The Effect of Reading Motivations of 6th, 7th and 8th Grade Students on Reading Attitudes: A Structural Equation Modeling

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ABSTRACT

In this study, it was aimed to analyze the reading motivations of 6th, 7th and 8th graders on reading attitudes through structural equation modeling, as well as their reading attitudes and motivations in terms of different variables. In the research carried out by the relational and descriptive scanning model, the study group formed by simple random sampling consisted of 349 6th, 7th and 8th grade students. The Survey of Adolescent Reading Attitudes (SARA) developed by Baştuğ and Keskin (2013) and the Motivations for Reading Questionnaire (MRQ) adapted to Turkish by Durmuş (2014) were used in the collection of the data. As a result of the research, it has been found that hypothesis model is valid and reading motivation directly and significantly affects the reading attitude, but it does not have a direct effect on the reading attitude. In addition, 50% of the reading attitude has been explained by reading motivation. However, it has been determined that reading motivations and attitudes of 6th, 7th, and 8th graders are different in terms of gender and class level variables.

Keywords:
Reading attitude, reading motivation, structural equation modeling, gender.

Introduction

The aim of contemporary education is to educate individuals who have realized themselves. One of the basic skills that enable this process, which is basically called enlightenment to be realized, is reading. According to Alvermann (2009), it is an intricate skill consisting of cognitive, emotional and complex dimensions. Affective dimension, which has an effective role in the variables (Putman and Walker, 2010), includes some variables such as anxiety, attitude, motivation, interest, self-efficacy, and metacognitive reading strategies. (Lawrence, 2007; McGeown, Osborne, Warhurst, Norgate, Duncan, 2016; Boerma, Mol and Jolles, 2016; Kelley, Swatu, Tost and Martinez, 2015; Huang ve Yang, 2015; Lin, Wong and McBride-Chang, 2012; Becker, McElvaney and Kortenbruck, 2010; Balci, 2009). These variables influence each other in various dimensions, as well as interacting with each other. This effect also influences reading skill. In this study, it is aimed to analyze the effect level of reading attitude and reading motivation to each other.

Reading Attitude

One of the affective variables directly affecting reading is the attitudes of students towards reading (Conlon, Zimmer-Bembeck, Creed and Tucker, 2006; Martinez, Aricak and Jewell, 2008). The reading attitude (Hitosugi and Day, 2004), which comprises of a complex structure, leads to the improvement (Smith, 1990) with its influence on the development and acquisition of reading skills (Lenihan, McCobb, Diurba, Linder, Freeman, 2016; Kaniuka, 2010; Bokhorst-Heng and Pereira, 2008). Researches show that students who have better reading attitudes have improved reading skills and are more competent in reading comprehension (Lin, 2017; Kim, 2016; Shaunessy-Dedrick, Evans, Ferron and Lindo, 2015; McGeown,
Johnston, Walker, Howatson, Stockburn and Dufton, 2015; Crosby, 2013; Ward, 2013; Kirmizi, 2011; Sallabas, 2008; Conlon, Zimmer-Gembeck, Creed and Tucker, 2006; Selek Kovacioglu, 2006; Diamond and Onwuegbuzie, 2001). It is known that the students who have developed reading habits tend to achieve advanced reader level (Schiefele, Schaffner, Möller and Wigfield, 2012; McKenna and Kear 1990; Tuckman, 1999). The development of the reading comprehension skills enhances the acquiring this habit and increases the tendency towards the level of advanced reading (Schiefele, Möller and Wigfield, 2012; McKenna and Kear 1990; Tuckman, 1999). In advanced readers, there is a positive relationship between reading attitudes and academic achievement (Martinez, Aricak and Jewell, 2008; McKenna, Kear and Ellsworth, 1995). Taking into account the influence of the reading attitude on the academic achievement, the main goal of reading for an individual is to realize that the life itself is a learning process. At this point, it is important to be realized that reading has an instrumental role and that the key to find happiness in life is to read for learning. It is also essential to gain a perspective that enjoys reading and learning which is one of the sensual goals of reading. In order to develop this perspective, affective dimension comes to the forefront. Reading attitude, one of the influenced factors affecting reading skill, consists of three components; cognitive, affective, and behavioral (Yamashita, 2007). It is influenced by a variety of internal and external variables within itself. The factors such as gender, grade, skill, success, learning-teaching environment, and the approach of teachers and parents can be considered as external variables affecting reading attitude (Öztürk, Hill and Yates, 2016; Schiefele, Schaffner, Möller and Wigfield, 2012; Mete, 2016; Bozpolat, 2010; Logan and Johnston 2009; Garrett, 2002; Schooten and Glopper, 2002; Byro, 2000). However, reading attitude is also related to various affective variables such as motivation, interest and purpose (Ho and Guthrie, 2013; Lau, 2004). In order to increase reading attitude which gives important clues about students’ behaviours (Bussert-Webb and Zhang, 2016) and to transform reading into a pleasure, analyzing the affective influences on the reading attitude, which is an affective variable, may contribute to increasing attitudes.

**Reading Motivation**

Reading motivation is a booster force consisting of individual goals, values and beliefs that direct reading by managing reading goals and processes (Hermosa, 2002; Mullis, Martin and Gonzalez, 2003; Wigfield and Guthrie, 1997). Reading motivation turns into a power that activates individuals by triggering the sense of curiosity, especially with the urges it creates internally (Deci and Ryan, 1985). A strong desire to read is also as effective as the use of reading skills (Tuckman 1999).


Because of high motivation, more time is devoted to reading (Wigfield and Guthrie, 1997), and reading rate and frequency are also increasing (Schiefele et al., 2012; Wigfield and Guthrie, 1997). In other words, the good readers who have improved reading skills also have higher internal motivation (Kirchhoff, 2013; Wang and Guthrie, 2004) and try to perceive their reading more deeply. They are also motivated differently from others (McGeown et al., 2015; Applegate and Applegate, 2010; Baker and Wigfield, 1999). Students with high motivation will be more interested in reading and this will contribute for them to developing positive attitudes towards reading.

**Conceptual Relationship Between Variables**

In order to avoid the traditional view of reading, it is necessary for reading to become a vital necessity (Afflerbach and Cho, 2011). However, in the development of reading skills, the importance of developing cognitive skills as well as the development of affective skills is not given (Putman and Walker, 2010). The affective dimension of reading consists of direct and indirect complex interaction of many affective variables related to each other. Attitudes and motivation have an important influence among these affective variables that affect the development of reading skills and language skills (Erten, Topkaya and Karakaş, 2010). Reading skills are coordinated with reading motivation and reading attitude, and reading motivation is in
interaction with reading attitude (Meniado, 2016; Long and Szabo, 2016; Karahan and Taşdan, 2016; Shaunessey-Dedrick et al., 2015; Aydemir and Öztürk, 2013; Slavin, Lake, Chambers, Cheung and Davis, 2009; Forget, 2004; Richardson and Morgan 2003).

Reading motivation directly and indirectly influences reading and comprehension skills (Karahan, 2016; McGeown, Duncan, Griffiths and Stothard, 2015; Guthrie and Klauda, 2014; Mucherah and Herendeen, 2013; Ho and Guthrie, 2013; Bozkurt and Memiş, 2013), reading desire and frequency along with reading tendency (Yıldız, 2013a; McGeown, Duncan, Griffiths and Stothard, 2015; Becker, McElvany and Kortenbruck, 2010), and academic success (Karahan, 2016; Kantarci, 2015; Yıldız, 2013a). The positive experiences of the students who are motivated to read help them to increase their interest in reading and their time for reading. These experiences also enable them to enjoy reading difficult texts (McGeown et al., 2016; Schiefele et al., 2012; Mol and Bus, 2011; Wang ve Guthrie, 2004; Guthrie, Wigfield, Metsala, Cox, 1999). Accordingly, the improvement of reading comprehension skills and influences reading motivation by increasing students' tendency to read (Kurnaz and Yıldız, 2015; Yıldız, 2013a). In the study by Yılmaz (2016) on middle school students, it was shown that unknown words apearong the reasons that decrease reading motivation. In the study of Yıldız and Akyol (2011), it was determined that mistakes in reading and comprehension are caused by a lack of motivation in general. As a result of the related study, it has been stated that internal motivation positively influences the reading comprehension and the reading based on personal tendency; however, extrinsic motivation affects reading negatively. It has also been found out that schools tend to teach reading based on external motivation. Lepper, Henderlong-Corpus and Iyengar (2005) conducted a study which found that internal and external motivation decreases with age, and this decrease is particularly noticed in internal motivation. Likewise, the field studies show that reading motivation decreases based on age (Ataş, 2015, Kurmaz and Yıldız, 2015; Yıldız, 2013b; Unrau and Schlackman, 2006; Guthrie and Wigfield, 2000; Wigfield, 1997; Cloer and Dalton, 1999; Guthrie and Wigfield, 1995). In the study of Ecless, Wigfield and Schiefele (1998), it was found that reading motivation showed a particularly serious decrease in the adolescence period. Similarly, the reading attitude has also been found to decrease based on grade level (Can, Deniz and Cecen, 2016; Çeçen and Deniz, 2015; Baş, 2012; McKenna, Conradi, Lawrence, Jang and Meyer, 2012; Akkilik, 2011; İseri, 2010; Balcı, 2009; Campbell and Kmiecik, 2004). Decreased positive attitudes towards reading, and reading comprehension (Kocaarslan, 2016; Morin, 2004) affect the development of reading skills, lead negative feelings towards reading and cause students to avoid reading and lose reading habits (Smith, Smith, Gilmore and Jameson, 2012; Karim and Hasan, 2007; Mckenna and Kear, 1990). These results also indicate the effect of reading attitude on the increase of reading skill and interest (Wilson and Casey, 2007). However, the weakness of reading skills can affect students' feelings about school negatively (Hernandez, 2011) and cause them to avoid from school as the attitude of reading influences the students' reading ability and academic achievement (Kaniuka, 2010; Martinez, Arikac and Jewell, 2008). However, the main aim of education is the acquisition and development of reading skills and the training of unique individuals who have acquired reading as a pleasure and habit and it aims students to discover themselves through with knowledge. The affective variables have an important role in the transformation of reading skill into pleasure and habit. Reading motivation and attitude, which are the affective variables affecting reading, are expected to increase depending on age. However, the literature has shown that reading motivation and reading attitude decrease depending on age and grade level.

Despite the increase in the tendency towards reading during adolescence (Wolters, Denton, York and Francis, 2014; Clark 2011) and the fact that adolescence has a significant place in the acquisition of reading habits (Yalçın, 2006; Aytaş, 2005), there is a decrease in reading attitude and motivation in this period. For this purpose, in this research, it was aimed to determine the prediction levels of reading motivations of 6th, 7th and 8th graders their reading attitudes, and to analyze reading attitudes and reading motivations of the students by various variables (grade, gender). Within the frame of this purpose, the concepts of reading motivation and reading attitude were explained and the conceptual link between these variables was revealed as a result of the researches in the literature. In the first part of the research, the effect of reading motivation on the reading attitude was analyzed and the hypothesis proposed to be tested in the framework of the model generated for the study is presented below.

H: Reading motivation significantly predicts reading attitude.
In the second part of the research, the effects of gender and grade level variables on the reading motivation and reading attitudes were analyzed and the answers to the following questions were sought in this study.

1. Do the reading motivations of the 6th, 7th and 8th graders significantly differ in terms of gender and grade level variables?
2. Do the reading attitudes of the 6th, 7th and 8th graders significantly differ in terms of gender and grade level variables?

**Method**

**Research Model**

The relational screening model was conducted in this study in which the effects of reading motivations of the 6th, 7th, and 8th graders on reading attitudes, and the effects of gender and grade level variables on reading motivations and reading attitudes of the 6th, 7th, and 8th graders were examined. In a relational screening model, it is intended to determine the presence and/or extent of covariance between two or more variables (Karasar, 2011). The effect of reading motivation on reading attitude was tested by the theoretical model and the relations between the model variables were tested through Structural Equation Modeling (SEM). SEM is a powerful statistical analysis method based on theory development by testing causality relationship between observed and latent variables and examining the relationships between multiple variables (Byrne, 2010).

**Study Group**

The study group of the research which was selected by simple random sampling from random sampling methods consisted of 349 students who are in the 6th, 7th and 8th grades at three middle schools in the central district of the province of Rize. When the demographic characteristics of the participants are analyzed, it is seen that 166 (47.6%) are female and 183 (52.4%) are male while 146 (41.83%) are in the 8th grade, 89 (25.50%) are in the 7th grade, and 114 (32.66%) are in the 6th grade. The reason why the study group of the research was chosen from 6th, 7th and 8th graders is to analyze the reasons of the decrease in reading attitude and motivation in the adolescence period in which they are expected to be more effective. In addition to this, since there are limited scales of measurement in the related field, the research has been carried out on the sample covering these grade levels.

**Collection of Data**

The data of the study were collected during the spring semester of the 2015-2016 academic year. After obtaining the necessary permissions for the schools to be applied by the Rize Provincial Directorate of National Education, the teachers of the relevant schools were interviewed and given necessary information about the objective of the research, the scales to be used and how the scales to be applied. Prior to the application of the scales, the students were informed about the application and the purpose of the research. The application of the scales was carried out on May 11, 2016. The scales were conducted at the same day and at the same time in all three schools and were applied at the same class hour at each grade level. The application of the scales took 45 minutes and no fee was paid to the participants. Research data were collected through the Survey of Adolescent Reading Attitudes (SARA) and Motivations for Reading Questionnaire (MRQ). The results of the validity and reliability analysis of these scales are presented below.

**Survey of adolescent reading attitudes.** The participants’ attitudes towards reading were determined through the “Survey of Adolescent Reading Attitudes (SARA)”. This scale was developed by McKenna, Conradi, Lawrence, Jang and Meyer (2012) and adapted to Turkish by Baştuğ and Keskin (2013). It is aimed to determine the reading attitudes of the students who study in the 6th, 7th and 8th grades by this scale. The scale differs from other attitude scales related to reading in the field in terms of its sub-dimensions such as academic digital, free digital. The scale was prepared in the form of a 4-point likert-type scale with “very different from me (1)”, “slightly different from me (2)”, “looks a bit like me (3)” and “very similar to me (4)”. An exploratory and confirmatory factor analysis was performed to determine the validity of the structure of this scale. As a result of the exploratory factor analysis (EFA), the Cronbach alpha reliability coefficient scale consisting of four sub-dimensions and 15 items was found to be .691 for the whole scale, .802 for its “free digital” sub-dimension, .690 for its “free paper” sub-dimension, .660 for its “academic paper” sub-dimension.
and .623 for its “academic digital” sub-dimension. As a result of the confirmatory factor analysis conducted by the researcher, it can be said that the fit indices of the structural model are at an acceptable level ($\chi^2=178.76$, $sd=98$, $p<.01$, RMSEA=.034, SRMR=.042, NFI=.97, GFI=.97, CFI=.95, AGFI=.96). The validity and reliability analysis of the Survey of Adolescent Reading Attitudes was conducted for this study and these analyses are given below.

**Reliability analysis.** The Cronbach Alpha internal consistency coefficient was calculated to determine the reliability of the entire Survey of Adolescent Reading Attitude and its sub-dimensions. As a result of this analysis, the Cronbach Alpha internal consistency coefficient of 15 items and four factors was found to be .746 for the whole scale, .787 for its “free digital” sub-dimension, .669 for its “free paper” sub-dimension, .685 for its "academic paper" and .706 for its "academic digital" sub-dimension.

**Confirmatory factor analysis.** The Path Diagram showing the results of the confirmatory factor analysis (CFA) conducted to determine whether the factorials in the original form of the Survey of Adolescent Reading Attitude have been verified in the framework of this research is given in Figure 1.

![Path diagram of the survey of adolescent reading attitude](image)

**Figure 1.** Path diagram of the survey of adolescent reading attitude

The results of confirmatory factor analysis (CFA) on the survey of adolescent reading attitude confirmed that the scale had a four-factor structure and this was also confirmed for this study, and the goodness of fit indices was calculated ($\chi^2/sd=2.270$ (p<.01), GFI=.931, CFI=.933, IFI=.933, TLI=.916, RMSEA=.60, SRMR=.0486). According to confirmatory factor analysis (CFA), results for the validity of the scale, the goodness of fit indices of the model which was formed by the four-factor structure of the scale can be considered to have an acceptable level (Hu and Bentler, 1999; Jöreskog and Sörbom, 1993; Kline, 2011; Sumer, 2000). As a result of these analyses, it has been determined that the factor structures of the original form of the scale are valid for this study and have adequate validity for the scale.

**Motivations for reading questionnaire.** In the determination of the participants, “Motivations for Reading Questionnaire (MRQ)” that was developed by Wigfield and Guthrie (1997) and adapted to Turkish by Durmuş (2014) was used. This measurement tool adapted to determine the motivations of the students who study in the 5th, 6th, 7th and 8th grades towards reading was prepared in the form of a 4-point likert-type, with “very different from me (1)”, “slightly different from me (2)”, “looks a bit like me (3)” and “very similar to me (4)”. Validity and reliability analyses of the scale and descriptive factor analyses (DFA) were carried out. As a result of the explanatory factor analysis performed on the measuring tool, it was determined that the scale has four sub-dimensions and 29 items. Cronbach alpha reliability coefficient of the scale was found to be .904 for the whole scale, .840 for its “importance and care” sub-dimension, .782 for its “competition”
sub-dimension, .740 for its “social environment” sub-dimension and .685 for its “book genre and quality” sub-dimension.

The validity and reliability analysis of the Motivations for Reading Questionnaire was also conducted for this study and these analyses are given below.

Reliability analysis. The Cronbach Alpha internal consistency coefficient was calculated to determine the reliability of the entire Motivations for Reading Questionnaire and its sub-dimensions. As a result of this analysis, the Cronbach Alpha internal consistency coefficient of the scale consisting of 29 items and four factors was found to be .883 for the whole scale, .758 for its “importance and care” sub-dimension, .791 for its “competition” sub-dimension, .814 for its “social environment” sub-dimension and .814 for its “book genre and quality” sub-dimension. These results indicate that the instrument has a high level of reliability.

Confirmatory factor analysis. The Path Diagram showing the results of the confirmatory factor analysis (CFA) conducted to determine whether the factorials in the original form of the Motivations for Reading Questionnaire have been verified in the framework of this research is given in Figure 2.

As a result of confirmatory factor analysis on the Motivations for Reading Questionnaire, the goodness of fit indices was calculated ($\chi^2$/sd=2.054 (p<.01), GFI=.860, CFI=.903, IFI=.904, TLI=.890, RMSEA=.55, SRMR=.0523) and it can be said that these values are at an acceptable level.

Analysis of Data

SPSS 23 and AMOS 22.0 software were used in the analysis of the data and central tendency and distribution measures (frequency, percentage, mean, kurtosis and skewness) were calculated for descriptive statistics and demographic variables. In the analysis of gender variation, Mann Witney U test that is preferred in cases where the variances are not homogeneous was used. In the analysis of grade level variation, One Way Anova Analysis that is preferred in cases where the variances are homogeneous was used. In the analysis of the effect of reading motivation on reading attitude, Structural Equation Modeling, which has a growing importance in social sciences, was used.

Before the SEM analysis, a two stage method commonly used in this analysis was preferred to evaluate whether the data support the model (Jöreskog and Sörbom, 1993; Meydan and Şeşen, 2011). First of all, the scales were analyzed and it was determined whether there was an unfilled or unreliably filled scale. Following this analysis, the scales were coded by numbering and were categorized. In the first stage, CFAs
were applied to determine the factor structures, validity and reliability of the scales included in the model. The CFA results for each scale were given in the sections where information on the relevant scales was explained, and the factor structures in the original form, in which the scales adjusted well with the obtained data, were also confirmed for this study.

In the second stage, significant relations between the structures in the model were evaluated. The hypotheses related to this analysis were checked before the SEM analysis was started. The sample size, multivariate normality and multicollinearity hypotheses required for this analysis have been tested. The sample size recommended for SEM is 100-150 (Kline, 2011). The skewness and kurtosis values of each variable were calculated for univariate normality, which is a prerequisite to provide the multivariate normality hypothesis (Kline, 2011). In examining the assumption of multivariable normality, Mardia's normalized multivariable kurtosis coefficient was calculated (Raykov and Marcoulides, 2008). For the multicollinearity hypothesis, binary correlations were analyzed using VIF (variance increase factor) and tolerance values (Field, 2009; Montgomery and Peck, 1992). Following the data set hypothesis, the model's fit with the data set as a whole was analyzed. Maximum Likelihood technique is preferred to analyze the hypotheses of parameters in SEM. As a result of the analysis, the fit indices of $\chi^2/df$, CFI, GFI, TLI, NFI, IFI, RMSEA and SRMR were used in the evaluation of the fit of the model. The level of these fit indices to the model and their interpretations are given in Table 1 (Hu and Bentler, 1999; Klem, 2000; Kline, 2011).

**Table 1.** Fit indices of structural equation models

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th>Perfect fit</th>
<th>Acceptable Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2/\text{sd}$</td>
<td>$0 \leq \chi^2/\text{sd} \leq 2$</td>
<td>$2 &lt; \chi^2/\text{sd} \leq 5$</td>
</tr>
<tr>
<td>RMSEA</td>
<td>$0 \leq \text{RMSEA} \leq .05$</td>
<td>$.05 &lt; \text{RMSEA} \leq .08$</td>
</tr>
<tr>
<td>SRMR</td>
<td>$0 \leq \text{SRMR} \leq .05$</td>
<td>$.05 \leq \text{SRMR} \leq .10$</td>
</tr>
<tr>
<td>IRI</td>
<td>$0.95 \leq \text{IRI} \leq 1.00$</td>
<td>$0.90 \leq \text{IRI} &lt; 0.95$</td>
</tr>
<tr>
<td>TLI</td>
<td>$0.90 \leq \text{TLI} \leq 1.00$</td>
<td>$0.90 \leq \text{TLI} \leq 0.95$</td>
</tr>
<tr>
<td>CFI</td>
<td>$0.90 \leq \text{CFI} \leq 1.00$</td>
<td>$0.90 \leq \text{CFI} \leq 0.95$</td>
</tr>
<tr>
<td>GFI</td>
<td>$0.90 \leq \text{GFI} \leq 1.00$</td>
<td>$0.90 \leq \text{GFI} \leq 0.95$</td>
</tr>
<tr>
<td>NFI</td>
<td>$0.90 \leq \text{NFI} \leq 1.00$</td>
<td>$0.90 \leq \text{NFI} \leq 0.95$</td>
</tr>
</tbody>
</table>

**Findings**

Findings obtained as a result of the research are classified under two separate sections according to the statistical techniques used. In the first section, the findings about whether the reading attitudes and motivations of participants have a significant difference in terms of gender and grade level are included. In the second section, the findings related to the predictions about the relationship between the variables in the research model, the explanation rates of variables and the fit of variables to the model are given.

**Reading Motivations and Reading Attitudes of Participants**

Reading motivations and reading attitudes of the participants were analyzed in terms of gender and grade level variables and the obtained results are presented below.

**Reading attitudes in terms of gender.** The results of the Mann Witney U Test performed to investigate whether participants’ reading attitudes differed at the level of significance in terms of gender are presented in Table 2.

**Table 2.** Results of the Mann-Whitney U Test of participants’ reading attitudes in terms of gender

<table>
<thead>
<tr>
<th>Reading Attitude</th>
<th>Gender</th>
<th>n</th>
<th>Order average</th>
<th>Rank Sum</th>
<th>U</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>183</td>
<td>153.02</td>
<td>28003.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>166</td>
<td>199.23</td>
<td>33072.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Levene Test $F=22.22$, $p=.00$

**p <.01 * p <.05**

According to Table 2, the variances are not homogeneous. According to the results of the Mann-Whitney U test which was done to determine whether the reading attitude differed in terms of gender, there is a significant difference in the sum of the scale $[Z=-4.27; p<.01]$. When the significant difference is
examined, it is seen that female students’ reading attitudes are higher than [Rank Average=199.23] male students’ attitudes [Rank Average=153.02].

**Reading attitudes in terms of grade level variable.** The results of the One Way Anova which was performed to determine whether participants’ reading attitudes differed in terms of grade-level variable are presented in Table 3.

Table 3. Results of One Way Anova for reading attitude in terms of grade level variable

<table>
<thead>
<tr>
<th>Grade</th>
<th>n</th>
<th>X</th>
<th>SS</th>
<th>Homogeneity Test</th>
<th>Variance Source</th>
<th>Squares Total</th>
<th>SD</th>
<th>Squares Cover.</th>
<th>F</th>
<th>p</th>
<th>LSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>114</td>
<td>72.59</td>
<td>9.75</td>
<td>Between groups</td>
<td>1225.05</td>
<td>2</td>
<td>612.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>89</td>
<td>72.51</td>
<td>9.82</td>
<td>Inside groups</td>
<td>3293.96</td>
<td>346</td>
<td>95.19</td>
<td>6.43 .00**</td>
<td>6&gt;8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>146</td>
<td>68.76</td>
<td>9.72</td>
<td>Total</td>
<td>3416.01</td>
<td>348</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p <.01 * p <.05

According to Table 3, it is seen that the variance is homogeneous. According to the results of the One Way Analysis of Variance that was performed to determine whether the attitudes of the participants differed in terms of grade level variable, it was found that the total of the scale \(F_{(346)}=6.43; p<.01\) was statistically different at the level of significance. When the significant differences are examined, it is seen that 6th and 7th grade students have higher reading attitudes \(X̅=72.59, X̅=72.51\) than those of 8th grade students \(X̅=68.76\).

**Reading motivations in terms of gender.** The results of the Mann Whitney U Test that was performed to determine whether participants’ reading motivations differed in terms of gender are presented in Table 4.

Table 4. Mann Whitney U Test results of participants’ reading motivations in terms of gender

<table>
<thead>
<tr>
<th>Reading Motivation</th>
<th>Gender</th>
<th>n</th>
<th>Order average</th>
<th>Rank Sum</th>
<th>U</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>183</td>
<td>153.12</td>
<td>28021.50</td>
<td></td>
<td></td>
<td>.00**</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>166</td>
<td>199.12</td>
<td>33053.50</td>
<td>11185.50</td>
<td>-4.25</td>
<td>.00**</td>
</tr>
</tbody>
</table>

Levene Test \(F=6.74, p=.01\)

\(^*p<.01; ^*p<.05\)

According to Table 4, it is seen that the variance is not homogeneous. According to the results of the One-Way Analysis of Variance that was performed to determine whether the attitudes of the participants differed in terms of gender, it was found that the total of the scale \(Z=-4.25; p<.01\) was statistically different at the level of significance. When the significant differences are examined, it is seen that female students’ reading motivations are higher than [Rank Average=199.12] male students’ motivations [Rank Average=153.12].

**Reading motivations in terms of grade level variable.** The results of the One Way ANOVA and the Kruskal Wallis Test Analysis that were conducted to determine whether participants' reading motivations differed in terms of grade level variable are presented in Table 5.

Table 5. Results of one-way anova analysis of participants’ reading motivations in terms of grade level variable

<table>
<thead>
<tr>
<th>Reading Motivation</th>
<th>Grade</th>
<th>n</th>
<th>X</th>
<th>SS</th>
<th>Homogeneity Test</th>
<th>Variance Source</th>
<th>Squares Total</th>
<th>SD</th>
<th>Squares Cover.</th>
<th>F</th>
<th>p</th>
<th>LSD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>114</td>
<td>86.95</td>
<td>16.57</td>
<td>Between groups</td>
<td>9618.83</td>
<td>2</td>
<td>9809.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>89</td>
<td>86.39</td>
<td>15.48</td>
<td>Inside groups</td>
<td>99518.13</td>
<td>346</td>
<td>287.62</td>
<td>34.10 .00**</td>
<td>6&gt;8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>146</td>
<td>71.51</td>
<td>18.07</td>
<td>Total</td>
<td>119136.97</td>
<td>348</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^**p<.01; ^*p<.05\)
According to Table 5, it is seen that the variance is homogeneous. According to the results of the One Way Analysis of Variance that was performed to determine whether the attitudes of the participants differed in terms of grade level variable, it was found that the total of the scale \( F_{(347)} = 34.10; p < .01 \) was different at the level of significance. When the significant differences are examined, it is seen that 6th and 7th grade students have higher reading motivations \( \bar{X} = 86.95, \bar{X} = 86.39 \) than those of 8th grade students \( \bar{X} = 71.51 \).

**Model on the Effect of Reading Motivation on Reading Attitude**

In this section, descriptive statistics on the variables in the structural equation model, findings related to the correlations between these variables, explanation ratios of the variables, and model fit were included.

**Descriptive statistics related to model variables.** Descriptive statistics related to the variables in the research model (IAC, C, SE, BGAQ, AD, FD, AP, FP) are presented in Table 6.

**Table 6.** Descriptive statistics related to measurement items

<table>
<thead>
<tr>
<th>Faktör</th>
<th>Min-Max</th>
<th>Average</th>
<th>SS</th>
<th>Skewness</th>
<th>Curtusis</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP</td>
<td>4-24</td>
<td>18.96</td>
<td>4.767</td>
<td>-1.220</td>
<td>1.050</td>
</tr>
<tr>
<td>AP</td>
<td>4-24</td>
<td>18.62</td>
<td>3.774</td>
<td>-1.013</td>
<td>1.058</td>
</tr>
<tr>
<td>FD</td>
<td>3-18</td>
<td>14.12</td>
<td>3.586</td>
<td>-.924</td>
<td>.308</td>
</tr>
<tr>
<td>AD</td>
<td>7-24</td>
<td>19.27</td>
<td>3.214</td>
<td>-.650</td>
<td>.561</td>
</tr>
<tr>
<td>BGAO</td>
<td>7-28</td>
<td>20.00</td>
<td>5.121</td>
<td>-.521</td>
<td>-.394</td>
</tr>
<tr>
<td>SE</td>
<td>6-28</td>
<td>13.48</td>
<td>4.365</td>
<td>.215</td>
<td>-.473</td>
</tr>
<tr>
<td>C</td>
<td>7-28</td>
<td>19.88</td>
<td>5.447</td>
<td>-.552</td>
<td>-.391</td>
</tr>
<tr>
<td>IAC</td>
<td>9-36</td>
<td>26.99</td>
<td>6.383</td>
<td>-.735</td>
<td>.067</td>
</tr>
</tbody>
</table>


According to Table 6, arithmetic averages for all the variables in the research model are above the midpoint of the related range and these values range from 14.12 to 26.99. This indicates that the participants' averages of the measured characteristics are positive. When the standard deviation values are examined, it is determined that these values are close to the average values. In order to predict univariate normality, skewness and kurtosis values of the variables should not be higher than |3.0| and |10.0|, respectively (Kline, 2011). Accordingly, skewness values of the variables were observed to be -215 to -1.220; and the kurtosis values were changed between .067 and 1.058. These findings show that univariate normality of the data is provided.

In determining whether the assumption of multivariable normality was provided, Mardia’s normalized multivariable kurtosis coefficient was calculated and found to be 12,433. In order to provide the assumption of this distribution, critical value for highly variable normality was calculated using the equation of \( p(p + 2) \) \( (p: \text{number of observed variables}) \) proposed by Raykov and Marcoulides (2008) and found to be 80. According to Raykov and Marcoulides (2008), for multivariable normality, this value obtained from the equation must be higher than \( 13.01 \) and \( 110.01 \), respectively. Accordingly, skewness values of the variables were observed to be -215 to -1.220; and the kurtosis values were changed between .067 and 1.058. These findings show that univariate normality of the data is provided.

In testing the assumption of multicollinearity between variables in the model, binary correlations were examined with VIF (variance increase factor) and tolerance values. As a result of the assessments, the tolerance value is calculated to be higher than 0.20 and the VIF value is calculated to be less than 10 (Field, 2009; Montgomery and Peck, 1992).

**Findings Related to Measurement Model**

The results related to the Test of the Model that was formed for Prediction level of Reading Motivations of 6th, 7th, and 8th Grade Students their Reading Attitudes are presented in Figure 3.
As a result of structural equation modeling performed to determine the effect of reading motivation on reading attitude, the goodness of fit indices obtained is $\chi^2/df=5.714; \ GFI=.93; \ CFI=.93; \ TLI=.91; \ NFI=.92; \ IFI=.90; \ RMSEA=.11$ and $SRMR=.07$. According to these results, it can be said that the values obtained are at an acceptable level. As a result of the structural model test, the factor loadings of the reading motivation latent variable ranged from .73 to .95 and the factor loadings of the reading attitude latent variable were found to be between -.13 and .81. The results of the structural equation modeling are presented in Table 7.

Table 7. Standardized regression weight results regarding the effect of reading motivation on reading attitude

<table>
<thead>
<tr>
<th>Path</th>
<th>Road Coefficient (β)</th>
<th>Standardized Forecast (Estimate)</th>
<th>Standard Error (S.E)</th>
<th>Critical Ratio (C.R)</th>
<th>Significance Value (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Motivation</td>
<td>Reading Attitude</td>
<td>.70</td>
<td>.136</td>
<td>.23</td>
<td>5.97</td>
</tr>
</tbody>
</table>

*** significant at $p<.01$ level

According to Table 7, reading attitude seems to be positively and significantly ($β=.70, \ p<.01$) predicted by reading motivation. In this model, it was determined that the parameters related to reading motivation and reading attitude variables were statistically significant ($p<.01$). In this context, the hypothesis of "H1: Reading motivation is positively predicted by reading attitude at a significant level" has been accepted. According to these results, 50% of the reading attitude variable was explained by reading motivation. As a result, it was determined that reading motivation and reading attitudes of 6th, 7th, and 8th grade students can be predicted positively and significantly.
According to Table 8, in the model in which the effect of reading motivation on reading attitude was tested, reading motivation has a direct (d=.70) and total (d=.70) effect on reading attitude, but does not any indirect effects (d=.00). However, 50% of the total variance of reading motivation is explained by reading attitude.

**Discussion, Conclusions and Recommendations**

In this study analyzing the effect of reading motivation on reading attitude, hypothesis model based on the literature was tested by structural equation modeling. As a result of the research, it was determined that the model is invalid, reading attitude is directly, positively and significantly predicted by reading motivation, but reading motivation does not have an indirect effect on reading attitude. However, 50% of the reading attitude has been explained by reading motivation.

According to these results, it can be said that if reading motivation increases, reading attitude increases as well and reading motivation has a direct and dominant effect on reading attitude. It was also concluded that there is a strong relationship between reading attitude and reading motivation. This finding suggests that increased reading motivation will also increase reading attitude and create a direct and significant impact on reading attitude. Karahan and Taşdan (2016) concluded that there is a moderate relationship between reading motivations and attitudes in their survey on 5th and 6th grade students. The positive relationship between reading motivation and reading attitude in the literature was revealed by various researches (Öztürk et al., 2016; Aydemir and Öztürk, 2013; Unrau and Schlickman, 2006; Lepper, Henderlong-Corpus and Iyengar, 2005; Baker and Wigfield, 1999). This relationship is remarkable, since it shows the power of reading motivation (Gambrell, 2011) in determining the purpose, method and amount of reading in the process of reading. Strong desire for reading originated from motivation creates a driving force in the development and active use of reading skills (Applegate and Applegate, 2004; Tuckman 1999).

This power has an effect on the increase of students' reading desires (Robbins, 1994) and the enabling of continuity of reading (Becker, McElvany and Kortenbruck 2010; Watkins and Coffey, 2004). It can be said that the time spared for reading has a linear way with motivation (Yıldız, 2010; Baker and Wigfield, 1999). The low reading motivation leads students to perceive reading as a tedious act (Scholes, 2010). This perception is also clearly understood from a linear relationship between reading motivation, metacognitive reading strategy awareness, and reading level (Bozkurt and Memiş, 2013). In addition to reading motivation, the linear relationship between reading skills and reading habits (McGeown et al., 2015) and reading strategies (Meniado, 2016) reveals the importance of reading motivation on reading skills. Likewise, in Karahan (2016)'s research on the 5th and 6th grade samples, reading motivation explained 31% of reading comprehension. In Kirchhoff (2013)’s study, it was seen that intrinsic motivation has a positive effect on reading comprehension and explains 38% of it. The positive relationship between reading comprehension and reading motivation is similar to the results of many researches in the field (Guthrie and Klauda, 2014; Ahmadi et al., 2013; Yıldız, 2013a; Taboada and Buehl, 2012; Taboada and Buehl, 2011; Anmarkrud and Braten, 2009; Guthrie and Wigfield, 1999). In Yıldız (2013a)’s research on the 5th grade students, reading motivation directly and significantly influences reading comprehension, reading fluency and academic success and these variables explain %61 of the academic achievement. This effect of reading motivation on academic achievement and accompanying reading products is a very important result since it reveals the importance of reading skills. Likewise, Kantarcı (2015), in his study on the 4th grade students, revealed that reading motivation explains 9% of academic achievement of Turkish course and that reading motivation is more effective than other variables in increasing academic achievement in this subject. Reading motivation influences reading frequency, vocabulary knowledge, vocabulary, reading fluency and reading comprehension (McGeown, Duncan, Griffiths and Stothard, 2015; Spear-Swerling, Brucker and Alfano, 2010) as well as academic achievement and it brings the significance of its effect on reading attitude into the forefront. The positive relationship between reading attitude and reading comprehension (Sallabaş, 2008; Şeflek Kovacoğlu, 2006), academic achievement of Turkish course (Kocaarslan, 2016; Baş and Şahin, 2012;
Karabay and Kuşdemir Kayıran, 2010) and overall academic achievement (Crosby, 2013; Ward, 2013; Kaniuka, 2010; Martinez, Aricak and Jewell, 2008) clearly demonstrates the impact of this affective variable on reading skills and academic life. This is because reading attitude positively affects students’ levels and career development (Mathewson, 1994; McKenna, Kear and Ellsworth, 1995) with its contribution to ensuring students’ continuity towards reading at later ages (Wilson and Casey, 2007).

As the reading attitude is a multidimensional affective variable, it interacts not only with motivation but also with variables such as belief, value, self-efficacy, awareness, curiosity, interest, and goal (McGeown, Johnston, Walker, Howatson, Stockburn, Dufton, 2015; Ho and Guthrie, 2013; Aydemir and Ozturk, 2013; Ho and Guthrie, 2013; Schiefele, Schaffner, Moller and Wigfield, 2012; Ulper, 2011; Putman and Walker, 2010; Bokhorst-Heng and Pereira, 2008; Black, 2006; Forget 2004; Applegate and Applegate, 2004; Guthrie and Alverman, 1999; Wigfield and Guthrie, 1995). When it is thought that reading attitude explains 50% of reading motivation as a result of the study, this interaction reveals the existence of other variables that affect reading attitudes. This case suggests that the research model needs to be tested with new variables to be added.

According to another finding from the study, participants’ reading attitudes differed significantly in support of female students in terms of gender. This finding suggesting that females’ attitudes towards reading are higher is similar to the results of the researches in the literature (Öztürk, Hill and Yates, 2016; Çeçen and Deniz, 2015; Akkaya and Özdemir, 2013; Balci, Uyar and Büyükkız, 2012; Erçan, 2012; Baş, 2012; Balci, 2009; Logan and Johnston, 2009; Bozpolar, 2010; Schotz and Krashen, 2006; Schooten and Glopper, 2002; Byro, 2000; Stokmans, 1999). Parents’ being effective on attitudes and their opinions suggesting that female students are more talented in literacy skills (Öztürk, Hill and Yates, 2016) have supported these results (Öztürk, Hill and Yates, 2016; Sackes, Isitan, Avci and Justice, 2015; Baroody and Diamond, 2013; Nicholls, 2002).

As a result of the research, it was determined that reading motivations of female students significantly differed from male students. At the same time, this finding supports this relationship between motivation and attitude. Moving from this finding, it can be said that female students have higher motivation towards reading. Katranci (2015)’s study on 4th and 5th grade students, Bozkurt and Memiş (2013)’s study on 5th graders, Yıldız (2010)’s study on 5th grade students and Yıldız (2013b)’s study on 3th, 4th and 5th graders also determined that reading motivations of female students significantly differed from male students. Similar results were obtained from other studies (Ataş, 2015; Sanli, Chik, Nik and Raslee, 2011; Yildiz, 2010; Baker and Wigfield, 1999; Wigfield and Guthrie, 1997; McCombs, 1996; McKenna, Kear and Ellsworth, 1995). However, in the study by Logan and Medford (2011), it is concluded that the motivation for reading is similar for females and males. Based on these results, it can be said that reading motivation of the female students is higher than that of the males and the difference is significant. This situation overlaps with the results that suggest the internal motivations, curiosities and interests of female students are more different (Bozkurt and Memiş, 2013), appreciate reading very much, spare time for reading and have higher reader self-perceptions (Ataş, 2015). Indeed, the significant relationship between intrinsic and pleasure reading (McGeown, Osborne, Warhurst, Norgate, Duncan, 2016) supports the personal tendencies in the reading process. Karahan (2016), in his research on the 5th and 6th graders, reached the conclusion that reading motivation influences the reading based on personal tendency.

In the relevant literature, with the positive relationship among individual reading tendencies, reading attitude and reading motivation (Yildiz and Akyol, 2011; Lau, 2009), it seemed necessary to consider individual interests in the reading process. (Orekoya, Chan and Chik, 2014). Students can be motivated to develop their reading motivation by different reading activities that meet their individual interests (Kuşdemir, 2014) based on different interests of students towards reading in terms of gender (Clark, 2011). It is known that motivation predicts the reading based on personal tendency (Karahan, 2016) and reading attitude and motivation are positively correlated with the reading based on personal tendency (Yildiz and Akyol, 2011; Lau, 2009). In this context, it can be said that personal tendencies need to be considered more carefully in order to increase both reading motivation and reading attitude. It is because the ultimate goal of the self-realization process, which is the main aim of education, is to reveal the individual’s own originality. The main goal of investigating the many affective variables such as attitude and motivation is to contribute to the development by turning the effects of internal catalysts in this flow into positive effects. Teachers have
an important influence both on students’ motivations and on the emergence of various behaviors (You, Dang and Lim, 2016; Long and Szabo, 2016). With reference to this effect, it is necessary to increase the level of awareness of teachers in order to enhance motivation, attitude and performance of reading (Meniado, 2016) and to bring qualitative characteristics of the students (such as grade, gender, interest, personal tendency, purpose, target etc.) into the forefront.

Positive attitudes towards reading are expected to increase depending on grade level due to the positive effect of education on human life. However, another result obtained from this research shows the opposite of this situation. As a result of the research, the reading attitudes of the 6th and 7th grade students differed significantly from the 8th grade students and the reading attitudes were found to be lower in the 8th grade. Similarly, field studies have also shown that the reading attitude decreases with the grade level (Can, Deniz and Çeçen, 2016; Çeçen and Deniz, 2015; Baş, 2012, McKenna et al., 2012; Worker, 2010; Campbell and Kmieck, 2004). The most remarkable result in this research is the emergence of significant difference in 8th grade level. In Balcı (2009)’s study, it was concluded that the attitudes of 8th grade students towards reading were high (81%), contrary to the results of this research.

From these results, it can be said that reading attitude shows a falling tendency depending on grade level. The cause of this decline is the exam anxiety according to İşeri (2010), the intense effect of entertaining stimuli in the technological age according to Arıcı (2008), the family and the education environment (school and teacher). According to Can, Deniz and Çeçen (2016), the effects of multiple-choice tests on the reading process are associated with the mistakes made in the text selection in textbooks and text processing period. From the related results, it is pointed out that the reasons for this difference at the 8th grade level, the last stage of transition to higher education level, should be examined on different samples in detail. From these results, it is necessary to analyze the source of the problem with different models in which not only the affective factors but also the cognitive and behavioral factors are included in the process. Besides, the reasons for this decrease in the 8th grade level should be emphasized in detail.

This effect of affective variables on reading also supports another finding in the research. As a result of the research, it has been determined that the reading motivations of the 6th and 7th grade students significantly differed from the 8th grade students according to the results obtained in terms of grade level variable. This finding suggests that reading motivation falls significantly in the 8th grade. Similarly, according to the research results of Ataş (2015) on 2nd, 3rd and 4th grade students, and the results of Yıldız (2013b) on 3rd, 4th and 5th grade students, reading motivation decreases as grade level increases. In the studies of the related field, reading motivation seemed to have declined depending on the grade level (Clark and Rumbold, 2006; Jakobsons, 2005, Guthrie and Davis, 2003; Guthrie and Wigfield, 2000; Cloer and Dalton, 1999). However, in Yilmaz (2016)’s study on middle school students, Yerlikaya (2014)’s study on primary and secondary school students, and Matthews (2007)’s research on 5th and 6th grade students, reading motivation did not significantly differ according to grade level. The researches reached the conclusion that reading motivation declines based on grade level, but there are other researches that proved the contrary. Although grade level affects the value towards reading and self-perceptions of readers (Ataş, 2015), students’ gathering with motivational factors decreases based on grade level (Ülper, 2011). The acquisition of reading skills, the creation of positive attitudes towards reading and turning reading into a pleasure can be acquired at early ages (McKenna et al, 2012; Petsch 2010; Katz, Lesaux and Kim 2009; Clark and De Zoya 2011). As a result of these conclusions, this decrease in adolescence, a significant stage in increasing reading motivation, reveals important problems in the establishment of reading habits. In this research, the following suggestions can be made to increase reading motivation and reading attitude.

With reference to this high and direct effect of reading motivation on reading attitude, the applications that meet gender-based expectations and highlight individual differences should be focused in order to increase reading motivation within and outside the classroom. Reading clubs can be set up in the schools, which are based on optional attendance. In these clubs, private spaces where students will enjoy and read the books they want and analyze can be created under the supervision of teachers. The participation of these students can be supported by an academic score and this can contribute to the increase in motivation. The process can also be supported by valuable rewards in order to increase motivations and reading rates in students. As a result of the research, with reference to the reading motivation’s explanation ratio of reading attitude, the results of the study can be tested by different models in which other variables affecting the
reading attitude are added. Additionally, these results can be evaluated more integrally by the effects of other cognitive and affective variables. In the study, it was determined that reading attitude and reading motivation decreased significantly in the 8th grade. In this context, it is possible to analyze which effects influence this result and the effects of TEOG (Transition from Primary to Secondary Education) exam, which is a crucial stage for transition from primary education to high school education. This research was limited to the 6th, 7th and 8th grades and its results can be tested by the models including the 5th grade and different affective variables.

References


