



## Effect of Parental Education and Home Educational Resources to Students' Results of PISA Reading Skills Test

### Anne-Babalarının Eğitim Durumlarının ve Evdeki Eğitim Kaynaklarının Öğrencilerin PISA Okuma Becerileri Testi Sonuçlarına Etkisi

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**Abstract.** The aim of this study is to evaluate whether the results of the PISA reading skills test vary according to educational status of parents and educational opportunities provided by their parents, to students in 7th, 8th and 9th grades. Survey design was used in the study. The population of the study was comprised of 9th grade students in Anatolian High Schools in the province of Zonguldak, and 7th and 8th grades students in the secondary schools of the same province. Student Questionnaire and the PISA Reading Skills Test were used for data collection. According to result of the study, the scores obtained by students in the PISA reading skills test increased as the educational levels of their parents increased. Furthermore, it was also revealed that there was a high correlation between the reading proficiencies of the students and the socio-economic levels of their families.

**Keywords:** PISA reading skills, Parental education, Home educational resources

**Öz:** Bu araştırmada, PISA okuma becerileri testi sonuçlarının öğrencilerin anne-babalarının eğitim durumları ve ailelerin sunduğu eğitsel olanaklar açısından farklılaşıp farklılaşmadığının belirlenmesi amaçlanmıştır. Araştırmada, tarama modeli kullanılmıştır. Araştırmanın çalışma grubunu, Zonguldak ilindeki Anadolu Liselerinde bulunan 9. sınıf öğrencileri ve ortaokullarda bulunan 7 ve 8. sınıf öğrencileri oluşturmuştur. Verilerin toplanmasında, Sormaca ve PISA Okuma Becerileri Testi kullanılmıştır. Araştırma sonucuna göre, anne ve babaların eğitim düzeyleri arttıkça, öğrencilerin PISA okuma becerileri testinden aldıkları puanlar da artmıştır. Araştırmanın dikkat çeken bir diğer sonucuna göre, ailelerin sunduğu eğitsel olanaklar ile öğrencilerin okuma becerilerindeki başarıları arasında yüksek düzeyde bir ilişki olduğu ortaya çıkmıştır.

**Anahtar Sözcükler:** PISA okuma becerileri, anne ve babanın eğitim durumu, evdeki eğitim kaynakları

## ÖZET

### **Amaç ve Önem:**

PISA uygulamalarında, okuma becerileri, fen bilimleri ve matematik alanlarının dışında öğrencilerin ev yaşantısına ilişkin, sosyo-ekonomik ve kültürel göstergeleri belirlemeye yardımcı olan yoklamalar da bulunmaktadır. Steenseel (2006) öğrenci anketlerinden oluşturulan bu yoklamalara dikkat çekerek, ailelerin öğrencilere sağladığı eğitsel olanaklara ait verilerle, öğrencinin PISA sonuçları arasındaki ilişkinin PISA'ya katılan ülkeler için önemli bir gösterge olduğunu vurgulamaktadır. Ayrıca, Dickinson ve Tabors (2001), Gülleroğlu ve Demirtaşlı (2014), ailelerinin sosyo-ekonomik düzeyleriyle birlikte anne ve babanın eğitim düzeylerinin öğrencilerin okuma becerilerindeki başarılarında etkili olduğunu söylemektedir. PISA, öğrencilerin eğitsel olanaklar açısından güçlü veya zayıflık indeksini hesaplarken, anne babanın eğitim düzeyi, öğrencinin evde eğitimle ilgili sahip olduğu araç ve gereçleri vs. göz önünde bulundurmaktadır. Bu çalışmada, PISA okuma becerileri testi sonuçlarının öğrencilerin anne-babalarının eğitim durumları ve ailelerin sunduğu eğitsel olanaklar açısından farklılaşp farklılaşmadığının belirlenmesi amaçlanmıştır.

### **Yöntem:**

Araştırmada, tarama modeli kullanılmıştır. Araştırmanın çalışma grubunu, Zonguldak ilindeki Anadolu Liselerinde bulunan 9. sınıf öğrencileri ve ortaokullarda bulunan 7 ve 8. sınıf öğrencileri oluşturmuştur. Araştırmada, 7. sınıf 94, 8.sınıf 95 ve 9. sınıf 362 öğrenci olmak üzere toplam 551 öğrenci yer almıştır. Verilerin toplanmasında, Sormaca ve PISA Okuma Becerileri Testi kullanılmıştır. Sormaca ve PISA Okuma Becerileri Testi, PISA uygulamasında yer alan test maddelerinden seçilerek oluşturulmuştur. Sormaca ve PISA Okuma Becerileri Testi uygulamasından elde edilen veriler, "Tek Yönlü Varyans Analizi ve Pearson Çarpım Moment Korelasyon" testleri kullanılarak analiz edilmiştir.

### **Bulgular:**

Çalışmadan elde edilen bulgulara göre; anne ve babanın eğitim düzeylerinin öğrencilerin okuma becerilerindeki başarılarında etkili olduğu görülmektedir. Anne ve babanın eğitim düzeyi arttıkça öğrencilerin PISA okuma becerileri testinden aldıkları puanlar da artış göstermiştir. Eğitim düzeyi yüksek olan anne ve babaların, öğrencilere eğitsel olanaklar sunma konusunda daha bilinçli ve istekli olduğu ve bu durumun, öğrencilerin okuma becerileri alanındaki başarılarını doğrudan etkilediği belirlenmiştir. Araştırmada dikkat çeken diğer bir bulguya göre; öğrencilerin evlerinde sahip oldukları eğitsel olanaklarla ilgili olan sormaca bölümünden aldıkları puanlar ile PISA okuma becerileri testi puanları arasında yüksek düzeyde bir ilişki olduğu belirlenmiştir. PISA okuma becerileri testi puanlarının ailelerin sunduğu eğitsel olanaklar açısından anlamlı olarak farklılaştığı ve farkın eğitsel olanaklar açısından güçlü öğrencilerin lehine olduğu görülmektedir.

### **Tartışma, Sonuç ve Öneriler:**

Anne ve babanın eğitim düzeylerinin öğrencilerin okuma becerileri başarılarında etkili olduğu belirlenmiştir. Anne ve babanın eğitim düzeyi arttıkça öğrencilerin PISA okuma becerileri testinden aldıkları puanlar da artmıştır. Bu sonuca göre, Türkiye Cumhuriyeti'nin devlet olarak sosyal ve kültürel yönden gelişmiş, eğitim düzeyi yüksek bireyler yetiştirmeye önem vermesi gerekmektedir. Eğitim düzeyi arttıkça, bireylerin okumanın önemini daha iyi anlamış olması beklenir. Bir "rol model" olarak anne ve babalar, çocuklara okuma alışkanlığı kazandırabilmek için, öncelikle kendileri ev ortamında okumaya zaman ayırabilirler, çocuklarının yaş düzeylerine uygun kitaplar alarak çocuklarıyla birlikte okuma etkinlikleri yapabilirler. Okul yöneticileri ve öğretmenler, evde kitap okuma alışkanlığı ve çocuklarıyla kitap okuma etkinliği düzenleme

konularında anne- babaları yönlendirebilirler. Araştırmanın diğer bir sonucuna göre; ailelerinin sunduğu eğitsel olanaklar ile öğrencilerin PISA okuma becerileri testinden aldıkları puanlar arasında yüksek düzeyde bir ilişki olduğu belirlenmiştir. Öğrencilerin evlerinde ders materyallerinin dışında sahip olduğu eğitsel olanakların (çalışma masası, bilgisayar, roman, şiir ve hikaye kitapları vb.) öğrencileri zengin eğitim kaynaklarından yararlanma, farklı türden kitapları okuma konularında motive ettiği söylenebilir. Cullinan (2006), okul dışında, özellikle ev ortamında yapılan okumaların, öğrencilerin okuma becerisi alanındaki gelişimlerine ve başarılarına katkı sunduğunu ifade etmektedir. Eğitim politikasını yönlendiren yetkililer, “sosyal adalet ve sosyal devlet” anlayışı çerçevesinde, sosyo-ekonomik düzeyi düşük ailelerin çocuklarına ders kitaplarının dışında (roman, şiir kitabı, bilgisayar, çalışma masası vb.) eğitsel olanaklar sağlamalıdır. Ayrıca, bir sosyal sorumluluk projesi kapsamında, bu olanakların sağlanabilmesi için özel sektör ve eğitimle ilgili vakıflar ve kuruluşlar tarafından çalışmalar yürütülebilir.

## INTRODUCTION

Globalization is a complex phenomenon that affects the modern world economically, culturally and politically. Also being directly associated with countries' desire to maintain the changes in financial, social and technological domains, globalization is a process which societies inevitably go through rapidly and commonly with the development of information and communication technologies. Karaman (2010) states that educational institutions are primarily some of the institutions which globalization has an inevitably direct impact on. Increased student mobility, proliferation of student exchange programs, readjustment of diplomas, documents and certifications pursuant to international criteria, and restructuring of curriculum development studies on the universal platform in developed and developing countries with the Bologna Process indicate the global aspect of education. Per Berberoğlu and Kalender (2005), the fact that education gains a universal dimension reveals international institutions' desire to set their educational policies by making international comparisons to direct their educational approaches. Hence, certain educational researches such as the Programme for International Student Assessment (PISA), the Progress in International Reading Literacy Study (PIRLS) and the Third International Mathematics and Science Study (TIMSS) have been carried out so that countries can restructure their educational programs, eliminate deficiencies of their educational programs and see their position within the international education in recent years

PISA focuses on one of the literacy proficiencies in the domains of mathematics, science and reading comprehension once every three years, and therefore, PISA is considered a more extensive project when compared to other international examinations (Bennet, 2009). PISA is an international educational assessment in which mathematics, science and reading skill literacies and socio-economic indicators of students and their parents are evaluated. PISA indicates to what extent 15-year-old students who completed the compulsory education in 34 OECD countries and other 31 countries have basic knowledge and skills they need (OECD, 2011). In PISA, it is important to find out to what extent 15-year-old students who completed the compulsory education can use what they learned at school or outside the school as well as how much of what they learned they can recall (OECD, 2013).

In PISA, there are also tests which help determine the socioeconomic and cultural indicators related to students' domestic life other than the domains of reading skills, sciences and mathematics. Steenseel (2006) draws attention to those tests formed with student questionnaires and emphasizes that the relationship between data on the educational opportunities provided by parents for students and students' PISA results is an important indicator for PISA-participant countries. Furthermore, Dickinson and Tabors (2001) and Gülleroğlu, Bilican and Demirtaşlı (2014) suggest that parents' educational levels as well as families' socioeconomic levels are effective in students' achievements in reading skills. Whereas PISA calculates strength or weakness index of students in terms of educational opportunities, it also takes parents' educational levels, tools and instruments that students have at home, etc.

One of the motives for developing new curricula which aims at solving problems in the educational system and the curricula in Turkey and training critical- and creative-thinking students with confidence is stated to be that students get low scores in international tests such as PISA, PIRLS, and TIMSS (MEB, 2006). It is seen that achievement levels of students in Turkey are not on the desired level in terms of reading skills and mathematics in PISA and TIMSS. As for the reading skills especially, it is also stated by researchers like Olkun and Aydoğdu (2003) and Ardahan and Ersoy (2004) that Turkey's results have fallen short and placed at the bottom of the list. Furthermore; PISA serves a larger aim for interpreting test results and assessing educational policies through its collection of background information. For this purpose, PISA gives surveys to collect data on the student, student's family and institutional factors that can help to explain

differences in reading literacy performance. One of survey is the student questionnaire on which students provide information about themselves. The questionnaire attempts to collect extensive background data on students regarding socio-economic measures such as parents' occupations and education, home resources, immigration status, and reading engagement outside of school (Gülleroğlu, Bilican and Demirtaşlı, 2014).

Lack of progress in international educational assessments today and low performance of students in the domain of reading skills which lays the foundation especially for accessing the information and plays a key role in individual's educational-instructional process despite the readjustments in the curricula constitute the research problem of this study.

### ***Purpose of the Research***

This research aims to evaluate whether the results of the PISA reading skills test vary according to educational status of parents and educational opportunities provided by their parents for students in 7th, 8th and 9th grades.

The following research questions are formulated for the purpose of study

1) Do score of PISA reading skills test vary significantly according to educational status of parents?

2) Do score of PISA reading skills test vary significantly according to educational opportunities provided by parents?

## **METHOD**

### ***Research Model***

The survey model was used in the research. The survey model is defined by Büyüköztürk (2008) as a "research model which allows for describing a past or present situation under its own circumstances." Erkuş (2005) defines this model as a "research model which aims at describing individuals or objects of the research within their own conditions without making any effort to change or influence them." In the research, Students' proficiencies of reading skills were described via an achievement test in an effort.

### ***Population and Sample***

The study group of the research was composed of the 9<sup>th</sup> grade students studying at the Anatolian High Schools and 7<sup>th</sup> and 8<sup>th</sup> grades students studying at secondary schools in Zonguldak province in the West Black Sea Region of Turkey. Criterion sampling method was used for selecting the sample. Criterion sampling is the act of forming the observation units out of individuals, events, objects or situations with certain qualities in a research (Büyüköztürk, 2008). PISA is an international educational assessment in which mathematics, science and reading skill literacies of 15-year-old students and socio-economic indicators of their parents are evaluated. As it is a requirement of PISA that students are 15 years old, it became necessary to include 9<sup>th</sup> grade students and use the criterion sampling method for forming the study group in the research. Students' proficiencies of reading skills were described via an achievement test in an effort. Due to the spiral structure in the domain of reading skills, 7<sup>th</sup> and 8<sup>th</sup> grades students were included in the study group of the research so that students' progress of reading skills could be analysed on the class level. 551 students of 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> grades participated in the research.

The information on the participant students are given in Table 1.

**Table 1.** Information on the Students in the Study Group

<b>Variable</b>	<b>Grade</b>	<b>N</b>	<b>%</b>
<b>Class Level</b>	7 <sup>th</sup> Grade	94	17.06
	8 <sup>th</sup> Grade	95	17.41
	9 <sup>th</sup> Grade	362	65.53
	<b>TOTAL</b>	551	100.00
<b>Gender</b>	Female	287	52.06
	Male	264	47.94
	<b>TOTAL</b>	551	100.00
<b>Mother's Educational Background</b>	Primary School	225	40.93
	Secondary School	231	41.83
	High School	71	12.93
	University	24	4.31
	<b>TOTAL</b>	551	100.00
<b>Father's Educational Background</b>	Primary School	57	10.59
	Secondary School	316	57.27
	High School	143	25.85
	University	35	6.29
	<b>TOTAL</b>	551	100.00

According to Table 1, 65.53% of the students who participated in the research were 9th-grade students, 17.41% were 8th-grade students, and 17.06% were 7th-grade students. 52.06% of them are girls and 47.94% are boys. 40.93% of students' mothers graduated from a primary school, 41.83% graduated from a secondary school, 12.93% graduated from a high school, and 4.31% graduate from a university while 10.59% of their fathers graduated from a primary school, 57.27% graduated from a secondary school, 25.85% graduated from a high school, and 6.29% graduate from a university.

### ***Data Collection Instruments***

#### **a) Student Questionnaire**

A section of questionnaire was added at the beginning of the achievement test to collect data on educational status of participant students' parents and the educational opportunities (books, dictionaries, etc.) provided by the parents.

The items in the questionnaire were derived from the student questionnaire used in PISA 2006 and 2009 applications and submitted for expert opinion to be finalized. In the questionnaire section, the students were asked for information on their classes and educational status of their parents. Furthermore, information on whether there are some of the tools-instruments and home educational resources (study table, computer, number of books at home, literary work, etc.), which are the most important indicator of parents' socioeconomic levels, were asked in items. Presence of each educational opportunity was granted one point and lack of it was granted zero point. Accordingly, each student could obtain 1 point at minimum and 18 points at maximum in the Questionnaire section. Group's score average and standard deviation of educational opportunities were calculated to distinguish strong and weak educational opportunities in the

study group. Score average of the participants was found to be 9.22 and the standard deviation was 2.01. Following these calculations, each student's educational opportunity score was transformed into the Z score with the formulation, therefore comparing the scores within the group and the data on educational opportunities provided by the parents and students' questionnaire scores were obtained.

#### b) PISA Reading Skills Test

The PISA Reading Skills test items are composed of questions asked in previous PISA tests. As in the PISA, it was ensured that there was text diversity in the reading skills test and texts reflected the characteristics in regard to the assessment of PISA reading skills. Questions in the PISA reading skills tests cover both proficiencies of PISA reading skills and the objectives of reading skills in the Turkish lesson 6th, 7th, and 8th grades curricula. Hence, it was paid attention that each item in the test measured a PISA reading skill as well as an objective of reading skill in the Turkish lesson 6th, 7th, and 8th grades curricula, and a table of specifications was prepared. There are 8 different texts in the PISA Reading Skills Test. The test is composed of 30 items in total (14 multiple-choice and 16 open-ended questions). The PISA test answer key was used for the multiple-choice items and PISA grading key was used for the open-ended questions. A student who gives the right answer to all questions obtains 46 points in total. The multiple-choice questions are one point each. The points for the open-ended questions are categorized as full point (corresponding to two points), partial point (corresponding to one point), and zero point.

#### ***Data Analysis***

The students in the study group answered the questions in the questionnaire section of the research in the pretest application. Research questions are related to the answers given by the students to the questionnaire and the results of PISA Reading Skills Test. The following is the process of analysing the data obtained to answer the research questions related to the three sub-goals of the research:

1) whether the scores differed significantly by the educational status of students' parents was analysed with the One-Way Variance Analysis,

2) for determining whether the PISA Reading Skills Test scores differed significantly by the educational opportunities provided by the parents, students provided with strong or weak educational opportunities were identified by calculating their Z scores.

T-test for Independent Groups was performed to determine whether PISA Reading Skills Test scores differed significantly by students provided with strong and weak educational opportunities. In addition to these analyses, Pearson's Product Moment Correlation analysis was performed to find the correlation between students' scores of educational opportunities and their scores of PISA Reading Skills Test.

## **RESULTS**

This chapter addresses the results obtained from the analyses of the research data.

### ***1) Results on Educational Status of Parents***

The results of the analysis concerning the comparison of students' posttest scores of the PISA Reading Skills Test by the educational status of their parents are given below.

As for students' posttest scores, the results of the One-Way Variance Analysis on whether students' scores of the PISA Reading Skills Test differed significantly by the educational status of their mothers are presented in Table 2.

**Table 2.** The Results of the One-Way Variance Analysis on Students' Scores of the PISA Reading Skills Test in terms of the Educational Status of their Mothers

Source of Variance	Sums of Square	sd	Mean Square	F	p
Intergroup	9416.337	3	3138.779	46.273	.000
Intragroup	37103.823	548	67.831		
Total	46520.160	551			

According to Table 2, students' posttest scores of the PISA Reading Skills Test differed significantly by the educational status of their mothers ( $F_{(3, 547)} = 46.27$ ;  $p < 0.05$ ). Scheffe test, which is a Post-Hoc test, was applied to the posttest scores to determine by which educational status there was a significant difference between students' posttest scores of the PISA Reading Skills Test, and the analysis results are given in Table 3.

**Table 3.** The Results of the Scheffe Test on Students' Scores of the PISA Reading Skills Test in terms of the Educational Status of their Mothers

Source of Variance	Sums of Square	sd	Mean Square	F	p	Significant Difference
Intergroup	9416.337	3	3138.779			
Intragroup	37103.823	548	67.831	46.273	.000	A-B, A-C, A-D
Total	46520.160	551				B-C, B-D

**A. Primary School, B: Secondary School, C: High School, D: University**

It is seen in Table 3 that students' posttest scores of the PISA Reading Skills Test differed significantly by the educational status of their mothers. Per the posttest scores of the PISA Reading Skills Test, a significant difference was found between the students whose mothers graduated from a primary school and a secondary school in favour of the latter. There is a significant difference between the students whose mothers graduated from a primary school and a high school in favour of the latter. A significant difference was found between the students whose mothers graduated from a primary school and a university in favour of the latter. According to Table 3, a significant difference was found between the students whose mothers graduated from a secondary school and a high school in favour of the latter. Finally, there is a significant difference between the students whose mothers graduated from a secondary school and a university in favour of the latter.

As for students' posttest scores, the results of the One-Way Variance Analysis on whether students' scores of the PISA Reading Skills Test differed significantly by the educational status of their fathers are presented in Table 4.

**Table 4.** The Results of the One-Way Variance Analysis on Students' Scores of the PISA Reading Skills Test in terms of the Educational Status of their Fathers

Source of Variance	Sums of Square	sd	Mean Square	F	p
Intergroup	8967.735	3	2989.245	43,542	.000
Intragroup	37552.424	548	68,652		



<b>Total</b>	46520.160	551
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According to Table 4, students' posttest scores of the PISA Reading Skills Test differed significantly by the educational status of their fathers ( $F_{(3, 547)} = 43.54$ ;  $p < 0.05$ ). Scheffe test, which is a Post-Hoc test, was applied to the posttest scores to determine by which educational status there was a significant difference between students' posttest scores of the PISA Reading Skills Test, and the analysis results are given in Table 5.

**Table 5.** The Results of the Scheffe Test on Students' Scores of the PISA Reading Skills Test in terms of the Educational Status of their Fathers

Source of Variance	Sums of Square	sd	Mean Square	F	p	Significant Difference
<b>Intergroup</b>	8967.735	3	2989.245			
<b>Intragroup</b>	37552.424	547	68,652	43,542	.000	A-B, A-C, A-D, B-C, B-D
<b>Total</b>	46520.160	550				C, B-D C-D

**A. Primary School, B: Secondary School, C: High School, D: University**

It is seen in Table 5 that students' posttest scores of the PISA Reading Skills Test differed significantly by the educational status of their fathers and in favour of the students whose fathers graduated from a university. Per the posttest scores of the PISA Reading Skills Test, significant differences were found between the students whose fathers graduated from a primary school and a secondary school in favour of the latter and between the students whose fathers graduated from a primary school and a high school in favour of the latter. A significant difference was also found between the students whose fathers graduated from a primary school and a university in favour of the latter. According to Table 16, there are significant differences between the students whose fathers graduated from a secondary school and a high school in favour of the latter and between the students whose fathers graduated from a secondary school and a university in favour of the latter. Finally, a significant difference was found per the posttest scores of the PISA Reading Skills Test between the students whose fathers graduated from a high school and a university in favour of the latter.

## 2) Results on the Home Educational Materials Provided by Parents

For determining whether the posttest scores of the PISA Reading Skills Test differed significantly by the educational opportunities provided by the parents, students provided with strong or weak educational opportunities were identified by calculating their Z scores. As for the Z scores of all the participant students, 308 out of 551 students were included in the category of students provided with 'weak educational opportunities' while 243 were placed in the category of 'students provided with strong educational opportunities.'

The results of t-test for Independent Groups concerning students' posttest scores of the PISA Reading Skills Test in terms of the educational opportunities provided by their parents are given in Table 6.

As seen in Table 6, PISA Reading Skills posttest score average of the participant students provided with weak opportunities was found to be 14.34 ( $sd = 4.11$ ) and the score average of the students provided with strong opportunities was found to be 30.34 ( $sd = 5.20$ ). The difference between the averages was discovered to be statistically significant ( $t_{(549)} = 40.287$ ;  $p < 0.05$ ).

**Table 6.** The Results of T-Test for Independent Groups Concerning Students' Posttest Scores of the PISA Reading Skills Test in terms of the Educational Opportunities Provided by their Parents

	N	$\bar{x}$	sd	t	p
<b>Weak Opportunities</b>	308	14.34	4.11	40,287	.000*
<b>Strong Opportunities</b>	243	30.34	5.20		

\* p<0.05

In addition to this analysis, Pearson's Product Moment Correlation analysis was performed to find the correlation between students' scores of the questionnaire and their scores of PISA Reading Skills Test. The results of Pearson's Product Moment Correlation analysis which shows the relationship between students' questionnaire scores and PISA Reading Skills posttest scores are shown in Table 7.

**Table 7.** Results of Pearson's Product Moment Correlation Analysis on the Relationship between Students' Questionnaire Scores and PISA Reading Skills Posttest Scores

Variable	N	r	p
Questionnaire Score	551	.775	.000
PISA Posttest Score			

Table 7 presents the relationship between students' scores of the questionnaire which aimed at collecting data on the opportunities that the participants have and their PISA Reading Skills posttest scores. A statistically positive correlation was found between the scores in Product Moment Correlation analysis ( $r=.775$ ;  $p<.05$ ).

## DISCUSSION and CONCLUSION

The following were concluded in the light of the findings achieved in the research.

How educational status of the parents influence students' achievements in reading skills can be considered an important result of this research. As the educational status of the parents increased, students' scores of the PISA Reading Skills Test increased, as well. There are several research studies directly or indirectly associated with this finding in the literature. It has been importantly emphasized that parents' educational levels have an impact on students' academic achievements in their reading skills (Spörer, Brunstein and Kieschke, 2009; Gürsakal, 2012; Jehangir and Van den Berg, 2015; Mikk, 2015; Jhang Fang, 2015; World Bank, 2016; Schleicher, 2016). Furthermore, studies show that parents who graduated from a university are more aware of and willing to provide their children with rich reading materials in the home setting (West, Denton and Reaney, 2000). It can be accordingly said that parents with higher educational levels are more conscious about and willing to provide the students with educational opportunities, and this has a direct impact on student achievements in reading skills.

According to second remarkable results of the study; it is seen that posttest scores of PISA Reading Skills Test differed significantly by home educational resources and the difference was in

favour of the students provided with strong educational opportunities. Moreover, a high-level relationship was found between students' scores of the questionnaire related to their educational opportunities at home and their posttest scores of PISA Reading Skills Test. It can be said that educational opportunities (study table, computer, novels, poem and story books, etc.) provided for students at home other than course materials motivate students to benefit from rich educational materials and read different type of books. Cullinan (2006) states that readings outside the school, especially at home, contribute to students' development in reading skills and to their achievements. Several studies (Şengül, 2011; Gülleroğlu, Bilican and Demirtaşlı, 2014; Jehangir, and Van den Berg, 2015; Mikk, 2015; Jhang Fang, 2015; Xu, 2006; Schleicher, 2016; World Bank, 2016) have drawn attention to similar findings on the high-level relationship between parents' socioeconomic levels and student achievements and emphasized that diversity of the educational opportunities which a student has at home directly affect students' academic achievement.

### **Recommendations**

- In the study, It was indicated that educational opportunities provided by parents and educational status of parents have a positive impact on students' academic achievements in reading skills. Accordingly, the Republic of Turkey must attach importance to train individuals who are social and culturally developed and have high educational status. It is expected that individuals have a better understanding of the importance of reading as the educational level increases. As a "role model," parents can spare time to read at their homes and buy books appropriate for their children's age and perform reading activities together to provide their children with the reading habit. School administrators and teachers can guide parents about the habit of reading at home and performing reading activities together with their children.
- The fact that there is a high-level relationship between parents' socioeconomic level and students' academic achievement is a shared result of the research studies on the subject in the literature. Officials who manage the educational policies should provide the children of parents with low socioeconomic levels with educational opportunities (novels, poem books, computers, study tables, etc.) other than the textbooks in compliance with the mentality of 'social justice and social state.' Moreover, efforts can be made by the public sector and education-related foundations and institutions within a social responsibility project so these opportunities and educational resources are provided.

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