$F_{(3\text{-}318)}$= 2.23; p<.05], and performance-avoidance [$F_{(3\text{-}318)}$= 2.68; p<.05] oriented learning dimensions. According to Dunnett's C and LSD test result aimed at finding the source of the variance, tenth grade students have more positive views than twelfth grade students in the mastery-oriented learning dimension; eleventh grade students have more positive views than tenth grade students in the performance-approach oriented learning dimension; and eleventh grade students have more positive views than twelfth and tenth grade students in the performance-avoidance oriented learning dimension. Results of regression analysis conducted to see whether student learning orientation is a predictor of authentic engagement dimension are provided in Table 4 below.

Table 4

Prediction of Authentic Engagement Dimension according to Learning Orientations

Predictors	*B*	*Standard Error B*	*β*	*T*	*p*	*Bilateral r*	*Partial r*
Mastery Goal	.596	.101	.314	5.92	.000	0.314	0.314
Constant	17.893	1.976		9.056	.000		
R= .314	R^2 = 0.099						
$F_{(1;320)}$= 35.039	p=.000						

There is a medium-level relationship between mastery-oriented learning and authentic engagement (R=.314, R^2=. 099). The said variable explains approximately 10% of the total variance in authentic engagement. When the correlation between the predictor variable and the predicted variable is examined, a medium-level positive relationship (r = 0.314) is seen between mastery-oriented learning and authentic engagement. Results of regression analysis conducted to see whether student learning orientation is a predictor of the engagement dimension at rebellion level are provided in Table 5 below.

Table 5

Prediction of Engagement Dimension at Rebellion Level according to Learning Orientations

Predictors	*B*	*Standard Error B*	*β*	*T*	*p*	*Bilateral r*	*Partial r*
Mastery Goal	-.422	2.623	-.174	-3.153	.000	-0.174	-0.174
Constant	36.327	1.976		13.84	.000		
R= .174	R^2 = 0.030						
$F_{(1;320)}$= 9.943	p=.002						

There is a low-level relationship between mastery-oriented learning and engagement at rebellion level (R=.174, R^2=. 030). The said variable explains approximately 3% of the total variance in engagement at rebellion level. When the correlation between the predictor variable and the predicted variable is examined, a low-level negative relationship (r = -0.174) is seen between mastery-oriented learning and engagement at rebellion level. Results of regression analysis conducted to see whether student learning orientation is a predictor of ritual engagement dimension are provided in Table 6 below.

Table 6

Prediction of Ritual Engagement Dimension according to Learning Orientations

Predictors	*B*	*Standard Error B*	*β*	*T*	*p*	*Bilatreral r*	*Partial r*
Mastery Goal	-.229	.078	-.162	-2.928	.000	-0.162	-0.162
Constant	18.660	1.533		12.17	.000		
$R = .162$	$R^2 = 0.026$						
$F_{(1;320)} = 8.574$	$p = .004$						

There is a low-level relationship between mastery-oriented learning and ritual engagement ($R=.162$, $R^2=.026$). The said variable explains approximately 3% of the total variance in class engagement at rebellion level. When the correlation between the predictor variable and the predicted variable is examined, a low-level negative relationship ($r = -0.162$) is seen between mastery-oriented learning and ritual engagement.

Discussion and Conclusion

When students' learning orientations are examined, they are seen to adopt mastery-oriented learning mostly, which is followed by performance-avoidance oriented and performance-approach oriented learning. When the results of the analysis conducted according to the gender variable is examined, female students are seen to learn better with mastery goal orientation. In other words, female students have more intrinsic motivation to learn than male students do. This finding is in alignment with the findings of the research previously conducted. Urdan, Midgley and Anderman (1998), Anderson and Dixon (2009), Aydın (2010), Alonso-Tapia, Huertaz, and Huriz (2010), Ozkal (2013), and Oga-Baldwin and Nakata (2017) suggest in their research that female students had more inner drive than male students. However, Smith and Sinclair (2005) and Abrahamsen, Robert, and Pensgaard (2007) suggest that the gender variable did not create a significant variance in learning motivation, and Erdem-Keklik and Keklik (2014) suggest that female students mostly learn with performance-avoidance goal motivation. Nayir (2015) found that male students were engaged more at rebellion and ritual level; in other words, male students learned with performance-approach and performance-avoidance goal orientation. At this point, it can be said that the gender variable must be studied more closely in the future.

When the results of the analysis conducted according to the school type variable is examined, vocational school students are seen to be more positive than Anatolian high school students in the mastery-oriented learning, performance-approach oriented learning, and performance-avoidance oriented learning dimensions.

According to this, vocational school students can be said to be influenced by motivational factors more than Anatolian high school students are. In Turkey, vocational schools are known to have easy admission criteria and are preferred by students who fail to be admitted to any other school and have a low success level. In other words, these students do not experience the feeling of success and want to experience it. Therefore, these students can be said to be more easily influenced by motivational factors.

When an analysis was conducted on the results according to the grade variable, tenth grade students are seen to have more intrinsic and extrinsic motivation than twelfth grade students and eleventh grade students are seen to have more intrinsic and extrinsic motivation than tenth and twelfth grade students. We can conclude, therefore, that intrinsic motivation decreases as the grade level increases. Ryan and Deci (2000), Aydın (2010), Gillet, Vallerand, and Lafreniere (2012), Özkal (2013), and Erdem-Keklik and Erdem (2014) all reached a similar finding in their research. This may be because twelfth grade students are especially affected by the university admission test. High school seniors may be afraid of making mistakes out of fear of failure and have low self-expectations as they are expected to succeed in the test. Erdem-Keklik and Keklik (2014), on the other hand, attributed this to the fact that ninth grade students are more motivated as they are starting a new school and tenth grade students are more motivated as they are supposed to choose a field of study. At this point, families' attitudes may be important, as families of twelfth grade students act with expectation and establish an authority over students that may affect students' motivation level. The research suggested that children of autocratic families were mainly motivated by extrinsic factors (Grolnick, Ryan, & Deci, 1991; De Bruyn, Dekovid, & Meijnen, 2003).

The result of the present study suggests that mastery-oriented learning is a significant predictor of all dimensions of class engagement. In a similar way, Martin and Eliot (2016) found that personal mastery goals predicted higher motivation and engagement. According to this, there is positive relationship between learners with mastery goal orientation and authentic engagement and a negative relationship between authentic engagement and rebellion and ritual engagement. In other words, while students with intrinsic motivation are authentically engaged, ritual engagement and rebellion appear as intrinsic motivation decreases. The research suggest that students motivated by extrinsic factors exhibit ritual engagement (Saeed & Zyngier, 2012), and that students with intrinsic motivation exhibit authentic engagement (Ryan & Deci, 2009; Schlechty, 2002). In addition, increasing students' motivation is related to students' engagement with practice learning in behavioral, emotional, and agentic dimensions (Wang, Qiao, & Chui, 2017).

The present study investigated the relationship between student motivation and class engagement levels. The research has revealed that motivation level is related to class engagement, that vocational school students are affected more by motivational factors and that motivation level decreases as grade level increases. Also, mastery-oriented learning is a significant predictor of all dimensions of class engagement.

There is yet more research needed on the gender variable. Along this line, it may be suggested that the use of intrinsic drives may increase the success of vocational school students. Teachers and school administrators must use more motivational tools for vocational school students. Tas (2016) suggested in her research there is a positive relationship between student engagement and learning environment. Also, in-class activities may be planned to make high school seniors more engaged in class. It is believed that the future research must focus on the gender variable and investigate the relationship between the roles of teachers in class and student motivation levels.

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Öğrencilerin Motivasyon Düzeyi ile Derse Katılım Düzeyi Arasındaki İlişki

Atıf:

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Özet

Problem Durumu: Okulda etkin bir öğrenmenin gerçekleştirilebilmesi için öğrencilerin derse aktif katılması ve derse ilgi duyması gerekir. Bunun için öğrencilerin motivasyonlarının yüksek olması ve derse ilgi göstermeleri gerekir. Öğrenme-öğretme sürecinde beklenen öğrencilerin içsel bir motivasyon göstererek derse gerçek katılım göstermeleridir. Bunun olabilmesi için ise, öncelikli olarak öğrencilerin motivasyon düzeylerinin bilinmesi ve bu doğrultuda derse aktif olarak katılımlarını sağlayacak etkinliklerin planlanması gerekir. Bunun için öğretmenlerin öğrencilerin motivasyon düzeyini bilmesinin ve öğrencilerin derse gerçek katılımını sağlayacak motivasyon stratejilerini kullanmasının önemli olduğu düşülmektedir. Öğrencilerin sahip olduğu motivasyon düzeyi, derse katılım düzeyi ile ilişkilidir. Motivasyonu olmayan öğrenciler isyan düzeyinde derse katılmakta, dışsal motivasyonu olan öğrenciler geri çekilme, pasif uyum veya sembolik düzeyde derse katılmakta ve içsel motivasyona sahip öğrenciler gerçek katılım düzeyinde katılım göstermektedir.

Araştırmalarda ustalaşma yönelimiyle içsel güdülenme (Chan, Wong ve Lo, 2012; Pintrich, 2000) ve performans- kaçınma yönelimiyle dışsal güdülenme (Özkal, 2013) arasında pozitif yönde anlamlı bir ilişki olduğu ortaya çıkmıştır. Performas-yaklaşma yönelimi ise hem içsel hem de dışsal güdülenmeyle ilişkilidir (Elliot ve Murayama, 2008). Buna göre içsel motivasyona sahip öğrencilerin gerçek katılım göstermesi, dışsal motivasyona sahip öğrencilerin ise sembolik katılım göstermesi

gerekmektedir. Bu çalışmada Ryan ve Deci (2000) tarafından öne sürülen Öz Belirleme kuramıyla, Schelechty (2001) tarafından ortaya atılan öğrenci katılım düzeyleri temel alınarak öğrencilerin katılım düzeyleri ile motivasyon düzeyleri arasındaki ilişki ortaya çıkarılmaya çalışılmıştır. İçsel ve dışsal motivasyon araçlarının nasıl kullanılacağının ve bunun öğrencinin derse katılımı ile ilişkisinin bilinmesi öğrencilere destekleyici bir öğrenme ortamı oluşturulmasında yardımcı olacaktır (Marsh, 2000).

Araştırmanın Amacı: Bu çalışmanın amacı lise öğrencilerinin derse katılım düzeyleri ile motivasyon düzeyleri arasındaki ilişkiyi incelemektir. Bu doğrultuda aşağıdaki sorulara yanıt aranmıştır.

1. Öğrencilerin motivasyon düzeyi ustalaşma yönelimi, performan-yaklaşma yönelimi ve performans kaçınma yönelimi boyutlarında nasıldır?

2. Öğrencilerin motivasyon düzeyi cinsiyet, sınıf düzeyi, ve okul türüne göre farklılık göstermekte midir?

3. Öğrencilerin motivasyon düzeyi ile derse katılım düzeyleri arasında anlamlı bir ilişki var mıdır?

Yöntem: İlişkisel araştırma modelinde olan bu araştırmada lise öğrencilerinin motivasyon düzeyi ile derse katılım düzeyleri arasındaki ilişki ortaya çıkarılmaya çalışılmıştır. Araştırmanın evrenini Ankara İl merkezinde bulunan liselerde öğrenim gören lise öğrencileri oluşturmaktadır. Evrene ulaşmak zor olduğundan örneklem alma yoluna gidilmiştir. Basit tesadüfi örnekleme kullanılarak Ankara İli'nde merkezde öğrenim gören 500 lise öğrenciye ölçek uygulanmıştır. Dönen ölçeklerden 322'si uygulamaya alınmıştır. Öğrencilerin motivasyon düzeylerini belirlemek amacıyla ise Midgley ve arkadaşları (2000) tarafından geliştirilen Adaptif Öğrenme Ölçeği (AÖÖ) Türkçe'ye uyarlanarak kullanılmıştır. 14 maddeden oluşan adaptif öğrenme ölçeği 5 dereceli likert tipi bir ölçektir. Ölçek, "ustalaşma yönelimli", "performans-yaklaşma yönelimli" ve "performans-kaçınma yönelimli" olmak üzere üç faktörden oluşmaktadır. Ölçek uyarlama sürecinde geleneksel yaklaşım benimsenmiştir. Verilerin analizinde betimsel istatistikler, aritmetik ortalama ve standart sapma kullanılmıştır. Öğrenci görüşleri arasında anlamlı fark olup olmadığını belirlemek amacıyla t testi, ANOVA kullanılmıştır. Son olarak öğrencilerin derse katlım düzeyleri ile motivasyon düzeyleri arasındaki ilişkiyi belirlemek amacıyla korelasyon analizi ve bu ilişkinin hangi değişkenler tarafından yordandığını ortaya çıkarmak amacıyla da regresyon analizi kullanılmıştır. Regresyon analizi stepwise yöntemi kullanılarak yapılmıştır.

Bulgular: Öğrencilerin öğrenme yönelimleri incelendiğinde en çok ustalaşma yönelimli öğrenmeyi benimsedikleri, bunu sırasıyla performans-kaçınma yönelimli ve performans-yaklaşma yönelimli öğrenmenin izlediği görülmektedir. Öğrenciler ustalaşma yönelimli öğrenme ve performans-kaçınma yönelimli öğrenme boyutundaki maddeleri "genellikle doğru", ve performans-yaklaşma yönelimli öğrenme boyutundaki maddeleri ise " az doğru" bulmaktadır.

Cinsiyet değişkenine göre yapılan analiz sonuçları incelendiğinde kız öğrencilerin daha çok ustalaşma yönelimli öğrendikleri görülmektedir. Başka bir deyişle kız öğrenciler erkek öğrencilere göre öğrenmek için daha çok içsel motivasyona sahiptir. Okul türü değişkenine göre yapılan analiz sonuçları incelendiğinde meslek lisesi öğrencilerinin görüşlerinin ustalaşma yönelimli öğrenme, performans-yaklaşma yönelimli öğrenme ve performans-kaçınma yönelimli öğrenme boyutlarında Anadolu lisesi öğrencilerine göre daha olumlu olduğu görülmektedir. Sınıf değişkenine göre yapılan analiz sonuçları incelendiğinde dokuz, on ve 11. sınıfların içsel motivasyona, 11. Sınıfların ise dışsal motivasyona daha fazla sahip olduğu görülmektedir. Buna göre sınıf seviyesi yükseldikçe içsel motivasyonun azaldığı söylenebilir. Regresyon analizi sonuçları incelendiğinde ustalaşma yönelimli öğrenmenin derse katılımın tüm boyutlarının anlamlı bir yordayıcısı olduğu görülmektedir. Buna göre ustalaşma yönelimli öğrenenler ile gerçek katılım ile olumlu bir ilişki, isyan ve sembolik katılım ile olumsuz bir ilişki vardır. Başka bir deyişle, içsel motivasyona sahip öğrenciler gerçek katılım gösterirken, içsel motivasyon azaldıkça sembolik ve isyan düzeyinde katılım ortaya çıkmaktadır.

Sonuç ve Öneriler: Bu çalışmada lise öğrencilerinin motivasyon düzeyi ile derse katılım düzeyi arasındaki ilişki incelenmiştir. Araştırmada motivasyon düzeyinin derse katılımla ilişkili olduğu, meslek lisesi öğrencilerinin motivasyonel faktörlerden daha çok etkilendiği ve sınıf düzeyi yükseldikçe motivasyon düzeyinde azalma olduğu ortaya çıkmıştır. Ayrıca, ustalaşma yönelimli öğrenme derse katılımın tüm boyutlarının anlamalı bir yordayıcısıdır. Cinsiyet değişkenine göre ise daha fazla araştırma yapılmasına ihtiyaç vardır. Bu doğrultuda, öncelikle meslek lisesi öğrencileri için içsel güdülerin kullanılmasının öğrenci başarısını artıracağı söylenebilir. Öğretmenlerin ve okul yöneticilerinin meslek lisesi öğrencilerine yönelik olarak daha fazla motivasyon aracı kullanması yararlı olacaktır. Ayrıca, lise son sınıf öğrencileri için derse katılımı artıran ders içi etkinlikler planlanabilir. Bundan sonra yapılacak araştırmalarda cinsiyet değişkeni temel alınarak bir araştırma yapılmasının ve öğretmenlerin sınıf içi sergiledikleri rollerle öğrencilerin motivasyon düzeyleri arasındaki ilişkinin incelenmesinin yararlı olacağı düşünülmektedir.

Anahtar Sözcükler: İçsel motivasyon, dışsal motivasyon, gerçek katılım, sembolik katılım, isyan.

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Assessment of Electro-mechanic Technician Qualifications in the Context of European Transparency Tools *

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ABSTRACT

Purpose: This study explores the applicability and transferability of tools developed for the realization of comparability and transparency of qualifications across Europe. It relates to the implementation of the European Credit System for Vocational Education and Training (ECVET) and the European Qualifications Framework (EQF) in the automotive sector.
Research Methods: This study was carried out according to the case-study model in order to investigate further operationalization and transferability of the previously developed VQTS matrix in Automotive Electro-mechanics to different national contexts. The working group of this study consists of 34 car service employees from Germany, Turkey and Italy.
Findings: The data analysis indicated that the participants were moderately motivated to learn English as a foreign language (*M=92.62*). There was not a significant gender-related difference in students' motivational orientations. Furthermore, female students' self-efficacy scores were significantly higher than those of the male students. Lastly, a positive correlation was found between students' motivational orientations and self-efficacy beliefs.
Implications for Research and Practice: According to the findings of the study, the qualifications required for the work processes of the automotive electro-mechanic technician profession and the knowledge, skills and competencies required by these qualifications were confirmed by the service employees to a great extent.

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Introduction

European instruments such as EQF and ECVET aspire to increase comparability, transparency and mutual recognition of learning. This aims to increase upward mobility and lifelong learning among European citizens. At the same time in many European countries these instruments are considered to be a starting point for reforms within vocational education and training (VET) systems. Those who hold this view intend to improve the coherence, quality and relevance of VET or, based on learning outcomes orientation, to develop new learning pathways, programs, qualification standards and/or procedures (CEDEFOP, 2012).

In today's rapidly changing world, matching the needs of the labor market and the labor force is of great importance. A qualified labor force must be trained, not only with vocational competencies but with other competencies such as communication, interpersonal relationship, foreign language, and computer skills. This supply-and-demand relationship between the labor market and the labor force could only be achieved with a strong connection between educational institutions and the labor market (Burgaz, 2008). VET should support development that is sustainable for an individual's wellbeing and play a crucial role in challenging and transforming society and labor (McGrath & Powell, 2016, 12).

Competence-based VET, which integrates knowledge, skills and competencies, has become popular in European countries (Nissilä, Karjalainen, Koukkari, & Kepanen, 2015, 25). The Copenhagen process aims to improve the performance, quality and attractiveness of VET in Europe. The goals of the process are the reinforcement of the European dimension, the establishment of mutual trust, the development of tools for the mutual recognition and validation of competencies and qualifications and the improvement of quality assurance in the context of VET in Europe. Within the framework of this basic policy, the European Parliament and the Council released in 2008 (EQF) and 2009 (ECVET) the recommendations on the establishment of an EQF (Official Journal of the European Union [OJC], 2008/C 111/01) and an ECVET (OJC, 2009/C 155/02). Although they are just recommendations, putting the proposal for an EQF and ECVET on the table has stirred much discussion among stakeholders in VET (Bouder, 2008) and also has led to a number of reform movements across all of the implementing countries (CEDEFOP, 2013a; CEDEFOP, 2013b; CEDEFOP, 2014a).

The European project MASECVET, implemented by a multilateral partnership from Turkey, Italy and Germany and funded with financial support from the European Commission's Lifelong Learning Programme, investigated ECVET in the automotive sector in order to explore possible tools to facilitate the trans-national mobility of workers and learners as well as the recognition of prior learning by the means of ECVET tools and practices in the automotive sector.

EQF and ECVET are functional instruments in providing transparency and transferring abilities and recognition between the sectors and levels included in the national and European vocational training systems. The study at hand is part of this project and presents the results of a comparison of electro-mechanic technician qualifications in the three countries participating in MASECVET based on the European tools EQF and ECVET.

The European Transparency Instruments EQF and ECVET

EQF is "a reference tool to compare the qualification levels of the different qualifications systems and to promote both lifelong learning and equal opportunities in the knowledge-based society, as well as the further integration of the European [labor] market, while respecting the rich diversity of national education systems" (2008/C 111/01).

ECVET "is a technical framework for the transfer, recognition and, where appropriate, accumulation of individuals' learning outcomes with a view to achieving a qualification. ECVET tools and methodology comprise the description of qualifications in terms of units of learning outcomes with associated points, a transfer and accumulation process and complementary documents such as learning agreements, transcripts of records and ECVET users' guides" (OJC, 2009/C 155/02). ECVET is supposed to be applied to all EQF levels in order to facilitate transnational mobility and recognition of learning outcomes independently from the context in which they have been obtained. Meanwhile, it is a method used to define a qualification in terms of transferable, savable and expressible learning outcome units (knowledge, skills and competence) (Altin, 2007). According to Rauner (2008), the experiences with ECVET and the EQF refer to the significant risk of an impending under-valuation of vocational competence. On the other hand, those European initiatives and the effects to which they lead are perceived to be a potential tool in order to increase the attractiveness of VET in Europe (CEDEFOP, 2014b).

Both European instruments build on the concept of learning outcomes orientation with learning outcomes being defined as "statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence" (OJC, 2008/C 111/01). A qualification should only be certified when someone actually proves to have the requisite competencies at a specific point in time. The developmental context of qualifications and competencies is a system lacking in quality. A complete self-actualization of the education and training systems will be ensured, by virtue of the decoupling of vocational requirements by means of competitive mechanisms and other instruments of subjective economics, such as the EQF and the ECVET (Bremer, 2008).

The Vocational Qualification Transfer System (VQTS)

The award-winning VQTS model has been applied in the MASECVET project. This model has been developed and further articulated in the European VQTS projects led by the Austrian research institute 3s. VQTS provides a model that allows for the transfer of vocational abilities acquired abroad (geographical mobility in VET), transfer and recognition of abilities acquired within a formal VET system as well as achieved through informal or other kinds of prior learning by developing qualifications, composing job profiles and conducting personnel (human resources) planning and enhancing the visibility of differences in qualifications to make qualifications comparable across borders.

In this context the model is regularly used within pilot projects in the framework of ECVET and EQF application throughout Europe. The core of the VQTS method uses a common competence matrix in order to display competences structurally in a table according to core work tasks in a specific occupational field and the progress of competence development" (Luomi-Messerer & Markowitsch, 2006, 9). This competence matrix is closely connected to the actual work done in the particular field of work at a shop-floor level rather than being based on a single qualification profile and should, therefore, be independent from existing qualifications/certificates. The VQTS approach is, however, explicitly not meant to harmonize qualifications across borders or to develop common qualifications/curricula; rather it only aims to make the competence level reached within a qualification/level or as a learner transparent and comparable. (Luomi-Messerer & Markowitsch, 2006)

The overall VQTS approach is strongly related to the world of work and therefore exclusively relies on and displays competences that also exist in practice. Further curricular elements not directly included in the core work processes may or may not be part of a VQTS matrix in order to view the work process as being the same or at least similar across organizational and national borders. Therefore, the VQTS matrix does not intend to replace a curriculum. Its intention is to be the basis for comparison of learning outcomes acquired in different kinds of learning processes including curricular learning (Luomi-Messerer & Markowitsch, 2006). This also makes it a very valuable tool in the context of integrating work-based learning elements into formal VET approaches such as those currently investigated and fostered through the European Alliance through Apprenticeship declaration (European Union, 2015).

Different kinds of competence profiles can be displayed on the matrix (see fig. 1). According to the level of competence reached by an individual learner (individual profile) or through attendance of a training program (organizational profile) within the identified competence areas/core work processes, the level of competence increases on the table from left to right. In this context, it must be noted that the VQTS definition of competence does not correspond to the definition of the term competence within EQF terminology. Within VQTS, the term competence refers to cognitive competences (knowledge), functional competences (skills) as well as social competences (behavior) and does not incorporate the autonomy and responsibility dimension as does the EQF.

The VQTS competence matrix approach has been tested, further explored and developed within VQTS and related projects in the framework of different vocations and in different application contexts.

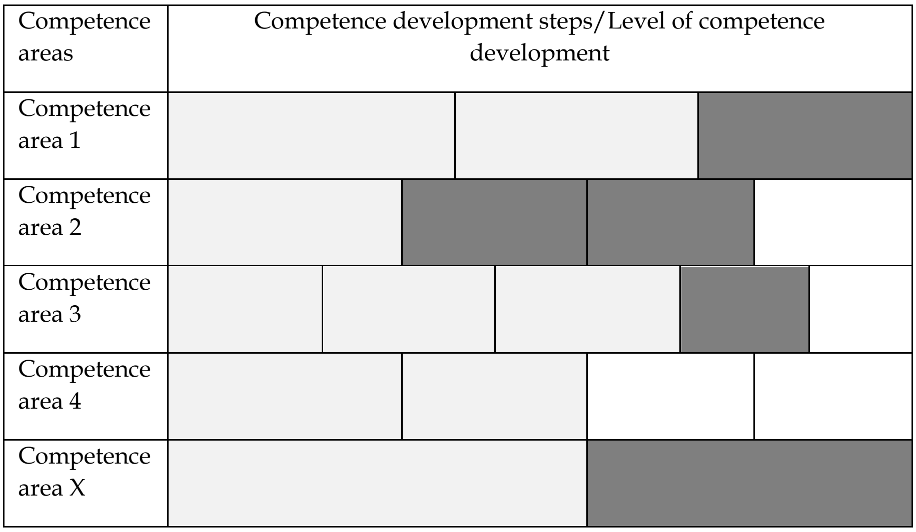

Figure 1. Sample VQTS Matrix with Organizational Profile (Dark grey) and Individual Learner Profile (light grey)

The VQTS Matrix Car Mechatronics (CarEasyVET)

The project CarEasyVET explored core work processes in the field of car mechatronics in order to develop a competence development matrix according to the VQTS approach used as the basis of this investigation. The CarEasyVET consortium identified a horizontal differentiation of each individual core work process similar to the VQTS approach. This led to a matrix that reflects the VQTS model in its overall approach. Each work process has been split into three-to-five levels of increasing degree of difficulty. An example of one of these work process (which are described as competences) from the competence development matrix can be seen in Table 1. Work processes in the competence matrix reflect the competence development steps necessary to acquire mastery in the respective field (Spöttl & Ruth, 2011). The competence development matrix for car service and repair (Car Mechatronics) was taken from Spöttl and Ruth (2011, 155–160) and extended with the results of the MASECVET study on the applicability of the different steps of competence development/fields of competence in Germany (DE), Turkey (TR) and Italy (IT).

Table 1

A competence step in the Competence Development Matrix for Car Service and Repair

Core Work Processes	Fields of competency/ Steps of competency development		
(1) Standard service	(1.1) He/she receives the vehicle from the customer and prepares the service tasks. The customer order is more precisely defined and includes the identification of the vehicle. Customer advisory service must be carried out.	(1.2) He/she carries out all tasks relevant for service and ensures that the car remains functional with regard to traffic, operation and technical functions. The service adheres to service plans and customer requirements.	1.3 He/she carries out service tasks and hands the fully functional car over to the customer. He/she explains the performed service tasks. All of the manufacturers' provisions tor service have been adhered to.

The study at hand aims to explore the transferability of concepts and tools intended to facilitate the realization of these European instruments from one national context to another and, therefore, the realization of the intended increase in comparability and transparency of qualifications across borders. This will be done by investigating the applicability of the VQTS matrix for car mechatronics as a way of expressing qualifications in ECVET and the applicability of the further defined competence development steps in terms of the EQF learning outcomes descriptors—knowledge, skills and competence—in the context of the three countries involved in this study.

The sub-purposes of the study are as follows:

- To determine if the competencies that were proposed for electro-mechanical technicians in the CarEasyVET project are valid for the three participating countries.

- To discover the similarities and differences among the participating countries regarding the competencies determined for electro-mechanical technicians.

- To develop a valid and reliable method for the correct determination of competencies.

Method

Research Design

This is a qualitative study. The case-study model that is used to produce results related to a definite situation has been applied (Yildirim & Şimşek, 2011). The study was designed to determine if the competence development matrix developed in the CarEasyVET project and its further operationalization in terms of learning outcomes is applicable and can be transferred to other national contexts. For this purpose, individual interviews were conducted with the participants of the study by the researchers by using the fully structured interview format.

Research Sample

Critical case sampling, which is a type of purposive sampling, was the chosen method of sampling used in this study. In critical case sampling, the purpose is to form sub-groups by including similar cases within the study (Yildirim & Şimşek, 2011). The working group of this study consists of car service employees, including an automotive electro-mechanic technician. By considering the accessibility situation of such services, 34 service employees who worked in a total 34 different positions—10 in Germany, 14 in Turkey and 10 in Italy—from different car companies and independent providers were contacted. Demographic variables of the working group are shown below (Table 2).

Table 2

Demographic Variables of the Participants from Germany (DE), Turkey (TR) and Italy (IT)

Gender	Demographic Variables	DE	TR	IT
	Male	10	14	10
	Female	0	0	0
Graduate	High school	7	8	4
	Higher school	-	2	-
	Bachelor's	3	3	1
	Master's	-	1	-
	Other degrees	-	-	5
Career experience	1–5 years	-	-	1
	6–10 years	1	-	1
	11–15 years	4	2	2
	16–20 years	3	9	4
	21 years and above	2	3	2
Position	Electro-mechanic technicians	3	7	10
	Instructors	2	3	-
	Service chief	-	1	-
	Service director	3	2	-
	Education manager	1	1	-
	Other	1	-	-
Total		10	14	10

Research Instruments and Procedures

In order to create the qualification matrix, the competency matrix established within the CarEasyVET (Careasyvet) project carried out between 2007 and 2009 was used. This project was carried out with partners from Germany, Austria, Bulgaria, France, Italy and Slovenia. The established matrix covers the work processes required for the automotive mechatronics in these countries. Nine work processes included in the matrix were used as a basis for the study.

The work processes included in the competency matrix established for the automotive maintenance and repair and automotive mechatronics correspond to the training area carried out in Turkey under name of automotive electro-mechanics in the Sisli Vocational and Technical Anatolian School. At the formal and non-formal Vocational and Technical secondary education institutions, training is given in this field under the Automotive ElectroMechanic branch, and graduates of such institutions are being employed in automotive service facilities as technicians.

By considering these work processes, a qualification matrix expressing the already available competence development steps in terms of the EQF descriptors was established by three expert technical teachers. In this process, a total of nine main qualification fields (work process) and development steps under each main qualification field were determined.

Under each competency area, there are a number of competencies. In order for an individual to be considered to be in possession of a certain competency, it should be demonstrated that s/he has the knowledge, skills and competence related to that competency. If we take electro-mechanical technicians as an example, as seen in Table 1, the first competency listed under the standard service competency area is: "(1.1) He/she receives the vehicle from the customer and prepares the service tasks. The customer order is more precisely defined and includes the identification of the vehicle. Customer advisory service must be carried out." This competency has three sub-dimensions. The first one of these is the knowledge dimension, "s/he knows communication techniques;" the second one is the skill dimension, "s/he can use a PC;" and the third one is the competence dimension, "s/he should be able to examine the vehicle by checking the customer complaint forms."

The whole matrix was converted to the fully structured interview form by the researchers. The data was obtained from applicable/non-applicable questions. There is a total of 293 questions on this form; each of which pertains to a different knowledge, skill or competence related to the nine competency areas determined for electromechanical technicians.

Validity and Reliability

A pilot study was realized with five service employees to examine how the choices were understood and the fully structured interview form was prepared according to the qualification matrix. The interview form was translated into English and from there into German and Italian. The technical dimensions of the translation into English were assessed by two technical teachers. Firstly, the interview form was translated into English by two researchers. Consequently, the translated interview form was translated from English to Turkish by two professional translators, and a comparison was made to understand the perception of the meaning of each clause. There were no differences between the two forms. This process was followed by German and Italian partners in their languages, and no difference were seen as well.

Data Analysis

The web-based LimeSurvey program was used to analyze the data obtained from the interview forms (LimeSurvey, 2017). This program was used for data input and to calculate the frequencies (f) and percentages (%). The percentages of choices collected under sub-dimensions were presented in tables. The validity and the reliability of the matrix used in this study has been checked within the CarEasyVET project carried out earlier.

Results

The following displays the results of the investigation with regard to the applicability of the competence development steps in different national and cultural settings and the applicability of the defined EQF descriptors for the individual development steps.

The first part of the study investigates the applicability of the competence development steps defined within the CarEasyVET project within different national contexts. Table 3 provides an overview of the research results differentiated by development step and national context.

Table 3

Results of The MASECVET Test Persons' Ratings on the Applicability of the Development Steps within Their Work Reality in Percent

Development Step	DE	TR	IT	Development Step	DE	TR	IT
1.1	100	57	100	6.1	20	78	100
1.2	100	78	100	6.2	100	100	100
1.3	100	50	100	6.3	100	92	100
2.1	100	100	100	6.4	100	92	100
2.2	100	85	100	7.1	20	85	100
2.3	100	57	100	7.2	100	71	100
2.4	100	92	10	7.3	100	78	100
3.1	100	78	100	7.4	100	92	100
3.2	100	100	100	7.5	100	92	100
3.3	100	92	100	8.1	100	71	100
3.4	90	92	100	8.2	20	78	100
4.1	100	64	100	8.3	20	85	100
4.2	100	78	100	8.4	100	92	100
4.3	100	85	100	9.1	100	71	100
4.4	100	92	100	9.2	100	85	100

Table 3 Continue

Development Step	DE	TR	IT	Development Step	DE	TR	IT
5.1	100	85	100	9.3	100	85	100
5.2	100	92	100	9.4	100	78	100
5.3	100	100	100				
5.4	100	92	100				
5.5	100	64	100				

There are three items within the standard service work process (1.1, 1.2, and 1.3). The table shows that participants from Germany and Italy agree with all the items (f=10; 100 %). Participants from Turkey meet the development step expressed as “Fulfills all the tasks related to the service and ensures that vehicle remains functional for traffic, operation and technical functions. Observes the service, service plans and costumer's needs” (f=11; 78%). However, according to data received from open-ended questions, a few of the participants from Turkey say that there were more positions like service advisor or damage consultant who performs some of these standard service work processes (Ozcan & Vuranok, 2013, 1962).

Four development steps are identified for the second work process, Repair of Corroded Parts. Participants from Germany and Italy meet the requirements for all of these items (f=10; 100 %). Participants from Turkey meet the development step expressed as “Changes the corroded parts. Functions of vehicle systems are secured. A new set of the corroded parts (brakes, V-belts, wheels, tires, clutches, lighting system, shock absorbers, water pump, etc.) are placed within the vehicle” (f=14; 100 %). However, just like the Standard Service work process, damage consultants perform some of this work process (Ozcan & Vuranok, 2013, 1962).

The third work process Standard Diagnosis, Diagnosis Processes,Malfunction Repair and Smaller Repairs contains four developmental steps. The participants from Germany meet the item of “Deals with more complex failures like production of fuel mixture, engine management, comfort and safety electronics, communication electronics and makes standard repairs in order to reinstate functionality. If necessary diagnosis and measuring devices are used” (f=9; 90 %) and fully meet the other items (f=10; 100 %). Participants from Turkey meet the development step expressed as “Makes a standard diagnosis and controls the failure notification. Necessary diagnosis routines are observed. Necessary minor repairs for troubleshooting are performed” (f=14; 100 %). Participants from Italy meet with all the items fully (f=10; 100 %).

Four items are related to the fourth work process inspection. Participants from Germany and Italy meet all the items (f=10; 100 %). Participants from Turkey agree with the development step expressed as “Carries out all the necessary inspection tasks through engine, engine management, chassis, traction and electronic system. Proper equipment is used. Adheres to technical standards during replacement of parts and prevents people from getting injured” (f=13; 92 %).

The fifth development step, Traction Repair and Suspension, contains five items. Participants from Germany and Italy meet all the items (f=10; 100 %). Participants from Turkey meet with the development step expressed as ”Determines the scope of the repair of the parts by considering failures and malfunctions.” Necessary repair measures are obtained from these findings. An exact damage assessment is made (f=14; 100 %).

Four items have been identified within the sixth work process, electric and electronic repair. Participants from Germany and Italy meet the requirement: “Defines the failures with the help of a diagnostic device and coordinates the scope of the repair with customer. Workshop's resources are planned according to this process. Based on the damage, the task is given to a certain team or a serviceperson who chooses proper equipment” (f=2; 20 %) and fully meet with the other items (f=10; 100 %). Participants from Turkey meet the requirements of the development step expressed as “Makes decisions for changing or repairing the parts of the vehicle by focusing on the restoration of the normal situation. This involves failure repair and partial modernization. Final determinations and information service are very important for determining the failures” (f=14; 100 %). It is seen that participants from Italy meet all the items’ requirements (f=10; 100 %).

Five items are related to the seventh work process, Extended Diagnosis and Repair of Parts, Components and Elements. Participants from Germany meet with the item of “Makes accurate diagnosis in especially difficult cases. This means that unique, undocumented and random failures will be detected via diagnostic method. In the next step, the reasons for failures are reduced and their repair content is estimated” (f=2; 20 %) and fully adhere with the other items (f=10; 100 %). Participants from Turkey adhere with the sub-qualifications expressed as “Reduces failures in order to determine the exact causes by conducting experiments. Focuses on the findings analyzed by using different methods. Methods often focus on troubleshooting with measuring and diagnostic devices. When the failure is found, it is repaired in adherence with the technical standards and safety regulations” (f=13; 92.86 %) and “Documents the failure and repair. The manufacturer will be informed by current communication details and recommendations for the development of interworking of diagnosis will be sent” (f=13; 92.86 %). Participants from Italy adhere with all of the items (f=10; 100 %).

The eighth work process, Repair and Maintenance of Parts such as the Motor and Gearbox (automatic and mechanic), contains four competence development steps. Participants from Germany adhere with the following development step: “Deals with costumer complaints and results of the first diagnosis and defines the damage accurately. Based on this, decides which services should be performed (general maintenance, changing etc.). In order to facilitate the decision, components should be checked thoroughly (manual check, listening, visual check) if necessary parts should be ordered. Before the final decision in the troubleshooting process, customer should be informed and after clarifying all details, in order to decide on an effective repair resulting in customer satisfaction, foster more intensive communication between workshop and customer. This also involves meetings with the customer about different options and prices. Repair is started after these decisions" (f=2; 20 %) and fully adhere with the other items (f=10; 100 %). Participants from Turkey adhere with the development steps expressed as "Performs repair in adherence to the legal provisions by using the proper tools after deciding the type of the repair. Should organize repair process systematically. Functionality and operability of the parts must be secured as far as possible. During repair, adheres to all quality and safety standards and focuses on the details of the repairs with highest precision possible" (f=13; 92.86 %). It is seen that participants from Italy adhere with all the items (f=10; 100 %).

Four development steps have been identified for the ninth work process "Extension of Standards and Mounting of Accessories" qualification. It is seen that participants from Italy and Germany adhere with all the items (f=10; 100 %). Participants from Turkey adhere with the development step expressed as "Deals with equipment in a manner that shows the best technical performance and adheres to all legal provisions and standards stated by manufacturer. Contradictions between the customer's interest and ecological compliance of vehicle and traffic and operational safety must be resolved These issues should be explained to the customer properly" (f=12; 85 %) and "Takes special extension measures and makes them serve a purpose. The effects of the all vehicles on vehicle systems and features should be checked. Necessary parts should be supplied before service process. Order planning should be made. Installations should not prevent the functionality and safety of the vehicle" (f=12; 85 %).

Discussion and Conclusion

This research on the car mechatronics matrix as a mean for the realization of ECVET conducted within MASECVET also emphasizes the applicability of the matrix within different organizational and national contexts. The validation of the matrix by stakeholders in all countries showed that the tasks and development steps identified within the CarEasyVET project are similarly evaluated by the stakeholders from Turkey, Italy and Germany. It can, therefore, be considered as similar in those countries and therefore suitable as a basis of comparison for related qualifications in the context of ECVET and EQF. The matrix can be seen as a complementary opportunity for comparing qualifications on EQF levels but without the necessity of actually comparing individual learning outcomes assigned to a qualification. It has, therefore, a clear added value in order to make qualifications transparent across borders. However, the validation also opened up some weaknesses of this specific VQTS matrix in terms of applicability of individual competence/responsibility areas on the shop-floor level, which need to be further investigated in order to increase the matrix' validity and therefore its practical usability.

The VQTS model was originally developed in the context of ECVET mobility. This application area has been further investigated in some of the VQTS transfer projects (MOVET I/II, SME MASTER Plus, Trift). In all of these cases, the application of the VQTS matrix proved to be feasible although additional tools such as the

MOVET-taxonomy table (Küßner & Drews, 2011) have been considered to be necessary in order to practice this approach. It can, therefore, be concluded that the VQTS matrix car mechatronic will be able to support the implementation of ECVET mobility activities, especially in the longer-term mobility of several months. However, for short-term mobility, it is recommended that evaluators further refer to the taxonomy table and the overall approach applied within MOVET or to the further elaborated approach chosen by the study at hand in order to express competence development steps in terms of the EQF descriptors in order to provide an additional tool for the realization of short-term mobility.

The study results, as well as the results of a number of other European projects in this context, also demonstrate the successful additional application of VQTS matrixes in making qualifications comparable across borders that complements the approach chosen within the EQF. The claim that "curricula can be 'translated' and compared, and one can identify equivalences and differences of learning outcomes" (Luomi-Messerer, 2009, 81) with the VQTS tools is therefore highlighted. The development of tools such as organizational profiles for relevant qualifications/certificates can, therefore, be considered as highly valuable in order to support comparability and transparency of qualifications in trans-national and national contexts (Blings & Spöttl, 2008).

The validation of informal learning in the context of EQF and ECVET is still an area with huge deficits with regard to testing and piloting tools such as the VQTS model. However, this ECVET application area seems to be especially important when considering the high youth unemployment rates, the shortage of skilled workers and the potential that is seen for work-based learning (European Union, 2015). In these cases, the ECVET application area recognition of prior learning can strongly contribute to increasing the formal qualification of workers and young people by creating the opportunity of receiving recognition for informally achieving learning outcomes when entering into formal learning environments and of receiving recognition of formal qualifications when seeking job placement (abroad) (CEDEFOP, 2015). This study confirmed the clear link between work processes and competence development steps the car mechatronics matrix is based on. This can be considered as highly valuable in the context of the recognition of informal learning and, therefore, for the realization of Council recommendation 2012/C 398/01 on the validation of informal learning with ECVET (CEDEFOP, 2013c).

It can be concluded that the application and implementation of European tools in combination with operational approaches such as VQTS (Becker, Luomi-Messerer, Markowitsch & Spöttl, 2008) can bring added value to VET systems not only by providing greater transparency and comparability of qualifications across borders, but also as a catalyst for quality, labor market responsiveness and innovation within VET in general and in the automotive sector in particular.

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Avrupa Şeffaflık Araçları Bağlamında Elektromekanik Teknisyenlerin Niteliklerinin Değerlendirilmesi

Atıf:

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Özet

Problem Durumu: Otomotiv sektörü Avrupa ekonomisi ve işgücü piyasası için çok önemli bir sektördür. Bu sektör içerisinde küresel ölçekte bir rekabet söz konusudur. Dolayısıyla teknik ve beşeri yönden sürekli yenilenme bir zorunluluktur. Sektörde yer alan işgücünün becerilerinin sürekli olarak güncellenmesi gerekmektedir. Ayrıca sınır ötesinden işgücü satın alımı da yaşanan bir realitedir. Ülkelerin mesleki eğitim sistemleri arasındaki farklılıklar öğrenci ve çalışanların ülkeler arası hareketliliklerini zorlaştıran bir unsurdur. İşgücü piyasası ve Avrupa otomotiv sektöründeki rekabet, çalışanların niteliklerin ve hareketliliklerinin kıyaslanması ihtiyacını doğurmaktadır.

Araştırmanın Amacı: Bu araştırma Almanya, Türkiye ve İtalya için Otomotiv Elektromekanik Teknisyenliği yeterliliklerinin, European Credit system for Vocational Education and Training (ECVET) ve European Qualifications Framework (EQF) sistemlerine uyumunun değerlendirilmesi için yapılmıştır. Bu araçlar şeffaflığın sağlanması, ülke içi ve Avrupa mesleki eğitim sistemleri içinde sektörler ve seviyeler arasında becerilerin transfer ve farkındalığının sağlanması için işlevsel araçlardır. Bu çalışma Almanya, Türkiye ve İtalya'daki elektromekanik teknisyenliği yeterliliklerinin ECVET kapsamında uygulanmasını sağlayacak bir yeterlilik modeli geliştirmeyi amaçlamaktadır.

Araştırmanın Yöntemi: Araştırmada görüşme tekniğine dayalı nitel metot kullanılmıştır. Tam olarak yapılandırılmış görüşme formaları kullanılarak katılımcılarla bire bir görüşmeler gerçekleştirilmiştir. Çalışma grubunu amaçlı örnekleme yöntemlerinden ölçüt örnekleme yolu ile belirlenmiş toplam 34 otomobil servisi çalışanı oluşturmuştur.

Araştırmanın Bulguları: Araştırma bulgularına göre tüm katılımcılar kendilerine sunulan maddelere büyük oranda katıldıklarını ifade etmişlerdir.

Araştırmanın Sonuçları ve Önerileri: Hareketlilik ve yaşam boyu öğrenme faaliyetlerinin desteklenmesi ve bu kapsamda elde edilen öğrenme çıktılarının tanınırlığının sağlanması amacıyla Avrupa Komisyonu tarafından EQF ile eşgüdümlü olarak ECVET geliştirilmiştir. Bu çalışmalarının bir ürünü olarak gerçekleştirilen "Mobility in Automotive Sector through ECVET" projesi kapsamında "otomotiv elektromekanik teknisyenliği" yeterliliklerinin belirlenmesinde çeşitli aşamalardan oluşan bir yöntem ortaya koyulmuştur. Bu yöntemin yeterliliklerin belirlenmesinde etkin olduğu görülmüştür.

Araştırma sonuçlarına göre elektromekanik teknisyenliği iş süreçlerin yerine getirilmesi için ihtiyaç duyulduğu belirlenen yeterlilikler ile bu yeterlilikleri gerektirdiği bilgi, beceri ve yetkinlikler büyük oranda servis çalışanlarınca da onaylanmaktadır. Türkiye'nin iş süreçlerinin işgücünün hareketliliği ve kredilendirilmesi konularında diğer AB ülkeleriyle uyum içinde olduğu görülmüştür.

Anahtar Kelimeler: ECVET, yeterlilik, otomotiv, elektromekanik teknisyeni.

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Investigation of The Effect of Various Demographical Characteristics on Pre-Schoolers' Self Concept *

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ABSTRACT

Problem statement: An individual's childhood years are pre-school period years when he/she makes progress in every aspect of development. Before getting to know his inner circle, the child starts to know himself/herself first. People's opinions about the child are highly important as long as these people are close to the child and valuable for him/her. As a result of these people's negative or positive opinions about the child, he/she creates a negative or positive self concept.
Purpose of Study: Thus, the aim of this study is to analyze self concept of children, who are currently in pre-school period, in terms of various factors.
Method: 393 children, who are currently pre-school students in nursery schools and kindergartens that are affiliated to Afyonkarahisar Provincial Directorate of Turkish Ministry of National Education, are included in the sample. For collecting the data, "General Information Form" including information about the children and " Child's Perception of Self Concept" assessment tool, which was developed to assess five-six years old children's self concept, were used.
Finding and Result: As a result of the study, children's self concepts were highly different according to the type of school, their age and the educational background of their fathers. **Recommendations:** From this point of view, various suggestions, such as informing parents about the factors that are effective in forming self concept as well as informing them about the education that children get in the family and in pre-school institutions are effective for children's later years and carrying out studies about these development areas, are addressed to the parents, teachers and researchers.

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Introduction

The process of building and development of one’s personality begins with the mother's womb and develops with the influence of the environment from the moment it comes to the world. Characteristics such as personality, temperament, character, self concept and self-esteem make clear distinction among the individuals. Self concept, which is composed of the feelings, thoughts and perceptions about oneself, is the resultant structure gained through the individual experiences from birth onwards (Bakırcıoglu, 2002; Gallahue, 2003; Ersanli, 2012; Kenc & Oktay, 2002). The foundations of the self are laid between the ages of zero and six, while the baby is observing the people around him/her, taking a model and taking initiatives, separating himself / herself from the environment and interpreting the perceptions and emotions he got from his / her environment. Children learn positive or negative feelings about their own characteristics from the behaviors and reactions shown to them by the people around them (Berk, 2013, Kenc & Oktay, 2002, Öngider, 2013, San Bayhan & Artan, 2005).

Families that form close surroundings of children can affect children physiologically, economically and socially. At the same time, expectations of parents from their children, the attitudes and behaviors shaped according to these expectations and the parents’ communication with the children have a great importance in the development of the children (Bee & Boyd, 2009) and leave positive or negative permanent traces in their lives (Koksal Akyol & Sali, 2013). Children who are supported by their parents and who have a positive self concept feel happy and talk about themselves with pride. For this reason, the concept of positive self is the foreground for life-long happiness and satisfaction in the individual (İnan, 2013). However, some of the reasons such as economic stresses and fragmented family structures experienced by some mothers and fathers may cause families to exhibit negative attitudes towards their children, such negative attitudes affect the perceptions of the child itself in a negative way (Cagdas, 2009), therefore negative self concept can develop in the child who receive no support (Demoulin, 2000). It has been determined that parental attitudes are influential on the concept of children's self in many studies investigating the relationship between the attitude towards the child and the concept of self (Adana & Kutlu, 2009; Brown, Mangelsdorf, Neff, Sullivan & Frosch, 2009; Koksal Akyol & Sali, 2013; Rocha, Ingberman & Poreus, 2011, Yildiz Cicekler & Alakoc Pirpir, 2015, Yuksel, 2009).

The child under the influence of the family in his/her first years is influenced by the people around him/her in the following years. These individuals are inclined to support children's problems and contribute to the development of the concept of self as a correct model for children. Positive shaping of the self facilitates harmony within the society (Koksal Akyol & Sali, 2013). Robert Rosenthal (1994), in his study investigating the effect of teachers on the success of students, informed teachers at the beginning of the teaching year that randomly selected some children as unsuccessful, and that some children were successful. He stated at the end of the year that children who were told to be successful in terms of academic achievement improved more than children who were told to be unsuccessful. The teacher was found out to have a small but significant effect on the child's attitude, talents and success (as cited in Bee & Boyd, 2009).

During the infancy, the baby tries to define his/her surroundings via the mother and the father; however, later on the baby starts to care other people's opinions such as friends, teachers and people who are important to him/her. In addition, self concept continues to change according to the experiences about the characteristics such as good-bad, beautiful-ugly, successfulness-unsuccessfulness (Koksal Akyol & Sali, 2013) and factors such as school type, number of siblings, order of birth, parental education status, socioeconomic status of the family. Rasul, Nor, Amat and Rose (2015) pointed out that such an important concept of self affects the future life of the individual at a significant level and that individuals with a positive self concept had a good career choice. In addition, according to the literature, it has been found out that all the characteristics (such as intelligence - positive self) of the individuals with positive self concept are high (Perez Fernandez & Garaigordobil Landazabal, 2004), that the success they achieved assisted them to develop their self-esteem (Baran, 1999; Bayraktar Erten & Erten, 2014; Kuru Turasli & Zembat, 2013; Liu & Wu Ming, 2015; Senol Ozyigit, 2011), that children with inadequate self-esteem and unsuccessful attitudes had difficulties in forming a positive self concept (Yeung & Lee, 1999), and finally that concept of self affected on peer relationships together with verbal ability, mathematical ability and adaptive social behaviors (Spilt, Van Lier, Leflot, Onghena, & Colpin, 2014). In the relevant literature, it is also emphasized that individuals who are successful in academic sense have a positive self concept (Matthews, Ponitz, Morrison, 2009; Morrison, Ponitz, McClelland, 2010). This requires research into the factors that affect the development of the concept of self in children.

The richer the school experience of the child is, the faster the development of the concept of self becomes. School life offers some experience that the child should learn. In this period, the child prioritizes the various images which affect the formation of his concept of identity. In short, it is seen that the experiences that emerge in school life define and shape the self (Villa & Auzmendi, 1992). The concept of self is one of the most powerful factors in the process of healthy personality development. Especially in the process of development of the concept of self, the individuals question their ability, qualities, value judgments, and ideals by asking "What am I? What can I do? What are my value judgments? And what do I expect from life? ". In addition, with the concept of self, the individual distinguishes himself / herself from other individuals and creates a special space for himself / herself. He/she is tries to protect and develop this area. For these reasons, the positive development of the concept of self, which is one of the important topics in the literature in recent years, seems inevitable to create a healthy personality.

Hence, it is revealed that the concept of self, which starts with birth and has a life-long effect, needs to be provided in the early years for positive development. In order for the support to be provided, it is important to determine the factors affecting from the earliest years and to take measures related to them. Therefore, the general purpose of this study is to analyze pre-schoolers' self concept according to some variables (school type, the child's gender, age, birth order, number of siblings, parents' education level, monthly family income). In response to this general objective, the following questions were listed:

1. Are the self concept scores of children who are in pre-school education different according to the type of school they attend?
2. Are the self concept scores of children in pre-school education different according to the gender, age, order of birth and number of siblings of the child?
3. Are the self concept scores of children who are in pre-school education different according to their parents' educational status and monthly income of the family?

Method

Research Design

The screening model was used to investigate the self concept of the pre-schoolers in terms of some variables.

Research Sample

The population was comprised of pre-schoolers who were showing normal developmental characteristics and attending to one of the public kindergartens and nursery schools affiliated to Afyonkarahisar Provincial Directorate of Turkish Ministry of National Education during 2015-2016 academic year. In Turkey, early childhood education includes the optional education of children between 36-66 month who are under the age of compulsory primary education. Early childhood education institutions are often opened as nursery classes which serve only 48-66 month old children under the umbrella of a primary school with not more than two classrooms or public and private kindergartens which are directly affiliated to the Provincial Directorate of the Ministry of Education and has its own principal serving 36-66 month old children with optimal facilities. 393 children showing normal developmental characteristics were included in the sample according to the voluntary principle determined by simple random sampling. Of the children involved in the research; 51.1% were female, 48.9% were male, 32.3% were between 49-60 months, 67.7% were between 61-72 months, 46.1% were first child, 19.6% were middle child and 34.4% were the last child, 48.9% attended to independent kindergarten, 51.1% attended to the nursery classes affiliated to primary schools, 19.1% were single children, 55.2% had two siblings while 25.7% had three and more, 35.6% of the mothers were primary school, 20.4% were middle school, 22.4% were high school graduates, 22.6% had undergraduate or graduate diplomas, 15.3% of the fathers were primary school, 17.6% were middle school, 31.8% high school graduates and 35.4% had undergraduate or graduate school diplomas, 13.5% of the families had under 1000 Turkish liras, 49.1% of them are between 1001-2000 liras, 20.9% between 2001-3000 liras and 16.5% 3000 liras and over as monthly income.

Data Collection Tool and Application

As data collection tools, in order to collect data about the demographic characteristics of children "General Information Form" and to assess the self concept of children PCSC (Perception of Child' self concept) which was developed by Villa and Auzmendi (1992) for five-six-year-olds and adapted to Turkish by Karaca (2015) were used.

General Information Form

The form developed by the researchers included items inquiring the number of siblings, the age of the child, the birth order, the number of siblings, the educational status of the parents, and the monthly income of the family. General information forms were filled out by researchers for each child according to the information in the personal development files of the children in the school.

Perception Of Child Self concept-PCSC Scale Validity and Reliability

The scale, which was developed by Villa and Auzmendi (1992) for five - six years old children with the purpose of assessing self concept has been used to identify children with positive or negative self concept simply and economically. It can be applied to children between the ages of five and six as an individual or small group. The scale consists of thirty-four items and thirty-four pictures of each item, and the application takes 15-20 minutes for each child. During the application of the scale, items related to the pictures are directed to the child and the answers given by the child are of the four-point Likert type (eg. choices of the 11th problem: 1. I always dress dirty clothes, 2. I often dress dirty clothes, 3. I often dress clean clothes, 4. I always dress clean clothes) and researchers record the response accordingly. The scale is scored from one to four, with 1 being the lowest and 4 representing the highest self concept. However, there is a reverse scoring in the 13th item and 1 point is evaluated as 4 points and 1 point as 4 points. The application of the scale should be in a relaxed atmosphere and requires the removal of time pressure, tension and distracting stimuli as far as possible. It is also recommended that the group to which the scale is applied should not exceed 10 children (preferably fewer numbers in younger age groups). The internal consistency of the test was found out to be .79 by Villa and Auzmendi (1989) for the validity and reliability study of the child's self concept perception. Another study was conducted by Ikastolas de Gipuzkoa Federation in the French Basque Region in 1990-1991 and internal consistency was found out to be .83 (as cited in Villa & Auzmendi, 1992). According to the studies it has been determined that "Perception of the Child's Self concept" is a valid and reliable instrument that can be adapted to all cultures in determining the concept of self. In Turkey, Karaca (2015) conducted a study on adaptation of the scale to Turkish. In the process of adaptation of the scale to the Turkish version, the instrument was first translated into Turkish by Spanish language experts (2 experts). Field experts, then, assessed the *content validity of* the Turkish translation of the guidelines to be carried out and assessment criteria in terms of its for compliance with the Turkish culture. As a result of the expert opinions, the content validity index (CVI) was found as 0.93, which means that all the items in the scale are necessary and the content is valid. There was a significant positive correlation between the scores of the raters (r = .996, r = .996, r = .997) and according to the item total correlation of the evaluation criteria and Cronbach alpha analysis results, the reliability coefficient was found to be .69 and the majority of the item total correlations were sufficient for the whole test, and the scores in the lower 27% and upper 27% groups were significantly different (t=-19, p <.01). Accordingly, it has been determined that the scale has a high level of discrimination and internal consistency in the assessment of self concept perception. The reliability of the scores obtained from the first and second applications of the scale (r = .999, p <.01) was found to be positive, high and significant. Thus, it was determined that the scale showed a stable structure depending on the time.

Data Analysis

In the analysis of the data collected; descriptive statistics such as frequency and percentage were used to assess the demographic characteristics of children and their families. In the analysis of the data obtained from the "Perception of the Concept of Self concept", the Kolmogorov-Smirnoff (KS) Test was used to examine whether the scores showed a normal distribution. It was determined that the values for homogeneity were less than 0.05 (Butuner, 2008), that is, they did not show normal distribution. Mann Whitney-U test was used to reveal whether there was any difference in the concept of self according to variables such as age, gender and school type. Meanwhile, Kruskal Wallis-H test was used for the same purpose for multiple comparisons among the variables such as parental education status, child's birth order, number of siblings, and monthly income of the family. When differences between groups were examined; the level of significance was set as 0.05 (Buyukozturk, Kilic-Cakmak, Akgun, Karadeniz & Demirel, 2011).

Results

The results of the research conducted to examine the self concept of pre-schoolers according to some variables (school type, child's gender, age, order of birth, number of siblings, educational status of parents, monthly income of family) are presented below.

Table 1

Results of the Mann Whitney U Test Regarding the Percentage of Self concept Score by School Attendance

School Type	*Perception of the child's self concept*					*MWU*		
	n	$\overline{X}$	*Min.*	*Max.*	*SD*	*Mean Rank*	*U*	*P*
Independent Kindergarten	192	119.822	91	134	7.850	250.30	9063.0	**.000** *
Nursery Class	201	111.706	83	130	8.964	146.09		

* p <.05

As shown in Table 1, according to Mann Whitney U test result; (U = 9063.0, p <.05) significant differences were found in the mean scores of the self concept of children attending independent kindergartens and nursery classes affiliated to primary schools. Considering the mean rank, it was seen that the scores of the children attending to independent kindergartens were higher than the children in the nursery schools. As a result, it can be said that children who attend to independent kindergartens have a higher and positive self concept.

Table 2

Mann Whitney U Test Results on Gender and Age of Children's Self concept Score Means

		Perception of the child's self concept				*MWU*	
		n	*M*	*SD*	*Mean Rank*	*U*	*P*
Gender	Female	201	115.582	9.737	196.73	19241.5	.961
	Male	192	115.765	8.964	197.28		
Age	48-60 Months	127	117.488	8.001	215.46	14546.0	**.026**
	61-72 Months	266	114.804	9.834	188.18		

* p <.05

Table 2 presents that, according to Mann Whitney U test result, no significant difference was found between the self concept mean scores of males and females (U = 19241.5, p> .05). According to this result, it can be said that the gender variable is not effective in children's self concept.

Another finding is that a significant difference was found in the mean of the self concept scores according to the ages of the children (U = 14546,0; p <.05). When the mean rank is taken into consideration, it is seen that children between 48-60 months have higher self concept scores than children between 61-72 months. It can be concluded that as the age of the children are smaller, the concepts of self become higher and more positive.

Table 3

Kruskall-Wallis H Test Results on the Self concept Score Means According to the Children's Birth Order and Number of Siblings

		n	*M*	*SD*	*Mean Rank*	*Kruskall-Wallis H*	
						X^2	*P*
Birth Order	First Child	181	115.668	9.001	196.19	3.124	***.210***
	Middle or one of the middles	77	117.311	9.105	215.89		
	Last child	135	114.740	9.889	187.31		
Number of siblings	Single child	75	117.360	9.174	220.81	5.545	.062
	2 siblings	217	115.788	9.089	196.64		
	3 siblings or more	101	114.168	9.897	180.08		

As seen in Table 3, according to Kruskall-Wallis H test result, it was found out that children's birth order did not make a significant difference in the mean scores of self concept (X^2= 3.124; p <.05). Thus, it can be said that the birth order variable is not effective in the self concepts of children.

Meanwhile the number of siblings of children did not make a significant difference in the mean scores of self concept (X^2= 5.545, p> .05). As a result, it can be said that the number of siblings is not effective in the self concepts of children.

Table 4
Results of the Kruskall-Wallis H Test Regarding the Self concept Score Means According to the Educational Status of the Parents of Children

	Education status	n	M	SD	Mean rank	Kruskall-Wallis H X^2	P	Significant Difference
Mother's Education Status	Primary school	140	114.985	9.985	191.5	4,111	.250	
	Middle School	80	114.4	9.566	180.67			
	High school	88	116.909	8.805	212.74			
	Undergraduate - above	85	116.717	8.491	205.13			
Father's Education Status	Primary school (1)	60	113.116	10.694	168.61	8.048	.045 *	1-3 1-4
	Secondary school (2)	69	114.536	8.584	179.83			
	High school 3)	125	116.624	10.08	211.73			
	Undergraduate-above (4)	139	116.482	8.196	204.53			

* p<.05

As presented in Table 4, according to Kruskall-Wallis H test result, it was found out that mothers' educational level did not make a significant difference in self concept mean scores (X^2= 4.111, p> .05) while the educational level of the father caused significant differences in self concept mean scores (X^2= 8,048; P <.05). When the mean rank scores of the fathers are considered, it is seen that the children of the fathers graduated from high school or those who hold bachelor's and master's degrees have caused higher self concept scores compared to the children of the fathers who are primary school graduates. As a result of this study, it can be said that children's self concept gets higher and more positive as fathers' education status increases.

Table 5.

Results of the Kruskall-Wallis H Test on the Perceptions of Self concept Mean Scores of by Children's Families Monthly Income

Monthly Income	n	M	SD	Mean rank	Kruskall-Wallis H X^2	P
1000TL and below	53	113.792	9.297	171.27	3.257	.354
1001-2000	193	115.740	9.741	199.98		
2001-3000	82	116.390	8.766	204.63		
3000 and above	65	116.092	8.954	199.52		

When Table 5 is examined, according to Kruskall-Wallis H test result, monthly income of the families did not make a significant difference between the mean scores of self concept of children (X^2= 3,257, p> .05). This result can be said that the monthly income of the family variable is not effective in the self concepts of the children.

Discussion and Conclusion

In order for healthy personality development to occur in the individual, the concept of self must be supported positively from the moment he/she comes to the world. Especially, the fact that the bases of the personality is formed in pre-school period increases the importance of this process. One of the most important features of the pre-school period and education is that the child can learn about himself/herself, what he/she feels about him, and what skills he/she should possess to cope with his surrounding world. The awareness of the child is not limited only to the awareness of the body and the senses, but also to the awareness of their emotions (Senemoglu, 1994). The child's feelings and self concept are influenced by pre-school children's love and acquired values provided by parents, interaction with their peers, success and failure in school life, and many life experiences. The result of this influence directly affects the positive or negative self concept that the child has made about himself/herself, the physical and mental health, the interactions with other people and the nature of these interactions, the academic success of the person, the choice of profession and the many choices he makes in life (Onur, 2004). Children who have a positive self concept have positive perceptions and emotions about themselves and at the same time they think that they are valuable and loved by the environment (Cuceloglu, 1998, Feldman, 2004, Schaffer, 2004, Yavuzer, 2004). How important it is for children to have a positive self concept is determined by studies that emphasize that the child is supported regarding the concept of self in a positive way with different education programs in education (Bao & Jin, 2015; Breslin, Murphy, McKee, Delaney & Dempster, 2012; Feilth, Renzulli & Westberg, 2002; Justo, 2008; Önder, 2006; Pan, Deng, Tsai, Sue & Jiang, 2014; Senol Özyigit, 2011; Uysal & Balkan, 2015).

The concept of self, which is a dimension of personality, begins to develop with the birth and shows its effect in every period of life. Broc (1994) also found that children with positive self-perception are more creative than children with negative self-perception, and that anxiety levels are lower, more open-minded, memory-lively, social and curious children (cited as in Justo, 2008). According to this, the environment in which the child is educated during the development of the concept of self in children, the communication and interaction with the parents and the immediate surroundings in this environment, the educational status of the parents, the type of school the child is attending, the number of siblings, the order of birth are all expected to be effective at a considerable level in the development of the positive or negative self concept.

In the study conducted, it was found that the factors that are effective in the development of the concept of self such as school type (Table 1), the age (Table 3) and the father's education status (Table 6), caused a significant difference in the self concept. In terms of these findings, it was observed that children who attended kindergartens had higher self concept scores than children who were educated in nursery classes affiliated to primary schools. The fact that the conditions of kindergartens are more adequate in terms of facilities and the number of staff in charge in comparison with the nursery classes may have contributed to the difference in the number of staff. It may also be a difference that the education levels of these children’s parents and their economical status may be more advantageous than those of children who attend nursery classes. However, it is evident that that there are limited studies on the relationship between school type variable and self concept in pre-school period. According to the the research findings, mean scores of children’s self concept decrease as the age of children increase. In this context, Kilicarslan (2012); Alisinanoglu and Koksal (1999) stated that there was not a significant relationship between the age of children and self concepts while Ocak and Sarlik (2016) argued that academic esteem of children was affected by age. In this study, on the cause of the decline in self concept scores as children’s ages increase, it can be said that children perceive their self concepts superficially and more positively than other periods of whereupon in parallel with the increasing age they begin to think more realistically the characteristics about themselves and this might cause a decrease in the perception of self concept. When we look at the relationship between the self concept of children and educational level of the fathers who are effective in the development of the concept of self; although Dilek and Aksoy (2013) and Ocak and Sarlik (2016) reported no statistical difference there are studies reporting that fathers holding undergraduate or graduate degrees have affected children’s self concepts (Zincirkiran, 2008), self-perceptions (Vidinlioglu, 2010), academic self-esteem (Can, 2015), and self-esteem (Kucukosmanoglu, 2013). These findings are parallel with the findings obtained in this study. Parents' self-development is closely related to the effectiveness of communication with each other, their expectations, their educational level. Therefore, as the educational status of the parents increases, the relationship between the spouses and the child may be of good quality, the sensitivity of the children's interests and needs may be more sensitive and the anxiety reasons for both parents and children may be reduced.

It was found that the gender of the children (Table 2), the birth order (Table 4), the number of siblings (Table 5), the education level of the mother (Table 6) and the monthly income of the family (Table 7) did not make a significant difference regarding the children’s self concepts. The relationship between the gender of the children and the self concept scores of females and males were found to be very close to each other. Although there are studies reporting the similarity of the concept of self according to the gender (Aral & Koksal,1999; Ocak & Sarlik,2016; Bayraktar Erten & Erten, 2014; Goni & Bello, 2016; Ozmentes, 2014; Secer, İlbay, Ay & Ciftci, 2012), there are also opposite findings reported so far (Can, 2015; Halici, 2005; Hyun, Kim & Kim, 2004; Janik & Jurak, 2014; Kilicarslan,2012; Koksal Akyol & Sali, 2013). Ercan (2005), Cevher and Bulus (2006), found that females had a higher self-perception than males in their pre-school years while Seremet (2006) asserted that self-perceptions of males were more positive compared to those of females in the pre-school period. Sexual identity means that the individual is aware of his / her sexual characteristics so it does not matter if the individual is a girl or a boy. The important thing is that the child is aware of his/her roles as a boy or a girl which is an important influence in gaining sex-related qualities. As a result of the research, there is no significant difference between male and female children and self concepts, and it can be a sign that girls and boys have their own sexual identity. In the other research results, it can be said that the significant difference between girls and boys and self-perceptions can arise from the viewpoint of the gender of the individual's surroundings and therefore the individual cannot acquire the characteristics of the gender. Middle children's self concept scores were found to be higher than self concept scores of first and last children. These behaviors and attitudes suggest that parents of middle children are more comfortable and experienced compared to the excellence attitudes and behaviors they have shown to their first-born children, and that children can find more comfortable environments and opportunities to express themselves. It was also found that single children had higher self concept scores than children who had more siblings. Among the reasons for this, it can be said that the parents who have one child are more interested in their children than the parents of many children, the interests and needs of their children, and also the opportunities for the child to express and develop the child in different ways like sports and art. Zincirkiran (2008) determined that the self concept scores of the children who were in pre-school period did not show any significant difference according to the number of siblings. When the results are analyzed according to the monthly income of the families, it was determined that the children of the families with a monthly income of 2000 TL or more have higher self concept scores than the children with a monthly income of 2000 TL or less. The monthly income of the family influences the social relations of family members, their education and their plans for the future with their children. Because establishing an appropriate environment for their children, meeting their needs requires a certain economic strength. As a result, as the monthly income of the family increases, it can be said that the child has more opportunities for appropriate environment that are effective in the development of the self concept. In this regard, Gurbuz and Sarlik (2016) argued that as the socioeconomic status of the families increased, children's academic self-esteem levels increased while Gokalan (2000) and Gursoy (2006) reported an increase in children's self concept designs. Likewise, Ercan (2005) and Sahin Yanpar (1994) stated that children coming from families at high socioeconomic status had higher self concept levels.

In the light of the results, it can be said that the concept of self should firstly be supported by parents, peers and pre-school education. Therefore, training programs can be prepared for the subjects such as factors affecting the development of self concept, effective communication, positive behavior development, and trainings for parents and teachers can be organized. In these programs, information regarding the factors that affect positive development of self concept such as school types, parental education level and age. Individual interviews can be carried out to identify the missing information and malpractices so that the effect on these characteristics of children can be positive by conducting interventional approaches. Morover, it is possible to organize informative media for parents (brochures, banners, advertisements, booklets, public service ads) for giving information about the effects of family environment and pre-school education on the child's personality, social and self-development. In the development of the concept of self, the teachers, who are as important as the parents, can affect the success or failure of the child. For this reason, awareness gatherings (such as training sessions, conferences, seminars) about the importance of the positive self concept acquired in pre-school period in the future life of the child can be organized for pre-school teachers. It is also seen that the studies about the variables especially about the concept of self in the pre-school period are inadequate. For this reason, it may be suggested that researchers should conduct more extensive sampling studies on the subject.

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Okul Öncesi Dönem Çocuklarının Benlik Kavramına Çeşitli Demografik Özelliklerin Etkisinin İncelenmesi

Atıf:

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Özet

Problem Durumu: Bireyin, çocukluk yılları her alanda en hızlı gelişim gösterdiği okul öncesi dönem yıllarıdır. Bu dönemde çocukların zihinsel, fiziksel, sosyal duygusal ve bilişsel gelişim alanları ile birlikte kişilik gelişiminde temelleri atılmaktadır. Çocuk ilk önce kendini daha sonra yakın çevresini tanır. Bu tanıma sürecinde çocuğun yakınında ve çocuk için değerli olan kişilerin çocuk hakkındaki düşünceleri önemli yer tutar. Bu kişilerin çocuk hakkındaki olumlu ya da olumsuz görüşleri sonucu çocuk kendinde olumlu ya da olumsuz benlik kavramı geliştirir. Çocuğun geliştirdiği benlik kavramı ise kişilik gelişimini önemli derecede etkiler. Bu süreçte çocuğun aldığı eğitimin yanında, çocuğun devam ettiği okul türü, kardeş sayısı, doğum sırası, anne-baba öğrenim durumu, ailenin sosyoekonomik durumu gibi

etkenler sonucu devamlı olarak şekillenmekte ve değişmeye devam etmektedir. Okul öncesi eğitimin amacı, çocukların fiziksel, motor, bilişsel ve sosyal-duygusal gelişmelerini sağlamak ve iyi alışkanlık kazanmak, çocukları ilköğretime hazırlamak, uygun olmayan koşullarda yaşayanlar için ortak bir büyüme ortamı oluşturmak ve Türkçenin doğru ve iyi konuşulduğundan emin olmaktır. Bu amaçlar doğrultusunda çocuğun aldığı okul öncesi eğitim benlik kavramının gelişim sürecinde önemli yer tutmaktadır. Türkiye'de okul öncesi eğitim 36-66 yaş çocuklarının zorunlu ilköğretim öncesi isteğe bağlı eğitimidir. Okul öncesi kurumları genelde 48-66 aylık çocuklara hizmet veren, ilkokul çatısı altında genelde ikiden fazla sınıfı olmayan "anasınıfları" ya da özel ve devlete ait kendi müdürüne sahip, doğrudan il milli eğitim müdürlüğüne bağlı en uygun olanaklarla 36-66 aylık çocuklara hizmet vermeye çalışan "bağımsız anaokulları" şeklinde açılmıştır. Aynı zamanda türkiye'de anneleri çalışan 0-36 aylık çocuklar için özel gündüz bakım evleri de hizmet vermektedir. Benlik kavramının gelişmesi ve şekillenmesinde eğitimin yanında çocuğun kardeş sayısı, doğum sırası, anne-baba öğrenim durumu, ailenin sosyoekonomik durumu gibi etkenlerde önemli yer tutmaktadır.

Araştırmanın Amacı: Bu çalışmada okul öncesi eğitime devam eden çocukların benlik kavramlarının bazı değişkenler (okul türü, çocuğun cinsiyeti, yaşı, doğum sırası ve kardeş sayısı, anne-baba öğrenim durumu, ailenin aylık geliri) açısından incelenmesi amaçlanmıştır. Bu genel amaç doğrultusunda aşağıdaki sorulara cevap aranmıştır.

1. Okul öncesi eğitime devam eden çocukların benlik kavramları puanı eğitime devam ettikleri okul türüne göre farklı mıdır?
2. Okul öncesi eğitime devam eden çocukların benlik kavramları puanı çocuğun cinsiyeti, yaşı, doğum sırası ve kardeş sayısına göre farklı mıdır?
3. Okul öncesi eğitime devam eden çocukların benlik kavramları puanı anne-baba öğrenim durumu ve ailenin aylık gelirine göre farklı mıdır?

Metot: Araştırmanın örneklemine, Afyonkarahisar il Milli Eğitim Müdürlüğü'ne bağlı anaokulu ve anasınıflarında okul öncesi eğitime devam eden 393 çocuk dâhil edilmiştir. Araştırmanın verileri, çocuklara ilişkin bilgileri içeren "Genel Bilgi Formu" ve çocukların benlik kavramlarını değerlendirmek amacıyla beş-altı yaş çocukları için geliştirilmiş olan Çocuğun Benlik Kavramını Algılaması ölçme aracı kullanılmıştır. Çalışmada öncelikle "Çocuğun Benlik Kavramını Algılaması" ölçme aracına Türkçe'ye uyarlama çalışması yapılmıştır. Uyarlama çalışmasında Türkçeye çevirisi yapılan ölçme aracının kapsam geçerliği ve Türk kültürüne uygunluğu için uzman görüşüne başvurulmuştur. Aynı zamanda değerlendiriciler arasındaki güvenirlik, madde toplam korelasyonu ve Cronbach alfa analizi, alt %27 ve üst %27'lik grupların ortalama puanları arasındaki farkların anlamlılığı, Test-tekrar test güvenirliği çalışması yapılmıştır. Okul öncesi eğitimine devam eden çocukların benlik kavramlarını belirlemek için kullanılan ölçme aracındaki puanlarının normal dağılım gösterip göstermediği Kolmogorov-Smirnoff (K-S) Testi ile incelenmiştir. Yapılan normallik testi sonucunda; ikili karşılaştırmalarda Mann Whitney-U testi, ikiden daha fazla karşılaştırmalarda ise Kruskal Wallis-H testi ile analiz edilmiştir.

Bulgular ve Sonuç: Araştırma sonucunda; çocukların devam ettikleri okul türüne, çocuğun yaşına ve baba öğrenim durumuna göre benlik kavramlarının anlamlı düzeyde farklı olduğu, çocuğun cinsiyetine, doğum sırasına, kardeş sayısına, anne öğrenim durumuna ve ailenin aylık gelirine göre benlik kavramlarının anlamlı düzeyde farklı olmadığı belirlenmiştir. Elde edilen sonuçlar doğrultusunda çocuklarda olumlu benlik kavramı geliştirebilmesinin ne denli önemli olduğu vurgulanmıştır.

Öneriler: Anne-babanın çocuğun okul öncesi dönemde aile de ve okul öncesi kurumlarda alacakları eğitimin kişilik, sosyal ve benlik gelişiminin çocukların gelecek yıllarının etkisi üzerine bilgi verilerek, farklı çalışmalar (broşür, afiş,ilan, kitapçık, medya ve basın ile işbirliği içerinde reklam gibi) yapılabilir. Ayrıca çocuğun benlik kavramı gelişiminde anne ve babalar kadar önemli rolleri olan öğretmenlerin de çocuğun başarılı ya da başarısız olmasında etkili olabilmekte ve ileriki eğitim hayatını etkileyebilmektedir. Bu nedenle okul öncesi eğitimi ile ilgili olan eğitmenlerin okul öncesi dönemde kazanılan olumlu benlik kavramının çocuğun ileriki yaşantısında ne denli önemli olduğu ve etkilediği konusunda bilgilendirme çalışmaları (eğitim uygulama, konferans, seminer gibi) yapılabilir.

Anahtar sözcükler: Erken çocukluk, sağlıklı kişilik gelişimi.

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Prospective Chemistry and Science Teachers' Views and Metaphors about Chemistry and Chemical Studies*

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ABSTRACT

Purpose: The aim of this study was to examine the metaphors created by prospective chemistry and science teachers and their views about how the studies in the field of chemistry are carried out in relation to the grade level and department.

Research Methods: Case study as a qualitative research design was used. Participants in the study included 16 freshmen and 25 senior prospective chemistry teachers and 52 freshmen and 41 senior prospective science teachers. The data were analyzed with content analysis.

Findings: The findings revealed that prospective teachers' views of chemistry were generally correct. However, a few of the participants' views were embedded with misconceptions. Also, the metaphors showed that they had different views toward chemistry.

Implications for Research and Practice: The views of prospective chemistry and science teachers are similar to each other, and the results are more comprehensive and detailed for the last-grade students. When prospective teachers' metaphors about the chemistry and justifications are compared in terms of grade levels, it is seen that the justifications put forth have various similarities and differences. When the findings obtained from the research are compared in terms of different fields, similarities and differences are present together in the results. It is seen that the metaphors set up by the prospective teachers are quite different from one another when they are compared in terms of the fields. It can be suggested that metaphors in different concepts and topics could be examined and studies could be conducted by determining the gaps in those areas.

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Introduction

In 2004-2005, Turkish educational curricula were totally revised, starting from primary education on up, based on the reform movement in education. Instead of being based on the philosophy of behaviorism which fostered the transfer of knowledge to the students, constructivism was adopted as the new philosophical understanding because it allows learners to construct their own knowledge. According to the constructivist approach, knowledge is not directly transferred to other people from the knower; but instead learners construct the knowledge themselves (Driver, Asoko, Leach, Scott & Mortimer, 1994). In this direction, the new curricula described the branches of science, such as physics, chemistry, and biology, within the framework of the constructivist viewpoint. The new chemistry curriculum aimed to raise chemistry literate individuals with knowledge about the role and value of chemistry in everyday life, are interested in chemical issues, and have critical thinking skills (The Ministry of National Education-MNE, 2013). Students who take science courses in accordance with this goal have an accurate and contemporary understanding of scientists working in chemistry and in the field of science.

The new perspective given by the constructivist approach also provides alternatives to the assessment and evaluation processes. In addition to traditional assessment tools, the use of alternative tools, such as scoring rubric keys, portfolio evaluation, and concept mapping, is becoming increasingly important. In this way, it will be possible to obtain more detailed answers in the assessment and evaluation process regarding not only what the knowledge is but also how the individuals structure the knowledge in their minds. From this point of view, the research has benefited from metaphors that can be used as alternative assessment tools.

Thinking with metaphors is an important part of the scientific thinking process. The word metaphor comes from the Greek word "metapherin". "Meta" means to change and "pherein" means to carry. Thus, metaphors, or "carrying changes", help people to transform what they already know into new insights (Levine, 2005). The concept of metaphor is taken as a "trope" and is described as "using a word or concept in a way other than their accepted meaning" (Turkish Linguistic Society-TLS, 2016). This means that metaphors help us understand the world through more familiar things (Lakoff & Johnson, 1980). Metaphors are structures that facilitate the disclosure of abstract concepts and help to present them in a concrete way (Gultekin, 2013).

According to Lancor (2014), it is possible to learn about how students or teachers conceptualize abstract and concrete issues with the help of metaphors. Experienced teachers know that students have their own ideas about phenomena, and these ideas sometimes seem very different from teachers' ideas (Demircioglu, Demircioglu, & Ayas, 2004). Accordingly, Derman (2014) states that metaphors are constructed based on experience; therefore, each of the constructed metaphors can be evaluated as an experience. In this way, metaphors can be alternative assessment tools to learn about the perspectives of students. Metaphors also help educators compare different concepts or find similarities between them and explain them interchangeably (Saban, 2004).

In recent years, educators have focused on determining the views of participants from different levels on various topics and concepts through metaphors, and in these studies, they have examined concepts such as teacher (Saban, 2004; McEwan, 2007; Aydin & Unaldi, 2010), student (Saban, 2009), and school (Saban, 2008). Chemistry can be thought of as an area where students can create rich metaphors because it examines the visible (macroscopic) and invisible (submicroscopic) areas. Especially in recent years, studies on metaphors for the concept of chemistry can be encountered in national and international literature (Jeppsson, Haglund, Amin, & Stromdahl, 2013; Derman, 2014; Donmez Usta, & Ultay, 2015). Jeppsson et al., (2013) used conceptual metaphors to solve the problems of entropy. The results emphasize the importance of including conceptual metaphors in the teaching of difficult subjects such as entropy. Derman (2014), on the other hand, pointed out the metaphors high school students used for chemistry concepts in their research. According to the results, it has been stated that state school students produce the most different metaphors and that the metaphorical perceptions provide indications about their perspectives of chemistry and their attitudes toward chemistry. The study conducted by Donmez Usta & Ultay (2015) aimed at determining the metaphors for "chemistry" used by prospective pre-school teachers at different grade levels. The findings of the study show that prospective teachers in different grades have similar metaphors about "chemistry".

A review of the related literature showed that studies conducted with prospective teachers include different branches, whereas a study in which the metaphoric perceptions of prospective science and chemistry teachers are evaluated together does not exist. Furthermore, any study that comprehensively presents the opinions regarding the metaphoric perceptions in a single area of study cannot be found in the literature. This research study aims to interpret the metaphoric perceptions of prospective teachers by also taking their opinions into consideration. In this way, it will be possible to assess the cognitive perceptions of prospective teachers together with their concrete definitions of concepts. The disciplines of chemistry and science study not only the visible phenomena but also those that are invisible and at the microscopic level. The phenomena taking place at the microscopic level contain different abstract concepts and the metaphors are accordingly the product of abstract thoughts. Also, sometimes a daily life event or situation can be explained in abstractions and it allows the relation with daily life to be indirectly constructed. In this respect, how the prospective teachers' opinions about chemistry can be explained in metaphors will be interpreted in the light of the findings of the research.

In addition, research carried out in different grade levels within the studies, specifically on chemistry, are conducted only with prospective pre-school teachers and these studies do not investigate the results regarding the grade differences both in science and in chemistry. In the light of the related literature, it is thought that we are in need of studies where prospective teachers' views about the field of chemistry are examined in detail.

In this context, the research will reveal the metaphorical perceptions of the prospective teachers as well as their views of the subject; in this way, the coherence between the metaphorical perceptions and the views on the subject will also be revealed. The research subjects are prospective science and chemistry teachers. The reason for choosing these two different groups is that prospective teachers in both fields are the ones who will teach chemistry to their students in the future and will influence their attitudes toward chemistry. Prospective teachers from these two different areas will also teach in the transition process from the secondary school to high school. Thus, prospective chemistry teachers would educate students who were previously educated by prospective science teachers, and therefore it is important to figure out the views of prospective teachers in different fields about chemistry. In addition, prospective teachers can reflect on their views on education from their high school experience onto their university education in the first years. With the various courses they have taken in university, especially with subject matter courses that are specific to the field of chemistry, their views may change by the last years of university education. In this context, it is thought that the examination of the views from different grade levels will contribute to the field. In this way, a richer portrait of the views of prospective teachers will be presented by examining the similarities and differences between the views of prospective teachers from different grade levels and different departments.

In this direction, the research aims to examine the metaphors created by prospective chemistry and science teachers and their views about how the studies in the field of chemistry are carried out in relation to the grade level and department.

Toward this end, answers to the following questions were sought:

1. How do the metaphors of prospective science and chemistry teachers about chemistry and their justifications differentiate according to the grade level and the department?

2. How do the views of prospective chemistry and science teachers about chemistry differentiate according to the grade level and the department?

3. How do the views of prospective chemistry and science teachers about chemical studies differentiate according to the grade level and the department?

Method

Research Design

The research is structured within the framework of the interpretive paradigm. Qualitative data collection and analysis methods were used in order to examine participants' explanations and metaphors of chemistry thoroughly. For this purpose, the research method of the study was case study from qualitative research designs. The research was conducted as a multiple holistic case study design. This design contains multiple situations that can be perceived as holistic on their own. Each situation is handled holistically within itself, and afterwards they are compared with each other (Yin, 2008).

Qualitative research is defined as research that uses data collection methods, such as observation, interview, and document analysis, and follows a process in order to present perceptions and events in a natural, realistic and integrative way. The most important feature of the case study, one of the qualitative research methods, is the detailed examination and investigation of a case. The various components of a case are examined in its natural environment with an integrative interpretation. The focus is on the interactions of the components with the related case (Yildirim & Simsek, 2013).

Research Sample

The research was carried out in the spring semester of the 2014-15 academic year, and the participants were 16 prospective teachers (4 male, 12 female) studying at the first grade and 25 (4 male, 21 female) studying at the last grade of the chemistry teaching department and 52 prospective teachers (7 male, 45 female) studying at the first grade and 41 (7 male, 34 female) studying at the last grade of the science education department of a public university in Istanbul. Participants were 18–23 years of age. Prospective teachers participating in the research were selected from the students taking the courses given by the researchers. In this context, the research used easily accessible case sampling method from purposeful sampling methods.

Chemistry teaching is a five-year program and in this program the prospective teachers take chemistry-weighted courses as they are being prepared to teach chemistry at the secondary school level. They also take courses in pedagogical education. The program's chemistry courses are given by the Department of Chemistry at the Faculty of Arts and Sciences and the pedagogical courses by the Faculty of Education. The Science Education Department, on the other hand, offers a four-year program and the prospective teachers take courses in different fields such as physics, chemistry, and biology, as they are being prepared to teach sciences at the primary school level. In addition, the prospective teachers complete their pedagogical education in the related unit of the university. Prospective teachers of both branches prepare different lesson plans within the course of their education and use these plans in their internship practice. Internship courses are given in the fall and spring semesters of the last year in both departments and allow the prospective teachers to practice teaching in their field of study.

Research Instruments and Procedures

The research data were collected by three open-ended questions prepared by the researchers. Two of these questions aimed to measure what chemistry is and how chemistry studies are conducted, while the final question asked participants to identify metaphors for the concept of chemistry. Thus, in the last question, the prospective teachers were asked to complete the sentences "chemistry is like..., because…". They were also told to construct only one metaphor and to explain the relation between the metaphor that they have constructed and chemistry.

There was no time limit for students to answer the questions. The researchers took active roles in the class during the collection of the research data and clarified the questions that the prospective teachers did not understand. Also, in order to increase the variety of metaphors to be created by prospective teachers about chemistry and to structure their justifications, various examples of metaphor (school, teacher, student etc.) were provided by the researchers beforehand. In addition, the prospective teachers were not allowed to communicate with one another while answering the questions.

Validity and Reliability

During the analysis of the data, the researchers codified the data independently of each another. Afterwards, they came together and discussed the consistencies and inconsistencies in their codifications. According to Lederman, Abd-El-Khalick, Bell & Schwartz (2002), when more than one researcher is involved in an analysis process, establishing inter-rater agreement or reliability is a very important part of the study. The consistency among researchers in such a situation is achieved when the researchers analyze the same data sets independently of each other. The inconsistencies are addressed and either different data sets (such as interview data) are used together or the researchers come to an agreement on one particular data set. Because this research involved a single data set, consensus among the researchers ease the goal.

The consistency between the encodings in the study was determined by the formula for the agreement percentage set by Miles and Huberman (1994). For this reason, the data were also evaluated by another expert from the field of science education. According to Miles and Huberman (1994), analyses are reliable when there is a consistency of 80% and over between two encodings. In this study, it was determined that the data obtained from the research was 86% consistent.

Data Analysis

The analysis of the research data was evaluated separately for each question and in this process, content analysis was carried out in order to examine the data in more detail. Accordingly, the data were first coded separately, and then the themes were constructed. The themes were then presented in tables. Metaphors constructed by prospective teachers were first coded according to justifications and then transformed into themes. Subsequently, the constructed metaphors were categorized and interpreted under these themes.

In order to increase the clarity of the findings, the results are presented with frequency and percentage values in terms of each of the themes. Because some themes were expressed by more than one prospective teacher, the sum of the frequency values can exceed the number of students participating in the study. Similarly, the sum of the percentages can also exceed 100%.

Results

The findings obtained from the research questions were presented in tables after being analyzed separately for each title.

The Findings Regarding the Metaphors Constructed By Prospective Chemistry and Science Teachers and Their Justifications

In the first question of the research, prospective teachers were asked to construct metaphors about chemistry and to justify why they used this metaphor. The metaphors constructed by prospective chemistry teachers are arranged according to their justifications and presented in Table 1.

Table 1.

The Findings Obtained from Prospective Chemistry Teachers Regarding the Question "Chemistry is…Because…"

1st grade				5th grade			
Justification	*Metaphor*	*f*	*%*	*Justification*	*Metaphor*	*f*	*%*
Chemistry as a needed field	Family Water Bread	4	25	Chemistry as a needed field	Life Creating power Cell nucleus Water Chili pepper Medicine	7	28
Chemistry as a field within life	Life Curtain Nature Scene	4	25	Chemistry as a field within life	Music Life Cell nucleus Shame Chili pepper Old aunty in the bus	7	28
Chemistry as a field of diversities	Pomegranate The meal with different vegetables Babushka doll	3	19	Chemistry as a field of diversities	The meal with different vegetables Flower	2	8
Chemistry as a field requiring constant work	Plant Craftsman	2	13	Chemistry as a field requiring constant work	Labor Ocean Infinity	3	12
Other	Magic Stylist	2	13	Chemistry as a mysterious field	Infinity Human	2	8
				Chemistry as a field bringing about harm or benefit according to its purpose of use	Chili pepper Fire Medicine Meteorology	5	20
				Other	Factory Treasury Marsh Universe	4	16

As seen in Table 1, prospective chemistry teachers at different grade levels constructed different metaphors by presenting similar justifications. Prospective teachers in the first grade constructed different metaphors by pointing out reasons, such as being the basic necessity of life (25%), being in every area of life (25%), containing diversity (19%), and requiring constant work (13%). On the other hand, last-grade prospective teachers expressed with different metaphors that chemistry is a basic necessity of life (28%), is in every area of life (28%), includes diversity (8%), requires constant work (12%), is mysterious (8%), and brings benefits and harms according to its purpose of use (20%). The metaphors that prospective teachers constructed and their justifications are set forth in the following citations:

"Chemistry is like pomegranate. They both appear single but when you open the inside there are many pieces of pomegranate/knowledge." (1st grade/S11)

"Chemistry is like water. Without chemistry it is impossible for people to maintain their lives today." (5th grade/S23)

The answers given by the prospective science teachers to the same question are given in Table 2.

Table 2.
The Findings Obtained from Prospective Science Teachers Regarding the Question "Chemistry is…Because…"

	1st grade				*4th grade*		
Justification	*Metaphor*	*f*	*%*	*Justification*	*Metaphor*	*f*	*%*
Chemistry as a field within life	Life The smallest unit of structure	2	4	Chemistry as a field within life	Water Life Kitchen Seed Food Taste of fruit Light source	10	24
Chemistry as a branch of science	Stairs Labyrinth Toy block Puzzle	5	10	Chemistry as a branch of science	Jigsaw Sand in ocean Puzzle Chain ring Sea Ocean	6	15
Chemistry as a field using trial-and-error method	Curious child Shop Life	4	8	Chemistry as a field using trial-and-error method	Puzzle Cooking Kitchen	3	7
Chemistry as a field producing new products	Music cooking adventurers	8	15	Chemistry as a field presenting new products	Photosynthesis Plant Factory Cooking	4	10
Chemistry as a field open to development	Cleaning Material foaming Soap growing Tree	3	6	Chemistry as a field open to development	Atom Life Dough	3	7

Table 2 Continue

Justification	1st grade Metaphor	f	%	Justification	4th grade Metaphor	f	%
Chemistry as a field bringing about harm or benefit according to its purpose of use	Volcano Bomb ready to explode Soil	3	6	Chemistry as a field bringing about harm or benefit according to its purpose of use	Blood Knife Amusement park	3	7
Chemistry as a field linking the known to the unknown	Bridge Dictionary Magnifying glass Kitchen of substances	4	8	Chemistry as a field of diversities	Sea World Ocean Mixture Chain ring Bottomless well Virus Labyrinth	8	20
Chemistry as a guiding field	Light Moon Fire	3	6	Chemistry as a needed field	Water Blood Bread Food Fish Self-understanding	6	15
Chemistry as field with complex knowledge	Puzzle	3	6	Chemistry as a field with certain rules of study	Puzzle Cooking	2	5
Chemistry as a field teaching while entertaining	Game Play dough	2	4	Other	Kitchen Source of light Factory Country Supermarket	5	12
Other	Wood Theatre Jewelry Love Cooking Education Fruit tree Game House	9	17				

As seen in Table 2, while the justifications for the metaphors constructed by prospective science teachers about the field of chemistry have differences in terms of the first and last grades, some of the metaphors have similar justifications. It is seen that prospective teachers' suggestions were often on common ground, such as taking part in every area of life, being a part of science, reaching results by trial and error, obtaining new products, being open to development, bringing benefits and harm according to its use. When the metaphors and justifications are examined separately, it is observed that first-grade prospective teachers stated with different metaphors that chemistry takes part in all areas of life (4%), is a part of science (10%), reaches results by trial and error (8%), acquires new products (15%), is open to development

(6%), has positive/negative features (6%), makes a connection between the known and the unknown (8%), is a guiding light (6%), contains a whole of complex information (6%), and educates by entertainment (4%). The final grade prospective teachers, on the other hand, presented justifications such as it is in all areas of life (24%), is a part of science (15%), reaches results by trial and error (7%), acquires new products (10%), is open to development (7%), has positive/negative features (7%), contains different fields in one (20%), is needed (15%), and depends on certain rules (5%) and they also produced different metaphors. The metaphors that the prospective teachers constructed are illustrated in the following citations:

"Chemistry is like life. Everything is all about trial and error. A mistake at any stage of study or in the substances to be included in the experiment is irreversible like life itself." (1st grade/S38)

"Chemistry is like dough. The more we knead it, the better the shape will be." (4th grade/S40)

The findings regarding the views of prospective chemistry and science teachers about chemistry

For the second question of the research, prospective teachers were asked the question of "What is chemistry?" Findings obtained from the answers of prospective chemistry teachers are given in Table 3.

Table 3.

The Findings Obtained from Prospective Chemistry Teachers Regarding the Question "What is Chemistry?"

1st Grade	*f*	%	*5th Grade*	*f*	%
Everything in universe	8	50	Science that explains matter and its interactions	14	56
The science of the structure of matter	6	38	The field existing in many spheres of life	10	40
The branch of science for the creation of matter	1	6	The field in cooperation with different disciplines	3	12
			The field trying to understand the natural world	3	12
			One of sciences	2	8
			Other	5	20

As can be seen in Table 3, first-grade prospective teachers often described everything in the world (50%) as chemistry. In addition, it is also seen that the prospective teachers described chemistry as the science of the structure of matter (38%). When the explanations by last-grade prospective teachers about the meaning of chemistry are analyzed, it is seen that they mostly choose the explanations of "science that explains matter and its interactions" (56%) and "the field existing in many spheres of life" (40%). Prospective teachers have also explained chemistry as "the field in cooperation with different disciplines" (12%) and "the field trying to understand the natural world" (12%). The answers to the question are illustrated in the following citations:

"Chemistry is the science which studies the matter and its structures, interactions, and characteristics." (1st grade/S4)

"Chemistry is the part of science which studies the essence of the matter." (5th grade/S15)

The answers to the same question by prospective science teachers are given in Table 4.

Table 4.

The Findings Obtained from Prospective Science Teachers Regarding the Question "What is Chemistry?"

1st Grade	*f*	*%*	*4th Grade*	*f*	*%*
The science of the structure of matter	14	27	The science studying the inner structure and contents of the matter	28	68
The science studying the matter	3	6	The science explaining the relation among molecules	9	22
The science studying natural phenomena	3	6	The science studying physical-chemical changes	5	12
Other	8	15	Field of inter-disciplinary study	2	5
			Other	7	17

As can be seen in Table 4, most of the prospective teachers in the first and last grade of science education gave similar answers about what chemistry is. It is seen accordingly that a large majority (27% - 68%) of the prospective teachers at both the grade levels identified chemistry as "the science of the structure of matter". In addition to this result, first-year prospective teachers also think that chemistry "studies the matter" (6%) and "studies natural phenomena" (6%). Prospective teachers of the final grade, on the other hand, identified chemistry as science "studying relations among molecules" (22%), "studying physical/chemical changes" (12%), and "working inter-disciplinarily" (5%). The answers to the question are illustrated in the following citations:

"Chemistry is the structure and molecular features of a matter; in short it is the identity of the matter." (1st grade/S2)

"Chemistry is the branch of science which studies the structure, features, interactions and reactions of the matter." (4th grade/S22)

The findings regarding the views of prospective chemistry and science teachers about the chemical studies

In the third question of the research, prospective teachers were asked to explain how studies on chemistry are conducted. The findings obtained from the responses given by prospective chemistry teachers are given in Table 5.

Table 5.

The Findings Obtained from Prospective Science Teachers Regarding the Question "How are Chemical Studies Conducted?"

1st Grade	*f*	*%*	*5th Grade*	*f*	*%*
Experiments in the laboratories	9	56	Experiment	16	64
In a careful way	1	6	Observation	10	40
Research-investigation	1	6	Research	5	20
Trial and error method	1	6	In compliance with the scientific method	5	20
			Trial and error method	1	4

As seen in Table 5, first-year prospective teachers think that chemistry studies are mostly conducted "by experiments in the laboratory" (56%). Last-grade prospective teachers, on the other hand, stated that chemical studies can be carried out by "experiment" (64%), "observation" (40%) and "research" (20%), and "with different studies in compliance with scientific method" (20%). The answers to the question are illustrated in the following citations:

"Studies in chemistry are carried out by making additions to the available data and by the experiments in the laboratory or by examining the results of experiments using trial and error method with some foresight." (1st grade/S15)

"Studies in chemistry are made through experimentation and observation." (5th grade/S20)

The answers given by the prospective science teachers to the same question are given in Table 6.

Table 6.

The Findings Obtained from Prospective Science Teachers Regarding the Question "How are Chemical Studies Conducted?"

1st grade	*f*	*%*	*4th grade*	*f*	*%*
Experiment	19	37	Experiment	22	54
Observation	9	17	Observation	11	27
In the laboratory	7	13	In the laboratory	6	15
Other	5	10	Scientific method	6	15
			Calculations	4	10
			Data collection	3	7
			Research-literature review	2	5
			Other	7	17

As can be seen in Table 6, while both first and last-grade prospective teachers think that most of the studies in chemistry (37-54%) are conducted through "experiment and observation", they also think (13%-15%) that "laboratory environment" can be used in this process. In addition, last-grade prospective teachers think that chemical studies depend on "the scientific process" (15%), collect data by various calculations (10%), and are carried out with the research process (5%). The answers to the question are illustrated in the following citations:

"Studies in chemistry are carried out by experiments, observations, and calculations of the results obtained from these." (1st grade/S17)

"Studies in chemical sciences are conducted using chemical tools and calculations to understand chemical mechanisms." (4th grade/S16)

Discussion and Conclusion

The results obtained from the research indicated that the prospective teachers created different metaphors about chemistry by offering similar justifications when their departments and grade levels are considered. Prospective chemistry teachers who took part in the research from both grade levels explained their metaphors about chemistry with the common justifications of chemistry being a field, which is needed, is from within life, contains diversities, and requires constant work. Prospective science teachers from different grade levels, on the other hand, offered common justifications such as chemistry being involved in life, being a branch of science, using the trial-and-error method, presenting new products, being open to development and bringing about harm or benefit according to its use. This result reveals that prospective teachers from different departments and different grade levels offer common justifications in explaining their metaphors. Accordingly, the study by Donmez Usta and Ultay (2015) also pointed out that the metaphors about chemistry created by prospective pre-school teachers from different grade levels share similarities when grade levels are considered. It is thought that this result is directly related to the education that the prospective teachers receive in their basic schooling.

When the answers given by prospective chemistry teachers from different grade levels are studied, it is observed that prospective teachers describe chemistry as "a needed field and involved in life," even though they come from different grade levels. This result also suggests that prospective teachers are aware that chemistry is part of daily life. Such results obtained from the research are in compliance with some of the results obtained from Derman's research (2014) with high school students. It shows that the students have certain images about chemistry in their minds, even if they belong to different age groups. In a study conducted by Ultay and Ultay (2009) with 7th, 9th, and 11th grade students, it is seen that the 7th grade students associate chemistry with experiments and observations while 11th grade students associate it with chemical reactions. This research hasn't obtained similar results and the prospective chemistry teachers emphasized the significance of chemistry rather than its associations, by offering reasons such as chemistry being needed and being involved in life. It is thought that the reason for this difference is related to the age group level and the courses taken during the undergraduate education. While the students of basic education see chemistry as a field composed of symbols and formulas, the undergraduate students have the opportunity of practicing chemistry in their laboratory courses. They comprehend the study process of chemistry and its significance for the human life more closely with different major courses.

It has been observed in the research that prospective chemistry teachers offered different justifications along with the common ones. One of these justifications is that chemistry brings about harm or benefit according to its use. Last-grade prospective teachers have taken more intense laboratory courses and have frequently interacted with chemicals in the process. Prospective teachers were warned against the negative circumstances to be caused by chemicals when they were engaged in laboratory experiments conducted under security precautions. It can be said in this regard that the prospective teachers might have thought of the various negative circumstances that the field of chemistry can embody. Another justification frequently offered by the prospective teachers was that chemistry is a mysterious field. This justification not only is an interesting supposition but also puts suggests that the prospective teachers emphasize chemistry's abstract nature and its relation with alchemy, when it is considered in regard to the related metaphors (infinity and human).

When the results of the research are analyzed in consideration of the prospective science teachers, it is seen that the first-grade prospective teachers have justified metaphors about chemistry as producing new products. Today there are many new products in different areas thanks to chemical research and it is, therefore, thought that the justifications by the prospective teachers can be related to chemistry's areas of usage in our lives. Along with this result, it is also observed that the first-grade prospective teachers describe chemistry as a branch of science. Last-grade prospective teachers, on the other hand, mostly describe chemistry as being involved in life, containing diversity, being needed, and being a branch of science. Thus, justifications offered by the last-grade prospective teachers are more comprehensive than those offered by the first-grade prospective teachers. Prospective teachers start their education with certain images in their minds; however, their minds are reshaped over time. As Thomas & McRobbie (1999) point out, each metaphor is in compliance with the opinions of the student as the learner, the learning processes, and the learning environment. In this regard, the metaphors and their justifications can be connected to the education received in secondary school and the undergraduate levels. It is also thought, therefore, that the different justifications offered by the last-grade prospective teachers could have been acquired through the courses they took in the course of their education.

When the justifications put forth in the research are investigated, it is observed that the prospective teachers generally define chemistry as a branch of science. Accordingly, in their explanations for what chemistry is, both prospective chemistry teachers and prospective science teachers indicated that chemistry is a branch of science, is involved in life, is shaped in the light of the needs, and consists of various disciplines. Hence, it is thought that the metaphors and the answers given to the questions overlap and that the results are consistent.

On the other hand, when the metaphors created by the prospective teachers are compared in terms of the fields of study, it is observed that the metaphors are very different from each other. For example, the results obtained from the first-grade students show that the prospective teachers from both groups are in agreement about a single common justification such as "chemistry exists in all aspects of life".

When the results are analyzed, the last-grade prospective teachers, on the other hand, put forth more justifications than the first-grade students. This difference in the metaphors and justifications offered by the prospective teachers could be due to their field of study. While the prospective chemistry teachers have a chemistry-heavy education in their undergraduate program, prospective science teachers are taught courses from different fields such as physics and biology. It is thought that this result could be related to the fact that prospective chemistry teachers are always engaged in chemistry as a necessity of their education and cannot view the topics/concepts independently of the patterns in their field of study.

Conclusion and Discussion Regarding the Question "How Do the Views of Prospective Chemistry and Science Teachers about Chemistry Differentiate According to the Grade Level and the Department?"

After evaluating the research results in terms of different grade levels, it is seen that the views of prospective chemistry and science teachers are similar to each other, and the results are more comprehensive and detailed for the last-grade students. For example, first-grade prospective chemistry and science teachers think that chemistry is "the scientific branch that studies the structure of the matter" while the last-grade prospective teachers stated that chemistry "tries to understand the natural world and cooperate with different disciplines". This result obtained from the last-grade students in the research despite their different departments may be related to the fact that the prospective teachers in both groups took common courses such as Scientific Research Methods, Special Teaching Methods, and laboratory courses. Such courses included in the education process have a positive contribution toward the views of the prospective teachers. Accordingly, Demircioglu et al., (2004) stated that the teaching of abstract concepts should be given more emphasis in laboratory courses where students are encouraged to learn by actively participating and experiencing.

Conclusion and Discussion Regarding the Question "How Do the Views of Prospective Chemistry and Science Teachers about the Chemical Studies Differentiate According to the Grade Level and the Department?"

When the findings obtained from the research are compared in terms of different fields, similarities and differences are present together in the results. For example, prospective teachers agree that "chemistry is the scientific branch which studies the structure of the matter" and that the studies in this area are conducted through "experiments". Even though the answers given by the prospective teachers are correct, they also indicate that their minds can carry wrong judgments as well as the correct ones. Indeed, it is believed that the prospective teachers' view that studies on chemistry are conducted by "experimentation" can lead to a new misunderstanding. This view is often found also in the literature, but it reveals a misconception (Wenning, 2006). McComas (2000) notes that experimenting is the most useful tool in science, but not the only one; many scientists also use non-experimental techniques to improve knowledge. The source of this view may have arisen from the teacher candidates in our study having carried out their studies in the field of chemistry via laboratory experiments before and during their undergraduate education. Moreover, many images in everyday life depict the use of chemical equipment in a laboratory environment.

Conclusion and Recommendations

When the present results are evaluated together, it is seen that the views of the prospective teachers about the field of chemistry are generally correct but can also contain various misconceptions. The metaphors constructed by the prospective teachers also show that there may be different views about the field of chemistry. It further shows that different and new views of prospective teachers can be identified when they are moved out of their molds. In this context, it can be said that metaphors are a tool that can be used effectively in the identification of both the misconceptions and the substructure existing in the cognitive thinking process. According to Thomas & McRobbie (1999), metaphors can be used to improve the learning process and strengthen the subconscious, which leads to a clear picture of the students' views. Accordingly, Derman (2014) asserts that the use of metaphors in chemistry teaching makes chemistry more attractive for students and at the same time gives students the chance to create a comprehensive, multidimensional, and rich cognitive image of the concept of chemistry. In line with the results obtained from the research, we offer these suggestions:

* The reasons for the results obtained from the research should be examined by face-to-face interviews or by different methods of measurement so that the underlying grounds for the metaphors and their justifications shall be identified. It is thought that this way would provide more detailed information about positive/negative images and true/false concepts in students' minds, and that the teaching process can be made more functional in this regard.

* The association between the constructed metaphors and the presented justifications should be presented in the course of teaching the subject with individual examples within the scope of the handled subject, and in this way the established relations shall be made more meaningful.

* The researchers working in the field are encouraged to conduct studies by examining the different concepts and metaphors constructed by the participants from different grade levels and identifying the deficiencies of the field in this respect.

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Kimya ve Fen Bilgisi Öğretmen Adaylarının Kimyaya ve Kimyasal Çalışmalara İlişkin Görüşleri ile Oluşturdukları Metaforlar

Atıf:

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Özet

Problem Durumu: 2004-2005 yılında eğitim alanında yapılan yenilenme çalışmalarıyla birlikte öğretim programlarında ilköğretim seviyesinden başlanarak yapılandırılmaya gidilmiştir. Bu doğrultuda, öğrencilere bilginin aktarımını amaçlayan davranışçılık felsefesi yerine, öğrenenlerin bilgiyi kendilerinin oluşturmasına fırsat veren yapılandırmacılık felsefesi bir anlayış olarak benimsenmiştir. Bu doğrultuda, öğretim programları; fizik, kimya ve biyoloji gibi bilim dallarını, yapılandırmacı bakış açısı çerçevesinde tanımlamaktadır. Yapılandırmacı yaklaşımın ortaya koyduğu yeni bakış açısı, ölçme değerlendirme sürecine yönelik de alternatifler getirmektedir. Geleneksel ölçme değerlendirme araçlarının yanı sıra; dereceli puanlama anahtarı, portfolyo değerlendirme, kavram haritası …gibi alternatif araçların kullanımı giderek önem kazanmaktadır. Bu noktadan hareketle araştırmada da alternatif bir ölçme değerlendirme aracı olarak kullanılabileceği düşünülen metaforlardan faydalanılmıştır. Literatürde yer alan çalışmalar incelendiğinde öğretmen adaylarıyla yapılan çalışmaların farklı branşları içerdiği, buna karşın fen bilgisi ve kimya öğretmen adaylarının görüşlerinin değerlendirildiği bir çalışmanın yer almadığı görülmüştür. Ayrıca kimya alanına özgü yapılan çalışmalarda farklı sınıf seviyelerinde gerçekleştirilen araştırmaların yalnızca okul öncesi öğretmen adaylarıyla yürütüldüğü; gerek fen bilgisi gerekse kimya açısından sınıf seviyeleri farklılıklarına ilişkin sonuçların irdelenmediği görülmüştür. İlgili literatür ışığında, öğretmen adaylarının kimya alanına ilişkin görüşlerinin ayrıntılı olarak incelendiği çalışmalara ihtiyaç duyulduğu düşünülmektedir. Bu bağlamda araştırmada öğretmen adaylarının görüşlerinin yanı sıra konuya ilişkin metaforik algıları da ortaya konacak; böylece konuya ilişkin görüşler ile metaforik algılar arasındaki uyum da ortaya konacaktır. Bunun yanı sıra araştırmada fen bilgisi ve kimya öğretmen adaylarıyla çalışılmıştır. Bu iki farklı grubun seçilme sebebi, her iki alandaki öğretmen adaylarının, gelecekteki öğrencilerine kimya konularını anlatacak ve kimyaya özgü tutumlarını etkileyecek kişiler olmalarıdır. Bu iki farklı alandan gelen öğretmen adayları, ileride, ortaokuldan liseye geçiş sürecindeki öğretim sürecini de gerçekleştireceklerdir. Dolayısıyla fen bilgisi öğretmen adaylarını yetiştirmiş olduğu öğrenciler, kimya öğretmen adaylarının yetiştireceği öğrenciler olacaktır ve bu sebeple farklı

alanlardaki öğretmen adaylarının kimyaya ilişkin görüşlerini belirlemek önemli bir nokta olacaktır. Ayrıca, üniversitedeki öğrenimlerine başlayan öğretmen adayları, ilk senelerinde, lisede sahip oldukları görüşleri eğitim yaşantılarına yansıtabilmektedir. Üniversitede aldıkları çeşitli derslerle, özellikle kimya alanına özgü olan alan bilgisi dersleriyle, son yıllara doğru görüşleri farklılaşabilmektedir. Bu bağlamda farklı sınıf seviyelerindeki görüşlerin incelenmesinin alana yönelik katkısının olacağı düşünülmektedir. Bu sayede farklı sınıf seviyelerindeki ve alanlardaki öğretmen adaylarının görüşleri arasındaki benzerlikler ve değişikliklerin incelenmesi ile öğretmen adaylarının görüşlerine dair daha zengin bir portre sunulacaktır. Bu doğrultuda araştırmanın problemini "kimya ve fen bilgisi öğretmen adaylarının, kimya alanına ve kimya alanındaki çalışmaların nasıl yapıldığına ilişkin görüşleri nelerdir?" sorusu ile "öğretmen adaylarının kimyaya dair oluşturdukları metaforlar sınıf seviyesi ve alana göre değişmekte midir?" sorusu oluşturmaktadır.

Araştırmanın Amacı: Bu doğrultuda araştırmada kimya ve fen bilgisi öğretmen adaylarının, kimya alanına ve kimya alanındaki çalışmaların nasıl yapıldığına ilişkin görüşleri ile kimyaya dair oluşturdukları metaforların sınıf seviyesine ve alana göre incelenmesi amaçlanmıştır.

Araştırmanın Yöntemi: Katılımcıların kimya alanına dair açıklamalarının ve metaforlarının derinlemesine incelenebilmesi amacıyla nitel veri toplama ve analiz yöntemleri kullanılmıştır. Bu amaçla araştırmada nitel araştırma desenlerinden durum çalışması araştırma yöntemi olarak kullanılmıştır. Araştırma 2014-2015 eğitim-öğretim yılı bahar döneminde gerçekleştirilmiş olup; araştırmaya İstanbul'daki bir devlet üniversitenin ortaöğretim kimya öğretmenliği anabilim dalı birinci sınıfında okuyan 16 (4 erkek, 12 kadın) ve son sınıfında okuyan 25 (4 erkek, 21 kadın) öğretmen adayı ile ilköğretim fen bilgisi öğretmenliği birinci sınıfında okuyan 52 (7 erkek, 45 kadın) ve son sınıfında okuyan 41 (7 erkek, 34 kadın) öğretmen adayı katılmıştır. Katılımcılar 18-23 yaş aralığında yer almaktadır. Araştırmaya katılan öğretmen adayları araştırmacıların vermiş olduğu ders/dersleri alan öğretmen adayları içerisinden belirlenmiştir. Bu bağlamda araştırmada nitel araştırma desenlerinden biri olan amaçlı örnekleme yöntemlerinden "kolay ulaşılabilir durum örneklemesi" ile kullanılmıştır. Araştırma verileri araştırmacılar tarafından hazırlanmış olan üç açık uçlu soru ile toplanmıştır. Bu sorulardan iki tanesi kimyanın ne olduğu ve kimya alanındaki çalışmaların nasıl yapıldığını ölçmeyi hedeflerken; son soru ise katılımcıların kimya kavramına ilişkin oluşturdukları metaforları belirlemeye yöneliktir. Bu doğrultuda son soruda öğretmen adaylarının "kimya .... gibidir çünkü……" cümlelerini tamamlamaları istenmiştir. Ayrıca sadece tek bir metafor oluşturmaları ve oluşturdukları bu metafor ile kimya arasındaki ilişkiyi mutlaka yazmaları gerektiği belirtilmiştir. Araştırma verilerinin analizi her bir soru için ayrı ayrı değerlendirilmiş olup; bu süreçte verilerin daha ayrıntılı bir şekilde incelenebilmesi amacıyla içerik analizi yapılmıştır.

Araştırmanın Bulguları: Araştırmadan elde edilen bulgular farklı sınıf seviyeleri açısından değerlendirildiğinde, hem kimya hem de fen bilgisi öğretmen adaylarının kimyaya ilişkin görüşlerinin benzer olduğu, bununla birlikte sonuçların son sınıflar açısından daha kapsamlı ve ayrıntılı olduğu görülmektedir. Öğretmen adaylarının

kimyaya dair oluşturdukları metaforlar ve gerekçeler sınıf seviyeleri açısından karşılaştırıldığında ise ortaya konan gerekçelerin sınıf seviyeleri açısından çeşitli benzerlikler ve farklılıklar içerdiği görülmektedir. Araştırmadan elde edilen bulgular farklı alanlar açısından karşılaştırıldığında ise mevcut sonuçların benzerlikleri ve farklılıkları bir arada içerdiği görülmektedir. Öğretmen adaylarının kurmuş oldukları metaforlar alanlar açısından karşılaştırıldığında ise kurulan metaforların birbirinden oldukça farklı olduğu görülmektedir.

Araştırmanın Sonuçları ve Öneriler: Mevcut sonuçlar bir arada değerlendirildiğinde öğretmen adaylarının kimya alanına ilişkin görüşlerinin genellikle doğru olduğu bununla birlikte çeşitli yanılgıları da içerebildiği görülmektedir. Öğretmen adaylarının kurmuş oldukları metaforlar ise kimya alanına ilişkin farklı görüşlerinin olabileceğini de gösterir niteliktedir. Bu durum kalıpların dışına çıkarıldığında öğretmen adaylarının farklı ve yeni görüşlerinin belirlenebileceğini de gösterir niteliktedir. Bu bağlamda metaforların gerek sahip olunan yanılgıların gerekse zihinsel düşünme sürecinde var olan alt yapının belirlenmesinde oldukça etkin olarak kullanılabilecek bir araç olduğu söylenebilir. Araştırmadan elde edilen sonuçların nedenleri, gerek yüz yüze görüşmeler gerekse farklı ölçme yöntemleriyle irdelenmeli böylece ortaya konan metaforlar ve sunulan gerekçelerin altında yatan temeller belirlenmelidir. Öğretim sürecinde, ortaya konan metaforlar ile sunulan gerekçeler arasındaki ilişkilendirmenin, ele alınan konu kapsamında birebir örneklerle sunulması; böylece kurulan ilişkilerin daha da anlamlı hale getirilmesi gerektiği düşünülmektedir.

Anahtar kelimeler: Öğretmen eğitimi, fen eğitimi, kimya eğitimi, öğretmen adayı, öğrenci algıları.

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Metaphorical Perceptions of the Concepts "Teaching Profession" and "Raising Students" *

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ABSTRACT

Purpose of Study: This study aims to reveal, via metaphors, pre-service biology teachers' perceptions of "teaching profession" and "raising students." **Research Methods:** In accordance with the aim of the study, phenomenology, one of the qualitative paradigm patterns, is used. The study group consists of 80 pre-service biology teachers taking pedagogical formation at the faculty of education at a state university in Ankara during the 2015-2016 academic year, spring semester. A metaphor form was used as a data-gathering tool. Data were analyzed through content analysis.

Findings: Through the study, it was determined that pre-service teachers generated 31 metaphors for "raising students" and 37 metaphors for "teaching profession." The most frequently used metaphor for "teaching profession" is "motherhood," and "giving life to a plant" for "raising students."

Implications for Research and Practice: As a result of the study, it was found that pre-service teachers think of teaching as a profession that requires labour, patience, responsibility, experience, innovation, and trust. Moreover, it was revealed that teachers should guide students and that students view teachers as role models. In this respect, since qualities such as being qualified leaders, guides, and observers are put at the fore for teachers today, it can be stated that teachers are expected to believe that they can carry out what is required of them.

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Introduction

As the most important and basic element of education, teachers have a significant role in the development of a country, training individuals, and transferring existing values to the next generation (Lasky, 2005; Nayir & Taneri, 2016). With today's rapid technological advancements, a great responsibility falls to the education system, and the teaching profession has that responsibility within the Turkish National Education System (Dundar & Karaca, 2013). Different from other professions, teaching can be defined as a noble profession which requires self-sacrifice and devotion as opposed to being merely a source of income (Beauchamp & Thomas, 2009). In Turkey, teachers are raised through field and pedagogical formation education. During their education, students are expected to acquire all the proficiencies required regarding field knowledge and teaching methods. Practical application of teacher education occurs through school experience and teaching application at faculties of education and through teaching during pedagogical formation education. These applications not only contribute to the development of these students' teaching skills but also help them become more experienced and transmit their knowledge to a class (Bell & Robinson, 2004). Thus, it is thought that pre-service teachers will gain experience within the modern education approach and will have the ability to guide their students. Moreover, it can be said that asking for pre-service teachers' views of the teaching profession would put forth their perceptions of the profession (Mahlios & Maxson, 1998; White, 2009).

Aim and Significance of the Study

The teaching profession and training students can be defined as a status that provides an end product through personal qualities and professional attitudes; it is gained in the long term, and it results in a social gain. In this case, it can be argued that the profession-related cognitive qualities of pre-service teachers who are enrolled at faculties of education and take pedagogical formation education are effective in their professional lives. Thus, it is thought that it is important to determine pre-service teachers' perceptions of "teaching profession" and "raising students" through metaphors (Koc, 2014). In this respect, for this study, perceptions related to the concepts "teaching profession" and "raising students" are determined via metaphors, also called "a creative expression of perspectives." Further, in the literature, metaphor studies are conducted to reveal pre-service teachers' views (Boostrom, 1998; Hunt, 2006; Thomas & Beauchamp, 2011). Metaphors are defined as mental mapping and modelling mechanisms which help people construct their thoughts. At the same time, they can be called perception tools people use when they try to explain events or things through comparison (Bullough, 1991). In literature, a study by Yalcin and Eren (2011) claims that the obtained metaphors are related to attitude and success and that success in a class increases with the obtained findings. Other metaphor studies in literature are mostly related to concepts such as "teacher, student, teaching process, teaching profession, education program, pedagogical formation program, principal, school, class, class management, learning, teaching, teaching material" (Dundar & Karaca, 2013; Gordon, 2010; Ulukok, Bayram, & Selvi, 2015). For example, one study determined that related to "teaching profession," pre-service Turkish teachers generate metaphors such as guide, leading figure, knowledge provider, shaper, and healer. In a research conducted by Cocuk et al. (2015), teaching profession-related metaphoric perceptions of pre-service teachers who take pedagogical formation education were determined. At the end of the research, it is seen that the teaching profession was likened to such positive images as mother, life, and water, but it was also associated with such negative expressions as worthless stamp and babysitting. In this study, too, the aim is to examine pre-service teachers' metaphors related to their perception of the concepts "teaching profession" and "training students" and to fill a gap in literature dealing with these concepts together and, thus, to comparatively examine this knowledge that will be important in pre-service teachers' professional lives. When it is understood that proficiencies related to teaching are taught in a shorter amount of time in pedagogical formation compared to faculties of education, it is believed that it is helpful for training teachers to examine pre-service teachers' views on their professions.

It is known that revealing teachers' and pre-service teachers' views through metaphors directly influences the planning and analysis of education. Thus, it is thought that most existing or prospective projects should focus on the teaching profession, students, school, raising students, class, class management, because it is believed that such projects play a significant role in the education system (Martinez, Saulea, & Huber, 2001). In this study, which was realized within this context, metaphorical perceptions about "teaching profession" and "raising students" were examined, and the aim was to contribute to the quality of education and effective training of teachers. Additionally, the following questions were tried addressed:

1. What metaphors do pre-service teachers enrolled at the faculties of education generate for "teaching profession" and "raising students"?
2. What metaphors do pre-service teachers enrolled at pedagogical formation programs generate for "teaching profession" and "raising students"?
3. Is there a difference between the metaphoric perceptions of these two groups?

Method

Research Design

In accordance with the aim of the study, phenomenology, one of the qualitative paradigm patterns, was used. The phenomenology paradigm patterns aim to reveal the relationship between the expressions an individual tries to learn or comprehend, and experiences. Thanks to this paradigm pattern, individuals' emotions, perceptions, and views can be understood and interpreted. Also, studies conducted with phenomenology pattern provide precise and generalizable results appropriate for the nature of the study (Fraenkel & Wallen, 2008).

Research Sample

The study group consists of 80 pre-service biology teachers enrolled at the faculty of education or taking pedagogical formation education at a state university in Ankara during the 2015-2016 academic year. Forty participants (50%) are enrolled at the faculty of education (FoE), and the other 40 (50%) take pedagogical formation (PFE). Sampling was selected via accessible case sampling. With the method, the researcher selected those who are easy to access so the study runs fast and practical (Yildirim & Simsek, 2013).

Research Instruments and Procedures

As a data-gathering tool, a metaphor form was used in the study. In the study, pre-service teachers were asked to complete sentences on the metaphor form. The sentences were, "*(The) Teaching profession is like ……….. because ……….*" and "*Raising students is like …………. because ……………*" Pre-service teachers were given a short introduction to metaphors before application of the form. After receiving the forms, they were given 20-25 minutes to complete them without consulting each other's views and opinions. The application was realized within a class hour. The researcher developed the metaphors given in the form, and the data were gathered from individuals who would reflect the determined phenomenon (Buyukozturk et al., 2012). Also, the form developed by the researchers was examined by two experts with PhDs. The experts' views deemed the data-gathering tool appropriate for and applicable to the study (Daymon & Holloway, 2003; Roberts & Priest, 2006). Data obtained in this study constitute the basis of the data source of this study.

Data Analysis

In the analysis of data, content analysis was used as coding, forming categories, designing data according to the code and categories, and providing validity and reliability. The aim of the content analysis was to conceptualize the data and to define the phenomenon via categories and themes (Yildirim & Simsek, 2013). The first step was to transfer data to electronic media. Thirty-four appropriate codes for "teaching profession," 35 appropriate codes for "training students" from FoE, 32 appropriate data for "teaching profession," and 32 appropriate codes for "training students" from PFE were coded. Then, similar ones were gathered by determining similarities and common traits in metaphors (Alger, 2009; Guerrero & Villamil, 2002). With a last decision, metaphors gathered because of their common traits were put into six categories for "teaching profession" and five categories for "training students." Then, explanations were given under related themes. Next, a chi-square test was done to determine whether there is a difference in the metaphors generated by pre-service biology teachers at faculties of education and pre-service biology teachers taking pedagogical formation. The results were analysed by SPSS and then interpreted.

Validity and Reliability

Data analysis process, the formation of categories, and the reasoning behind the formation of categories were explained in detail to provide validity for study results. Moreover, a detailed final report was presented, and pre-service teachers' metaphors and their reasoning were directly quoted. Within the scope of reliability, data were given to two experts who hold PhDs. These experts did a categorization by reviewing the material at different times. Harmony between the researcher and the experts and the reliability of the study was determined by applying the formula suggested by Miles and Huberman (2002) [Reliability=(Agreement/(Agreement+Disagreement))x100]. Harmony between the researcher and the experts was found to be 90 percent for "teaching profession" and 92 percent for "training students." According to Miles and Huberman (2002), any harmony that is 90 percent or above indicates that the study has reliability. Thus, the reliability and validity of the study were ensured by these methods.

Results

In this section, pre-service teachers' metaphors regarding "teaching profession" and "training students" were given in tables, and the categories were examined in relation to pre-service teachers studying at faculties of education and pre-service teachers taking pedagogical formation.

Metaphors Related to Teaching Profession

In the study, data were collected with 40 PFE and 40 FoE views. However, only 32 PFE and 34 FoE views were considered valid, and in total 37 metaphors were generated. Metaphors generated by pre-service teachers and their categories were given in Table 1.

Table 1

Distribution of Metaphors Related to Teaching Profession, According to Categories

Categories	*(f, %)*	*Metaphors*	*PFE (f,%)*	*FoE (f,%)*	*Total (f,%)*
Teaching as a profession that requires patience, labour, responsibilty	36 (56,25%)	Being a parent	2 (6,25%)	4 (11,76%)	6 (9,37%)
		Being a hacker	-	1 (2,94%)	1 (1,56%)
		Painting	-	1 (2,94%)	1 (1,56%)
		Being a mother	2 (6,25%)	7 (20,58%)	9 (14,06%)
		Being a farmer	-	2 (5,88%)	2 (3,12%)
		Patience	-	1 (2,94%)	1 (1,56%)
		Planting	-	3 (8,82%)	3 (4,68%)
		Being a doctor	-	1 (2,94%)	1 (1,56%)
		Being Spiderman	-	1 (2,94%)	1 (1,56%)
		Being a gardener	2 (6,25%)	-	2 (3,12%)
		Being a technical director	1 (3,12%)	-	1 (1,56%)
		Water	1 (3,12%)	-	1 (1,56%)
		Starfish	1 (3,12%)	-	1 (1,56%)

Table 1 Continue

Categories	*(f, %)*	*Metaphors*	*PFE (f,%)*	*FoE (f,%)*	*Total (f,%)*
		Being a tailor	2 (6,25%)	-	2 (3,12%)
		Nature	1 (3,12%)	-	1 (1,56%)
		A big bag	1 (3,12%)	-	1 (1,56%)
		Planting a tree	1 (3,12%)	-	1 (1,56%)
		Playing video games	1 (3,12%)	-	1 (1,56%)
Teaching as a profession that requires experience	8 (12,5%)	Plane tree	-	1 (2,94%)	1 (1,56%)
		Raising a good person	-	1 (2,94%)	1 (1,56%)
		Being a carpenter	1 (3,12%)	-	1 (1,56%)
		Acting	3 (9,37%)	-	3 (4,68%)
		Being a cook	2 (6,25%)	-	2 (3,12%)
Teaching as a profession that guides students	8 (12,5%)	Compass	-	3 (8,82%)	3 (4,68%)
		Candle	-	1 (2,94%)	1 (1,56%)
		Being a ship captain	1 (3,12%)	-	1 (1,56%)
		Being a sculptor	2 (6,25%)	-	2 (3,12%)
		Being a coach	1 (3,12%)	-	1 (1,56%)
Teaching as a profession that students take as a role model	5 (7,81%)	Acting	-	1 (2,94%)	1 (1,56%)
		A famous model	-	1 (2,94%)	1 (1,56%)
		Being a parent	-	2 (5,88%)	2 (3,12%)
		Being a pilot	1 (3,12%)	-	1 (1,56%)
Teaching as a profession that is expected to be innovative	5 (7,81%)	Being a cook	1 (3,12%)	1 (2,94%)	2 (3,12%)
		Cooking	2 (6,25%)	-	2 (3,12%)
		Being a magician	1 (3,12%)	-	1 (1,56%)
Teaching as a profession that requires trust	4 (6,25%)	Being a mother	-	2 (5,88%)	2 (3,12%)
		Being a driver	2 (6,25%)	-	2 (3,12%)

As can be seen in Table 1, the 37 metaphors generated by pre-service teachers were gathered under six categories. The most frequently expressed metaphor is “being a mother,” with nine pre-service teachers expressing it. This is followed by “being a parent,” expressed by six pre-service teachers. The most frequently expressed metaphors are in the category of teaching as a profession that requires labour, patience, and responsibility. Expressions of pre-service teachers as an example to metaphors in the categories are given below (SE: FoE, SP: PFE, #: Coding number).

Teaching profession is like farming because each student is a fruit that you produce. Each and every one of them requires effort, patience, and devotion. The more you put an effort, the more you get (SE23).

Teaching profession is like being a carpenter because the material would be ruined in the hands of someone who does not know what is good for that particular material. However, in the hands of a master, the same material will become a great monument and will come to life (SP2).

Teaching profession is like a compass because the aim of the teacher is to transmit his or her knowledge to the students and make sure they receive correct information. The teacher is someone who shows the way for behaviour that would ensure what is good for society (SE2).

Teaching profession is like being a famous model because students take their teachers as their role model. They mimic the way the teacher behaves, dresses, and talks. Students see the teacher as someone who is somewhat perfect or someone who would do everything perfectly because the teacher is the teacher, and the student is the student (SE18).

Teaching profession is like being a cook because cooking as a profession is open to new things such as new recipes and cooking techniques. Just like cooks, teachers should continuously update themselves (SE39).

Teaching profession is like being a driver because the fate of many people is in the hands of the teacher. If a mistake is made, more than one person's fate is affected. However, teachers should be trusted just as one should trust a driver (SP34).

Metaphors of all pre-service teachers regarding teaching profession and the related word cloud can be found in Figure 1. Quantitative excess of the answers given by participants in the word cloud increases as the dimensions of concepts puts them at a central point. In the word cloud constructed within this context, it can be seen that words of the phrase "Being a mother" are large and at the center.

Figure 1. Word Cloud of Metaphors of Pre-Service Teachers Concerning Teaching Profession

Metaphors about Training Students

In the study, counting 32 PFE and 35 FoE views as valid, 31 metaphors were generated for the training students' metaphor. Metaphors generated by pre-service teachers and their categories are given in Table 2.

Table 2

Distribution of Metaphors Related to Raising Students, According to Categories

Categories	*(f, %)*	*Metaphors*	*PFE (f,%)*	*FoE (f,%)*	*Total (f,%)*
Raising students with patience, labour, and transfer of knowledge	48 (71,64%)	Giving life to a plant	11 (34,37%)	9 (25,71%)	20 (29,85%)
		Raising your own kid	4 (12,5%)	4 (11,42%)	8 (11,94%)
		Farming	-	3 (8,57%)	3 (4,47%)
		Sculpting	2 (6,25%)	2 (5,71%)	4 (5,97%)
		Filling water	-	1 (2,85%)	1 (1,49%)
		Cultivating roses	-	1 (2,85%)	1 (1,49%)
		Cooking	2 (6,25%)	1 (2,85%)	3 (4,47%)
		Giving shape to a fragile object	-	1 (2,85%)	1 (1,49%)
		Being the director	-	1 (2,85%)	1 (1,49%)
		Baking	1 (3,12%)	-	1 (1,49%)
		Embroidering	1 (3,12%)	-	1 (1,49%)
		Painting on a white canvas	1 (3,12%)	-	1 (1,49%)
		Building a snowman	1 (3,12%)	-	1 (1,49%)
		Tilling the land	1 (3,12%)	-	1 (1,49%)
		Growing strawberries	1 (3,12%)	-	1 (1,49%)
		Building a skyscraper	1 (3,12%)	-	1 (1,49%)
Raising students as an investment for the future	9 (13,43%)	Changing the future	1 (3,12%)	-	1 (1,49%)
		Constructing a building	2 (6,25%)	1 (2,85%)	3 (4,47%)
		A project targeting the future	-	1 (2,85%)	1 (1,49%)
		Saving money	-	1 (2,85%)	1 (1,49%)
		Winning a compulsory war	-	1 (2,85%)	1 (1,49%)
		Planting seeds	-	2 (5,71%)	2 (2,98%)
Raising students by learning together	3 (4,47%)	Being reborn	-	1 (2,85%)	1 (1,49%)
		Riding	-	1 (2,85%)	1 (1,49%)
		Rediscovering something every day	1 (3,12%)	-	1 (1,49%)

Table 2 Continue

Categories	*(f, %)*	*Metaphors*	*PFE (f,%)*	*FoE (f,%)*	*Total (f,%)*
Raising students by taking responsibility	3 (4,47%)	Walking at the edge of an abyss	-	1 (2,85%)	1 (1,49%)
		Being a medical doctor	-	1 (2,85%)	1 (1,49%)
		Knitting	1 (3,12%)	-	1 (1,49%)
Raising students with experience	3 (4,47%)	Writing a book	1 (3,12%)	-	1 (1,49%)
		Getting on a plane for the first time	-	1 (2,85%)	1 (1,49%)
		Watering the plants	-	1 (2,85%)	1 (1,49%)

As can be seen in Table 2, 31 metaphors were generated for training students; these metaphors were gathered under five categories. The most frequently expressed metaphor is “Giving life to a plant,” with 20 pre-service teachers expressing it. This is followed by raising your own kid with eight participants, and being a sculptor with four participants. Moreover, it is also seen that these metaphors are under the category of raising students with patience, labour, and transfer of knowledge. Pre-service teachers’ reasoning for their metaphors is given below.

Raising students is like being a sculptor because you shape the dough (the student) given to you with such care. The end result is yours, good or bad (SE10).

Raising students is like a project targeting the future because raising students can be considered as an investment that seems like a dream for the time being, the effects of which we will see in the future (SE34).

Raising students is like riding because you can either put all weight on the student, or you can walk by them. Either way, you learn things together (SE37).

Raising students is like being a doctor because one mistake you make may cost your student’s life. Raising students is a huge responsibility. You can save their lives depending on the way you raise them. (SE40).

Raising students is like watering a plant because each student is a plant, and teachers water them with their experience. Then, teachers will see the growth of these plants and be happy (SE26).

Metaphors of all pre-service teachers regarding raising students and the related word cloud can be found in Figure 2. In the word cloud constructed within this context, it can be seen that words of the phrase “Giving life to a plant” are big and at the centre.

Figure 2. Word Cloud of Metaphors of Pre-Service Teachers Concerning Raising Students

Comparison of Categories of Teaching Profession and Raising Students within the Context of FoE and PFE

Chi-square test was done to compare the categories of pre-service teachers' metaphors for teaching profession and raising students within the context of FoE and PFE. The results can be seen in Table 3 and Table 4.

Table 3

Comparison of Categories Related to Teaching Profession, According to FoE and PFE

Categories	*PFE*		*FoE*	
	f	%	*f*	%
Teaching as a profession that requires labour, patience and responsibility	15	46,87	21	61,76
Teaching as a profession that requires experience	6	18,75	2	5,88
Teaching as a profession that guides students	4	12,5	4	11,76
Teaching as a profession that is a role model for students	1	3,12	4	11,76
Teaching as a profession that is expected to be innovative	4	12,5	1	2,94
Teaching as a profession that requires trust	2	6,25	2	5,88

χ^2=6,545, df=5, p = .257, p >.05

When Table 3 and Table 4 were examined, it was determined that the difference between the categories formed by the metaphors generated for raising students in FoE and PFE is not statistically meaningful. As a result, metaphors students have for "teaching profession" and "raising students" in FoE and PFE do not have any meaningful difference.

Table 4

Comparison of Categories Related to Raising Students, According to FoE and PFE

Categories	*PFE*		*FoE*	
	f	%	*f*	%
Raising students with patience, labour and transfer of knowledge	26	81,25	23	65,71
Raising students to invest in the future	3	9,37	6	17,14
Raising students by learning together	1	3,12	2	5,71
Raising students by taking responsibility	1	3,12	2	5,71
Raising students with experience	1	3,12	2	5,71

χ^2=2,053, df=4, p = .726, p >.05

Discussion and Conclusion

Discussion

As a result of the study, views of students at FoE and PFE on teaching profession and raising students were determined via metaphors. It was also obtained at the end of this study that pre-service teachers think of teaching as a profession that requires labour, patience, responsibility, experience, innovation, and trust. Moreover, it was revealed that they think teachers should be guides to their students and that students take teachers as their role models (Aslan, 2013; Ekiz & Kocyigit, 2013). It can be said that teachers are guides to their students in preparing them for life since it is known that the role of teachers is to raise competent individuals and enable students' personal growth. In literature, too, it is seen that "teaching profession" is expressed as devotion, guidance, motivation, and source for personal growth (Karabay, 2016; Koc, 2014). Consequently, it was determined that pre-service teachers have positive views of their profession; they used expressions that are compatible with those found in the literature (Eraslan & Cakici, 2011). When it comes to raising students, it was determined that teachers were thought to transfer their knowledge with patience, by taking responsibility, making use of their experience, and putting forth effort. It was also thought that students should be raised to invest in the future and by learning together when necessary. Raising students is a topic that should be developed and one teachers should frequently think about regarding how they can teach students. In fact, metaphors enable teachers in this issue, because metaphors can develop teachers' emotions, thoughts, and skills. Metaphors help teachers think innovatively and make sense of their responsibilities (Gatti & Catalano, 2015). In this study, it was determined that pre-service teachers from FoE and PFE metaphors for "teaching profession" and "raising students" do not have a meaningful difference. This can be said to be stem from the fact that pedagogical formation is not compulsory but is taken voluntarily because it is thought that pre-service teachers who take pedagogical formation have a positive view of the profession; thus, there is no difference detected between FoE and PFE. In this case, when it is taken into consideration that pre-service teachers from FoE and PFE are prospective teachers, it is believed that the information collected from pre-service teachers would help re-structure courses within the curriculum of faculties of education and would provide a fresh perspective for academics and teachers (Gur, 2012). When pre-service teachers' metaphors for "teaching profession and training students" are taken into consideration, a common trait is that teachers should inform students and guide them to eliminate students' mistakes and incorrect knowledge. Moreover, knowing that teaching as a profession and raising students cannot be thought of without the concept of devotion, it can be said that the role of teaching and raising students is highly significant (Koc, 2014).

Conclusion

When studies on metaphors are examined, studies on teaching and the teaching profession are found. It was determined that a teacher is more likely to be defined as a knowledge transmitter, source of knowledge, compass, gardener, friend, and so on (Oxford et al., 1998; Zhao, Coombs, & Zhou, 2010). However, these perceptions are expressed in literature likely to depend on environment, culture, education, and experience. In this study, metaphors are used to reveal perceptions of pre-service teachers from FoE and PFE on "teaching profession" and "raising students." It is believed that this study will reveal how pre-service teachers perceive such concepts as "teaching profession" and "raising students" and that the study will provide useful information to be used in the planning of education. Because teachers are expected to put forth characteristics such as administrator, guide, and observer, they are also expected to believe in their ability to fulfil their responsibilities. Since metaphors are known to be effective tools in revealing beliefs, in this study, pre-service teachers' views were examined comparatively with the help of metaphors (Yilmaz, Gocen, & Yilmaz, 2013).

Recommendations

When the results of the study are considered, it can be said that metaphors are an effective tool in revealing pre-service teachers' perceptions. It is believed that studies that reveal pre-service teachers' perceptions contribute to raising teachers. It is also believed that general information about attitudes can be obtained by determining pre-service teachers' current views on their profession in studies to be realized with different groups. Moreover, it can be suggested that since metaphors can be used as an auxiliary technique to help teach abstract concepts and that visual materials can be prepared with imagery metaphors, such metaphor studies be conducted with the participation of teachers, administrators, and parents.

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'Öğretmenlik Mesleği' ve 'Öğrenci Yetiştirmek' Kavramlarına İlişkin Metaforik Algılar

Atıf:

Bezen, S., Aykutlu, I., Secken, N. & Bayrak, C. (2017). Metaphorical perceptions of the concepts "teaching profession" and "raising students". *Eurasian Journal of Educational Research,* 71, 141-158, DOI: 10.14689/ejer.2017.71.8

Özet

Problem Durumu: Öğretmenlik mesleği ve öğrenci yetiştirmek, kişisel nitelik ve mesleki tutumlar sonucunda ortaya bir ürün çıkaran, bu ürünün telafisi olmayan, uzun süreçte yanıt veren ve sonucunda toplumsal bir kazanca dönüşen bir statü olarak tanımlanabilmektedir. Türkiye'de alan ve pedagojik formasyon eğitimi ile öğretmenlik mesleğine yönelik öğrenciler yetiştirilmektedir. Bu eğitim sürecinde öğrencilerin alan bilgisi ve öğretim yöntemleri açısından mesleki alanda gerekli olan tüm yeterliliklere sahip olmaları beklenmektedir. Bu eğitimlerin uygulaması ise, eğitim fakültesi lisans eğitiminde okul deneyimi ve öğretmenlik uygulaması, pedagojik formasyon eğitiminde öğretmenlik

uygulaması dersi ile gerçekleştirilmektedir. Okul deneyimi ve öğretmenlik uygulaması dersi öğretmen adaylarının öğretmen niteliklerinin gelişimine katkı sağlamakla beraber daha deneyimli olmalarına, öğretmenlik becerilerinin gelişimine ve bilgilerini sınıf ortamına aktarmalarına yardımcı olmaktadır. Böylece öğretmen adaylarının modern eğitim yaklaşımı kapsamında deneyim kazanarak öğrencilerin bilgileri oluşturmasında onlara rehber olma yetisine sahip olabilecekleri söylenebilir. Aynı zamanda öğretmen adaylarının öğretmenlik mesleğine yönelik alınacak görüşlerinin onların bu mesleğe olan algılarını ve tutumlarını ortaya koyabileceği söylenebilir. Bu kapsamda öğretmenlik mesleği içerisinde yer alan öğretmen adaylarının mesleğe yönelik alınacak görüşlerinin ve onların bu mesleğe olan algılarının süreç içerisinde önemli olduğu düşünülmektedir.

Araştırmanın Amacı: Araştırmada pedagojik formasyon ve eğitim fakültesi biyoloji öğretmen adaylarının 'öğretmenlik mesleği' ve 'öğrenci yetiştirmek' kavramlarına ilişkin algılarının metaforlar aracılığıyla ortaya çıkarılması amaçlanmıştır.

Araştırmanın Yöntemi: Araştırmanın amacına uygun olarak nitel paradigma desenlerinden 'olgu bilim' (fenomenoloji) kullanılmıştır. Bu desen sayesinde, bireylerin hisleri, algıları, görüşleri anlaşılarak yorumlanabilmektedir. Aynı zamanda olgu bilim deseninden yararlanılarak, araştırmanın doğasına uygun kesin ve genellenebilir sonuçlara ulaşılabilmektedir. Araştırmanın çalışma grubunu 2015-2016 eğitim-öğretim yılının bahar döneminde Ankara'da yer alan bir üniversitenin eğitim fakültesinde öğrenim gören ve pedagojik formasyon eğitimi alan 80 öğretmen adayı oluşturmaktadır. Araştırmaya katılan öğretmen adaylarının 40 (%50)'ı eğitim fakültesinde öğrenim görmekte (EFÖA), 40 (%50)'ı da pedagojik formasyon eğitimi (PFÖA) almaktadır. Örnekleme kolay ulaşılabilir durum örneklemesi yöntemiyle seçilmiştir. Bu yöntemde araştırmacı erişilmesi kolay olan örneklemeyi seçerek araştırmaya hız ve pratiklik kazandırmıştır. Araştırmada veri toplama aracı olarak metafor formu kullanılmıştır. Araştırmada öğretmen adaylarından sahip oldukları metaforların belirlenebilmesi için '*Öğretmenlik mesleği .... gibidir. Çünkü ....*', '*Öğrenci yetiştirmek .... gibidir. Çünkü ....*' şeklinde dağıtılan metafor formunda yer alan cümleleri tamamlamaları istenmiştir. Öğretmen adaylarına form uygulanmadan önce metafor ile ilgili kısa bilgi verilmiştir. Öğretmen adaylarına formların dağıtılmasının ardından 20-25 dakika süre verilmiştir ve birbirlerinin görüş ve düşüncelerinden yararlanmadan doldurmaları istemiştir. Uygulama ders saati içerisinde gerçekleştirilmiştir. Formda yer alan metaforlar araştırmacılar tarafından geliştirilmiştir ve veriler belirlenen olguyu yansıtabilecek bireylerden toplanılmıştır. Aynı zamanda araştırmacılar tarafından geliştirilen form alanda doktora eğitime sahip iki uzman tarafından incelenmiştir. Uzmanların görüşü ile veri toplama aracının araştırmanın problemine uygun ve uygulanabilir olduğu sonucuna varılmıştır. Verilerin analizi kodlama, kategorilerin oluşturulması, verilerin kod ve kategorilere uygun düzenlenmesi ve geçerliğin, güvenirliğin sağlanması şeklinde içerik analizi ile çözümlenmiştir. Ayrıca eğitim fakültesinde öğrenim gören ve pedagojik formasyon eğitimi alan biyoloji öğretmen adaylarının oluşturdukları metaforların birbirinden farklılık gösterip göstermediğini sınamak için ki-kare testi uygulanmıştır ve elde edilen sonuçlar SPSS programı yardımıyla analiz edilerek yorumlanmıştır.

Araştırmanın Bulguları: Araştırmada öğretmen adaylarının 'öğretmenlik mesleği' kavramına yönelik 37, 'öğrenci yetiştirmek' kavramına yönelik ise 31 metafor ürettikleri belirlenmiştir. Öğretmen adaylarının metaforları 'öğretmenlik mesleği' için altı, 'öğrenci yetiştirmek' için beş kategori altında yer almaktadır. Öğretmenlik mesleğine yönelik en fazla ifade edilen metafor 'Annelik', bu metaforu da 'Ebeveynlik' takip etmektedir. Ayrıca en fazla ifade edilen metaforların emek, sabır ve sorumluluk isteyen bir meslek olarak öğretmenlik kategorisinde yer aldıkları görülmektedir. Öğrenci yetiştirme kavramı için en fazla 'Bir bitkiye hayat vermek' metaforu ifade edilmiştir. Bu metaforun ardından kendi çocuğunu yetiştirmek ve heykeltıraşlık ifadeleri gelmektedir. Belirtilen metaforlar sabır, emek ve bilgi aktarımı ile öğrenci yetiştirmek kategorisinde yer almaktadır. Son olarak eğitim fakültesi ve pedagojik formasyon eğitimi alan öğretmen adaylarının bu kavramlara ilişkin ürettikleri metaforlara karşılaştırmalı olarak bakıldığında, öğretmen adayları tarafından üretilen metaforların birbirlerinden anlamlı bir şekilde farklılık göstermediği belirlenmiştir.

Araştırmanın Sonuçları ve Önerileri: Araştırma sonucunda öğretmen adaylarının öğretmenlik mesleğini emek, sabır, sorumluluk, deneyim, yenilikçilik ve güven isteyen bir meslek olduğunu düşündükleri elde edilmiştir. Aynı zamanda öğretmenlerin öğrencilere rehber olunması gerektiği ve öğrenciler tarafından öğretmenlerin rol model olarak alındıkları ortaya çıkmıştır. Alanyazında öğretmenin daha çok bilgi aktarıcısı, bilgi kaynağı, pusula, bahçıvan, arkadaş vb. şekilde ifade edildiği tespit edilmiştir. Ancak ifade edilen bu algıların çevreye, kültüre, eğitime ve yaşantılara bağlı olarak değişebileceği bilinmektedir. Bu kapsamda araştırmada metaforlar PFÖA ve EFÖA'nın 'öğretmenlik mesleği' ve 'öğrenci yetiştirmek' kavramlarına ilişkin algılarını ortaya koymak amacıyla kullanılmıştır. Araştırmanın öğretmen adaylarının 'öğretmenlik mesleği' ve 'öğrenci yetiştirmek' kavramlarını nasıl algıladıklarını ortaya çıkarabileceğine ve bu sayede eğitim planlamasında kullanılabilecek yararlı bilgilerin elde edilebileceğine inanılmaktadır. Günümüzde öğretmenlerin nitelikli yönetici, rehber ve gözlemci gibi özelliklerinin ön plana çıktığı düşünüldüğünde, öğretmenlerinde görev ve sorumluluklarına yerine getirebilme inancına sahip olmaları beklenmektedir. Metaforların da bu inançların ortaya çıkarılmasında etkili bir araç olduğu bilindiğinden araştırmada metaforlar yardımıyla öğretmen adaylarının görüşleri karşılaştırmalı olarak incelenmiştir. Kısacası araştırmanın sonuçları göz önüne alındığında, öğretmen adaylarının algılarını ortaya çıkarmada metaforların etkili bir araç olduğu söylenebilir. Öğretmen adaylarının algılarının ortaya çıkarıldığı çalışmaların öğretmen yetiştirmeye katkı sağlayacağına inanılmaktadır. Farklı çalışma grupları ile gerçekleştirilecek olan araştırmalarda, güncel bir şekilde mesleğe yönelik algıların belirlenmesiyle

tutumlar hakkında genel bir bilgiye sahip olunabileceği düşünülmektedir. Ayrıca metaforların soyut konuların öğretimine yardımcı bir teknik olarak kullanılabileceği ve öğretim esnasında imgesel metaforlar aracılığıyla görsel materyaller hazırlanabileceği düşünüldüğünde, bu tarz metafor çalışmalarının öğretmenler, yöneticiler ve velilerle de gerçekleştirilmesi gerektiği önerilebilir.

Anahtar Kelimeler: Öğretmen adayları, metaforlar, öğretmen yetiştirme, pedagojik formasyon.

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The Effect of the Critical Literacy Approach on Pre-service Language Teachers' Critical Reading Skills

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ABSTRACT

Purpose: This study aimed to measure the effect of the critical literacy approach on pre-service language teachers' critical reading skills. The critical reading skills measured consisted of six levels: interpretation, analysis, inference, evaluation, explanation, and self-regulation.
Research Methods: This study was designed as a quasi-experiment which involved 56 pre-service teachers studying at the Indonesian Language Teaching Department, Universitas Negeri Makassar, Indonesia. Research data was collected using a critical reading test. Prior to the study, a package of instructional materials was developed for the experimental group. Data was analyzed with descriptive statistics and ANCOVA test with pretest scores as the covariate. Significance level was determined at α= .05.
Findings: The results of the study indicated that the critical literacy approach had a significant effect on the pre-service language teachers' critical reading skills. The experimental group achieved better at critical reading skills and reached higher post-test scores on average. It indicated that the critical literacy approach had a significant effect on critical reading skills, which include interpretation, analysis, making an inference, evaluation, explanation, and self-regulation.
Implications for Research and Practice: Based on the results of the research, it can be concluded that the critical literacy approach was effective in improving the students' critical reading skills. These findings suggest that the process of reading a text critically from the domination perspective can develop students' critical thinking. Future research could possibly discuss the results of a test conducted to investigate the effectiveness of the critical literacy approach based on gender variables, cognitive ability levels, and reading habit.

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Introduction

Critical reading as a manifestation of critical thinking has become influential in living a more competitive life. Critical thinking, which applies higher order thinking skills and more complex cognitive processes, belongs to one of the skills needed in the 21st century to achieve success either at work or school (Greiff, Niepel, & Wustenberg, 2015). In an academic context, Bharuthram (2012) and Wilson (2016) state that many university students are not yet competent to read critically. In fact, critical reading skills may affect the students' overall academic achievement.

Previous research findings have suggested that critical reading skills are difficult to master. Puteh, Zin, and Ismail (2016) discovered that students' ability to reflect and evaluate a text was lower than their ability to access, retrieve, interpret, and integrate. This shortfall in skills indicates that the students struggled to understand texts at a higher level. Findings by Karadag (2014) also indicate that pre-service elementary school teachers believed that they were not critical readers and had no confidence to claim that they could perform critical reading skills. These findings have become a foundation of why research on university students' critical reading skills needs abundant attention.

Critical reading involves readers' active engagement to think deeply by applying various skills. The critical reading activity is done to reveal the main ideas of a text, draw a conclusion from it and connect the information, predict its purpose, analyze the arguments, find different points of view, and evaluate ideas (Flemming, 2012). A critical reader has the ability to (1) accurately summarize arguments from the text, (2) identify claims, (3) discover stated or implied assumptions, (4) analyze and evaluate the preciseness of the reasoning that supports a certain thesis statement, and (5) analyze, evaluate, and explain the purpose or consequence of the use of particular facts or sources of information (Barnet & Bedau, 2011).

Critical reading as an actualization of a critical thinking process constitutes a mental process that is directed to solve problems, make a decision, persuade, analyze, and evaluate ideas systematically (Johnson, 2007, p. 183). It is realized through a careful evaluation and decision made to identify the truth, errors, weaknesses, or strengths of a text. Critical readers collect evidence and use it to challenge mistaken assumptions and evaluate them based on criteria set to assess the quality of the value of a reading text.

Critical reading trains critical thinking skills. Critical reading makes readers more active in understanding the meaning that lies behind the text through evaluating objectives, perspectives, and assumptions of the writer (Huijie, 2010, p. 53). Finally, critical readers can make a judgment whether to believe, follow, trust, or reject the view or ideas conveyed by the author.

Critical reading skills developed in this research are adapted from the critical thinking taxonomy suggested by Facione (2013, p. 5-7; 2015, p. 5-8). These critical reading skills consist of six levels: (1) interpretation skill, (2) analysis skill, (3) inference skill, (4) evaluation skill, (5) explanation skill, and (6) self-regulation skill.

These comprehensive skills are able to promote students' competences in understanding, evaluating, and providing responses to problems critically. As these skills develop, students are also encouraged to think analytically and reflectively, especially in dealing with various pieces of information obtained from the texts.

Critical attitude toward a text is needed to assess the meaning that lies behind the text. Critical reading skills, therefore, help readers to understand the writer's purpose and make them active receivers (McLaughlin & DeVoogd, 2004a, p. 7). By reading critically, readers are not merely passively accepting the information contained in the text. Instead, they can develop their critical attitude by actively examining the writer's background and making use of different perspectives in understanding the information provided by the text (McLaughlin and DeVoogd, 2004b, p. 53).

The importance of critical reading skills is based on two major factors, (1) reading texts and (2) readers. In this era where information and communication technology has developed rapidly, the number of available reading texts is also increasing. It is easy to receive information, whether it is from printed or electronic media such as newspapers, magazines, television, or social media. However, the information is not always accurate and cannot always be trusted. Besides, the available reading materials do not always consistently fit in with the readers' need. Some of them are intentionally written for certain people's interest, intended to influence public perception, gather sympathy, or implant an ideology. According to Fairclough (1989), every text is built on a particular point of view and produced for a certain purpose. Therefore, readers need to assess and select the information before accepting or utilizing it.

A study conducted by Zin, Eng, and Rafik-Galea (2014) concluded that a fundamental issue of developing critical reading skills is that readers have no ability to identify the writer's purpose. In fact, this ability is crucial in reading critically. Critical reading requires readers' awareness of the purpose for writing a text. This is to make them realize that there is a meaning that lies behind the text. In this context, critical reading activities should emphasize how readers can discover propositional and ideological messages delivered through the text (Wallace, 1992).

The significance of reading critically is based on Morgan's view (1997, p. 39-44), which suggests that (1) each text is written to represent certain ideas, (2) each text does not contain a single meaning, (3) each text has its own version/emphasis which is different one from another, and (4) each text provides a way for the readers to accept it as the truth. To understand every meaning that lies behind a text, readers have to be able to read the text critically and reflectively and then draw a conclusion and make a decision about the text's messages. Readers need to be convinced and able to utilize the information contained in the text, or on the other hand, reject it.

To every reader, critical reading skills are essential. Wallace (1992) points out three problems in reading a text: (1) readers' tendency to obey and trust the information obtained from the text, (2) readers' tendency to be susceptible to the text, and (3) readers' tendency to try to understand the propositional messages of the text and overlook the ideological messages. However, every text has been written according to a particular agenda, purpose, and point of view. Low critical thinking skills will allow readers to be easily deceived by a text.

The descriptions above demonstrate the significance of critical reading skills, especially for pre-service language teachers. The ability to read critically will support their intellectual development, learning skills, and professional competence. Teachers are the key to reinforcement of students' critical reading skills. Therefore, the teachers first need to possess the skills. The teachers need to have an ability to plan the lesson, such as selecting appropriate reading materials and conduct learning, such as implementing relevant methods (Maltepe, 2016). To make them able to fulfill the needs, pre-service language teachers need to be competent in reading critically.

To improve the pre-service language teachers' competence in reading critically, the learning process is designed using a critical literacy approach. This approach is sourced from critical language awareness which aims to help readers reflect on power and domination issues found in a text (Hood, 1998). The critical literacy approach is oriented to develop reading ability at the level of critical understanding. This approach encourages students to think and evaluate reading texts and guides them to find the meaning hidden behind the texts. This approach has an emphasis on messages and views brought by a text from the power-related perspective (Roberge, 2013, p. 1). The critical literacy approach is effective in teaching students how to analyze social issues and the relationship between unequal powers found in a text (Roberge, 2013, p. 1).

A study conducted by Wallace (2010) indicates that the critical literacy approach can develop students' critical awareness of domination practice. The critical literacy approach guides readers to question information, perspective assumptions, and the purpose of the writer. Reading activity is conducted by identifying, analyzing, and reflecting on the practice of domination, discrimination, and injustice found in texts (Priyatni, 2010). The critical literacy approach develops reading ability actively and reflectively. This approach helps university students to make a link between textual and social aspects by asking analytic questions (Lesley, 2001, p. 184).

This study aimed to measure the effect of the critical literacy approach on pre-service language teachers' critical reading skills. To be more specific, the following research questions were asked about the critical literacy approach:

1. Does it have an effect on the pre-service language teachers' interpretation skill?
2. Does it have an effect on the pre-service language teachers' analysis skill?
3. Does it have an effect on the pre-service language teachers' inference skill?
4. Does it have an effect on the pre-service language teachers' evaluation skill?
5. Does it have an effect on the pre-service language teachers' explanation skill?
6. Does it have an effect on the pre-service language teachers' self-regulation skill?

Method

Research Design

This research project employed the quasi-experimental with nonequivalent control group design. The experiment was conducted to investigate the effect of a learning approach toward students' critical reading ability. Dependent variables of this study were the critical reading skills of pre-service teachers. These skills are divided into six levels: interpretation skill, analysis skill, making an inference skill, evaluation skill, explanation skill, and self-regulation skill. Meanwhile, the independent variable of this study was a learning approach. The pretest conducted to represent initial knowledge of the subjects was used as the covariate (Dimitrov and Rumrill Jr., 2003).

This research was carried out by following five steps: (1) selecting the control group and the experimental group, (2) conducting a pretest, (3) performing learning in classes for both the control group and the experimental group, (4) conducting a posttest, and (5) analyzing the test. The pretest was organized in both classes in the beginning of the effectiveness test. After conducting the pretest, learning occurred in both classes. The experiment class was taught critical reading using the critical learning tools developed earlier based on the critical literacy approach. The control group undertook conventional learning using a task-based approach. The research was carried out for eight meetings. After learning was completed, all students took the posttest.

Research Sample

The 56 students participating in this study came from two classes of the Indonesian Language Teaching Department, Universitas Negeri Makassar, Indonesia. One class (28 students) was treated as the experimental group and the other played the role of the control group (28 students). The groups were assigned randomly since they were considered to have the same characteristics. The sample groups were all pre-service language teachers enrolled in semester three of an undergraduate program. Seventy percent of the sample was female.

Research Instruments and Procedures

Prior to conducting an effectiveness test aimed to measure the effect of the critical literacy approach on the students' critical reading skills, a set of instructional materials were developed through several activities: (1) developing competences, sub-competences, and indicators, (2) selecting texts, (3) testing the texts' readability and attractiveness, and (4) promoting reading activities. The competences and sub-competences of critical reading skills were adapted from Facione's critical thinking skills taxonomy (1990, 2013, 2015) and consisted of six levels: (1) interpretation skill, (2) analysis skill, (3) inference skill, (4) evaluation skill, (5) explanation skill, and (6) self-regulation skill. The six levels of skills were then elaborated into 16 sub skills. Each of the sub-skills was divided into some indicators of competence containing the attitude to be measured from the students to show their achievement in critical reading.

Texts used in the classroom were selected based on these criteria: authenticity, usefulness, attractiveness, appropriateness, and fairness (Nuttal, 2005). The criteria are explained in Table 1.

Table 1
Criteria of Selecting the Texts

Criteria	*Description*
Authenticity	The texts are authentic; they have been published in the mass media.
Usefulness	The texts are chosen because they provide information for the students, which is in accordance with the society's norms and ethics.
Attractiveness	The texts are chosen for their appeal and for corresponding to the students' interests.
Appropriateness	The texts can be used to improve the students' critical reading skills through the critical literacy approach. These texts contain the elements of domination that can increase students' critical awareness.
Fairness	The texts can be exploited within the six levels of critical reading skills. The length of the texts enables the students to perform the indicators of critical reading competence.

The readability was tested by asking the students to do a cloze test. The difficulty level was categorized as medium (Gillet & Temple, 1994). The students had to complete a questionnaire to examine the attractiveness of the texts. They were asked to read each text in its entirety and respond to some yes/no questions.

The reading activities implemented in this research included four kinds of texts: (1) news items, (2) editorial, (3) advertorial, and (4) opinion. The reading process covered pre-reading, while reading, and post reading. Reading comprehension questions were carefully constructed to test students' ability to criticize the texts from the perspective of power relations.

The critical reading test was developed based on Facione's (1990, 2013, 2015) critical reading skills. The test consisted of 40 items: 23 items of multiple choice and 17 essay questions. Of the 40 items, eight items tested the interpretation skill, nine items tested the analysis skill, six items tested the making an inference skill, five items tested the evaluation skill, seven items tested the explanation skill, and five items tested the self-regulation skill. A literature review was conducted before developing the blueprint of the test. All the test items referred to indicators sourced from the blueprint.

Test validity was measured using content validity by expert judgment. A test that had been developed was examined by three reading experts. The experts were asked to correct every test item and evaluate the critical reading aspects of the test. The test was then tried out to test its reliability. The Cronbach's alpha internal consistency coefficients were .645 for interpretation skill, .896 for analysis skill, .632 for inference skill, .712 for evaluation skill, .751 for explanation skill, and .725 for self-regulation skill. The Cronbach's alpha coefficient for all critical reading skills was .882.

Data Analysis

Three steps of data analysis were conducted: (1) data management, (2) statistical analysis, and (3) interpretation of the results. Data management contained activities of grouping, coding, scoring, and labeling answer sheets. To maintain the objectivity of the results, the test was examined by two scorers. The data was statistically analyzed using IBM SPSS Statistic 23. The results of the normality test, which was analyzed with One-Sample Kolmogorov-Smirnov Test, showed a significance value of .712 for the experimental group and of .999 for the control group. This finding suggested that the distribution of the data among the experimental group and the control group was normal. The test of homogeneity of variance showed a significance value of .597, which indicated that the data had the same (homogeneous) variance. Descriptive statistical analysis was used to compare the average score of pretest and posttest achieved by the experimental and the control group of students. The ANCOVA test was conducted to reveal the effect of the critical literacy approach on improving pre-service teachers' critical reading skills. The significance level determined was $\alpha = .05$. The interpretation of the results was based on the theories and findings of the related previous research. The researchers' points of view were also included.

Results

This section will cover the explanation of the research findings. It attempts to investigate the effect of the critical literacy approach on students' critical reading skills.

The Average Score of Pretest and Posttest of the Experimental and the Control Group

The average pretest and posttest scores of the experimental and control groups on every level of skill are presented in Table 2. The table also shows the percentage of the improved pretest and posttest average scores of each group.

Table 2

The Average Score of Pretest and Posttest of the Experimental and the Control Group

Skills	*Groups*	*Pre-test*	*Post-test*	Improvement	
				Scores	%
Interpretation	Experimental	3.46	6.39	2.93	84.68
	Control	3.68	5.29	1.61	43.75
Analysis	Experimental	2.96	6.96	4.00	135.14
	Control	3.25	3.64	0.39	12.00
Inference	Experimental	3.86	5.18	1.32	34.20
	Control	3.32	3.93	0.61	18.37
Evaluation	Experimental	6.91	14.43	7.52	108.83
	Control	7.11	9.75	2.64	37.13
Explanation	Experimental	10.61	22.93	12.32	116.12
	Control	10.25	15.38	5.13	50.05
Self-regulation	Experimental	7.18	14.96	7.78	108.36
	Control	7.25	10.04	2.79	38.48

Based on Table 2, it can be concluded that the average posttest scores of the experimental and the control group are higher than the average pretest scores on the six aspects of critical reading skills. The scores of the experimental group, however, improved more than those of the control group.

The Effect of the Critical Literacy Approach on the Pre-service Language Teachers' Critical Reading Skills

The results of the ANCOVA test to show the effect of the critical literacy approach on the pre-service language teachers' critical reading skills are presented below.

Table 3

The Results of the ANCOVA Test on Interpretation Skill

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Corrected Model	19.846[a]	2	9.923	5.171	.009
Intercept	169.134	1	169.134	88.135	.000
Pretest	2.685	1	2.685	1.399	.242
Learning Approach	18.202	1	18.202	9.485	.003
Error	101.708	53	1.919		
Total	2031.000	56			
Corrected Total	121.554	55			

a. R Squared = .163 (Adjusted R Squared = .132)

According to the covariate value presented in Table 3, it is seen that F=1.399 with a level of significance of .242 (p>.05). This indicates that there was no significant effect found on the improvement of the pre-service language teachers' interpretation skill. Based on the effect of the learning approach, it was found that F=9.485 with a level of significance of .003. These results suggest that the learning approach had a significant effect on the pre-service language teachers' interpretation skill.

Table 4

The Results of the ANCOVA Test on Analysis Skill

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Corrected Model	156.577[a]	2	78.288	32.604	.000
Intercept	202.172	1	202.172	84.197	.000
Pretest	2.130	1	2.130	.887	.351
Learning Approach	156.563	1	156.563	65.202	.000
Error	127.263	53	2.401		
Total	1859.000	56			
Corrected Total	283.839	55			

a. R Squared = .552 (Adjusted R Squared = .535)

According to the covariate value presented in Table 4, it is seen that F= .887 with a level of significance of .351 (p>.05). This indicates that there was no significant effect found on the improvement of the pre-service language teachers' analysis skill. Based on the effect of the learning approach, it was found that F=65.201 with a level of significance of .000. These results suggest that the learning approach had a significant effect on analysis skill.

Table 5

The Results of the ANCOVA Test on Inference Skill

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Corrected Model	25.514[a]	2	12.757	12.922	.000
Intercept	166.351	1	166.351	168.496	.000
Pretest	3.639	1	3.639	3.686	.060
Learning Approach	24.751	1	24.751	25.070	.000
Error	52.325	53	.987		
Total	1239.000	56			
Corrected Total	77.839	55			

a. R Squared = .328 (Adjusted R Squared = .302)

According to the covariate value presented in Table 5, it is seen that F=3.686 with a level of significance of .060 (p>.05). This indicates that there was no significant effect found on the pre-service language teachers' skill in making an inference. Based on the effect of the learning approach, it was found that F=25.070 with a level of significance of .000. These results suggest that the learning approach had a significant effect on making an inference skill.

Table 6

The Results of the ANCOVA Test on Evaluation Skill

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Corrected Model	321.302[a]	2	160.651	21.010	.000
Intercept	432.074	1	432.074	56.508	.000
Pretest	14.856	1	14.856	1.943	.169
Learning Approach	295.060	1	295.060	38.589	.000
Error	405.252	53	7.646		
Total	8911.000	56			
Corrected Total	726.554	55			

a. R Squared = .442 (Adjusted R Squared = .421)

According to the covariate value presented in Table 6, it is seen that F=1.943 with a level of significance of .169 (p>.05). This indicates that there was no significant effect found on the pre-service language teachers' evaluation skill. Based on the learning approach, it was found that F=38.589 with a level of significance of .000. These results suggest that the learning approach had a significant effect on evaluation skill.

Table 7

The Results of the ANCOVA Test on Explanation Skill

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Corrected Model	799.699[a]	2	399.849	49.311	.000
Intercept	549.279	1	549.279	67.740	.000
Pretest	.909	1	.909	.112	.739
Learning Approach	785.720	1	785.720	96.898	.000
Error	429.761	53	8.109		
Total	21769.750	56			
Corrected Total	1229.460	55			

a. R Squared = .650 (Adjusted R Squared = .637)

According to the covariate value presented in Table 7, it is seen that F=.112 with a level of significance of .739 (p>.05). This indicates that there was no significant effect found on the pre-service language teachers' explanation skill. Based on the learning approach, it was found that F=96.898 with a level of significance of .000. These results suggest that the learning approach had a significant effect on explanation skill.

Table 8

The Results of ANCOVA Test on Self-Regulation Skill

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Corrected Model	340.412[a]	2	170.206	40.895	.000
Intercept	192.767	1	192.767	46.316	.000
Pretest	.340	1	.340	.082	.776
Learning Approach	340.412	1	340.412	81.790	.000
Error	220.588	53	4.162		
Total	9311.000	56			
Corrected Total	561.000	55			

a. R Squared = .607 (Adjusted R Squared = .592)

According to the covariate value presented in Table 8, it is seen that F= .082 with a level of significance of .776 ($p > .05$). This indicates that there was no significant effect found on the pre-service language teachers' self-regulation skill. Based on the learning approach, it was found that F=81.790 with a level of significance of .000. These results suggest that the learning approach had a significant effect on self-regulation skill.

Discussion and Conclusion

The results of the study presented in Table 2 show that there was an improvement of students' achievement in critical reading skills in both classes. However, the students in the experimental group achieved better compared to the control group. This indicates that the learning process that occurred in the experimental group was more effective than the learning process that occurred in the control group. Based on the ANCOVA test, it was found that the learning approach had a significant effect on interpretation skill, analysis skill, inference skill, evaluation skill, explanation skill, and self-regulation skill of the pre-service language teachers. The results of the analysis indicated that the critical literacy approach had a more significant effect on reading skills compared to the task-based approach. It can be concluded that the difference has resulted from different treatments implemented in each classroom.

The results of this research showing that the critical literacy approach had a significant effect on the pre-service teachers' critical reading skills can be explained as follows. The critical literacy approach was comprehensive in developing the university students' competence in understanding problems, evaluating, and producing critical responses. The learning activities trained them in the process of constructing the competences by directing the students to be able to investigate meanings and messages behind language choices, information, and arguments found in texts. The critical literacy approach empowered students by assigning a role to constructing meanings and having a resistant attitude (Locke & Cleary, 2011). These characteristics encouraged the students to develop their critical reading competency.

The significant effect of the critical literacy approach on the students' critical reading skills indicates the benefit of implementing this approach. Using this approach involved the students in learning by analyzing and evaluating from many perspectives. The students were actively engaged in discussing problems of a text within its context, connecting them with their background knowledge and experience, asking questions from different perspectives, and connecting the relevance of the text to its context in real life. Kuo (2014) revealed that the critical literacy approach could improve students' critical attitude toward a text and their ability to investigate a problem from many perspectives. Research findings that showed the effectiveness of the approach in improving students' critical reading skills are in line with the results of the research conducted by Yang (2011), which proved that this approach could improve the critical English reading-writing skills of Korean university students.

The critical literacy approach is a learning method that helps students to think deeply to reveal hidden domination practice (Roberge, 2013). This approach emphasizes developing higher order thinking skills. Therefore, this characteristic plays an important role in the critical reading activity. According to Soares and Wood (2010), the critical literacy approach can be used to improve the critical thinking capacity through responding to texts. The results of the effectiveness test have confirmed it.

The critical literacy approach applied in learning could encourage university students to structure their thinking process. Critical reading activities executed in the classroom provided an opportunity for the students to expand their thinking process. It resulted from the ability of the students to criticize elements found in texts and connect them with wider contexts. The students' learning achievement, which significantly improved, indicates a similarity to findings suggested by Izadinia and Abednia (2010) who point out that the critical literacy approach to reading can improve students' critical thinking ability, confidence, and self-awareness.

The results of this study are in line with the results of the study conducted by Ali (2011). He proved that the development of critical awareness through an explicit learning method can improve students' critical thinking skills and motivation. Through the critical literacy approach, students have an opportunity to train their reading skills to a higher level. They can criticize texts from many aspects, such as information, data, facts, and arguments with the sense of domination. Huang (2011) states that the critical literacy approach can be used to develop students' language skills with positive results. In reading, the critical literacy approach can improve readers' ability to comprehend a text because it helps reveal hidden messages and perspectives.

The results of this research also show that criticizing text from the domination perspective can improve readers' critical thinking skills. This is in accordance with the findings of research conducted by Norris, Lucas, and Prudhoe (2012) and Gustine (2014) who found that the critical literacy approach can improve students' critical thinking skills by engaging them in various activities to analyze, respond, inquire about a text and also connect the text with its social context.

Critical reading learning developed on a critical literacy approach promotes students' competence in reading behind the lines. Reading activity covers finding arguments which represent the practice of power and domination, making an inference from a text, evaluating the text, responding to it, linking the text with the context and reflecting on the problems found in the text. Such a learning process can improve students' analytic and reflecting skills which can result in improving their critical thinking competency. Similarly, Kalantzis and Cope (2012) assert that the critical literacy approach which brings authentic texts into the classroom can help students think more critically.

Critical reading skills as a part of critical thinking skills are important elements in determining every individual's success in this century (Morocco, Aguilar, Bershad, Kotula, & Hindin, 2008; Trilling & Fadel, 2009). The development of the pre-service teachers' critical thinking skills can contribute to their career development as teachers. As teachers, they will have to facilitate students to think critically. Therefore, they need to master critical thinking skills and later teach their students how to develop theirs. One of the ways of doing this is through critical reading activities.

Based on the results of the research, it can be concluded that the critical literacy approach is effective in improving pre-service teachers' critical reading skills. This approach develops the students' critical attitude by actively engaging them into a process of thinking, analyzing a problem, and providing responses from many perspectives. These findings can give an alternative to the development of critical reading skills by giving students guidance in a text investigation, which will reveal domination and power acts in texts.

Recommendations

The results of this research have proven that the critical literacy approach had a significant effect on pre-service language teachers' critical reading skills. It implies that this approach can be an alternative to apply in universities. The implementation of this approach can improve the quality of students' learning processes and achievements. Lecturers are expected to be able to develop students' ability in analyzing and criticizing domination practice in a text since many texts published recently are likely to contain domination elements, such as propaganda, discrimination, persuasion, or marginalization.

Future research could possibly discuss the results of a test conducted to investigate the effectiveness of the critical literacy approach based on gender variables, cognitive ability levels, reading habits, and various kinds of reading texts. Their findings hopefully can contribute to practical use of learning materials and broaden the theoretical perspective of reading. Future research is expected to be conducted at the elementary and secondary levels of education since the students need to improve their critical reading skills to improve their critical thinking skills in evaluating domination acts in texts and textual hegemony.

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A Meta-Analysis of the Relationship Between Teachers' Job Satisfaction and Burnout *

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ABSTRACT

Purpose: Given the inconsistency among research studies on the relationship between burnout and job satisfaction of teachers in Turkey, it is of great importance to combine and interpret the results of such studies. In this regard, this study aims to examine the size and direction of relationships between job satisfaction and dimensions of burnout, and to determine the possible effect of moderator variables on these relationships.

Research Method: The study was designed using a meta-analysis method. Identified as appropriate to the specified inclusion criteria, 15 studies for emotional exhaustion and depersonalization and 14 for reduced personal accomplishment were included in this meta-analysis. The total sample size of the included studies was 3,778 for emotional exhaustion and depersonalization, and 3,455 for reduced personal accomplishment. In the study, the possibility of a publication bias was examined. The included studies were determined to be heterogeneous. A random-effects model was used in the computation of effect sizes.

Findings: In the study, the relationships between job satisfaction and emotional exhaustion and between job satisfaction and reduced personal accomplishment were found to be negative and at a medium level, whereas between job satisfaction and depersonalization the relationship was found to be negative and at a low level. For study-type and grade-level moderators, the variance among studies did not statistically differ.

Implications for Research and Practice: Teachers' higher emotional exhaustion, depersonalization, and reduced personal accomplishment relatively reduce their job satisfaction. Further research might be beneficial in favor of extending the generalization in specific cultures and in combining inconsistent research results existing in literature.

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Introduction

In social sciences literature, there has been a dramatic increase in the number of studies examining the relationship between job satisfaction and burnout. In the national database of Turkey's Higher Education Council (HEC) alone, 37 graduate theses examining the relationship between job satisfaction and the burnout of employees can be found. Of these, 23 were published between the years 2010 and 2016. When the findings of all this research is examined, what is remarkable is the varying results of these studies. However, combining the results of such independently conducted studies can be significant in terms of producing valid and reliable information. Furthermore, the examination of such relationships specific to teachers might contribute to the production of generalizable information with regard to educational organizations. For this reason, a meta-analysis aimed at determining the relationship between job satisfaction and the burnout of teachers has been performed as part of the scope of this research.

The subject of job satisfaction has attracted many scholars' attention since the 1920s and Elton Mayo's factory experiments, which tied increased attention to workers' conditions to increased productivity (Tillman & Tillman, 2008). These studies are based on the assumption that individuals become happier and more productive by also reaching their own workplace aims alongside working toward the aims of organizations. In this day and age, job satisfaction occupies an important place in the overall achievement of organizations. In parallel with this judgement, job satisfaction has become an important aim for organizations (Yilmaz, 2012). Because, the ability of organizations to benefit from individuals' expertness, by providing and sustaining collaboration, is only possible by ensuring the job satisfaction of employees (Locke, Schweiger, & Latham, 1986).

Job satisfaction, in general, is associated with what is felt by individuals for the various aspects of their job (Spector, 1997). There are many definitions regarding this concept in the related literature. There are researchers expressing job satisfaction as: a positive emotional state (Inandi, Tunc, & Uslu, 2013), a positive impact of job experiences on individuals (Filiz, 2014), and employees' perceptions regarding their jobs (Altinkurt & Yilmaz, 2014). As understood by these definitions, job satisfaction is associated with what an individual feels for his or her job and with contentment levels. To ensure job satisfaction, meeting the needs and expectations of the employee is of vital importance. The rapport between the conditions of an individual and a job (Locke, 1975) is also of great importance. In order to ensure such a rapport, there should be similarities between the purposes of employees and organizations.

Job satisfaction can be asserted to profit not only employees, but also organizations and their success. Employees with a high level of job satisfaction have positive opinions about their organizations and, therefore, put in more effort than expected (Yilmaz, 2012). In addition, high job satisfaction reduces absenteeism by employees, increases voluntary behaviors, and ensures greater happiness in other aspects of life. On the other hand, low job satisfaction can lead to alienation and negative attitudes toward the job (Altinkurt & Yilmaz, 2014). Such negative emotions might remain over time and cause employees to feel themselves under pressure and to experience burnout.

The concept of burnout began to be used in the 1970s in connection with individuals whose work involved frequent face-to-face interactions (Maslach, Schaufeli, & Leiter, 2001). Maslach (1993) identified burnout as an individual stress source arising from complicated social relations and shaped by perceptions related to self and the environment. In this sense, burnout can be described as the psychological reaction of employees against negations in the workplace. Maslach et al. (2001) further conceptualizes burnout as multidimensional, consisting of emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion is the feeling of having depleted emotional resources and having nothing else left to do for one's job. Another dimension of burnout, depersonalization, is the demonstration of negative and indifferent manners toward colleagues in order to cope with intense work pressure and work overload. Reduced personal accomplishment, meanwhile, is described as an individual's self-perception of being insufficient and unsuccessful in the job and not as productive as expected. These dimensions deal with different aspects of burnout. Emotional exhaustion is associated with an individual stress dimension, depersonalization with an interpersonal dimension, and reduced personal accomplishment with a self-evaluation dimension.

Burnout both affects individuals' personal lives negatively and gives rise to them having problems in their jobs. For instance, burnout can significantly impact individuals by way of personality disorder, physical depletion, and family problems. It also affects organizations in that it leads to a decrease in the quality of service and an increase in employee turnover rates (Maslach, Jackson, & Leiter, 1996). However, some researchers regard burnout as a social problem beyond these issues. (Lackritz, 2004; Maslach, 1993). Burnout as experienced by teachers likewise has individual and organizational consequences. As teachers have a substantial role in the future of societies, teachers' burnout might cause structural problems for society.

In the literature, many studies regarding the burnout and job satisfaction of employees in educational organizations are encountered. Among these studies, there are also meta-analyses examining teachers' burnout and job satisfaction levels in terms of demographic variables. Within such studies, gender, grade-level, marital status, seniority, school-type, and subject-matter variables were found to have a low-level effect on the burnout of teachers (Doguyurt, 2013; Weng, 2004; Yorulmaz, 2016). Similarly, gender was found to have a low-level effect on teachers' job satisfaction in a meta-analysis study conducted by Aydin, Uysal, and Sarier (2012). There are meta-analysis studies examining the burnout and job satisfaction of teachers in terms of various personal and organizational variables, as well. Among these, the relationships between burnout and perceived stress and organizational support (Stewart, 2015), classroom management skills (Aloe, Amo, & Shanahan, 2013), undesired student behaviors (Aloe, Shisler, Norris, Nickerson, & Rinker 2014), and mobbing (Iri, 2015), and between job satisfaction and organizational commitment (Yutcu, 2015) were examined. However, meta-analysis or meta-evaluation studies examining the relationship between job satisfaction and the burnout of teachers have not been broached. As a result, the purpose of this study was to determine the relationship between job satisfaction and burnout with regard to teachers. Within the scope of this purpose, the possible effect of study-type and grade-level moderators on relationships between job satisfaction and emotional exhaustion, depersonalization, and reduced personal accomplishment were also investigated.

Method

Research Design

In the determination of relationships concerning job satisfaction and burnout of teachers in Turkey, a meta-analysis method was used. Meta-analysis refers to a quantitative procedure used to statistically combine the results of individual studies (Cooper, 2017).

Data Collection Procedure

The data of the research were collected in December 2016. In order to reach the included studies, Web of Science, ERIC, ULAKBIM, EBSCOhost, Google Scholar, and HEC databases were searched with such key words as “burnout,” “emotional exhaustion,” “depersonalization,” “(reduced) personal accomplishment,” “job satisfaction,” and “Maslach,” and their Turkish equivalents. Following this search, a total of 98 studies including 58 articles and 40 graduate theses were obtained. Subsequent to the examination of the studies reached through the databases, specific criteria were determined for inclusion of the studies in the meta-analysis. These criteria were as follows: 1) Studies should be articles or graduate theses published between 2005 to 2016. 2) The aim of the studies should be determining the relationship between job satisfaction and burnout of teachers working at pre-school, elementary, lower-secondary, or upper-secondary schools in Turkey. 3) The findings of the studies should include sample size and correlation coefficients or any other statistics to compute these values. 4) In cases where articles were produced from the theses, the studies including more data should be included in the meta-analysis. 5) Data of the studies must be collected with the Maslach Burnout Inventory (MBI) and include findings regarding the dimensions of the MBI. The criterion “data being collected with the MBI” was not determined as a criterion at the beginning of the research. However, it was observed that the data of all the included studies were collected with the MBI and it was not empirically fitted with any other data collection instrument by which the burnout was measured, because it was not possible to obtain a total score through the MBI. For this reason, “data being collected with the MBI” was decided upon as a criterion.

In the study, a coding key was created to set the characteristics of the studies reached through the databases. This coding key included information about the author(s) of the study; the year published; topic of the research; type (qualitative, quantitative, mixed or theoretical); sample and sample size; the name, developers, and validity and reliability proofs of the data collection instruments used; and the availability of the data regarding relationships between job satisfaction and burnout. Through this coding key it was determined that, out of 98 studies, 70 would not be included in the meta-analysis as their samples did not meet the inclusion criteria, and a further 13 were rejected as not including appropriate data. Then, a second coding key was created, which consisted of the data regarding the author(s), sample sizes, and correlation coefficients of the studies.

Research Sample

Meeting all the inclusion criteria, 15 studies in terms of emotional exhaustion and depersonalization, and 14 in terms of reduced personal accomplishment dimensions of burnout, were included in the meta-analysis. The total sample size of the included studies was 3,778 for emotional exhaustion and depersonalization, and 3,455 for reduced personal accomplishment.

Publication Bias

Publication bias refers to the possibility that the published studies may not be representative of all studies conducted in a specific topic (Rothstein, Sutton, & Borenstein, 2005). Publication bias also pertains to the fact that overall effect sizes are biased toward studies finding statistically significant effects, where included studies are selected from the published literature (Pigott, 2012). Publication bias above a critical level causes effect sizes to seem higher than what they normally are (Borenstein, Hedges, Higgins, & Rothstein, 2009). With this in mind, the possibility of a publication bias was examined using funnel plots, Orwin's Fail-Safe N analysis, Duval and Tweedie's Trim and Fill, and Egger's regression test before computing the effect sizes. The funnel plots regarding the effect sizes computed for the relationships between job satisfaction and emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA) are shown in Figure 1.

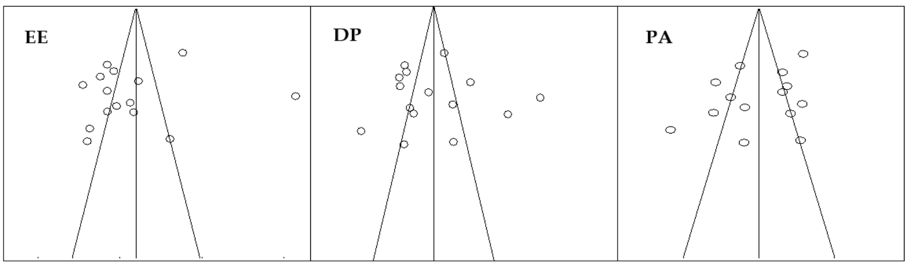

Figure 1. Funnel plots: The effect size of the relationship between job satisfaction and burnout.

Funnel plots are regarded as instruments that can visually express the possibility of a publication bias in meta-analysis (Sterne, Becker, & Egger, 2005). In cases where there is no publication bias observed through the funnel plots, the effect sizes are symmetrically scattered around the vertical line indicating the combined effect size (Borenstein et al., 2009; Sterne et al., 2011). Whereas effect size estimates of studies with smaller samples are widely scattered at the lower part of the funnel plots, studies with bigger samples are scattered narrowly at the upper part of the diagram (Sterne et al., 2011). In cases where there is publication bias in the meta-analysis, studies are asymmetrically scattered around the funnel plots (Sterne & Egger, 2001). When the funnel plots in Figure 1 were examined, it was observed that the studies were nearly symmetrically scattered around the vertical line, signifying the general effect size, and they were mostly accumulated in the upper part of the funnel plots. However, the funnel plots did not provide sufficient proof regarding publication bias. That is why this finding was also supported by Orwin's Fail-Safe N analysis, Duval and Tweedie's Trim and Fill, and Egger's regression test (Table 1).

Table 1.

Results of Publication Bias Tests

	Orwin's Fail-Safe N*	***Duval and Tweedie***		***Egger's Test***
	Studies Required	*Trimmed Studies*	*Observed/Filled*	
EE	589 for -.01 Fisher's z	5	-.430 (-.317)	p=.520
DP	274 for -.01 Fisher's z	3	-.184 (-.111)	p=.814
PA	362 for -.01 Fisher's z	1	-.306 (-.326)	p=.181

*Number of missing studies needed to bring Fisher's z over -.01

Orwin's Fail-Safe N analysis computes the number of required (missing) studies for the combined effect sizes to reach the determined critical value (Orwin, 1983). According to Table 1, Orwin's Fail-Safe N analysis results reveal there was no need to include more studies in the meta-analysis in order to bring Fisher's z coefficient over the "trivial" -.01 value. The evidential values refer to the absence of a publication bias in the meta-analysis.

Duval and Tweedie's test determines the new center of the funnel plot by trimming the studies which lead to an asymmetry in the diagram, and computes the new combined effect size by filling the trimmed studies with their symmetrical equivalents around the center of the diagram (Duval & Tweedie, 2000; Higgins & Green, 2008). According to Table 1, subsequent to studies being trimmed from the funnel plots, the new (filled) effect sizes did not considerably differ from the observed effect sizes. This finding also proves there was not a publication bias in the meta-analysis study.

Another instrument used to determine publication bias in meta-analysis, Egger's linear regression test, reveals the symmetry of funnel plots through the results of "p" significance tests (Sterne & Egger, 2001); a result which is not significant (p>.05) indicates no publication bias observed in the meta-analysis. According to Table 1, the results of Egger's regression test were not significant for all three dimensions, confirming there was no publication bias in this meta-analysis. After determining that there was no bias in the study, a heterogeneity test, model selection, and effect size computations were performed.

Heterogeneity

In this meta-analysis, heterogeneity tests were conducted before computing effect sizes. The heterogeneity concerning the effect sizes of the included studies are identified with the Q test. In cases where the Q value exceeds the degree of freedom and the critical χ^2 value, the effect sizes are assumed to be heterogeneous (Card, 2011). Even though the Q statistics and significance test give evidence regarding the heterogeneity of the combined studies, they do not clarify the level of heterogeneity. Therefore, I^2 statistics were used to explain the heterogeneity level of the combined studies. Another advantage of I^2 statistics is that they are not directly affected by the number of studies in meta-analysis (Cooper, Hedges, & Valentine, 2009; Higgins & Thompson, 2002). The I^2 value can also be used to compare the heterogeneity results of different meta-analysis studies as it provides information about the heterogeneity level (Card, 2011). I^2 values lower than 25% are regarded as low, equal to 50% as medium, and higher than 75% as a high level of heterogeneity (Cooper et al., 2009; Pigott, 2012). The Q statistics and I^2 values regarding the heterogeneity of studies included in this meta-analysis are shown in Table 2.

Table 2.

Heterogeneity of Studies Included in This Meta-Analysis

Job Satisfaction	k	Q	I^2
Emotional Exhaustion	15	343.902	95.929
Depersonalization	15	229.884	93.910
Reduced Personal Accomplishment	14	116.345	88.826

k: Number of studies included in meta-analysis

As seen in Table 2, the Q values used to determine heterogeneity were computed as 343.902 ($df_{(Q)}$= 14; p=.00) for emotional exhaustion, 229.884 ($df_{(Q)}$= 14; p=.00) for depersonalization, and 116.345 ($df_{(Q)}$= 13; p=.00) for reduced personal accomplishment. The I^2 values were computed as 95.929 for emotional exhaustion, 93.910 for depersonalization, and 88.826 for reduced personal accomplishment. The computed values indicate a high level of heterogeneity among the included studies.

Data Analysis

In meta-analysis studies, models to be used (fixed- or random-effects models) should be selected before computing the effect sizes. If effect sizes are computed by the fixed-effects model based on a homogeneity assumption, variance among the studies is accepted to result from only sampling error. On the other hand, if effect sizes are computed by the random-effects model based on a heterogeneity assumption, the variance among studies is considered to be based on different samples of individuals within each study (Higgins & Green, 2008; Pigott, 2012). The purpose of a random-effects model is not to estimate one true effect, but to estimate the mean of the distribution of effects among the included studies (Borenstein et al., 2009). Another important consideration in deciding between fixed- and random-effects models is the type of conclusion to be drawn. While conclusions from a fixed-effects model is limited only to the sample of the studies included in the meta-analysis, conclusions from random-effects models allow more generalizable conclusions (Card, 2011). In addition, the random-effects model is suggested if the included studies are selected from the published literature (Borenstein et al., 2009). Furthermore, it is recommended by Basol (2016) that an a priori decision be made and the random-effects model be used in cases where the included studies vary with regard to design, scope, sample, and examined variables. Therefore, the effect sizes for this analysis were computed according to the random-effects model, and heterogeneity tests were conducted to prove that the included studies were heterogeneous.

In meta-analysis studies, the variance depends strongly on correlation coefficients (r) (Borenstein et al., 2009). For this reason, correlation coefficients were transformed into Fisher's z coefficient for computing the effect sizes, and analyses were conducted through the transformed coefficients. Afterwards, Fisher's z was re-transformed into correlation coefficient (r) so as to state the general correlation and confidence intervals. In all computations regarding the effect sizes, the confidence level was accepted as 95%. Correlation coefficients higher than .70 were accepted as high, those between .69 and .30 as medium, and lower than .29 as low level (Buyukozturk, 2009). The possible effect of study-type (articles or graduate theses) and grade-level (pre-school, elementary, lower-secondary, upper-secondary) moderators on relationships between emotional exhaustion, depersonalization, and reduced personal accomplishment were determined with the Q test and p significance test. Throughout the study, analyses were conducted using Comprehensive Meta-Analysis software.

Results

The purpose of this study was to determine the relationship between job satisfaction and burnout. Within the scope of this purpose, relationships between teachers' emotional exhaustion, depersonalization, reduced personal accomplishment, and job satisfaction were examined. Figure 2 shows the forest plot indicating the primary studies on the relationship between emotional exhaustion (EE) and job satisfaction.

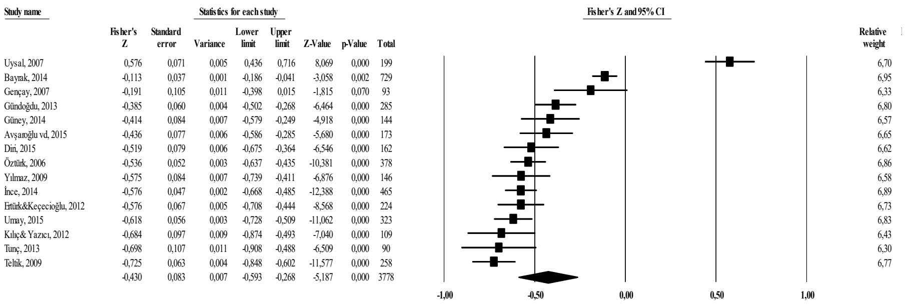

Figure 2. Forest plot of the relationship between EE and job satisfaction.

As shown by Figure 2, 15 primary studies examining the relationship between emotional exhaustion and job satisfaction were included in the meta-analysis. In terms of emotional exhaustion, the total sample size of the included studies was 3,778, and their study weights were close to one another. The effect size (ȥ) of the relationship between emotional exhaustion and job satisfaction computed by the random-effects model was -.430, p=.00 (r= -.406); standard error of combined effect size was .083; and lower and upper limits of the combined effect size were -.593 to -.268. The computed values show there was a medium level of negative correlation between emotional exhaustion and job satisfaction.

Another purpose of the research was to determine the relationship between depersonalization and job satisfaction. Figure 3 illustrates the forest plot denoting primary studies on the relationship between depersonalization (DP) and job satisfaction.

Study name	Fisher's Z	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	Total	Relative weight
Uysal, 2007	0,497	0,071	0,005	0,357	0,637	6,962	0,000	199	6,71
Güney, 2014	0,292	0,084	0,007	0,127	0,457	3,468	0,001	144	6,52
Gündoğdu, 2013	0,053	0,060	0,004	-0,064	0,170	0,891	0,373	285	6,86
Gençay, 2007	-0,055	0,105	0,011	-0,262	0,152	-0,522	0,601	93	6,17
Avşaroğlu vd, 2015	-0,060	0,077	0,006	-0,210	0,090	-0,783	0,433	173	6,63
Bayrak, 2014	-0,113	0,037	0,001	-0,186	-0,041	-3,058	0,002	729	7,09
Ertürk&Keçecioğlu, 2012	-0,213	0,067	0,005	-0,345	-0,081	-3,169	0,002	224	6,76
Yılmaz, 2009	-0,308	0,084	0,007	-0,472	-0,145	-3,688	0,000	146	6,53
Diri, 2015	-0,333	0,079	0,006	-0,488	-0,177	-4,196	0,000	162	6,59
Öztürk, 2006	-0,354	0,052	0,003	-0,455	-0,253	-6,857	0,000	378	6,95
İnce, 2014	-0,365	0,047	0,002	-0,457	-0,274	-7,855	0,000	465	7,00
Tunç, 2013	-0,370	0,107	0,011	-0,580	-0,160	-3,451	0,001	90	6,14
Teltik, 2009	-0,395	0,063	0,004	-0,518	-0,273	-6,314	0,000	258	6,82
Umay, 2015	-0,400	0,056	0,003	-0,510	-0,290	-7,156	0,000	323	6,90
Kılıç&Yazıcı, 2012	-0,643	0,097	0,009	-0,833	-0,453	-6,621	0,000	109	6,31
	-0,184	0,068	0,005	-0,317	-0,051	-2,704	0,007	3778	

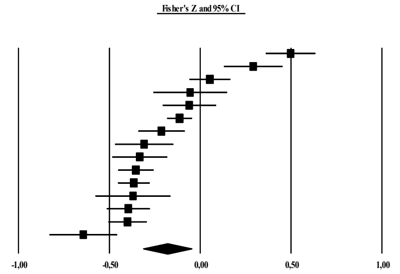

Figure 3. Forest plot of the relationship between DP and job satisfaction.

As shown by Figure 3, 15 primary studies dealing with the relationship between depersonalization and job satisfaction were included in the meta-analysis. In terms of depersonalization, the total sample size of the included studies was 3,778, and the study weights were close to each other. The effect size (ȥ) of the relationship between depersonalization and job satisfaction, according to the random-effects model, was -.184, p=.00 (r= -.182); standard error of combined effect size was .068; and lower and upper limits of the combined effect size were -.317 to -.051. The computed values indicate there was a low level of negative correlation between depersonalization and job satisfaction.

Another purpose to this research was to determine the relationship between reduced personal accomplishment and job satisfaction. Figure 4 displays the forest plot of primary studies on the relationship between the reduced personal accomplishment (PA) and job satisfaction of teachers in Turkey.

Study name	Fisher's Z	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	Total	Relative weight
Bayrak, 2014	-0,076	0,037	0,001	-0,149	-0,003	-2,052	0,040	729	8,00
Avşaroğlu vd, 2015	-0,080	0,077	0,006	-0,230	0,070	-1,045	0,296	173	7,09
Gençay, 2007	-0,090	0,105	0,011	-0,297	0,116	-0,856	0,392	93	6,27
Güney, 2014	-0,141	0,084	0,007	-0,306	0,024	-1,673	0,094	144	6,88
Teltik, 2009	-0,159	0,063	0,004	-0,282	-0,037	-2,544	0,011	258	7,46
Öztürk, 2006	-0,182	0,052	0,003	-0,283	-0,081	-3,524	0,000	378	7,72
Ertürk&Keçecioğlu, 2012	-0,182	0,067	0,005	-0,314	-0,050	-2,705	0,007	224	7,34
Diri, 2015	-0,375	0,079	0,006	-0,530	-0,219	-4,723	0,000	162	7,02
Tunç, 2013	-0,379	0,107	0,011	-0,589	-0,169	-3,537	0,000	90	6,21
İnce, 2014	-0,400	0,047	0,002	-0,491	-0,309	-8,599	0,000	465	7,82
Uysal, 2007	-0,448	0,071	0,005	-0,588	-0,308	-6,268	0,000	199	7,23
Gündoğdu, 2013	-0,524	0,060	0,004	-0,641	-0,408	-8,804	0,000	285	7,54
Yılmaz, 2009	-0,535	0,084	0,007	-0,699	-0,371	-6,395	0,000	146	6,90
Kılıç&Yazıcı, 2012	-0,755	0,097	0,009	-0,945	-0,564	-7,771	0,000	109	6,51
	-0,306	0,053	0,003	-0,410	-0,201	-5,754	0,000	3455	

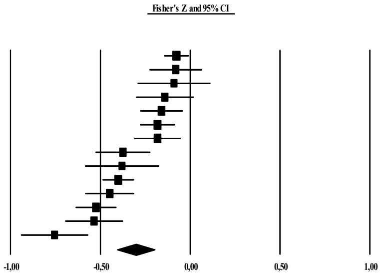

Figure 4. Forest plot of the relationship between PA and job satisfaction.

As seen in Figure 4, 14 primary studies investigating the relationship between reduced personal accomplishment and job satisfaction were included in the meta-analysis. In terms of reduced personal accomplishment, the total sample size of the included studies was 3,455, and their study weights were close to one another. The effect size (ʐ) of the relationship between reduced personal accomplishment and job satisfaction, according to the random-effects model, was -.306, p=.00 (r= -.296); standard error of combined effect size was .053; and lower and upper limits of the combined effect size were -.410 to -.201. The computed values point to a medium level of negative correlation between reduced personal accomplishment and job satisfaction.

The last purpose of the research was to determine the moderator effect of the study-type (thesis or article) and grade-level (pre-school, elementary, lower- and upper-secondary school) variables on the relationship between emotional exhaustion, depersonalization, reduced personal accomplishment, and job satisfaction. For all dimensions of burnout, the variance among studies did not differ significantly (p>.05) for moderator variables. Whether the included studies were theses or articles, or whether the sample of the included studies consisted of teachers working at different grades did not significantly alter the size of the relationship between job satisfaction and burnout.

Discussion and Conclusion

This study aimed to determine the relationships between job satisfaction and emotional exhaustion, depersonalization, and reduced personal accomplishment of teachers working in Turkey. Appropriate to the specified criteria, 15 studies for emotional exhaustion and depersonalization and 14 for reduced personal accomplishment were included in the meta-analysis. The total sample size of the included studies was computed as 3,778 for emotional exhaustion and depersonalization, and 3,455 for reduced personal accomplishment.

Within the scope of this meta-analysis, 98 studies published between 2005 and 2016 examining job satisfaction and burnout in employees were identified for consideration. Of these studies, 28 examined job satisfaction and burnout with a specific reference to teachers. Among these studies, graduate theses and articles published between 2005 and 2015 were included in the meta-analysis. However, it was remarkable that 9 of the 15 studies included in the meta-analysis were published in or after 2012. This finding has confirmed that many studies related to job satisfaction and burnout have been conducted in recent years. The included studies were conducted in different geographical regions in Turkey: one from the Mediterranean, one from East Anatolia, four from the Aegean, two from Southern East Anatolia, three from Central Anatolia, one from the Black Sea, two from the Marmara Region. Finally, one of the included studies was conducted in various provinces of Turkey. That the sample of included studies consists of research conducted in different geographical regions in Turkey contributes the generalizability of the research.

The meta-analysis study indicates that there is a medium negative correlation between emotional exhaustion and job satisfaction. When the primary studies included in the meta-analysis were examined, it was determined that the direction of the relationship between emotional exhaustion and job satisfaction was negative in all studies except one (Uysal, 2007). In terms of the size of the relationship, there were only two studies (Bayrak, 2014; Gencay, 2007) finding a low level, and one study (Teltik, 2009) finding a high level of relationship. In the rest of all the included studies, the size of that relationship was of a medium level.

As for depersonalization and job satisfaction, the relationship was found to be negative and low level. When the primary studies included in the meta-analysis were evaluated, it was seen that the direction of the relationships were negative in all studies except three (Gundogdu, 2013; Guney, 2014; Uysal, 2007). In terms of the size of that relationship, the results of the studies varied. Among the included studies, some reported the size of the relationship between depersonalization and job satisfaction as very low (Avsaroglu, Deniz, & Kahraman, 2005; Gencay, 2007; Gundogdu, 2013), while some others reported close to a high level (Kilic & Yazici, 2012; Uysal, 2007). The variety in terms of the size of the relationship among the included studies was thought to stem from the sample of the primary studies.

Another result that emerged in the study was that the relationship between reduced personal accomplishment and job satisfaction was negative, to a medium level. The direction of the relationship in all included studies was negative. However, the relationship between reduced personal accomplishment and job satisfaction was found to be at a very low level in some primary studies (Avsaroglu et al., 2005; Bayrak, 2014; Gencay, 2007), while at a medium or high level (Gundogdu, 2013; Kilic & Yazici, 2012; Yilmaz, 2009) in others.

Analyses were also conducted for moderator variables which might explain a reason for differences among the findings of the primary studies. According to the results of the moderator analyses, the primary studies' being thesis or articles, or the sample of the primary studies consisting of teachers working at different grades, did not have a significant effect on the size of the relationships for all dimensions. However, it was remarkable that the size of the relationships between job satisfaction and emotional exhaustion (r:-.556) and job satisfaction and depersonalization (r:-.355) were relatively higher in the studies where the sample consisted of pre-school teachers. It was also striking that the size of the relationship between job satisfaction and reduced personal accomplishment (r:-.274) was relatively higher in studies, the study group for which was elementary schools. One rationale for this finding might be that the teachers working at these grade levels have a relatively sincere and straightforward job atmosphere, as they work at relatively smaller schools and, accordingly, have less burnout and more job satisfaction.

Burnout and job satisfaction draw attention as two subjects for which research has been conducted in the last several years in Turkey. However, researchers' deficiencies in reporting the necessary statistics required for meta-analysis do reduce the generalizability of meta-analyses. For this reason, it can be recommended that researchers pay meticulous attention to reporting the necessary statistics for their studies to be included in future meta-analyses.

This study was conducted to determine the relationship between job satisfaction and burnout of teachers. Further meta-analysis studies examining the effects of various personal or organizational variables on the aforementioned relationships could be designed. Moreover, this study is limited to examining the relationship between job satisfaction and burnout of teachers in Turkey. Designing similar meta-analysis studies, the samples for which would consist of teachers working in various countries, might contribute to the generalizability of the research results.

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*(*The researches marked with an asterisk indicate the studies included in the meta-analysis)*

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Öğretmenlerin İş Doyumları ile Tükenmişlikleri Arasındaki İlişkilerin İncelenmesi: Bir Meta Analiz Çalışması

Atıf:

Yorulmaz, Y. I., Colak, I. & Altinkurt, Y. (2017). A meta-analysis of the relationship between teachers' job satisfaction and burnout. *Eurasian Journal of Educational Research,* 71, 175-192, DOI: 10.14689/ejer.2017.71.10

Özet

Problem Durumu: Sosyal bilimler alanyazınında son yıllarda iş doyumu ve tükenmişlik arasındaki ilişkileri inceleyen çalışmalarda önemli bir artış yaşanmaktadır. Bu araştırmaların bulguları incelendiğinde, araştırma sonuçlarının birbirinden farklılaşması dikkat çekicidir. Birbirinden bağımsız olarak yürütülen bu çalışmaların bulgularının birleştirilmesi, geçerli ve güvenilir bilgilerin üretilmesi bakımından önemlidir. Tükenmişlik ile iş doyumu arasındaki ilişkilerin öğretmenler özelinde incelenmesi ise eğitim örgütleri bağlamında genellenebilir bilgilerin oluşmasına katkı sağlayacaktır. Alanyazında öğretmenlerin tükenmişlik ve iş doyumu düzeylerini branş, cinsiyet, medeni durum, kıdem, okul türü ve öğrenim durumu gibi demografik değişkenler açısından inceleyen meta analiz çalışmaları yer almaktadır. Öğretmenlerde tükenmişlik ve iş doyumunun algılanan stres, örgütsel destek, sınıf yönetimi becerileri, istenmeyen öğrenci davranışları, yıldırma ve örgütsel bağlılık gibi çeşitli kişisel ve örgütsel değişkenler açısından incelendiği meta analiz çalışmaları da bulunmaktadır. Ancak tükenmişlik ve iş doyumu arasındaki ilişkileri öğretmenler özelinde inceleyen bir meta analiz ya da meta değerlendirme çalışmasına ulaşılamamıştır. Bu nedenle, öğretmenlerin iş doyumları ile tükenmişlikleri arasındaki ilişkilerin belirlenmesine yönelik bir meta analiz çalışmasına gereksinim olduğu düşünülmektedir.

Araştırmanın Amacı: Bu araştırma ile Türkiye'de görev yapan öğretmenlerin tükenmişlikleri ve iş doyumları arasındaki ilişkilerin belirlenmesi amaçlanmıştır. Bu amaç doğrultusunda, öğretmenlerin iş doyumları ile tükenmişliğin boyutları olan; duygusal tükenmişlik, duyarsızlaşma ve kişisel başarısızlık algıları arasındaki ilişkilerin büyüklüğü ve yönü belirlenmiştir. Araştırmada ayrıca, iş doyumu ile tükenmişlik arasındaki ilişkiler üzerinde etkili olduğu düşünülen çalışma türü (makale, lisansüstü tez) ve okul türü (okul öncesi, ilkokul, ortaokul, lise) değişkenlerinin ara değişken (moderator) etkisinin incelenmesi amaçlanmıştır.

Yöntem: Araştırma meta analiz yöntemi ile desenlenmiştir. Çalışmada yer alan araştırmalar için Web of Science, ERIC, ULAKBİM, EBSCOhost, Google Akademik ve YÖK Ulusal Tez Merkezi veri tabanları kullanılmıştır. Bu çerçevede, 58 makale ve 40 lisansüstü tez olmak üzere 98 çalışmaya ulaşılmıştır. Elde edilen çalışmalar incelendikten sonra, çalışmaların meta analize dâhil edilmesine ilişkin bazı ölçütler belirlenmiştir. Bu ölçütler: 1) Araştırmaların 2005-2016 yılları arasında tamamlanmış lisansüstü tezler ile hakemli dergilerde yayınlanmış makaleler olması, 2) Türkiye'de görev yapan okul öncesi,

ilkokul, ortaokul ya da lise öğretmenlerinin tükenmişlikleri ile iş doyumları arasındaki ilişkileri belirlemeye yönelik olması, 3) Araştırma bulgularında örneklem büyüklüğü ve korelasyon katsayısının yer alması veya hesaplanabilmesi için gerekli değerlerin verilmiş olması, 4) Lisansüstü tezlerden üretilen makaleler olması durumunda, daha fazla veri içeren çalışmanın analize dâhil edilmesi ile 5) Verilerin "Maslach Tükenmişlik Ölçeği" ile toplanmış olması ve ölçeğin boyutlarına ilişkin bulguların yer alması şeklindedir. Bu bağlamda meta analiz çalışmasına, dâhil edilme ölçütlerine uygun, duygusal tükenmişlik ve duyarsızlaşma açısından 15, kişisel başarısızlık açısından 14 çalışma dâhil edilmiştir. Meta analize dâhil edilen çalışmaların toplam örneklem büyüklükleri duygusal tükenmişlik ve duyarsızlaşma açısından 3778, kişisel başarısızlık açısından 3455'tir. Araştırmada yayın yanlılığının durumu Huni Saçılım Grafikleri, Orwin'in Güvenli N analizi, Duval ve Tweedie'nin Kırpma ve Doldurması ve Egger'in Doğrusal Regresyon Testi ile incenmiş ve araştırmada yayın yanlılığı bulunmadığı sonucuna ulaşılmıştır. Meta analize dâhil edilen çalışmaların yüksek düzeyde heterojen yapıda olduğu belirlenmiştir. Araştırmada etki değerleri rastgele etkiler modeline göre hesaplanmıştır. Etki değeri hesaplamalarında korelasyon katsayıları Fisher'ın "z" katsayısına dönüştürülmüş ve analizler dönüştürülmüş katsayılar ile gerçekleştirilmiştir. Ancak, genel etki büyüklüğüne ve güven aralıklarına ilişkin değerler raporlanırken, tekrar korelasyon katsayısına (r) dönüştürülmüştür.

Bulgular: Araştırmada iş doyumu ile duygusal tükenmişlik ve kişisel başarısızlık arasındaki ilişkilerin orta düzeyde ve negatif yönde olduğu belirlenmiştir. Buna karşın, iş doyumu ile duyarsızlaşma arasındaki ilişkinin ise düşük düzeyde negatif yönlü olduğu sonucuna ulaşılmıştır. Öğretmenlerin iş doyumları ile tükenmişlikleri arasındaki ilişkiler üzerinde etkili olabilecek yayın türü (lisansüstü tez ve makale) ve öğretim kademesi (okul öncesi, ilkokul, ortaokul, lise) ara değişkenleri için çalışmalar arası varyans istatistiksel olarak farklılaşmamaktadır. Ancak, duygusal tükenmişlik ve duyarsızlaşma açısından okul öncesi öğretmenlerinin, kişisel başarısızlık açısından ise ilkokul öğretmenlerinin tükenmişlikleri ile iş doyumları arasındaki ilişkilerin görece yüksek olduğu belirlenmiştir.

Sonuçlar ve Öneriler: Öğretmenlerin duygusal tükenmişlikleri, duyarsızlaşmaları ve kişisel başarısızlıklarının artması iş doyumlarını görece azaltmaktadır. Bununla birlikte, okul öncesi ve ilkokul öğretmenlerinin tükenmişlikleri ile iş doyumları arasındaki ilişkilerin büyüklüğü görece yüksektir. Bu durum, bu kademelerde görev yapan öğretmenlerin görece sıcak ve samimi bir ortamda çalışmalarından kaynaklanıyor olabilir. Tükenmişlik ve iş doyumu Türkiye'de son yıllarda fazla sayıda araştırma yapılan konular olarak dikkat çekmektedir. Ancak, araştırmacıların yaptıkları çalışmaların ileride yapılabilecek meta analiz çalışmalarına dâhil edilebilmesi için, gerekli istatistikleri raporlama konusunda daha titiz davranmaları gerektiği söylenebilir. Bu tip araştırmalar, belirli bir kültürde genellemelere gidebilmek ve alanyazındaki tutarlı olmayan araştırma sonuçlarını birleştirmesi bakımından yararlı olabilir. Ayrıca, faklı ülkelerde görev yapan öğretmenler ile ilgili benzer meta analiz çalışmaları desenlenerek araştırma sonuçlarının genellenebilirliğine katkı sağlanabilir.

Anahtar Kelimeler: Araştırma sentezleme, etki büyüklüğü, duygusal tükenmişlik, duyarsızlaşma, kişisel başarısızlık, iş doyumu.

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The Impact of Socio-cultural factors on females passing through Higher Education in Pakistan

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ABSTRACT

Purpose: Educated females play an important role in the social and economic development of a country. The aim of the study was to assess the problems facing females before entering higher education, and then after education when joining professions. **Research Methods:** Using a higher education survey questionnaire, data were collected from 2188 female respondents including students (n=2018) and teachers (n=170) from government colleges and universities spread over four districts of the Pakistan province of Punjab. Results showed females who do succeed in getting a higher education are then exposed to a male dominant culture in the workplace. This re-inforces the socio-cultural norms of the country at large; causes conflict between professional and cultural obligations, and is linked with de-motivation. Four types of female have been identified who respond to the socio-culture in stereotypical ways. System successes have survived discrimination inherent in the wider society with family support. System fighters, lacking whole-hearted family support, perceive discrimination strongly but have an intrinsic motivation that drives them on. Motivated realists appear to have accommodated to the socio-cultural practices of Pakistan, and have planned how to 'beat the system' to eventually become system successes. Neutral acceptors can be contrasted with system fighters as they appear to lack intrinsic motivation, accept the external socio-cultural world with minimal challenge.

Implications for Research and Practice: The results of the study provide guidelines to the policy makers and administrators to make amendments in the higher education policy where female can avail more opportunities to get higher education and social recognition as they have the significant contribution in the development of a sustainable society.

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Introduction

Higher education is a pre-requisite of an open civil society based on merit. It helps in the understanding of societal norms; gives individuals self-reliance; discourages discrimination based on gender, beliefs, religion and social class; enhances the quality of life, and encourages democratic governance (Isani & Virk, 2000, Kramarae, 2000; McClelland & Evans, 1992). For empowering women in all walks of life, the most basic and essential factor is the education (Lopez-Claros & Zahidi, 2005). Higher education empowers qualified women to become leaders in society and it permits them to become role models for the young girls.

Access to higher education is a priority for all countries, and where they are still under-represented the issues need to be addressed in both quantitative and qualitative terms (Jacobs, 1996; Morely, 2007). Ahmed (1986) has reported that a significant reason for under development in economic and social terms in the developing countries, of which Pakistan is typical, is the absence of a sufficiently high percentage of educated and technically qualified women. The socio-culture of Muslim majority countries means that females suffer particular disadvantages because discrimination appears to be woven within the fabric of society (Sen, 2001). This is indeed the major limitation on gender equality in Pakistan (Khan, 2007, p.43; The Nation, 2014).

The Islamic republic of Pakistan is a generally male dominated society, and commonly adopts a hostile attitude towards women. The gender disparity is not only with respect to opportunities and resources, but it is also in rewards, and exists in all regions and classes of the country. Poor education provision results in adult female literacy at 29 % compared with 57 % literacy of males (Sen, 2001). These figures are reflected in the gender disparity statistics for employment. Comparing Pakistan with other countries in terms of the labour force, in all the developing countries the female labour force ranges between 40% and 50%, whereas in Pakistan it is only 7% (Shahzad, Ali, Qadeer & Hukamdad, 2011). The female role is one of general subordination to the male, determined by the forces of patriarchy across classes, regions, and the rural/urban divide. The gender-biased criterion of resource allocation severely limits the educational opportunities of females both at school and higher education (HE) levels.

The socio-cultural hurdles facing females are many, there is a preference for sons due to their leading and productive role in household life. Parents' prefer to invest more in a son's education as their old age social security (Khan, 2007). Daughters are expected to marry early and carry out the domestic tasks of the home. Their prescribed goals are those of motherhood and being a good wife (Maqsood, Maqsood & Raza , 2012; UNESCO, 2010). Parents do not prioritize education for girls due to low family household income (Khalid & Mukhtar, 2002). Travel is seen as a threat to personal security. This is a particularly strong factor in deterring girls from entering higher education as institutions are likely to be very distant and, even if boarding facilities are available, there are possible incidents of sexual harassment and sexual abuse to consider (Sathar & Haque, 2000; World Bank, 2007; UNESCO, 2010). Rural females are at a particular disadvantage (Soofi, 2014). Firstly, the culture is ultra-conservative, and secondly, the survival of poor families often depends upon the work of their women and children (Kumar, 2000; Farah and Sheera, 2007). However, in recent decades it has been observed that a growing proportion of girls are getting education at higher levels despite the socio-cultural hurdles. By 2011-12, the proportion of Pakistani females in HE had risen to 49% (Government of Pakistan, 2013), which is well above the global figure for a Less Developed Country (UNESCO, 2002).

On entering HE, females continue to have less parity in their experiences (Jacobs, 1996). During their studies, transportation, accommodation, and continuing family pressures can all cause distractions (Komuhangiro et al., 2003; Rathgeber, 1995). There are gender issues in co-educational institutions in Muslim majority countries, given the traditional cultural perception of the female in society (Malik, 2002; Shahzad et al 2011; UNESCO, 2010). Many countries have encouraged the establishment of all women's colleges and universities in an effort to empower women by introducing contemporary female courses (Chliwniak , 1997).

After graduation, even in less gender polarised societies, it is common for females to experience overt and subtle gender discrimination to some extent throughout their careers (Jacobs, 1996; Gracia, 2009). There has been some improvement in Pakistan (Batool, et al, 2013; Maqsood et al., 2012), but for women to achieve a successful career here it requires the inner strength of purpose to overcome the prevailing socio-culture norms of society, and this is likely to be at the cost of their family life.

Research Questions

This study looks at the admission to HE and the movement into professional work from the perspective of the discriminated Pakistani female. Given that an increasing proportion of women are receiving higher education and taking up professional positions in the country, how has the patriarchal mind set been overcome for this to happen? Do all women in HE encounter the same obstacles and if a form of gender discrimination does exist, what is this form and does it affect all females equally? Research questions will now be presented to explore the perceptions of gender discrimination as seen by female students and faculty firstly in gaining admission to HE and, secondly, in moving from HE into professional life.

1. Does male dominant culture of Pakistan inhibits females from seeking admission to higher education?
2. To what extent do females, who succeed in getting a higher education, later encounter a male culture of the workplace, which

(a) re-inforces the socio-culture norms of the country at large;

(b) causes conflict between professional and cultural obligations, and

(c) causes de-motivation.

3. To what extent does the degree of success females achieve in overcoming the discriminating, cultural obstacles depend upon their age, family support, subject area and district?
4. Do female teachers and lecturers, having achieved some measure of success, less affected by discrimination than college and university students?
5. Are there specific 'types' of female who respond characteristically in different ways to the discriminatory problems they face?

Method

Research Design

The present research study aimed to investigate the impact of socio-cultural factors on females passing through higher education in Pakistan. To this aim, the study used a mixed approach by using quantitative and qualitative research design during the data collection and analysis phases. For quantitative design, survey questionnaire was employed and for qualitative design interviews were conducted.

Research Sample

Tables 1 and 2 show the main survey sample broken down by the four female respondent groups and the districts of the institutions. The majority of the questionnaire sample respondents were university students (Table1). Some 7.8% were college and university teachers.

Table 1.

Distribution of the Respondents

	Frequency	Percent
College student	485	22.2
University student	1533	70.1
College teacher	94	4.3
University teacher	76	3.5
All	2188	100.0

The age distribution of respondents showed 86.5% were aged between 20 to 30 years and 5.7% over 30 years. The rest of the sample did not provide age data. Table 2 explains the respondents' frequency from different districts of Punjab (Pakistan province).

Table 2.

Respondents' Districts

District	Frequency	Percent
Lahore	776	35.5
Okara	384	17.6
Multan	456	20.8
Rawalpindi	572 *	26.1
All	2188	100.0

*Includes 144 respondents from Private institutions

Research Instruments and Procedures

The research reported here is based on the questionnaire survey of a larger mixed methods investigation (Shaukat & Pell, 2016; Shaukat & Siddiquah, 2013). The advantage of the questionnaire approach is that large amounts of information can be composed from a large number of individuals in a short period of time and in a comparatively cost-effective way (Cohen, Manion, & Morrison, 2007). The sample comprises college students, college teachers, university students, and university teachers. Teachers were to reflect upon the problems from their earlier careers, while students were to comment on their HE admission and their perceptions of the professional life to come. Only females were targeted due to the gender sensitivity of the issue.

To test the hypotheses, a questionnaire was constructed after an extensive literature review and the outcomes of discussions from focus groups comprising female students and faculty. The first pilot version of the questionnaire comprised 34 items in a Section A (HE admission) and Section B (post HE). Responses to the items required judgement to be made on a five-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. Item analyses of the first pilot with 50 female students and faculty showed up inappropriate items and that an open-ended question was drawing very few responses. The second version of the questionnaire comprised 43 items and was piloted with 80 female students and faculty.

The analysis of the second pilot responses to the questionnaire, included a preliminary factor analysis. The language of several items was slightly modified and five more added to make 48 in total. A measure of face validation was provided by expert opinion from the two faculty members of Education disciplines.

In the main survey, principal components factor analysis was used to reduce the data collected and to test the validity of emerging factors. The relative contributions of demographic variables to the derived attitude scale scores were tested by multiple regression (Cohen, Manion, & Morrison, 2007; Youngman, 1979). To identify possible types of respondent, cluster analysis of the data is used (Pell & Hargreaves, 2011). This is a statistical methodology which is able to identify those individuals who score broadly the same on the research variables under investigation. This causes the population to be split into a number of 'types', showing similar characteristics. In the words of Anderberg (1973), “The objective of cluster analysis is to set the observations into groups such that the degree of 'natural association' is high among members of the same group and low between members of different groups” (p.3). Pell and Hargreaves (2011) looked at the relative strengths of the methods and their validities to conclude that an optimum solution requires a dual clustering methodology of an initial hierarchical 'group-average' clustering, to establish the number of clusters in the data, followed by partition clustering operating on this knowledge.

Main survey data were collected from four districts of Punjab, namely Okara, Multan, Rawalpindi and Lahore. Districts were selected purposively from southern, central and northern Punjab, where at least one university was available. This was to enable the selection of both HE students and teachers. Random sampling was used to select the colleges and universities within the selected districts. Prior permission was sought for data collection from the heads of all the chosen institutions. Participants were then selected randomly from each year stratum of the chosen college and university. Researchers described the nature of survey to the participating students and faculty before the data collection, which took place at the end of the semester.

Data Analysis

A survey questionnaire was established to measure the female students and faculty problems in attempting to higher education and moving on to a profession after higher education.

The items of two questionnaire sections;

A. Problems faced by females in attempting to enter higher education, and

B. What moving on to a profession after higher education will mean,

were subjected, separately, to principal components factorisation followed by an oblique rotation of the factor axes to allow for the likely correlation of the attitudinal factors (Norusis, 1990). The complexity of the factors emerging suggested that the items with major loadings be extracted and subjected to a psychological uni-dimensional check for validity (Gardner 1995, 1996) and Cronbach Alpha maximisation for reliability (Youngman, 1979). Table 3 shows the nine scales defined by their respective major items. The allocation of all items to their corresponding scales appears in the Appendix. Five of the nine scales satisfy the criterion of 0.7 for an acceptable attitude scale reliability (Youngman, 1979). Four of the scales have reliabilities in the range of 0.6 to 0.7, which are considered as acceptable for investigating group differences (Youngman, 1979; McMillan & Schumacher, 1993). The unidimensional presentation of each of the scales as indicated by a single factor accounting for the non-error variance is taken as a measure of each scale's validity (Duff, 1997; Munby, 1997).

Results

The following tables are presented for the description of the research study.

Five items of Section A are not allocated to either of the emergent factors. Correlations between scale scores and the five items show that the socio-cultural pressures females are subject to in attempting to enter higher education are a consequence of *a male dominated society, where deep conservative beliefs rule family life*. (This is conveyed by item 11, which has the highest mean score at 4.00, SD 0.98 and N=2188 on inhibiting entry to HE). Further, higher education is expensive, and for most families is an additional hurdle, not only because of the financial pressures of tuition fees, but also in providing for safe transportation and secure living accommodation.

Table 3.

Scales from the Questionnaire Items

Scale	*Item*	*M*	*SD*	*N*	*Factor loading*	*Item-whole correlation*
1. Socio-cultural challenge Section A Six items Alpha=0.73 Unidimensional allocation of variance 42.0%	7. Parents do not feel comfortable in letting their daughters join higher education institutions because they will then not be submissive in accepting their parents \ families	3.05	1.24	2162	0.659	0.51
2. Personal insecurity Section A Six items Alpha=0.70 Unidimensional allocation of variance 40.1%	14. Females do not get higher education because they, themselves , do not feel secure and safe while going to institutions alone	3.25	1.24	2188	0.677	0.46
3. Family pressures Section B Four items Alpha=0.78 Unidimensional allocation of variance 59.8%	36. Lack of job approval from family	3.40	1.18	2186	0.709	0.64
4. Social problems at home Section B Three items Alpha=0.67 Unidimensional allocation of variance 60.5%	44. Neglect of children and family	3.70	1.12	2187	0.588	0.56
5. Potential workplace worries Section B Three items Alpha=0.65 Unidimensional allocation of variance 58.6%	39. Lack of handsome salary according to their qualification	3.91	1.05	2187	0.526	0.49

Table 3 Continue

Scale	Item	M	SD	N	Factor loading	Item-whole correlation
6. Acquiring wisdom Section B Four items Alpha=0.66 Unidimensional allocation of variance 50.8%	31. I can take wise decisions in my professional life	4.22	0.73	2187	0.706	0.56
7. Personal well-being Section B Three items Alpha=0.61 Unidimensional allocation of variance 56.4%	47. Being able to take wise decisions in your personal life	4.12	0.86	2187	0.606	0.45
8. Unsuitable aspects of workplace Section B Five items Alpha=0.78 Unidimensional allocation of variance 52.8%	21. Unsafe and unsecure working environment	3.64	1.13	2188	0.749	0.61
9. Lack of recognition Section B Four items Alpha=0.71 Unidimensional allocation of variance 53.3%	26. Professional jealousy against females	3.60	1.17	2188	0.739	0.52

The five un-allocated items of Section B provide additional interpretation of the seven emerging factors from this Section. Although it does appear that *family pressures* are exacerbated by the responsibilities and challenges of the workplace and when this is far from the home residence. Particularly, item 41 might be seen as a measure of workplace de-motivation.

Table 4.

Scale and Item Inter-Correlations for Section B

Un-allocated item		Correlation with main scale total less item (N=2187)						
		Family pressures	Social problems at home	Work doubts	Acquiring wisdom	Personal well-being	Unsuitable workplace	Lack of recognition
20	Interaction with males for professional networking	0.205 (6)	0.185	0.177	0.087	0.098	0.290 (8)	0.225 (8)
28	Expressing my ideas and opinions confidently in professional life	0.097 (6)	0.123	0.193	0.301	0.238	0.095 (8)	0.212 (8)
33	Working place far from their residence (out of station)	0.307 (6)	0.282	0.297	0.155	0.160	0.373	0.305
34	Household responsibilities	0.207 (6)	0.207	0.261	0.133	0.147	0.162	0.161
41	Fear of accepting responsibilities and challenges at workplace	.414 (5)	0.327 (6)	0.317 (6)	0.024 (6) ns	0.117 (6)	0.222 (6)	0.283 (6)

All correlations significant at p<1%, ns not significant
(8) N=2188; (6) N=2186; (5) N=2185

Linking the Questionnaire Scales

The analysis of the nine scale scores proceeded by investigating the significant breakdown effects in terms of District, type of institution, status of respondent, and student semester. The full analysis is available elsewhere (Shaukat & Siddiquah, 2013). Here, the analyses are summarised by employing the Negative pathway through HE measure which is derived from the nine separate factor scales of Table 3.

Correlational and factor analysis of these nine scales' scores shows that scales 6 and 7 form a positive outcome measure for the HE experience, which demonstrates enhanced individual mastery, pride in successful achievement, gender neutrality and social vision. It is regretful that the two measures in combination have a very low reliability of only 0.56. The remaining seven scale scores provide a unidimensional measure of the Negative pathway through HE that is faced by females. Table 5 shows the statistics for this composite scale, the reliability of nine sub scales is mentioned in the table.

Table 5.

Negative Pathway through HE (N=2186)

	Scale	Mean score/item	SD	Item-whole correlation
1	*Social cultural challenge*	3.24	0.79	0.36
2	*Personal insecurity*	3.51	0.73	0.53
3	*Family pressures*	3.46	0.92	0.60
4	*Social problems at home*	3.79	0.79	0.54
5	*Potential workplace worries*	3.83	0.79	0.56
8	*Unsuitable aspects of the workplace*	3.76	0.78	0.53
9	*Lack of recognition*	3.52	0.83	0.53

Multiple linear regression was used to review the relative contributions of the independent, explanatory variables of district, respondent type and semester. Multiple linear regression shows the relative importance of the breakdown variables in predicting composite scores on *Negative pathway through HE,* and takes into account the significant contributions of all variables (Table 6). The 'typical' respondent's composite score is calculated from the linear expression:

3.598 - 0.114 Lahore - 0.307 Semester 1 + 0.144 College student - 0.170 University teacher + 0.070 Rawalpindi

Table 6.

Predicting Negative Pathway through HE Scores from Demographic Variables

	Unstandardized Coefficient	Std. Error	% variance
(Constant)	3.598	0.019	
Lahore district (scores '1')	-0.114	0.026	1.3
Semester 1 (scores '1')	-0.307	0.068	1.0
College student (scores '1')	0.144	0.033	0.9
University teacher (scores '1')	-0.170	0.062	0.3
Rawalpindi district (scores '1')	0.070	0.032	0.2

Multiple r = 0.198, medium effect size, N = 2016

It is seen that *Negative pathway through HE* scores are depressed (i.e. 'pathway' is less negative) for respondents from Lahore, students in Semester 1 of their courses and for university teachers. Scores are higher (i.e. 'pathway' is more negative) for college students and those studying in Rawalpindi.

Cluster Analysis

Using the two-stage clustering procedure of ‘group-average' clustering followed by 'partition' clustering with the data for the nine scale scores from Table 3, and after rejecting 26 'outlier' data sets, the four clusters of Table 7 emerged.

Table 7.
Mean Scale Scores and Standard Deviations for Four 'Partitioned' Clusters

Type (N)	1.Social cultural challenge	2.Personal insecurity	3.Family pressures	4.Social problems at home	5. Work place worries	6.Acquiring wisdom	7. Personal well-being	8.Unsuitable workplace aspects	9.Lack of recognition
1	**2.80**m**	**2.80**l**	**2.31**l**	**2.91**l**	**2.89**l**	**4.19**	**4.10**	**2.78**l**	**2.63**l**
(319)	0.72	0.71	0.67	0.81	0.80	0.60	0.56	0.78	0.84
2	**2.66** l**	**3.38**s**	**3.35**s**	**3.88** n**	**4.13** m**	**4.31**s**	**4.31** m**	**3.87** s**	**3.50**
(562)	0.64	0.65	0.78	0.66	0.51	0.45	0.45	0.61	0.74
3	**3.82** l**	**4.03**l**	**4.19**l**	**4.31**l**	**4.33**l**	**4.41** m**	**4.37** m**	**4.26**l**	**4.12**l**
(680)	0.58	0.49	0.60	0.47	0.50	0.42	0.46	0.52	0.53
4	**3.40**s**	**3.45** n**	**3.37** n**	**3.66**s**	**3.53** m**	**3.75**l**	**3.46**l**	**3.62** s**	**3.35** s**
(601)	0.59	0.57	0.67	0.63	0.62	0.56	0.61	0.60	0.62
All	**3.25**	**3.52**	**3.47**	**3.81**	**3.84**	**4.17**	**4.06**	**3.76**	**3.52**
(2162)	0.78	0.72	0.91	0.77	0.78	0.56	0.64	0.78	0.83

**p<1%, *p<5% significant difference between type mean and the rest
Effect sizes for mean differences: n=negligible, s=small, m=medium, l=large

The System Successes

Type 1 mean scores fall into the 'disagree' sector of the postulated problems for females in HE. From this, it is concluded that these respondents are not experiencing or do not anticipate any major difficulties in moving through higher education and into a career. Type 1s have the lowest *Negative pathway* scores of the four types. The value of higher education in acquiring intellectual skills and personal satisfaction is strongly supported (but the ratings are actually less than those of Types 2 and 3). These respondents are the '*System successes*', who acknowledge the socio-cultural and workplace problems of females that can occur in Pakistan, but who are able to overcome these. There are proportionally fewer Type 1s amongst college students (p<1%, small effect size) and there are proportionally more amongst University teachers (p<1%, small effect size) (Table 9). Okara district has the lowest proportion of Type 1s: Lahore has the highest (p<1%, small effect size).

Table 8.

Negative Pathway through HE Broken Down by Type

Cluster	*Mean/scale*	*N*	*Std. Dev*
1	2.73**l	319	0.33
2	3.54**n	562	0.24
3	4.15**l	680	0.24
4	3.48**s	601	0.26
All	3.60	2162	0.53

**p<1%, when compared to the rest, effect sizes l=large, s=small, n=negligible

The System Fighters

Type 3 respondents agree, sometimes very strongly, about the negative obstacles they face, first of all getting admission to higher education and then moving onto a job later. Mean scores on item 11, Conservative family norms are the main hurdles in the way of female higher education, are significantly higher than for the other types (p<1%, small effect size). Type 3s closely link Family pressures and Social problems at home with Work place worries (from a factor analysis of Type 3 scores). Despite these forebodings, Type 3s are even more convinced of the end product of high intellectual and personal development. This group are 'System fighters', who recognise clearly the problems and difficulties that females face but are determined to overcome them. There are proportionally more Type 3s amongst College students (p<1%, small effect size) and fewer amongst University students (p<1%, small effect size). Rawalpindi district has a higher proportion of Type 3s than does other districts (p<1%, small effect size). This type comprises a higher proportion of Arts respondents (p<1%, small effect size).

The Motivated Realists

Type 2 respondents experience more obstacles than Type 1s in getting to higher education, although their perceptions of female treatment are less hostile than the Type 3s. A major difference between Type 2s and Type 1s is that the former expect or experience more difficulties in the work place. Like Type 3s, Type 2s are highly motivated to the value of higher education and its possibilities. There are proportionally more University students in Type 2 (Table 9). These are the 'Motivated realists'. Science has a greater representation than Arts for this type (p<1%, small effect size). This type are under-represented in Lahore (p<1%, small effect size), but over-represented in Multan and Okara (p<1%, small/medium effect sizes).

The Neutral Acceptors

Type 4 respondents have less motivation than the other three groups. The difference on this measure has an unusually large effect size. This is not to imply that Type 4s are de-motivated, rather that they are not so 'driven' to succeed as the others. There is a strong awareness of the prevailing socio-cultural pressures. This probably leads to a compliance with the existing norms of Pakistani society, and these respondents are not unhappy to come to terms with the restrictions at home and at work. Type 4s are 'Neutral Acceptors'. There are proportionally more Type 4s amongst College students (p<1%, small effect size) (Table 9). Multan and Okara districts both have lower proportions of Type 4s than expected (p<1%, small effect size): Lahore has a higher proportion (p<1%, small effect size).

Table 9.

Cluster Type Broken Down by Respondent Group

Respondent group	Type				
	1 *System successes*	2 *Motivated realists*	3 *System fighters*	4 *Neutral Acceptors*	All
College student	49	107	203	120	479
University student	236	426	432	420	1514
College teacher	12	17	30	35	94
University teacher	22	12	15	26	75
Total	319	562	680	601	2162

In conclusion, College students are more likely to be *system fighters* or *neutral acceptors.* University students show a bias towards *motivated realists.* University teachers, having successfully negotiated the socio-cultural maze, are more likely to be *system successes.* The sample of College teachers is too small for significant variations to emerge.

The Efficiency of the Clustering

Discriminant function analysis is able to show how a combination of the scale scores can allocate a respondent to an appropriate group. This can be done for 96% of the respondents by using the three functions consisting primarily of (i) *socio-cultural challenge* scores, (ii) *acquiring wisdom/personal well-being* scores, and (iii) all the other six scale scores. The third function is the major discriminator, which contributes 74% of the variance. Pell and Hargreaves (2011) suggest that the percentage correct classification into groups by the cluster variables is a measure of the efficiency of the clustering procedure, which at 96% would be judged satisfactory for a valid discussion of findings. The lower reliabilities of four of the nine scales adds to error variance, which shows itself in 85 of 2162 respondents appearing in groups other than those predicted. Breakdown of group composition by respondent type (College student etc.), district and subject discipline will also be affected by the error variance and is an explanation of the proliferation of small effect sizes when testing for differences within the breakdown categories.

Discussion and Conclusion

Discussion

The study was conducted to determine the problems faced by female students and faculty regarding higher education in attempting to higher education and while getting in a profession after higher education. The discussion is presented here according to the research questions.

Research Question 1

The male dominant culture of Pakistan will inhibit females from seeking admission to higher education.

This statement receives immediate strong support from the socio-cultural challenge factor (Tables 3), which identifies the prevailing socio-cultural climate as a deterrent to seeking higher education entry. The second factor of personal insecurity (Tables 3 and) highlights the practical, every-day concerns that arise and have to be overcome to become a student. The correlations of the unallocated items of Section A emphasise that a male dominated society, which has established conservative norms, underpins the responses of the socio-cultural challenge.

In terms of the cluster analysis of Table 7, the mean socio-cultural challenge scores for two groups of respondent suggest that the 'challenge' either does not exist or has been overcome.

Thus for a majority, but not all respondents, the research question of a patriarchal culture inhibiting higher education for females is supported. For others, the family environment is sufficiently strong for daughters to be encouraged to continue with their education.

Research Question 2

To what extent do females, who succeed in getting a higher education, later encounter a male culture of the workplace, which

(a) re-inforces the socio-culture norms of the country at large;

(b) causes conflict between professional and cultural obligations, and

(c) causes de-motivation.

This issue is specifically addressed in Section B of the questionnaire. The family pressures factor of Tables 3 shows that the strong socio-cultural element of gender discrimination persists far beyond the higher education experience. Moving on to work, the extraction of the social problems at home factor (Tables 3) gathers together the domestic difficulties that women face, while work place worries (Tables 3) are expressed by the three 'real-word' items. It is important to emphasise the positive correlation between scores on these three factors and item 41, 'Fear of accepting responsibilities and challenges at workplace' (Table 4). This item implies low motivation at work. Women, once employed, are likely to adopt a low profile because of the negative impact of the family pressures, social problems at home and workplace worries factors. They lack confidence in taking on leadership and direction because of the feeling that pressures of the family, the home and the workplace will become too much for them. In an extended interview validation study (Shaukat & Siddiquah, 2013) term this concept professional dissatisfaction.

From the evidence collected research question 2 is supported and retained.

Research Question 3.

To what extent does the degree of success females achieve in overcoming the discriminating, cultural obstacles will depend upon their age, family support, subject area and district.

The unallocated Item 11, Conservative family norms are the main hurdles in the way of females higher education, has the highest mean score of all items in Section A, confirming that the family history of conservatism is a major force for limiting females' opportunities in higher education.

The current study presents the composite variable Negative pathway through HE for analysis (Table 6). Here, high scores indicate significant discrimination and cultural obstruction. Age is not significant. District has the strongest influence of the breakdown variables tested, most notably that of being educated or working in Lahore. This lowers scores and indicates less perceived discrimination. Lahore is the most advanced and developed of the districts, and its residents have a more encouraging attitude towards females’ higher education than elsewhere.

The positive effect of being a Semester 1 respondent (negative coefficient in Table 6) can be explained by a lack of experience within higher education of how the discriminatory system actually operates in practice. Regardless of the semester, college students perceive higher levels of discrimination than do the other groups. College students will be younger than the other groups and closer to family instilled values of perceived role and implicit discrimination. College lecturers tend to be less well educated than university staff and hence more conservative. College students are therefore in an environment that can be more repressive than that of the universities.

Subject area proves to be insignificant in predicting Negative pathways scores. However, a more detailed regression studies of the separate nine scales (Shaukat & Siddiquah, 2013) shows Arts respondents having significantly elevated scores on Socio-cultural challenge and Science respondents giving higher rating to the 'HE purpose' scale of Acquiring wisdom. This suggests that science might have the potential to upset the current socio-cultural mores of the country.

On the evidence presented, research question 3 is supported in terms of the influence of family and district factors for females entering and passing through higher education.

Research Question 4

Do Female teachers and lecturers, having achieved some measure of success, less affected by discrimination than college and university students?

The regression equation for Negative pathway through HE (Table 6) are 'College student' shows significant coefficients at 0.144 and University teacher' at - 0.114. The positive sign for college students indicates a high predicted 'discrimination' score: the negative value for university teachers implies a low predicted score.

There would seem to be sufficient differences between the natures of college students and university students (see the Discussion of research question 3) for the latter to perceive discrimination as less harsh. The omission of a significant effect for college teachers might well be more statistical as the sample is relatively small.

From the evidence presented, it is concluded that research question 4 is supported for university teachers and college students alone

Research Question 5.

Are there specific 'types' of female who respond characteristically in different ways to the discriminatory problems they face?

The cluster analysis of Table 7 shows four possible types of respondent; system successes, system fighters, motivated realists and neutral acceptors.

The system successes (Type 1) do not fit the general stereotype of the oppressed Pakistani female. This cluster is not insubstantial and comprises about 15% of the sample. All seven gender discrimination research measures in Table 7 show means that register disagreement with the propositions expressed. Thus, system successes do not rate Pakistani higher education as being disadvantageous to females.

System fighters (Type 3) are fully aware of the prevalent gender discrimination. Family pressures, social problems at home and work place worries are strongly linked for this group from a within cluster correlational study. This demonstrates a particular strength of cluster analysis in allowing correlation methods to be applied within the individual clusters, which can reveal otherwise diametrically opposite associations or no associations at all. System fighters have superior medium effect size mean scores on the intellectual enhancing, acquiring wisdom and personal well-being scales.

Motivated realists (Type 2) have to battle against socio-cultural discrimination like the system fighters, but they differ in their perceptions of moving from home into higher education, and then the working environment beyond (Table 7). At the senior education stage, motivated realists appear to be supported by the family against external socio-cultural pressures, as are the system successes, who also have mean scores below 3.0 for socio-cultural challenge. However, having to leave the home environment and go to higher education raises the motivated realists' mean scores on personal insecurity. Work place inequality problems and career related family relationship difficulties are appreciated, but are not rated as severely as do the system fighters. The motivated realists press forwards with high scores on the intellectual enhancing, acquiring wisdom and personal well-being scales.

Neutral acceptors (Type 4), on the average, disagree with the role of higher education as a personal 'liberator'. This group have significantly lower scores on the

'HE purpose' scales of acquiring wisdom and personal well-being (Table 7). The difference on these measure when compared with other types has a large effect size. Cohen (1988) refers to normal effect sizes in the 'soft' behavioural sciences as 'small', especially when using newly developed scales, so these differences between the clusters are striking, especially as these two scales have above average error variance (Table 3). It appears that neutral acceptors have less motivation than others to be in higher education. The socio-culture challenge of living in Pakistan is accepted, as are the realities of insecurity and workplace discrimination. Hypothetically, neutral acceptors accommodate to the 'status quo', and have minimalist lifetime goals.

Profiling the clusters in terms of institutional grouping, broad subject discipline and district does show some small effect size variations compatible with Lahore being a relatively rich and developed city (Shaukat & Siddiquah, 2013). The institutional grouping effect shows high prestige university teachers having above average representation in the system successors: college students in less prestigious institutions are having to grapple with difficulties as system fighters or having accommodated to discrimination as neutral acceptors. University students in higher prestige institutions are more likely to be motivated realists aiming to become system successes, but not yet comfortable with the inequality they experience. Having stated all this it must be appreciated that the four types are spread across all districts and all four institutional groups, which suggests that additional variables not gathered in this research, for example respondent personality, family resources and economic well being, are needed to interpret and explain the differences between the types.

On the evidence presented, research question 5 is supported and retained.

Conclusion

In the introduction to this study it was asked how do females in Pakistan overcome the patriarchal mindset of the country to make use of Higher Education, and whether all females adopt the same strategy. The research has identified four types of female, who respond in stereotypical ways. System successes have survived discrimination inherent in the wider society with family support. System fighters, lacking whole-hearted family support, perceive discrimination strongly, but have an intrinsic motivation that drives them on. Motivated realists appear to have accommodated to the socio-cultural practices, and have planned how to 'beat the system' to eventually become system successes. Neutral acceptors can be contrasted with system fighters as they appear to lack intrinsic motivation and accept the external socio-cultural world with minimal challenge.

This study sampled only those females who had successfully overcome gender discriminatory practices to gain admission to Higher Education. There is another female population who succumb to the socio-cultural pressures and are unable to realise their potential to the detriment of themselves and their country.

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Appendix: Questionnaire items

Key for Section A scales:

Soc-cul *Socio-cultural challenge*
Per-insec *Personal insecurity*

Table A1.
Section A Items and Scales

	Section A *What do you think about the problems faced by females in attempting to enter higher education?*	Scale
1	Preference given to sons leads towards the low participation of females in higher education	Soc-cul
2	Higher education is more important for males as they have to run families and females just look after them	
3	A male dominating culture prevents females from seeking higher education	
4	Parents are hesitant to educate females because they are less likely to make use of their education in future	Soc-cul
5	Females are not supported in getting higher education because it will encourage them to demand their social (talking decisions on important events) and legal (property)rights	Soc-cul
6	Females are not encouraged to get higher education because individuals are reluctant to change their social structure (females' empowerment)	Soc-cul
7	Parents do not feel comfortable in letting their daughters join higher education institutions because they will then not be submissive in accepting their parents decisions	Soc-cul
8	Females don't receive higher education due to financial constraints on the family	
9	Females are not encouraged to join higher education because parents do not feel the environment of higher education is secured and protective for their daughters	Per-insec
10	Co-education restricts female higher education	Per-insec
11	Conservative family norms are the main hurdles in the way of female higher education	
12	Late teenage (below 20 years) marriages/ marriages during higher education prevents females from going on to higher education	
13	Prevalence of discrimination between daughters and sons creates hindrance in female higher education	Soc-cul
14	Females do not get higher education because they, themselves, do not feel secure and safe while going to institutions alone.	Per-insec
15	Females do not get higher education due to unavailability of proper transportation	Per-insec
16	Females who do not get safe boarding facility should not enroll in a higher education institution	Per-insec
17	Females do not get higher education because their parents assume they can lose their character due to bad company	Per-insec

Key for Section B scales:

Fam-press *Family pressures*
Soc-home *Social problems at home*
Wk-worr *Potential workplace worries*
Ac-wis *Acquiring wisdom*
P-well *Personal well-being*
Unsuit-w *Unsuitable aspects of workplace*
Lac-rec *Lack of recognition*

Table A2.
Section B Items and Scales

	Section B *Moving on to a profession after higher education will mean:*	Scale
18	Late working hours	Unsuit-w
19	Male dominant work place where males are more in number than females in different disciplines	Unsuit-w
20	Interaction with males for professional networking	
21	Unsafe and unsecure working environment	Unsuit-w
22	Unsuitable working time (late afternoon and evening)	Unsuit-w
23	Harassment at workplace	Unsuit-w
24	Discrimination against females	Lac-rec
25	Lack of work recognition	Lac-rec
26	Professional jealousy against females	Lac-rec
27	Lack of work reward	Lac-rec
28	Expressing my ideas and opinions confidently in professional life	
29	I can contribute to the welfare of society in a positive way	Ac-wis
30	I can compete equally with male colleagues	Ac-wis
31	I can take wise decisions in my professional life	Ac-wis
32	I can achieve personal social mobility	Ac-wis
33	Working place far from their residence (out of station)	
34	Household responsibilities	
35	Lack of moral support from family	Fam-press
36	Lack of job approval from family	Fam-press
37	Conservative thinking of life partner	Fam-press
38	Unavailability of transportation	Wk-worr
39	Lack of handsome salary according to their qualification	Wk-worr
40	Under employment according to qualification	Wk-worr
41	Fear of accepting responsibilities and challenges at workplace	
42	Conservative family (parents) environment	Fam-press
43	Lack of day care facility for their children	Soc-home
44	Neglect of children and family	Soc-home
45	Allow you to adjust better in your future personal life	P-well
46	Some conflict with household responsibilities	Soc-home
47	Being able to take wise decisions in your personal life	P-well
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Relationship between University Performance and Dimensions of Intellectual Capital: An Empirical Investigation *

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ABSTRACT

Purpose: India is the second largest higher education system in the world and 50% of its population is under 25 years. This demographic advantage can be leveraged only if India has a formidable higher education system. Present study tries to explore the relationship between intellectual capital and university performance across North India with an objective of providing fruitful insights to the policy makers about the areas of focus.
Research Method: Quantitative research design was used for the study. Respondents of the study were comprised of faculty members of universities from selected North Indian states. Regression analysis using SPSS was employed to study the relationship between the two dimensions of intellectual capital and university performance.
Findings: Findings revealed that universities need to operate in close interactions with government institutions and private industries that help enhance relational capital. Organizational capital emerged as a major dimension that affects university performance. The study gives university policy makers tools in the form of organizational and relational capital that can be leveraged to enhance performance.
Implications for Research and Practice: These findings are pertinent for the top management of universities which can focus on strengthening relational capital by building strong relationships with alumni and industry, facilitating consulting and having consistent interactions with stakeholders in order to enhance university performance. Results imply that in addition to relying on teaching expertise and teaching pedagogy, planners need to focus equally or more.

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Introduction

If physical capital was central to the debates on economic development in the last century, intellectual capital (IC) occupies the center stage today. This is largely due to the emergence of knowledge economies, which are fast becoming concurrent with global competitiveness. For a developing country like India, one of the critical success factors is the ability to exploit its knowledge potential. Moreover education being an extremely important enterprise in any economy, its role in a country's success is undisputable.

Physical assets like plants, equipment, property, cash, investments and financial instruments are necessary, but they are no longer sufficient means to achieve an organization's objectives. Knowledge sharing practices, knowledge development, networks that produce a good image, and information systems that support quality decision making constitute the critical success factors today.

India is the second largest higher-education system in the world. Fifty percent of its population is under age 25, which is an immensely favorable demographic pattern. Leveraging this advantage is possible only if it has a formidable higher education system. This gives decision makers in India's higher education sector, the potential to improve university performance by harnessing the power of this intellectual capital. This informs the major research question of the current study: how does intellectual capital affect the performance of a university. The study also undertakes to explore the individual dimensions of intellectual capital: organizational and relational capital and their effects on a university's performance so as to highlight the specific importance of each dimension.

Theoretical Background

Intellectual capital & university performance. Researchers opined that the most critical ingredients of firm resource endowment are not tangible, but are intangible, and are thus rare, valuable, imperfectly imitable and non-substitutable (Issac, Herremans, & Kline, 2010; Nerdrum & Erickson, 2001). It was also proposed that identifying and valuing Intellectual Capital is increasingly important for knowledge-intensive organizations (Mondal &Ghosh, 2012). Although some researchers differ, most studies (Bontis, 1998; Mondal & Ghosh, 2012; Ramirez & Gordillo, 2014) proposed three dimensions of intellectual capital: human, organizational and relational.

For the purpose of this study, the authors have dealt with the dimension of organizational and relational capital. Researchers (Cannibano & Sanchez, 2009; Sanchez & Elena, 2006) emphasize the growing interest regarding intangibles and intellectual capital in higher education institutions with the purpose of making them comparable, transparent and competitive. Stark parallels have been drawn between IC and its configurations/approaches and the analytical framework proposed by the Observatory of European Universities to measure overall performance. It was suggested that the companies' framework of IC can be applied to universities with certain specifications. The importance of managing and measuring IC in universities was explored by researchers (Ramirez, Lorduy & Rojas, 2007) in their study as a part of an important IC management initiative at Spanish public universities. The study provided deep insights into the definition and diffusion of the organization's strategic objectives and the identification of the critical intangibles related to these objectives.

H1: Intellectual Capital has a significant positive association with university performance.

Organizational capital. Organizations are store-houses of information, and how efficiently that information is accumulated and used determines its productivity (Prescott & Visscher, 1980). Organizational capital includes all non-human resources of knowledge, such as databases, executive instructions of processes, strategies and administrative programs that aid in informed decision making. It is the means by which an organization captures knowledge and makes it re-usable.

Studies proposed that information technology has the capacity to bring massive structural changes to a university and in another context, to the healthcare industry, they suggest that the reimbursement rates depend on how it is put to use. In context to Indian universities, it was suggested that deploying web-development technologies and mainstream web-information services on library websites will provide a one-stop portal for information to the students (Balaji & Kumar, 2011; Kohli & Devraj, 2004).

Conversion of willingness to innovate into innovative research and teaching, depends to a great extent on the institutional infrastructure. In organizations, it is important to make sure that people have the required support system to enhance creativity. Studies have shown a strong connection between supporting infrastructures- like online portals, accessibility to database and digital archives and research output (Minguillo & Thelwall, 2015; Zhang, Bao, & Sun, 2016).

With the emergence of knowledge sharing and communities of practice, organizational capital is fast becoming a prerequisite for collaboration within institutions. This thought has been substantiated by researchers (Lauring & Selmer, 2011, Syh- Jong, 2007). It was proposed that knowledge structures, networks and support systems were significant in achieving a collaborative environment in universities through the platform of knowledge sharing.

Capitalizing on organizational capital is important for universities because their ranking as centers of excellence depends greatly on the availability of the archived wealth of knowledge in their possession (Doctor, 2008; Doctor & Ramachandran, 2008). This further reinforces the strategic importance of organizational capital since the recent emergence of the neo-liberal universities treats these institutions as service providers and students and faculty as customers. Organizational capital affects the learning outcomes of not only students but also professors' imaginations, expectations and behavior, and this has been reinforced by previous researchers (Coates, James, & Baldwin, 2005).

Previous studies on organizational capital have covered the concept, its dimensions and their significance or have focused on its specific components and their effect on performance in particular sectors. This study covers the particular effects of organizational capital on the performance of universities.

H2: Organizational capital has a significant positive association with university performance.

Relational capital. Relational capital refers to external structures concerning the organization's relationships with channel partners, supply-chain partners and business collaborations. There is strong evidence of the impact of relational capital on an organization's performance and value creation (Tsai & Ghoshal, 1998; Westlund & Adam, 2010). Of late, research on intellectual capital has stressed on the importance of building reciprocal relationships between universities and the external world. This has resulted in a robust network between industry and academia and both reaping the benefits through university-industry collaboration channels like projects, alumni associations, incubators, industrial advisory boards, startup firms and spin offs (Dill, 1995; Fisher & Grosjean, 2002; Nyerere & Friso, 2013).

Universities have also started collaborating with local communities due to the triple-helix model. This has further accentuated the role of universities in local, regional and national development and brought out the growing recognition of university contribution towards economic development as a core part of the higher education policy.

Alumni are another source of monetary and non-monetary support in the form of political advocacy and volunteerism apart from funding (Weerts, Cabrera, & Sanford, 2010). Thus it is indispensable for universities to explore how alumni think of their alma mater after they are no longer a part of the institution.

University websites are becoming a potentially significant source of information, not only for the current and prospective students and stakeholders but also for the universities themselves in the process of creating academic and non-academic visibility in the external world. This idea has been corroborated by Utulu and Okoye (2010).

Studies have proposed having an open and interactive atmosphere where students and teachers can communicate freely. This has resulted in a customer centric and an interactive relationship between students and universities. The students-as-customer model proposed that if students think of themselves as customers, they are more prone to behaviors that are conducive to academic success (Finney & Finney, 2010; Koc & Celik, 2015).

Current research carries forward these thoughts to provide useful insights on the role of relational capital in determining a university's performance.

H3: Relational capital has a significant positive association with university performance.

University performance. There is an increased emphasis on continuous enhancement in the operating standards of knowledge-based institutions like universities. Kaplan and Norton (1992) introduced a new dimension to evaluate the performance of organizations from a balanced perspective. While Karathanos and Karathanos (2005) described how the Baldrige education criteria for performance excellence adapted the concept of a balanced score card (BSC) to education, Umashankar and Dutta (2007) applied the concept of BSC to higher education programs/institutions in the Indian context.

Researchers (Bigliardi & Dormio, 2010; Karathanos & Karathanos, 2005; Zangoueinezhad & Moshabaki 2011) promoted the use of BSC and its application in measuring the performance of universities. Previous studies have emphasized on the role of intellectual capital approaches in managing the performance of higher education institutions (Secundo, Elena-Perez, Martinaitis, & Leitner, 2015; Secundo, Margherita, Elia, G & Passiante, 2010). Current study aims to focus particularly on university performance in India and to establish a relationship between the organizational & relational capital of universities. The literature review highlights that there is not enough work covering these relationships in the Indian context.

The growing focus on information and knowledge in all sectors of the economy suggests, that the role of universities will only become more important over time. So far very few studies have been conducted on intellectual capital in context of university education and performance. Even lesser literature is available in terms of Indian universities. For this study, researchers have adopted the balanced scorecard approach because it not only includes the financial aspect, but the market-oriented (neo-liberal) customer aspect apart from process and learning, which encompass teaching and research-related aspects, thus providing a complete holistic perspective.

Method

Research Design

The framework of the study has been developed in consistence with the mission of the Department of Higher Education, Ministry of Human Resource Development, Government of India. Salient points from the mission of the department are as follows:

- "Initiate policies and programs for strengthening research and innovation and encourage institutions - public or private to engage in stretching the frontiers of knowledge."
- "Promote quality higher education by investing in infrastructure and faculty."

Universities constantly need to raise the bar of innovation and performance. Although knowledge economy may not represent the pinnacle of the university, they are the most adaptable institutions, making them indispensable in evolving knowledge economies. As they are at the heart of knowledge creation and dissemination, monitoring and enhancing the performance of universities will be a critical success factor in creation of a knowledge economy.

Current research caters to the increased need for monitoring and augmenting the performance of universities against the backdrop of the mission of the Ministry of Human Resource Development. Both dimensions of intellectual capital-organizational and relational, are included in the research design while human capital items have been taken into consideration only for the purpose of aggregate analysis of the relationship between intellectual capital and university performance.

Research Sample

The sample of the study was comprised of universities categorized into state, central and private from selected North Indian states. A stratified random sampling method was used to collect data. Three-hundred-thirty usable questionnaires were retained.

All respondents were faculty members of universities. They were categorized into three strata: lecturer/ assistant professor, associate professor & professor/ visiting professor. Tables 1 and 2 show the breakdown of the data collected.

Table 1.

Sample Institutions and Classifications

Name of University	*Nature of University*	*State*
Allahabad University	Central	Uttar Pradesh
Desh Bhagat University	Private	Punjab
Maharishi Dayanand University	State	Haryana
Maharishi Markandeshwar University	Private	Haryana
Punjab University	State	UT of Chandigarh
Thapar University	Private	Punjab
UP Technical University	State	Uttar Pradesh

Table 2.

Strata Sample Description

Job Title	*Number of responses*
Lecturer/ assistant professor	228
Associate professor	54
Professor/ visiting professor	48
Total	330

Out of a total of 330 respondents, 69% were lecturers/assistant Professors, 16.36% associate professors and 14.54% were professors/visiting professors. Roughly 25% of each category was included in the sample.

Research Instruments and Procedures

In order to reduce ambiguity, a preliminary pilot study was performed. The final questionnaire emerged as a close-ended tool based on 5- point Likert scale from Strongly disagree(1) to Strongly agree(5) .The questionnaire was tested for reliability and the overall reliability score for all the 103 items as depicted by Cronbach Alpha was 0.980. Table 3 lists the construct-wise Cronbach's-alpha scores of research variables. The Cronbach's-alpha score was close to 1 (Nunnally 1978) in all constructs. Thereafter factor analysis was performed for all three dimensions.

Table 3.

Construct Reliability Statistics

Name of the construct	*Number of items*	*Cronbach's Alpha*
Human capital	40	0.933
Organizational capital	9	0.918
Relational capital	21	0.932
Organizational performance	33	0.964

Results

Key Factors of Human Capital

Factor analysis helped in classifying human capital into six factors: research facilitation (HC1), perquisites for employee retention (HC2), faculty commitment (HC3), teaching effectiveness (HC4), individual recognition (HC5) and equal employment opportunities (HC6). These six factors explained 56.153% of the total variance. "Collaboration among faculty for research" emerged as a major item contributing towards human capital with a factor loading of (0.802) explaining 16.385% of the total variance. This substantiates the results of previous studies that claim that the productivity of researchers contributes immensely towards human capital (Bozeman & Corley, 2004; Hill & Lynn, 2010; Ponomariov & Boardman, 2010). "Collaboration with other universities" emerged as an important item under "Research facilitation" with a factor loading of (0.799). These items appeared to contribute towards human capital more than "hiring faculty with experience" and "provision of conducive physical environment". This analysis indicated that 'faculty commitment' is a major contributor to human capital, thus introducing a new dimension in the area of employee commitment.

Key Factors of Organizational Capital

The construct was classified into two factors-knowledge sharing (OC1) and knowledge infrastructure (OC2) that explained 72.26% of the total variance. The most important item that emerged under "knowledge sharing" was knowledge network (0.890) which explained 61% of the total variance, followed by "online portals for uploading teaching & reading materials" (0.877) and "Digital archives"(0.834), indicating the growing need to facilitate the sharing and dissemination of knowledge through these new age practices. This showed that having knowledge infrastructure is indispensable but more important is its implementation and usability. Studies (Charles, 2006; Huggins, Johnston, & Stride, 2012; Noor & Crossley, 2013) have found both the items significant in the context of firm innovation and regional innovation.

This study proposes knowledge sharing and knowledge infrastructure as major contributors towards organizational capital for universities. The KMO measure of sampling adequacy was 0.888 and the value of the Bartlett test of sphericity was 2065.718 (df: 36) which was significant at less than 0.05%. Table 4 shows the results of the factor analysis of organizational capital.

Key Factors of Relational Capital

The construct was reduced to four factors: "access to information" (RC1)," "network leveraging capacity" (RC2), "degree of interaction" (RC3) and "outreach", (RC4) which explained 65.101% of the total variance. The strongest item that emerged as the underlying factor of" "access to information" was academic paper repository with a factor loading of (0.799). This indicated that presence of an academic repository on the website of a university increases its visibility to the outside world. Other factors that emerged, were information about teaching resources (0.755) and information on conferences and seminars (0.740), indicating that information dissemination is the best way for a university to increase its outreach among the academic and industrial communities. University laws and handbooks (0.738), online public access catalogues (0.738) and student exchange programs (0.649) also emerged as important items.

The current study establishes "access to information" as the major contributor to relational capital. Making use of alumni networks (0.784) emerged as an important item indicating the role played by alumni in enhancing university relational capital, followed by a strong alumni network (0.687). Previous works (Datta & Saad, 2008; Doctor & Ramachandran, 2008; Kitson, 2004; Weerts, Cabrera, & Sanford, 2010) contain similar ideas.

Belief in students as stakeholders (0.757) seemed to be a significant contributor towards relational capital followed by interaction with parents (0.688) and interaction with students (0.679), showing that universities are increasingly adopting neo-liberal policies, operating as corporations and treating students, parents and industry sectors as stakeholders. The KMO measure of sampling adequacy was 0.908 and the value of Bartlett test of sphericity was 4235.088 (df: 210), which is significant at less than 0.05. Table 5 shows the results of the factor analysis of relational capital.

Key Factors of University Performance

Factor analyses were performed on the four parameters of "Financial", "Customer", "Learning" and "Process." The three factors with the highest loadings for all four parameters were taken and their average scores were calculated. For the financial aspect, items taken were "finance from research" (0.798), "professional development allowance" (0.766) and "salary hike" (0.760). For the customer aspect, items taken were "word of mouth among students" (0.825), "student satisfaction with pedagogy" (0.814) and "student satisfaction with infrastructure" (0.812).For the learning aspect, items included were "active involvement in consultancy" (0.809), "objective measure to assess teaching performance" (0.807) and entrepreneurial initiatives among faculty" (0.780). The process aspect was covered through "quality enhancement of regular program" (0.869), "program for enhancing staff productivity" (0.849) and "measurement scales to evaluate students" (0.828).

Moving further in the analysis, a stepwise regression was performed to determine the important predictors of organizational performance. Table 4 shows the regression results between organizational performance and the three dimensions of intellectual capital. The Breusch- Pagan test of heteroskadasticity was conducted using STATA software and the values below indicate the validity of the statistical methodology used.

Ho: Constant variance

Variables: fitted values of op

chi2(1) = 18.68

Prob > chi2 = 0.0000

Table 4.

Step Regression Results for Intellectual Capital with University Performance

Model	*R*	*R square*	*Adjusted R square*	*Std. error of the estimate*	*Change Statistics*					*Durbin-Watson*
					R square change	*F change*	*df1*	*df2*	*Sig. F change*	
1	.727[a]	0.528	0.527	0.61029	0.528	366.87	1	328	0	
2	.795[b]	0.631	0.629	0.54014	0.103	91.723	1	327	0	
3	.831[c]	0.69	0.687	0.49606	0.059	61.696	1	326	0	
4	.852[d]	0.727	0.723	0.46663	0.037	43.413	1	325	0	
5	.864[e]	0.747	0.743	0.44989	0.02	25.639	1	324	0	
6	.871[f]	0.759	0.754	0.43968	0.012	16.221	1	323	0	1.708

Beta values and significance level of predictor variables

Model		*Unstandardized coefficients*		*Standardized coefficients*	*t*
		B	Std. error	Beta	
1	(Constant)	1.748	0.106		16.52
	Knowledge sharing	0.546	0.028	0.727	19.154***
2	(Constant)	0.671	0.146		4.583
	Knowledge sharing	0.354	0.032	0.471	10.98***
	Access to information	0.443	0.046	0.411	9.577***
3	(Constant)	0.303	0.142		2.131
	Knowledge sharing	0.241	0.033	0.32	7.309***
	Access to information	0.361	0.044	0.335	8.27***
	Network leveraging capacity	0.296	0.038	0.318	7.855***
4	(Constant)	0.048	0.139		0.343
	Knowledge sharing	0.203	0.031	0.27	6.433***
	Access to information	0.286	0.043	0.265	6.694***
	Network leveraging capacity	0.284	0.036	0.3	7.862***
	Individual recognition	0.205	0.031	0.226	6.589***

Table 4 Continue

Model		Unstandardized coefficients		Standardized coefficients	t
		B	Std. error	Beta	
5	(Constant)	-0.244	0.146		-1.671
	Knowledge sharing	0.178	0.031	0.238	5.806***
	Access to information	0.267	0.041	0.248	6.459***
	Networ- leveraging capacity	0.275	0.034	0.295	8.019***
	Individual recognition	0.161	0.031	0.177	5.140***
	Perks for employee retention	0.169	0.033	0.165	5.064***
6	(Constant)	-0.53	0.159		-3.321
	Knowledge sharing	0.146	0.031	0.195	4.715***
	Access to information	0.253	0.041	0.234	6.231***
	Network-leveraging capacity	0.206	0.038	0.221	5.472***
	Individual recognition	0.144	0.031	0.159	4.672***
	Perks for employee retention	0.187	0.033	0.182	5.668***
	Degree of interaction	0.177	0.042	0.161	4.028***

Note: All variables are significant at ***p< 0.001

Variables that emerge as important predictors are: knowledge sharing (B=0.146,t= 4.715, p=0.000), access to information (B=0.253, t= 6.231, p= 0.000), network-leveraging capacity (B= 0.206, t= 5.472, p= 0.000), individual recognition (B=0.144, t=4.672, p= 0.000), perks for employee retention (B= 0.187, t= 5.668, p= 0.000) and degree of interaction (B= 0.170, t= 4.028, p= 0.000). The model ($R^2 = 0.759$, $p < 0.001$) suggests that the three dimensions of intellectual capital have significant explanatory power.

A study by Mumtaz and Abbas (2014) contains similar thoughts. It also shows 75.9 % variation. Out of the six major predictor variables affecting organizational performance, significant ones were access to information, network leveraging capacity, perks for employee retention and degree of interaction, thus highlighting the importance of relational capital in predicting the performance of a university. Out of the six predictors, the ones having the maximum Beta values were access to information, & network-leveraging capacity, the sub factors of Relational capital. Results provide significant support to H_1.

An important finding is, that out of the six significant variables that emerged, four were from the relational and organizational capital dimensions. Only two were from human capital, thus providing a novel insight into the new areas of focus for university policy makers. Focusing only on conventional faculty expertise and research performance will no longer be sufficient for universities. The policies will need to be more neo-liberal in terms of its relationship with the external world, students, industry and society in general. Table 5 shows the regression results of organizational capital and university performance.

Table 5.

Stepwise Regression of Organizational Capital with University Performance

Model	*R*	*R square*	*Adjusted R square*	*Std. error of the estimate*	Change Statistics R square change	F change	df 1	Df2	Sig. F Change	Durbin - Watson
1	.727[a]	0.528	0.527	0.6103	0.528	366.9	1	328	0	
2	.739[b]	0.547	0.544	0.5989	0.019	13.54	1	327	0	1.442

Beta values and significance levels of predictor variables

Model		Unstandardized coefficients B	Unstandardized coefficients Std. Error	Standardized coefficients Beta	t
1	(Constant)	1.748	0.106		16.52
	Knowledge sharing	0.546	0.028	0.727	19.154***
2	(Constant)	1.34	0.152		8.829
	Knowledge sharing	0.435	0.041	0.579	10.564***
	Knowledge infrastructure	0.202	0.055	0.202	3.680***

Note: Both variables are significant at ***p<0.001

Both variables of knowledge sharing and knowledge infrastructure emerge as important predictors of university performance and show a significant explanatory power (R2 =0.547, p=0.000) thus offering support to H2. Table 6 shows the regression results of relational capital and university performance.

Table 6.

Regression results of relational capital with university performance

Model	*R*	*R square*	*Adjusted R square*	*Std. error of the estimate*	*Change Statistics*					*Durbin-Watson*
					R square change	*F change*	*df1*	*df2*	*Sig. F change*	
1	.704[a]	0.495	0.494	0.63094	0.495	322.11	1	328	0	
2	.800[b]	0.639	0.637	0.53435	0.144	130.3	1	327	0	
3	.816[c]	0.666	0.663	0.51498	0.027	26.059	1	326	0	
4	.822[d]	0.675	0.671	0.50876	0.009	9.023	1	325	0.003	1.54

Beta values and significance levels of predictor variables

Model		Unstandardized coefficients		Standardized coefficients	t
		B	Std. error	Beta	
1	(Constant)	0.665	0.171		3.892
	Access to information	0.759	0.042	0.704	17.948***
2	(Constant)	0.151	0.152		0.993
	Access to information	0.502	0.042	0.466	11.872***
	Network leveraging capacity	0.417	0.037	0.448	11.415
3	(Constant)	-0.203	0.162		-1.256
	Access to information	0.452	0.042	0.419	10.787***
	Network leveraging capacity	0.296	0.042	0.318	6.979***
	Degree of interaction	0.241	0.047	0.228	5.105***
4	(Constant)	-0.337	0.166		-2.032
	Access to information	0.404	0.044	0.375	9.105***
	Network leveraging capacity	0.264	0.043	0.283	6.101***
	Degree of interaction	0.23	0.047	0.218	4.914***
	Outreach	0.119	0.04	0.122	3.004**

All four variables- access to information, network leveraging capacity, degree of interaction and outreach, emerge as important predictors of university performance. The model also shows significant explanatory power (R2 =0.671). Three out of four variables had a p value of 0.000. The above results support H3.

Discussion and Conclusion

If the 21st century is to be dominated by Asia, its universities will have to play a vital role to play, by producing world-class research and solutions to all policy-related challenges. According to the Times Higher Education BRICS & Emerging Economies University Rankings 2016-17, China has the highest density of leading educational institutions in the developing world. While 27 Indian universities have featured in the top 300 rankings, China still dominates the list taking 52 places. Policymakers across BRICS and emerging economies place far more importance on universities and the role they play in driving national growth and competitiveness.

Hence this is an opportune time for India to create a second wave of institution building based on strong institutional support systems, knowledge sharing, access to information, network -leveraging capacity and interactive culture based on market-like governance. Therefore it is timely and relevant to investigate university performance from a fresh perspective of intangibles.

Keeping the above objective in mind, the current research provides novel insights into the relationship between intellectual capital and performance of universities in North India. Although in the initial analysis, research facilitation had maximum loading on human capital, it was later found in the aggregate analysis that it did not emerge as a significant factor affecting university performance, which is quite dissimilar to what has been suggested in many previous studies (Edgar & Geare, 2011; Kuah & Wong, 2011; Pratt, Margaritis, & Coy, 2006). It was also found in the analysis that out of the two dimensions that effect university performance, organizational and relational capital, relational capital emerged as the more important one. When the regression model introduced the relational capital variables into the equation, three out of a total of six predictor variables comprised of relational capital, and it was revealed that access to information, network-leveraging capacity and degree of interaction are some of the areas that university policy makers just can't afford to neglect.

Access to information enhances the level of transparency in the university processes and network-leveraging capacity. Previous studies (Alvarez, Dominguez, & Sanchez, 2010; Bektas & Tayauova, 2014; Canibano & Sanchez, 2009; Chakrabarti & Santoro, 2004) argue along the same lines. This gives researchers and administrators in India; a new perspective for examining a university's performance and indicates that universities are undergoing a new paradigm of change from being just good quality education providers to institutions working on a customer centric model by being more flexible, transparent, competitive and accountable.

Many studies (Chan & Lo, 2007; Etkowitz, Webster, Gebhardt, & Terra, 2000; Gunasekara, 2004; Jongbloed, Enders, & Salerno, 2008; Trequattrini, Lombardi, Lardo, & Cuozzo, 2015) have described that universities around the world are increasingly shifting from their traditional primary role as education providers and scientific knowledge creators to a more complex "entrepreneurial" university model that incorporates the role of the commercialization of knowledge and active contribution to the development of private enterprises in the local and regional economy with different stakeholders. Universities need to operate within a knowledge-based framework enabled with close interactions with government institutions and private industries.

These findings are pertinent and practically relevant for the top management of universities which can focus on these unconventional areas by strengthening relational capital, building strong relationships with alumni and industry members, facilitating industry consulting and increasing the degree of interaction with students and parents in order to enhance a university's performance.

Findings of the above study can also be generalized and applied to developing economies across the world, since relational capital that emerged in this study has also found a significant place in the framework given by the Times Higher Education World University Rankings 2016-17. Other than applying global yardsticks, this study also looks at the indicators from a completely fresh perspective of intellectual capital. Results imply that in addition to relying on the conventional areas of focus like teaching expertise and teaching pedagogy, planners in the education sector need to focus equally or more on the infrastructural aspects and a culture of knowledge which influences the methods of teaching and learning so that our universities are able to provide the best of learning and research experiences to their students and teachers.

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