


Factors Related to the Reading Comprehension Skills of 4th Grade Students According to Data of PIRLS 2001 Turkey¹

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ABSTRACT

Central to a nation's pursuit of its social, political, and economic goals is a literate and well-educated population. Furthermore, the ability to read is fundamental to individual intellectual development and personal growth. Knowledge about how well students can read, together with information about which policy-related factors are implicated in understanding reading achievement, can provide policy makers and researchers worldwide with insights into how to improve literacy and reading achievement. The aim of this study is to model the factors related to the reading comprehension skills of 4th grade students according to the PIRLS 2001 data. A model has been proposed by making use of the student, teacher, family questionnaires used in the PIRLS 2001 study, with variables considered as related to the reading comprehension skills of students, in addition to taking into account the related literature. A structural equation model has been used in order to define the relation among the students' reading comprehension skills and the specifications of the family, school, teacher and student. Taking into account the regression equation obtained by the result of the structural equation model analysis, it is seen that the determination coefficient is 0.51. This shows that 0.51 of reading comprehension skills of the Turkish students taking place in the PIRLS study can be explained by the features of family, school, teacher, and student, as specified for this study.

Key Words: PIRLS, Assess of reading comprehension skill, Reading achievement student achievement

 DOI Number: <http://dx.doi.org/10.12973/jesr.2015.52.1>

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INTRODUCTION

Defining reading is required in order to determine what reading actually is, but there is no single agreed definition. Many people consider reading as a process in which words are formed, and defines it as the learning of their meaning at a specific time. But this definition is not in conformity with the comprehension arising in recent years relevant to school learning. Reading is not only a basic skill, but a complex process requiring the participation of the reader. Experienced educators and researchers on education are likeminded on the subject, that reading is a versatile and complex form of linguistic performance. In this respect, reading consists of various skills which are tightly interconnected and benefit from educational materials (Güldenöğlü, Kargın, & Miller, 2012).

Reading is an action that enables the individual to become informed, to develop and to entertain oneself. The individual can become familiarized with different locations and lives and can learn new experiences by reading extracurricular books. As a general description, reading is the process of perceiving printed or written words through sense organs and comprehending them by giving them a meaning (Yağcıoğlu & Değer, 2002).

Reading comprehension is a significant life skill for the individual. Without development of this skill, it would not be possible for them to understand the facts arising in society, to relate to these facts, and to think on these facts, question them, and to generate a solution (Kutlu, 2004).

In recent years, as countries recognized the importance of reading and the understanding of what is being read in the lives of individuals, and based on that, how society will develop faster, they look for specific changes in educational policies at the national level. They realize these changes, considering studies that determine international student success, and assess the educational policies in respect of reading success and how they compare to other countries (Kutlu, Yıldırım, Bilican, & Kumandaş, 2011). One of the studies on the reading success of students at an international level is Progress in International Reading Literacy Study (PIRLS), undertaken by the International Association for the Evaluation of Educational Achievement.

PIRLS had been applied to elementary 4th grade students in 35 countries, including Turkey. This study examines the level of reading skills of 4th grade students in participant countries and their development over time. The main purpose being to determine the existing state of students in respect of reading skills, and to perform comparisons at the national and international level. Also, to enable the monitoring of skills changes and development, and to enable evaluation of the effect of countries' educational policies and policy implementations on the skill levels (IEA, 2001). The difference of PIRLS from other international studies is that it solely considers the skill of understanding what is being read.

In PIRLS, besides the provision of a student reading comprehension test designed to determine their reading comprehension skills, it also benefits from questionnaires developed for students, teachers, schools and families in order to reveal the factors affecting the reading comprehension skills of the students. The student, school, family and teacher questionnaires are crucial in respect of revealing the factors affecting the reading comprehension skills of the students. With the help of the information provided by such questionnaires, it is possible to assess the student population as a whole.

Educators and families are therefore able to discover what makes children possess good reading comprehension skills, and they are being able to create involvement in such activities which will increase the reading skills of children in light of such information (Duffey & Roehler, 1993). Research performed regarding the factors associated with academic success indicate that equipped state of students (Farrow, Tymms, & Henderson, 1999; Gilson, 1999; Aksoy & Link, 2000; Hodges & White, 2001), equipped state of teachers (Betts & Morell, 1999; Larson, 2000), the home environment and sub-structure of family (Jones & White, 2000; Kaplan, Liu, & Kaplan, 2001), and school environment (Erbe, 2000; Hodges & White, 2001; Linnakyla, Marlin, & Taube, 2004) affect the academic success of students.

It had been determined that the academic success of student, among their other characteristics, is associated with their homework (Farrow, Tymms, & Henderson, 1999; Aksoy & Link, 2000; De Jong, Westerhof, & Creemers, 2000) and their opinions and attitudes relevant to lessons (Elly, 1992; Kim & Hocevar, 1998; Kazazoğlu, 2013). Among these, Aksoy and Link (2000) as well as De Jong et al. (2000) specify that the time allocated for homework increases the students' performance. And Farrow et al. (1999) as well as Eren and Henderson (2011) specify that there is a negative relation between students' performance and time allocated for homework. In many studies, findings indicate that students' opinions and attitudes are associated with success (Kim & Hocevar, 1998; Weinberg, 1995; Kazazoğlu, 2013), and in some research, it has been revealed that there is no relation between opinions and attitudes, and academic success (Gilson, 1999). When research intended to observe the relation between preschool attendance and reading comprehension performance are considered, it becomes evident that the reading performance of students attending preschool is higher (West, Denton, & Germino, 2002).

Among the family characteristics related with academic success of students, the educational level of the family (Jones & White, 2000; Tomoff, 2000; Kaplan, Liu, & Kaplan, 2001; Gelbal, 2008), number of books in the house and time allocated for reading by the family (Rowe, 1995; West, Denton, & Germino, 2002) can be listed. Many studies have revealed findings where there is a significant relation between the educational level of the family and the academic success of the student.

Among the school properties related with academic success of students, the range of class, the region of school (Luyten, 1994; Kornfeld, 2010) and the availability of a school library (Zhong & Alexander, 2007) can be listed. Studies relevant to the range of class reveal that classes with lower student numbers positively affect academic success (Kornfeld, 2010). Besides, there are also studies indicating that the region of the school relates to academic success. While some of these are specifying a positive significant relation between the region of school and academic success (Rowe, 1995; Pearson, 2009), others' findings state there being no relation between them (Fuller, 1987; Scheerens, 1993). While research findings show that having a school library significantly affects academic success (Elly, 1992; Zhong & Alexander, 2007), there are also research findings that state that the availability of a school library is not directly related with academic success (Rowe, 1995).

Among the characteristics of teachers determined to be related with the academic success of students, the educational level of the teacher (Betts & Morell, 1999; Larson, 2000; Sadioğlu, & Bilgin, 2008) and the seniority of the teacher (Betts & Morell, 1999; Kornfeld, 2010) can be listed. While Larson (2000) states that the educational level of the teacher affects

the performance of the student, Betts and Morell (1999) report no relation between these two variables. Many studies indicate there is a relation between the seniority of the teacher and the success of students.

METHOD

Purpose of the Study

The purpose of this study is to test the reading comprehension skills of students based on the data of PIRLS 2011, and to test the theoretic model presented in Figure 1, which intends to reveal any relation among the following;

- Students' characteristics (status of attending preschool, interest in reading, activities within and outside of the class relevant to reading, frequency of making homework relevant to reading),
- Teachers' characteristics (seniority of the teacher, educational level of the teacher, time allocated for activities which will improve linguistic skills),
- School's properties (range of class, region of school, availability of a library), and
- Family's characteristics (educational level of mother and father, number of books in the house, time allocated to reading by the family).

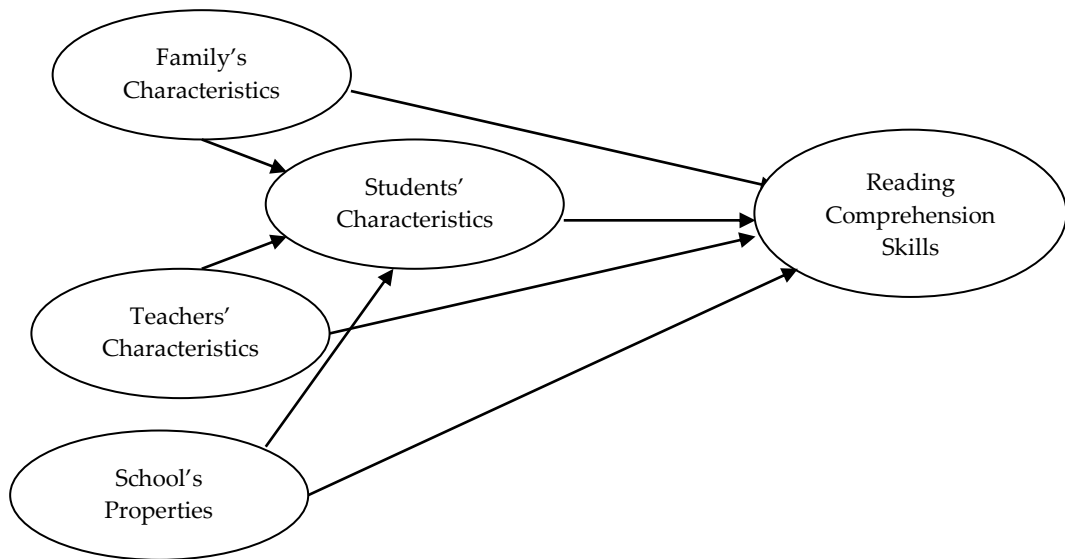


Figure 1. *Theoretic model to be tested relevant to reading comprehension skill*

In this model, there are five latent variables, and within each latent variable, there are variables representing that variable, as specified above. For the aim of this study, it is intended to apply the Students' Opinions Scale relevant to reading, Intraclass Reading Activities Scale, and the Out of Class Reading Activities Scale regarding students' characteristics.

Population and Sample

A group of nine year old students at the elementary school 4th grade in Turkey constitutes the population of the study. Two stage stratified cluster design was used in the sampling. The determination of the schools constituted the first stage of sampling. First of all, schools that represent Turkey in seven geographical regions were selected by Canada Statistics for the statistical aspect of the PIRLS 2001 study. After the selection of schools, the sampling of classes constituted the second stage. One class was selected from each school. The total students of the selected classes constituted the sample. According to this, the sample consists of 5,125 students in total, attending 154 schools.

Data Gathering Instruments

In the PIRLS 2001 student questionnaire, there are questions regarding the interest of students in reading, as well as intraclass and out of class reading activities. It is thought that these dimensions are relevant with the reading skills of the students, and as a result, three different scales were applied with selected questions relevant to the specified dimensions. Specialist opinion was sought in the selection of the questions, and it was examined whether or not the questions reflected the relevant dimensions. Below are the explanations regarding these scales.

Interest in Reading Scale: 10 questions, which were considered by the researcher to be relevant to the opinions of students regarding reading, were selected from the questionnaire, and constituted the Interest in Reading Scale. According to this, the items beneficial for determining the interest of students in reading had been gathered. The response format of that scale is in the form of (4) totally agree, (3) agree, (2) disagree, (1) totally disagree. Scoring in reverse order was applied for the negative questions in the scale. For instance, one item included in the scale is as follows: “I read when I have to read”.

Intraclass Reading Activities Scale. 13 questions in total were selected from the questionnaire as they were considered by the researcher to determine the intraclass activities of students regarding reading, thereby creating the Intraclass Reading Activities scale. The response format of that scale is in the form of (4) every day or nearly every day, (3) once or twice a week, (2) once or twice a month, (1) never or very rarely. Scoring in reverse order was applied for the negative questions in the scale. For instance, an item included in the scale is as follows: “Our teacher reads out loud during the class”.

Out of Class Reading Activities Scale. 14 questions in total were selected from the questionnaire as they were considered by the researcher to determine the out of class activities of students regarding reading, and thereby constituted the Out of Class Reading Activities scale. The response format of that scale is in the form of (4) every day or nearly every day, (3) once or twice a week, (2) once or twice a month, (1) never or very rarely. Scoring in reverse order was applied for the negative questions in the scale. For instance, an item included in the scale is as follows: “I read out loud to someone else in the house”.

Arrangement of Data

The data used in this study was obtained via the internet from the PIRLS 2001 data files at the International Association for the Evaluation of Educational Achievement (IEA) (<http://pirls.bc.edu>). The data of all international projects performed by IEA is available online for the use of researchers.

The data relevant to Turkey was selected from among the PIRLS data. This data was arranged by school questionnaire, family questionnaire, student questionnaire, and by teacher questionnaire. Data was selected and organized from each of these files considering the research variables. In the PIRLS teacher questionnaire, the responses for open ended questions such as seniority of teacher and range of class were grouped and coding applied. Then, based on the student questionnaire, out of class reading activity, intraclass reading activity and interest in reading scales were constituted respectively.

Analysis of Data

In this study, principal components factor analysis, reliability analysis and structural equation model were used for the data analysis.

FINDINGS

In this section, the findings of the research are presented with the aid of tables, figures and descriptions.

Findings Relevant to Data Gathering Instruments

Below, factor and reliability analysis results of the Interest in Reading Scale, Intraclass Reading Activity Scale and the Out of Class Reading Scale were provided.

Results of Factor and Reliability Analysis of Interest in Reading Scale

The results of factor analysis of the Interest in Reading Scale are shown in Table 1 as a single dimension scale by selecting items with high factor load value.

Table 1. *Results of factor analysis of students' opinions regarding reading scale (principal components analysis)*

Item No	Communality	Load Value of Factor
1	0.035	0.187
2	0.184	0.428
3	0.320	0.566
4	0.286	0.535
5	0.270	0.519
6	0.425	0.652
7	0.241	0.491
8	0.104	0.323
9	0.361	0.601
10	0.246	0.495
Eigen value:	2.472	
Described Variance:	24.72%	

When the first factor loads of the items are included in the scale, it is observed that they change in between 0.652-0.187, and the variance where a single factor was described was 24.72%. According to this, it is shown that the scale can be used with a single factor, without the requirement for removing any items.

When the Cronbach's Alfa reliability coefficient of the scale is considered, it is seen to be 0.62 and the reliability deemed to be at a sufficient level (Anastasi, 1982). The formation of the

scale for the 10 items showed a low value reliability coefficient, as reliability is able to increase or decrease depending on the number of items.

Results of Factor and Reliability Analysis of Intraclass Reading Activities Scale

The results of factor analysis of the Intraclass Reading Activities Scale are shown in Table 2 as a single dimension scale by selecting items with high factor load value.

Table 2. Results of factor analysis of intraclass reading activities scale (principal components analysis)

Item No	Communality	Load Value of Factor
1	0.082	0.280
2	0.213	0.461
3	0.292	0.541
4	0.066	0.256
5	0.092	0.303
6	0.209	0.457
7	0.301	0.549
8	0.266	0.516
9	0.162	0.403
10	0.293	0.542
11	0.316	0.562
12	0.294	0.542
13	0.330	0.575
14	0.200	0.447
Eigen Value:	3.117	
Described Variance:	22.26%	

When first factor loads of the items included in the Intraclass Reading Activities Scale are considered, it is observed that they change between 0.575-0.280. According to this, it is seen that the scale can be used with a single factor, without the requirement for removing any items. The variance of 22.26% indicates that the scale had a general factor.

Cronbach's Alfa reliability coefficient of the scale of 14 items was found to be 0.72 and therefore interpreted as the scale has sufficient reliability.

Results of Factor and Reliability Analysis of Out of Class Reading Activities Scale

When the results of first factor analysis performed with 14 items from the Out of Class Reading Activities Scale are examined, it was observed that all items of the scale were loaded in first factor, but that the seventh item provided a negative relation with the first factor. The referred item, after examining its content, was removed from the scale after seeking specialist opinion. The analysis was repeated with the remaining 13 items, and the results are shown in Table 3.

Table 3. Results of factor analysis of out of class reading activities scale (principal components analysis)

Item No	Communality	Load Value of Factor
1	0.253	0.503
2	0.298	0.546
3	0.283	0.532
4	0.307	0.554
5	0.188	0.434
6	0.230	0.479
8	0.149	0.387
9	0.235	0.485
10	0.262	0.512
11	0.233	0.483
12	0.186	0.431
13	0.249	0.499
14	0.120	0.346
Eigen Value:	2.994	
Described Variance:	23.08%	

The load values of the remaining 13 items on the scale range between 0.546-0.346. The variance in which a single factor is described is 23.08%. According to this, it can be stated that the scale has a general factor and that it can be used with a single factor. The Cronbach's Alfa reliability coefficient calculated for the item analysis of the 13 item Out of Class Reading Activities Scale is 0.75 and thereby deemed to be at a sufficient level.

Consequently, when the reliability of the scales used in the research are considered, it is observed that the reliability coefficient of the Students' Opinions Regarding Reading Scale is 0.62, for the Intraclass Reading Activities Scale it is 0.72, and for the Out of Class Reading Activities Scale it is 0.75. When the number of items are considered, it can be accepted that the scales used in the research are sufficiently reliable.

Besides, it can be accepted that the scales used in the research have sufficient validity coefficients. According to the results of factor analysis, the scales of Interest in Reading, Intraclass Reading Activities and Out of Class Reading Activities are accepted as single dimensioned.

Findings of Structural Equation Model Relevant to Reading Comprehension Skill

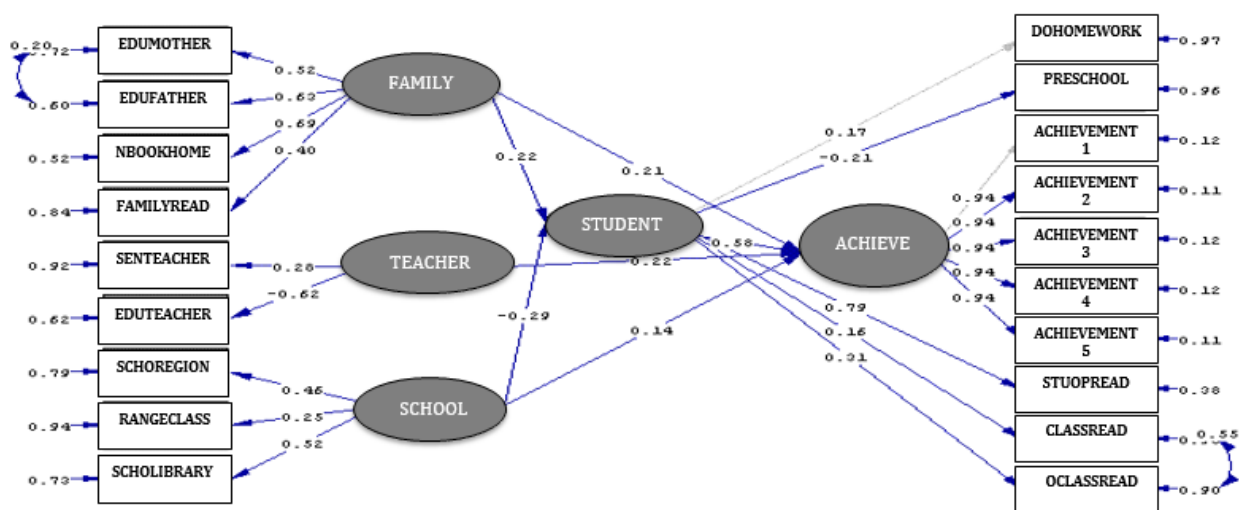
Table 4. Comparison of the fit indices of model and criteria

Fit Indices	Criteria	Model
χ^2/sd	< 5/1	1418.80/141=10.06
GFI	> 0.90	0.96
AGFI	> 0.90	0.95
RMSEA	< 0.05	0.048
S-RMR	< 0.05	0.053
CFI	> 0.90	0.98
NNFI	> 0.90	0.97

Along with the selection of those suitable among the modification indices suggested by the LISREL program, and considering that the model is complex and multivariate, the fit indices indicate a good fit. When the fit indices of the model are examined, it is observed that

the deviation 1418.80/141 rate with chi square is larger than 5/1. Along with it not being a requested condition, it is known that chi square and degree of freedom are affected by the size of sample (Fasinger, 1987), and it is therefore considered that a large sample negatively affects this value. Root Mean Square Error of Approximation (RMSEA) being 0.048 indicates a perfect fit. Standardized Root Mean Square Residual is 0.053. For SRMR, Kline (1999) specifies that values under 0.10 are acceptable. Goodness of Fit Index was 0.98 and the Adjusted Goodness of Fit Index of 0.95 indicates that the model shows a good fit. Moreover, when the values of Comparative Fit Index (0.90) and Normed Fit Index (0.97) are considered, it is observed that these values also show a good fit.

The structural equation model showing the relation of latent variables, as related to reading comprehension skill, with other latent variables besides their relation with the observed variables is given in Figure 2.



Chi-Square= 1418.80, df =141, p-value = 0.00000, RMSEA = 0.048

Figure 2. Structural equation model showing standard coefficients relevant to reading comprehension skill

When the structural equation model relevant to reading comprehension skill is considered (Figure 2), it is observed that all factor loads are significant at the level of 0.05. The meaning of that is that all the observed variables contribute to the structure in latent variables. According to this, the highest relation regarding reading comprehension skill (ACHIEVEMENT) is with the students' characteristics (STUDENT). Teachers' characteristics (TEACHER) ($\lambda_x=0.28$), family's characteristics (FAMILY) ($\lambda_x=0.21$, $p<0.05$) and school's properties (SCHOOL) ($\lambda_x=0.22$, $p<0.05$) follow respectively. Below, the findings obtained from the model are shown under sub-headings.

Students' Characteristics

Among the five determinants of the STUDENT latent variable, the observed variable with the highest factor load is students' opinions relevant to reading (STUOPREAD) ($\lambda_y=0.79$). Variable of out of class reading activities (OCLASSREAD) ($\lambda_y=0.31$), preschool attendance state (PRESCHOOL) ($\lambda_x=-0.21$), frequency of making homework (DOHOMWORK) ($\lambda_y=0.17$) and intraclass activities regarding reading (INCLASSREAD)

follow respectively. In this research, when the relation between success (ACHIEVEMENT) dependent latent variable and student (STUDENT) dependent latent variable is examined, it is observed that the relation is both significant and positive. Path coefficient is 0.58 ($\lambda_x=0.58$, $p<0.05$), and t value is 8.52. The meaning is that the preschool attendance status, making homework regarding reading, interest in reading, intraclass activities regarding reading and out of class activities regarding reading, being referred to as students' characteristics, increase the reading comprehension skill.

Family's Characteristics

When the path coefficients between the family's characteristics (FAMILY) latent variable within the model, and the educational level of the mother (EDUMOTHER), the educational level of the father (EDUFATHER), the number of books at home (NBOOKHOME), and the time allocated for reading by the family (FAMILYREAD), from among the observed variables of that variable, are examined, it is seen that the relations are both significant ($p<0.05$) and positive. According to this, the observed variable having the highest factor load from among the four determinants of FAMILY latent variable is the number of books at home ($\lambda_x=0.69$). Variables of the education status of the father ($\lambda_x=0.63$), educational status of the mother ($\lambda_x=0.52$) and time allocated for reading by the family ($\lambda_x=0.40$) follow respectively. By another expression, the variables of the educational level of the mother, educational level of the father, the number of books at home and the time allocated for reading by the family, referred to as the family's characteristics, positively affect the reading comprehension skills of the students.

Teachers' Characteristics

When the path coefficients between the teachers' characteristics (TEACHER) latent variable and observed variables of seniority of teacher (SENTEACHER) and educational level of the teacher (EDUTEACHER) are examined, it is observed that there is a significant ($p<0.05$) and positive relation between the teachers' characteristics and the seniority of the teacher. In other words, the increased seniority of the teacher positively affects the teachers' characteristics. The relation between the teachers' characteristics and the educational level of the teacher has a negative factor load ($\lambda_x=-0.62$), along with being significant. This finding means that the increase of educational level of the teacher negatively affects the teachers' characteristics.

School's Properties

When the path coefficients between the school's properties (SCHOOL) latent variable and the region of the school (SCHOREGION), range of the class (RANGECLASS) and availability of a school library (SCHOLIBRARY) are examined, it is observed that the relations are significant ($p<0.05$) and positive. According to this, the SCHOOL latent variable had three positive and significant components, being SCHOREGION ($\lambda_x=0.46$), RANGECLASS ($\lambda_x=0.25$) and SCHOLIBRARY ($\lambda_x=0.52$). The variable among these with the highest factor load value is the availability of a school library, with the variables of region of school and range of class following respectively.

Family's Characteristics and Students' Characteristics

Again, when the relation between FAMILY and STUDENT latent variables in the model are examined, it is observed that it is both positive and significant. Path coefficient is

0.22 ($\lambda_x=0.22$, $p<0.05$), and t value is 5.11. This finding may mean that the variables of the educational level of the mother, the educational level of the father, the number of books at home and the time allocated for reading by the family, referred to as the family's characteristics, increase the students' characteristics.

School's Properties and Students' Characteristics

It is observed that the relation between the SCHOOL and STUDENT latent variables in the model is negative as well as being significant. Path coefficient is -0.29 ($\lambda_x=0.29$, $p<0.05$), and t value is 4.05. According to this, the determined school properties negatively affect the students' characteristics.

The regression equation of the model in which standardized regression coefficients, Beta and t values are included is as follows:

$$\text{SUCCESS} = 0.61*\text{STUDENT} + 0.21*\text{FAMILY} + 0.22*\text{TEACHER} + 0.14*\text{SCHOOL}, \text{Errorvar} = 0.49, R^2 = 0.51$$

$SH_B =$	(0.071)	(0.028)	(0.054)	(0.063)	(0.024)
t =	8.62	7.48	4.06	2.18	19.98

When the equation is examined, it is observed that the determination coefficient is 0.51, indicating 0.51 of the variance, as relevant to reading comprehension skills of Turkish students participating in the PIRLS, is explained by characteristics of family, teachers and students and properties of school. When the regression equation is considered, the reading comprehension skill of the students is mostly being determined by students' characteristics, and then followed by teachers' characteristics, family's characteristics and school's properties.

RESULT AND RECOMMENDATIONS

1. It is seen that the Intraclass Reading Activities, from among the students' characteristics, positively affects the students' characteristics. According to this, it is thought that it would be beneficial for teachers to plan reading activities whereby they take individual students to the center/front of the class, and for reading out loud to be performed by both the students and teacher during such events, to ask the students questions regarding what is being read, and to ask them to write about the books or texts that they read. Moreover, the teachers may provide more attractive projects to students regarding reading, and require them to prepare plays or stage plays. Finally, if it is considered that a dimension of intraclass reading activities is assessment and evaluation at this stage, it would be proper for the teachers to measure the reading comprehension skills not through classic approaches (requiring students to respond based on memorization), but by approaches in which the students may comment on the facts within the text and in which they can relate it to their daily lives. In the scoring of such questions to measure reading comprehension skill, the use of scoring rubric is being suggested.

2. It was determined that Out of Class Reading Activities, from among the students' characteristics, also positively affect students' characteristics. At this stage, teachers and families should take on some responsibilities. It should be a requirement for families to allocate sufficient time for reading at home, they should regularly purchase newspapers and

magazines, and they should make available the types of books which conform to the age level of their children. Moreover, it is considered crucial for families to prevent their children from passing their whole time using computers and by watching TV, as that means the children allocate less time for reading. The families, whose children are very hooked on TV and/or computers, should ensure more beneficial use of such means. For instance, they can ensure the improvement of reading skills of their children by selecting subtitled programs on TV, and they could increase the reading interest of their children by buying CD books, which are supported visual items which need to be read.

3. It is observed that the fulfillment of homework relevant to reading also positively affects students' characteristics. According to this, it would be proper for teachers to benefit from performance tasks intended to measure the high level mental skills of students, and for their homework to be based on real life states in order to motivate the student.

4. From among the family's characteristics, it is especially seen that the number of books at home is the variable having the highest factor load. According to this, families should have many books available in the home which conform to the age level of their child(ren).

5. Among the family's characteristics, it is noted that time allocated for reading by the family also positively affects the family's characteristics. According to this, it would be ideal for families to read books at home and to discuss among themselves the books they have read. This condition will positively affect the opinions of students regarding reading, and it will further encourage them to read.

6. It is observed that, among the school's properties, having a school library is the variable with the highest factor load. According to this, the availability of a library at each school is deemed as a requirement. At this point, the Ministry of National Education in Turkey should undertake significant duties. The Ministry of National Education can determine which schools are without a library and can arrange for campaigns to attract donations of books to these schools. Attempts to ensure schools have a library, and their operations for improving their existing libraries, will enable students to have positive opinions regarding reading.

7. Finally, it is seen that the variable of range of class, from amongst the school's properties, also positively affects the school's properties. At this stage, again the Ministry of National Education should undertake significant duties. The ministry should prevent education within classes of excessive student numbers, as research shows that the variable of range of class is not only relevant to success in reading skills, but also a variable which affects the whole academic success of students.

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PIRLS 2001 Türkiye Verilerine Göre 4. Sınıf Öğrencilerinin Okuduğunu Anlama Becerileriyle İlişkili Faktörler⁴

Aslıhan ERMAN-ASLANOĞLU⁵ & Ömer KUTLU⁶

Giriş

Bireysel yeteneklerin ön plana çıktığı günümüz toplumlarında bireyler, toplumsal yaşamda gereksinimlerini gidermek, duygu ve düşüncelerini başkalarıyla paylaşmak, bilgi kazanmak ve denge içinde yaşayabilmek için toplumdaki diğer bireylerle iletişim kurmak zorundadırlar. Bireyler arası iletişimin en temel ögesi olan dilin etkili kullanımı, hem bireylerin toplum içinde diğer bireylerle iyi bir iletişim kurmasına hem de temel dil becerileri olarak kabul edilen dinleme, konuşma, okuma ve yazma becerilerinin geliştirilmesine bağlı olarak, eğitim alanındaki öğrenmelerin daha etkili bir şekilde gerçekleşmesine olanak sağlar. Okuma, kişinin bilgilenmesini, gelişmesini ve eğlenmesini sağlayan bir eylemdir. Kişi sadece ders içerikli değil, ders dışı kitaplar da okuyarak farklı yerleri, yaşantıları tanıyabilir, yeni tatları öğrenebilir. Genel bir tanımla okuma; basılı ya da yazılı sözcükleri duyu organları yoluyla algılama, bunları anlamlandırıp kavrama sürecidir. Okuma becerisi, özellikle ilköğretimde, bütün derslerin temelini oluşturur. Çünkü öğrenciler, okuma becerilerini geliştirdikçe düşünce yapısı ve yorum gücü gelişen, duygu ve beğeni inceliği kazanan, ulusal ve evrensel kültür birikimini algılamaya başlayan, kimliğini geliştiren bireyler olmaya başlarlar. Bunun yanı sıra okuma becerisini geliştiren bir öğrenci, öteki dersleri de büyük ölçüde başarmaktadır.

Okuma becerisinin eğitimin temel becerilerinden biri olması ve ancak bu becerinin kazanılmasıyla bireylerin matematik, fen vb. diğer alanlarda kendilerini geliştirerek başarılı olacaklarının bilinmesi okuma becerisiyle ilgili hem ulusal hem de uluslararası düzeyde çalışmaların yapılmasına neden olmuştur. Ülkeler ulusal düzeyde yaptıkları çalışmalarla öğrencilerin okuma becerilerini belirleyerek kendi okuma programlarının etkisini değerlendirirken, uluslararası çalışmalara katılarak da öğrencilerini diğer ülkelerin öğrencileriyle karşılaştırma olanağı bulmaktadırlar. Okuma becerisinin öneminin bilincinde olan ülkeler, okuma becerisine ulusal düzeyde önem vermenin yanında, uluslararası düzeyde yapılan çalışmalara da katılarak ülkelerindeki öğrencileri daha geniş bir platformda değerlendirme olanağı bulmaktadırlar.

Çalışmalarını uluslararası düzeyde yürütmekte olan bir kurum da Uluslararası Eğitim Başarısını Değerlendirme Kuruluşu'dur (International Association for The Evaluation of Educational Achievement-IEA). IEA akademik başarıyı belirlemek amacıyla matematik, fen ve okuma becerileri konularında uluslararası düzeyde karşılaştırmalı sınavlar yapmaktadır. IEA'nın yaptığı çalışmalar; Üçüncü Uluslararası Matematik ve Fen Bilgisi Araştırma Projesi (The Third International Mathematics and Science Study-TIMSS), Uluslararası Okuma Becerilerinde Gelişim Projesi (The Project of International Reading

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Language Skills-PIRLS)'dir.

PIRLS, Türkiye'nin de aralarında bulunduğu 35 ülkede, ilköğretim 4. sınıf öğrencilerine uygulanmıştır. Bu proje, katılımcı ülkelerdeki 4. sınıf öğrencilerinin okuma becerilerinin düzeyini ve zaman içerisindeki gelişimini incelemektedir. Bu projenin temel amacı, okuma becerileri açısından öğrencilerin var olan durumlarını belirlemek, ulusal ve uluslararası düzeyde karşılaştırmalar yapmak, zaman içerisinde söz konusu becerilerde nasıl bir değişim ve gelişim olduğunun izlenmesine olanak tanımak ve ülkelerin eğitim politikalarının ve uygulamalarının söz konusu becerilere olan etkilerini değerlendirme olanağı sağlamaktır. PIRLS'ün diğer uluslararası çalışmalardan farkı, kapsamına yalnızca okuduğunu anlama becerilerini alması ve yalnızca bu konu üzerinde çalışmasıdır. PIRLS çalışmasında öğrencilere, öğrencilerin okuduğunu anlama becerilerini belirlemeye yönelik bir okuduğunu anlama testi verilmesinin yanında, öğrencinin okuduğunu anlama becerilerine etki eden faktörleri de ortaya koyabilmek amacıyla öğrenci, öğretmen, okul ve aile için geliştirilmiş anketlerden de yararlanmıştır. Öğrencilerin okuduğunu anlama becerilerine etki eden faktörlerin ortaya konulabilmesi açısından; öğrenci, okul, aile, öğretmen anketleri önem taşımaktadır. Çünkü bu anketlerle sağlanan bilgiler yardımıyla öğrenciyi bütün olarak değerlendirmek olanaklı olmaktadır.

Okuduğunu anlamanın öğrenmeye temel oluşturması ve bireyin yaşamı için vazgeçilmez olması, okuduğunu anlama becerisinin nasıl geliştirileceği sorusunu gündeme getirmektedir. Okuduğunu anlama becerisinin geliştirilebilmesi ise ancak bu beceriyle ilişkili faktörlerin ortaya konmasıyla olanaklıdır. Böylelikle eğitimciler ve aileler çocukların iyi bir okuduğunu anlama becerisine sahip olması için yapılması ya da yapılmaması gereken durumlar hakkında bilgi sahibi olabilmekte ve bu bilgiler ışığında çocuklarının okuma becerisini artıracak etkinliklerde bulunabilmektedirler. Bu çalışmanın amacı, Türkiye'deki 4. sınıf öğrencilerinin okuduğunu anlama becerileriyle ilişkili faktörlerin PIRLS 2001 verilerine dayalı olarak modellenmesidir. Bu amaçla öncelikle

Yöntem

Bu çalışmada kullanılan veriler Uluslararası Başarıları Değerlendirme Kuruluşu (IEA)'nın uluslararası veri tabanındaki PIRLS 2001 veri dosyalarından internet aracılığıyla elde edilmiştir (<http://pirls.bc.edu>). IEA'nın yaptığı bütün uluslararası projelerin verileri internette ilgili sayfasında araştırmacıların kullanımına açıktır. Çalışmada öncelikle, PIRLS 2001 çalışmasında kullanılan öğrenci, öğretmen, okul, aile anketlerinden yararlanılarak öğrencilerin okuduğunu anlama becerileriyle ilişkili olduğu düşünülen değişkenlerle, ilgili alan yazın da göz önünde bulundurularak, bir model öne sürülmüştür. Değişkenler belirlendikten sonra öğrenci anketinde yer alan maddeler göz önüne alınarak, okuma ilgisi, okumayla ilgili sınıf içi etkinlikleri ve okumayla ilgili sınıf dışı etkinlikleri ölçekleri geliştirilmiştir. Ölçeklerin faktör yapıları temel bileşenler faktör analizi yöntemi ile incelenmiştir. Ölçeklerin güvenilirliği için hesaplanan Cronbach Alfa Güvenirlik Katsayısı kullanılmıştır. Daha sonra öğrencilerin okuduğunu anlama becerileriyle aile, okul, öğretmen, öğrenci özellikleri arasındaki ilişkileri belirlemek amacıyla yapısal eşitlik modeli (YEM) kullanılmıştır.

Sonuçlar

Çalışmada kullanılan ölçeklerin faktör yapıları temel bileşenler faktör analizi yöntemi ile incelenmiş, analiz sonuçları, ölçeklerin tek faktörlü kullanılabileceklerini göstermiştir.

Ölçeklerin güvenilirliği için hesaplanan Cronbach Alfa Güvenirlik Katsayısı okumayla ilgili öğrenci görüşleri ölçeği için 0.62, sınıf içi okuma etkinlikleri ölçeği için 0.72, sınıf dışı okuma etkinlikleri ölçeği için 0.75'dir. Öğrencilerin okuduğunu anlama becerileriyle aile, okul, öğretmen, öğrenci özellikleri arasındaki ilişkileri belirlemek amacıyla uygulanan yapısal eşitlik modeli (YEM) sonucunda elde edilen regresyon denkleminde bakıldığında, belirleme katsayısının 0.51 olduğu görülmüştür. Bu durum, PIRLS çalışmasına katılan Türk öğrencilerin okuduğunu anlama becerilerinin 0.51'inin bu çalışma için belirlenen aile, okul, öğretmen, öğrenci özellikleriyle açıklandığını göstermektedir.

Ayrıca Türk öğrencilerinin okuduğunu anlama becerileri üzerinde etkili olan en önemli değişkenin öğrenci özellikleri olduğu görülmektedir. Buna göre öğrenci özelliklerinden olan öğrencilerin okuma ilgisi, öğrenci özellikleriyle ilişkisi en yüksek olan değişkendir. Bunu sırasıyla sınıf dışında yapılan okuma etkinlikleri, anaokuluna gidip gitmeme durumu (negatif yönde), ödev yapma sıklığı ve okumayla ilgili yapılan sınıf içi etkinlikler izlemektedir.

Öğrenci özelliklerinden sonra okuduğunu anlama becerisiyle ilişkili en önemli değişkenin öğretmen özellikleri olduğu görülmektedir. Öğretmen özelliklerinden öğretmenin kıdemi arttıkça öğretmen özellikleri olumlu etkilenirken, öğretmenin eğitim düzeyi arttıkça öğretmen özelliklerinin olumsuz etkilendiği görülmektedir. Aile özellikleri, öğrenci ve öğretmen özelliklerinden sonra okuduğunu anlama becerisiyle ilişkili diğer bir değişkendir. Aile özellikleri değişkeni incelendiğinde evdeki kitap sayısının aile özellikleriyle ilişkili en önemli değişken olduğu görülmektedir. Bunu sırasıyla babanın eğitim düzeyi, annenin eğitim düzeyi ve ailenin okumaya ayırdığı zaman izlemektedir. Okuduğunu anlama becerisiyle ilişkili diğer değişken ise okul özellikleridir. Okul özelliklerinden bir okul kütüphanesine sahip olma değişkeninin okul özellikleriyle ilişkili en önemli değişken olduğu, bunu okulun bulunduğu bölge değişkeninin izlediği görülmektedir.

Öneriler

Öğrenci özelliklerinden sınıf içinde yapılan okuma etkinliklerinin öğrenci özelliklerini olumlu yönde etkilediği görülmektedir. Buna göre öğretmenlerin özellikle öğrenciyi merkeze alan okuma etkinlikleri planlaması bu etkinliklerde sınıfta öğrencilerin ve kendisinin sesli okuması, öğrencilerin okudukları metinlerle ilgili onlara sorular sorması ve okudukları kitaplar ya da metinler hakkında onların bir şeyler yazmalarını istemesinin yararlı olacağı düşünülmektedir. Bunun yanı sıra öğretmenler öğrencilerine okumayla ilgili ilgi çekici projeler verebilir ve oyun ya da piyes hazırlamalarını istenebilir. Son olarak bu aşamada sınıf içi okuma etkinliklerinin bir boyutunun da ölçme ve değerlendirme olduğu düşünülürse öğretmenlerin, okuduğunu anlama becerilerini, öğrencilerin ezbere dayalı yanıt vermelerine yol açan klasik yaklaşımlarla değil, öğrencilerin parçada geçen olaylarla ilgili yorum yapabilecekleri ve günlük yaşamlarıyla ilişki kurabilecekleri bir yaklaşımla ölçmeleri yerinde olacaktır. Bu tip okuduğunu anlama becerisini ölçen soruların puanlanmasında ise dereceli puanlama anahtarlarının (scoring rubric) kullanılması önerilmektedir.

Öğrenci özelliklerinden öğrencilerin sınıf dışında yaptıkları okuma etkinliklerinin öğrenci özelliklerini olumlu yönde etkilediği belirlenmiştir. Bu aşamada öğretmenlere ve ailelere birtakım sorumluluklar düşmektedir. Ailelerin evde okumaya yeterli zaman ayırmaları, eve gazete ve dergi almaları, evde çocuklarının yaş düzeyine uygun kitap bulundurmaları gerekmektedir. Ayrıca ailelerin çocuklarının okul dışındaki tüm zamanını

bilgisayar ve televizyon başında geçirmelerini engellemeleri önemli görünmektedir. Çünkü bu tip araçların çocukların okumaya daha az zaman ayırmalarına neden olduğu bilinmektedir. Çocukları televizyona ya da bilgisayara çok düşkün olan aileler, bu araçların daha yararlı bir şekilde kullanılmasını sağlayabilirler. Örneğin televizyonda alt yazılı programlar seçerek çocuklarının okuma becerisinin gelişmesini sağlayabilir yine aynı şekilde bilgisayar ortamında okunacak, görsel öğelerle desteklenmiş cd halindeki kitapları alarak çocuklarının okumaya karşı ilgilerini artırabilirler.

Öğrencilerin okumayla ilgili ödev yapmalarının da öğrenci özelliklerini olumlu yönde etkilediği görülmektedir Buna göre, öğretmenlerin özellikle öğrencilerin üst düzey zihinsel becerilerini ölçmeye yönelik performans görevlerinden yararlanması, verdiği ödevlerin gerçek yaşam durumlarına dayalı olması ve öğrenciyi güdülemesi yerinde olacaktır. Aile özelliklerinden özellikle evdeki kitap sayısının aile özellikleriyle en yüksek faktör yüküne sahip değişken olduğu görülmektedir. Buna göre ailelerin evlerinde özellikle çocuklarının ilgili yaş düzeyine uygun çok sayıda kitap bulundurmaları gerekmektedir. Aile özelliklerinden ailenin okumaya ayırdığı zamanın da aile özelliklerini olumlu yönde etkilediği görülmektedir. Buna göre ailelerin evde kitap okumaları, okudukları bu kitaplarla ilgili kendi aralarında konuşmaları yerinde olacaktır. Bu durum öğrencilerin hem okumayla ilgili görüşlerini olumlu yönde etkileyecek hem de onları okumaya özendiracaktır.

Okul özelliklerinden bir okul kütüphanesine sahip olmanın, diğer okul özellikleri arasında en yüksek faktör yüküne sahip değişken olduğu görülmektedir. Buna göre her okulun bir kütüphaneye sahip olması gerekli görülmektedir. Bu noktada Milli Eğitim Bakanlığı'na önemli görevler düşmektedir. Milli Eğitim Bakanlığı, kütüphanesi olmayan okulları belirleyerek bu okullara kitap bağışlarının yapılmasına yönelik kampanyalar düzenleyebilir. Okulların bir kütüphaneye sahip olmak için girişimlerde bulunmaları, kütüphanesi olan okullarında kütüphanelerini geliştirmeye yönelik çalışmalar yapmaları, öğrencilerin okumayla ilgili olumlu bir görüşe sahip olmalarını sağlayacaktır.

Son olarak yine okul özelliklerinden olan sınıf genişliği değişkeninin de okul özelliklerini olumlu yönde etkilediği görülmektedir. Bu aşamada yine Milli Eğitim Bakanlığı'na görev düşmektedir. Buna göre bakanlık birtakım önlemler alarak sınıflarda gereğinden fazla öğrenciyle eğitim ve öğretim yapılmasının önüne geçmelidir. Çünkü yapılan araştırmalar göstermektedir ki, sınıf genişliği yalnızca okuma becerisindeki başarısıyla ilgili bir değişken değil öğrencilerin tüm akademik başarılarını etkileyen bir değişkendir.

Anahtar Sözcükler: PIRLS, Okuduğunu anlama becerisinin değerlendirilmesi, Okuma başarısı, Öğrenci başarısı

Atıf için / Please cite as:

Erman-Aslanoğlu, A. & Kutlu, Ö. (2015). Factors related to the reading comprehension skills of 4th grade students according to data of PIRLS 2001 Turkey [PIRLS 2001 Türkiye verilerine göre 4. sınıf öğrencilerinin okuduğunu anlama becerileriyle ilişkili faktörler]. *Eğitim Bilimleri Araştırmaları Dergisi - Journal of Educational Sciences Research*, 5 (2), 1-18. <http://ebad-jesr.com/>