The Effect of Anxiety and Attitudes of Secondary School Students towards Reading on their Reading Habits: A Structural Equation Modeling

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Abstract

In this research, it was aimed to analyze the effects of reading attitudes and reading anxiety of middle school students reading habits through structural equation modeling. The study group, which was formed by simple random sampling in the research conducted by the relational screening model consists of 341 students who were studying on 5th, 6th, 7th and 8th grades. In the collection of the data, “Reading Anxiety Scale (Melanlıoğlu, 2014),” “Reading Attitude Scale (Çakıroğlu & Palancı, 2015) and “Secondary School Reading Habits Scale (Tok, Küçük, & Kırmacı, 2015)” were used. Data were analyzed by structural equation modeling and SPSS 23 and AMOS 22.0 software were used for the analysis of data. As a result of the research, it was determined that and the reading anxiety and the attitude in which the hypothesis model was valid directly and significantly affected the reading habits. It has been determined that reading anxiety and reading attitude were the most dominant predictor of reading habits, as well as explaining 42% of reading habits, and that reading habits were indirectly influenced by reading anxiety and they were directly influenced by reading attitude.

Keywords

Reading habit
Reading anxiety
Reading attitude
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Introduction

Modern education aims to educate the creative individuals who reproduce the knowledge, develop their intellectual skills and have different perspectives (Bulgurcuoğlu, 2016). The most basic action which provides to acquire, understand, and transfer the information, which is the basic tool for the individual to discover his own reality, is reading (Harvey & Allard, 2015; Nelson & Stage, 2007; Temizkan, 2009). Reading, like vision, perception, vocalizing, understanding, structuring in the mind, is a holistic action jointly carried out by the eye, voice and brain (Palani, 2012). The constructivist approach considers reading as an active and interactive process in which new meanings are revealed in mind by matching new information with preliminary information that the student has (Alderson, 2000; Güneş, 2007; Manguel, 2004). Through a communication based on the development consisting of cognitive, emotional, and dynamic dimensions, this complex developmental action consisting of perception and learning is aimed at revealing the output called meaning in an individual’s mind (Alvermann, 2009; Sever, 2000; Krashen, 1993). Reading, which is also considered as the process of

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concept formation, is an interactive process in which senses and productive skills combine to form meaning by perceiving and analyzing the messages encoded through letters (Greenwood & Flanigan, 2007; Harris & Sipay, 1990; Razı, 2008). This process is the whole set of skills that enable to reveal the product called ‘meaning’ as a result of reader’s using his own mental dictionary (Akyol, 2005). Reading skill, one of the language skills that contributes most to mental, academic and affective development, is the key to information access which is the most crucial point for students not only to succeed in their academic lives, but also in their future lives (Clark & Andreasen, 2014; Hassen, 2016; Stadler, 1980).

The main goal that is meant by gaining reading skills in our education system is to transform reading activity into a constant and willing habit (Demirel, 2003; Güneş, 2007; Karatay, 2011). The concept of habit defined as “being accustomed to something, closeness, character” (Turkish Language Association [TDK], 2005) can also be considered as a repetition of a certain behavior at certain frequency. In order to be named as a habit, reading action should be continued with different opinions and sources in a certain period (Odabaş, Odabaş, & Polat, 2008). However, it is necessary for the reading activity to be transformed into a basic necessity (Bircan & Tekin, 1989) and to be perceived as a necessity to be used for life (Arslan, Çelik, & Çelik, 2009).

The acquisition of reading skills and habit, one of the basic objectives of the education system, is carried out by teaching Turkish in a special context. In the Turkish course curriculum, it is aimed to transform reading into a pleasurable habit by increasing the personal interest and lifting up the student from passive reader to active reader level after acquiring reading skills and becoming a habit for reading (Ministry of National Education [MEB], 2015). According to Hamer (2001), reading activity is performed with two main goals: for benefit and for pleasure. While reading for benefit is regarded as reading for a certain purpose, reading for pleasure is considered as taking a pleasure from reading (as cited in Razı, 2008). It should not be ignored that the student needs to be motivated in order to convert reading habits into a pleasurable action, which means that students’ brain regions which are responsible from sensory functions participate in this process (Applegate & Applegate, 2004; Calkins, 2001; Kurudayrılıoğlu, 2011; Özbay, Bağça, & Uyar, 20; Ülper, 2011). As a matter of fact, educators came to a consensus that in addition to various variables such as age and gender (Yıldız & Akyol, 2011; Arslan et al., 2009; Balci, Uyar, & Büyükikiz, 2012; Çakmak & Yılmaz, 2009; Mete, 2012; Odabaş et al., 2008; Smith, 2009; Sünbül et al., 2010, Temizyürek, Çolakoğlu, & Coşkun, 2013; Uşnak, 2008; Yıldız & Akyol, 2011), affective variables such as; attitudes, interest, motivation, self-efficacy, and anxiety are the important factors affecting the reading process (Çeliktürk & Yamaç, 2015; Eşçan & Demirel, 2011; Melanlıoğlu, 2014b; McKenna & Kear, 1990; Schofield & Start, 1977; Ülper, Yaylı, & Karakaya, 2013; Yıldız, 2013).

**Reading Anxiety**

Anxiety is a complex and emotional state consisting of affective, physiological, cognitive, and motivational dimensions defined as “sadness, anxious thoughts and grief” (TDK, 2005) (Çeliktürk & Yamaç, 2015). Anxiety, which is regarded as a complex concept that creates uneasiness and anxiety in an individual, reveals different results in terms of the effect level it creates. A high level of anxiety leads to an uneasiness and anxiety (Manav, 2011), while a low level of anxiety creates positive effects on learning and turns it into an impulsive power in an individual, which makes the effect stimulating and motivating (Işık, 1996; Klausmeier & Goodwin, 1971).

Reading anxiety, referred to as a response against reading, is defined as a situational phobia and reluctance towards reading at the physical and cognitive level (Jalongo & Hirsh, 2010). This type of anxiety prevents the student from understanding what s/he reads by diminishing the capacity and function of his/her mental skills such as logical thinking, questioning, and evaluation (Mohammadpur & Ghafournia, 2015; Mohd. Zin & Rafik-Galea, 2010). However, by influencing the cognitive system, it prevents the understanding and remembering of the significant points in the text (Melanlıoğlu, 2014b; Mohd. Zin & Rafik-Galea, 2010), reducing the motivation for reading, (Çeliktürk & Yamaç, 2015, Downing & Leong, 1982; Lawrence, 2007), and it causes loosing attention to reading and being avoided from the reading activity (Çeliktürk & Yamaç, 2015; Melanlıoğlu, 2014a; Murray & Janelle, 2003). The factors that influence reading anxiety are the students’ encountering with texts that they have never
been familiar with, the increase in the number of unknown words in texts, or the texts prepared above student level (Jalongo & Hirsh, 2010; Melanlıoğlu, 2014a).

Being effective at every stage of the reading process, reading anxiety leads to an increase in the level of anxiety, to avoid from reading activity, and to reduce reading performance (Murray & Janelle, 2003). As a matter of fact, a negative relationship between the reading levels of the students and their reading anxieties explains this situation (Mohammadpur & Chafournia, 2015). The reasons that cause reading anxiety are the fluency reading at the beginning of the learning period, the reading prosody from the lower stages of the reading comprehension processes, and the reading speed or the problems that are experienced in correct reading (Çeliktürk & Yamaç, 2015). These reasons can also include personal and interpersonal anxieties, the beliefs developed against reading, and the effects of the learning environment and the environmental components (Bell & Perfetti, 1994; Koizimu, 2002 as cited in Melanlıoğlu, 2014b). In order to reduce the negative effect of this affective variable, it is considered that the learners’ having qualifications such as using the correct, fluent and appropriate method in reading process and their knowing the reading strategies are among the anxiety reducing factors towards reading (MacIntyre & Gardner, 1991; Melanlıoğlu, 2014b). The increase of reading motivation and interest, the use of appropriate reading strategies and methods (Melanlıoğlu, 2014b), and the positive changes to be observed in reading skills help to reduce the negative effects that are caused by reading anxiety. These positive changes also contribute to the formation of positive attitudes toward reading, a multidimensional skill.

**Attitude in Reading**

Attitude which are met with the concepts of “way of behaving, behavior” (TDK, 2005) can be defined as a state of emotional and mental readiness that determines the individual’s tending towards the relevant event, situation, concept or object (Allport, 1967). Attitudes are revealed by a consistent balance between the three components which are named cognitive, emotional, and behavioral components. In other words, attitudes are comprised as a result of the balance between the cognitive, emotional and behavioral dimensions which are the individual’s knowledge (cognitive element), perspective (affective element) and reaction (behavioral element) that s/he reflects positively and negatively (Tavşancıl, 2006; Öncül, 2000). With being one of the important driving and active factors that lead to the emergence of an individual’s behaviour, this formation can reveal its existence positively or negatively (Tavşancıl, 2006). Attitudes have a changeable and flexible structure, even though they are formed through inheritance, experience, and environmental impact. Knowing the attitudes that have facilitating effects in the formation and repetition of behaviors and habits offers the ability to predict and shape the reactions of individuals. Thus, with the affective effect they create, attitudes become a summary of the past and the shapers of future behaviors (Erkuş, 2003).

The reading attitude is defined as a mental state and emotion that includes sensory and emotional components which increase or decrease reading activity (Alexander & Filler, 1976; Smith, 1990). Positive and negative viewpoints developed about reading reveal the tendency of the individual towards reading activity. When the components of the concept of attitude are considered in terms of reading activity; Beliefs and agreements about the necessity of reading are considered as cognitive elements, aesthetic pleasure felt during the reading activity is considered as affective element, and performing reading activity is considered as behavioral element (Özbay & Uyar, 2009; Mathewson, 1994; Yamashita, 2007). Various factors are effective in developing an attitude towards reading (Hitosugi & Day, 2004; Alexander & Fox, 2011). According to Black (2006), these factors are classified as familial, internal and school-related factors. When the factors affecting reading are considered at the family and school level; various variables can be counted such as, the time spent reading outside the school, frequency of reading, cultural characteristic of the learning-teaching environment, and attitudes of teachers and parents (Applegate & Applegate; 2004; Akkaya & Özdemir, 2013; Alvermann, Young, Green, & Wisenbaker, 2004; Aytaş, 2005; Balç et al., 2012; Guthrie, Wigfield, Metsala, & Cox, 1999; Logan & Johnston, 2009). Apart from these external factors, motivation, interest, curiosity, self-efficacy towards reading (Black, 2006; Forget, 2004; Richardson & Morgan, 2003; Putman & Walker, 2010);
Reading strategies (Forget, 2004); Continuity and change in positive and negative emotions towards reading (Kush & Watkins, 1996; McKenna, Kear, & Ellsworth, 1995); and internal factors including the goals, values and beliefs that students have can affect the attitudes towards reading (Bokhorst-Heng & Pereira, 2008; Ho & Guthrie, 2013; McGeown et al., 2015; Schiefele, Schaffner, Moller, & Wigfield, 2012). Attitude towards reading that directly affect reading skills (Conlon, Zimmer-Gembeck, Creed, & Tucker, 2006; Martinez, Aricak, & Jewell, 2008; Morgan & Fuchs, 2007; Tuckman, 1999) also provide some important clues about learners’ values, self-esteem and academic development (Kaniuka, 2010).

On that sense, attitude has an significant influence on students’ academic life as an important affective variable of reading activity as well as having an important place in the developmental process of learners. As a matter of fact, the linear relationship between reading attitude and academic achievement (Balci, 2009; Bağcı, 2010; Martinez et al., 2008; McKenna et al., 1995) confirms this fact. This situation also coincides with the linear relationship between reading skills and the abilities to understand and interpret (Conlon et al., 2006; Crosby, 2013; Karabay & Kusdemir Kayıran, 2010; Kocaarslan, 2016; Kush, Watkins, & Brookhart, 2005; McKenna et al., 1995; Martinez et al., 2008; Sallabaş, 2008; Ward, 2013). In that, students with positive attitudes towards reading have attained a high level of awareness of reading skills (Diamond & Onwuegbuzie, 2001). The attitude towards reading based on the idea of developing positive attitudes in the student, which is one of the affective goals of education, can be regarded as an important affective variable that enables students to acquire and maintain reading pleasure and habit, which are the basic means of acquiring intellectual skills necessary for their future lives as well as their academic life achievements.

**Conceptual Relationship Between Variables**

Acquisition of reading habits starts with elementary school (Gallik, 1999; Güneş, 2007), however, the middle school period is considered as a very important process when reading becomes an intrinsic habit (Aytaş, 2005; Balci, 2009; Çakmak & Yılmaz, 2009; McCoy & Others, 1991; Yalçın, 2006). Reading habit significantly decreases on 7th and 8th grades (Alvermann & Moore, 1991; Smith, Smith, Gilmore, & Jameson, 2012; McCoy & Others, 1991; McKenna et al., 1995; Schatz & Krashen, 2006), and it almost completely disappears with a serious decline until the end of the middle school period. The problems that were experienced in the process of developing reading habits have confirmed that the current practices were inadequate (Yıldız & Akyol, 2011), that no one made enough time to read (Kurudayyıoğlu & Çelik, 2013) and that reading habits were not developed at the desired level (Collins, 1996; Odabaş et al., 2008; Ungan, 2008).

However, love of reading which directly affects reading habits, positive attitude towards reading (Hayes, 2000; Schatz & Krashen, 2006) and individual voluntary reading activities (McKenna, Conradi, Lawrence, Jang, & Meyer, 2012) decrease based on age. Continuity and willingness to read should be provided in order for reading to be transformed into a pleasure and habit (Karatay, 2011; Karim & Hasan, 2007). Studies have shown that there was a linear relationship between reading frequency and reading attitude (McKenna et al., 1995; Logan & Johnston, 2009) and positive reading attitudes increased based on the increase in reading rates (Guthrie & Davis, 2003; Moje, Young, Readence, & Moore, 2000; Yamashita, 2007). The linear relationship between the reading frequency and the number of books read shows its effect in transforming attitudes into habits as well as its being an indicator of reading attitude and habits (Akkaya & Özdemir, 2013; Bağcı, 2010; Balci et al., 2012; Türkyılmaz, 2012). As a matter of fact, the students who had strong reading skills have positive attitudes towards reading (McKenna et al., 1995; McKenna et al., 2012; Petscher, 2010; McGeown et al., 2015; Clark & De Zoya, 2011) and this attitude is also an effective factor in changing their interests towards reading on the next grades (Wilson & Casey, 2007). This is because the positive attitude towards reading has a direct and significant influence in turning reading activity into a habit and a pleasure (Karim & Hasan, 2007; Türkyılmaz, 2012).

Positive attitudes have an important effect on the reading habits to be a strong and sustainable pleasure, but the most important fact is that this positive attitude is sustainable (Balci, 2009; Calkins, 2001; Temizkan, 2007; Türkyılmaz, 2012; Becker, McElvany, & Kortenbruck, 2010; Shahriza Abdul
Karim & Hasan, 2007). Because, the positive attitude towards reading is one of the key aspects of interest and continuity that leads to the emergence of reading behavior (Mathewson, 1994; Wilson & Casey, 2007). Environmental factor, learning-teaching environment and its components have a shaping power in providing this interest and continuity (Akkaya & Özdemir, 2013; Balci et al., 2012; Balci, 2009; Baş, 2012; Çakıcı, 2005; Duruaplı, Duruaplı, & Ciçekoğlu, 2013; İşeri, 2010; Karadağ, 2014; Karim & Hasan, 2007; Ogurlu, 2014; Özbay & Uyar, 2009; Sallabaş, 2008; Ünal & İşeri, 2012). However, studies show that the attitudes towards reading decrease more rapidly in higher grades of primary education than in its lower grades depending on grade level (Akkılık, 2011; Alvermann & Moore, 1991; Baş, 2012; Byro, 2000; Çeçen & Deniz, 2015; Campbell & Kmiecik, 2004; Hayes, 2000; McKenna et al., 2012; McKenna et al., 1995; Schatz & Krashen, 2006). İşeri’s study (2010) on 6th, 7th and 8th grade students revealed that the positive attitudes towards reading decreased as the class level increased. When the importance of secondary school is taken into account in the acquisition and development of reading habits, the decrease in attitudes towards reading especially on the 6th grade in the related field revealed the necessity of analyzing middle school level and affective variables negatively affecting reading at this level.

Another affective variables that affect reading habits is the reading anxiety (Jalongo & Hirsh, 2010). With its negative effects, reading anxiety also affects cognitive processes and causes distraction and prevents to be focused on the material being read. This causes the interruption of understanding process and thus the reading activity is avoided (Çeliktürk & Yamaç, 2015; Mohammadpur & Ghafournia, 2015; Mohd. Zin & Rafik-Galea, 2010; Rafik-Galea, 2010). Due to the increase in the level of anxiety related to reading, reading activity is avoided. Accordingly, reading performance and reading attitude are affected negatively (Murray & Janelle, 2003; Eysenck & Payne, 2006; Rafik-Galea, 2010; Saito, Garza, & Horwitz, 1999; Sellers, 2000) and reading behavior is avoided (Çeliktürk & Yamaç, 2015; Melanlıoğlu, 2014a; Murray & Janelle, 2003). According to Melanlıoğlu (2014a), for students’ acquiring reading habits, it is necessary to remove the concerns about reading first, since this kind of anxiety affects attitudes and habits (Balci, 2009). Studies on reading anxiety which affects the formation of reading attitudes and reading habits are limited and these researches are mostly focused on reading anxiety in second language teaching (Brantmeier, 2005; Çeliktürk & Yamaç, 2015; Melanlıoğlu, 2014a, 2014b; Mohammadpur & Ghafournia, 2015; Saito et al., 1999; Sellers, 2000; Shi & Liu, 2006; Young, 1986; Zhao, 2009).

According to Putman and Walker (2010), studies on reading emphasize that it was focused more on cognitive skills than on affective skills and cognitive and affective skills must work together to transform reading into a pleasurable habit. It has been known that affective tendencies were effective in education as well as cognitive skills and these tendencies were among the main objectives of education. It is also necessary to measureffective characteristics when deciding on the development of students (Tekindal, 2009). As a multidimensional acquisition, reading habit is a complex and multidimensional process that is influenced by mental processes as well as affective processes. The reading habit observed through continuity and repeatability can be regarded as an internalized form of the individual’s behavior. Human behavior is very complex and the examination of the qualifications of a multidimensional process requires the examination of the certain effects together. In this context, in the related research, it is aimed to examine the observable effect of the emergence of attitude and anxiety as a habit. These attitude and anxiety are considered to be invisible affective qualities that affect the individual’s behaviors. Studies in the related field revealed that affective variables such as anxiety, attitude, motivation, interest, and self-efficacy affected reading habits directly and indirectly as well as cognitive skills in turning reading into a habit (Balci, 2009; Becker et al., 2010; Lawrence, 2007; McGeown, Osborne, Warhurst, Norgate, & Duncan, 2016). In the studies of the related literature, affective qualities such as attitudes towards reading skills (Hitosugi & Day, 2004; Alexander & Fox, 2011), anxiety (Mohammadpur & Ghafournia, 2015; Mohd. Zin & Rafik-Galea, 2010; Rafik-Galea, 2010) and habit (Aksaçhoğlu & Yılmaz, 2007; Balci, 2009; Balci et al., 2012; Gömöksiz, 2004; Tok, Küçük, & Kirmacı, 2015) are predicted by other variables. However, any researches on explaining the prediction level of these variables (anxiety, attitude) the reading habits, and the direction and situation of the
relationship have not been reached. These studies also indicated that reading was a habit of multidimensional mental and affective processes and there was a big gap on this topic in the literature. In addition, with reference to the importance of middle school level in acquisition and development of reading habits and the decrease in these habits in the middle school period, it is important to reveal the effect of affective variables (anxiety, attitude) on this decrease by a holistic approach, which is thought that it will provide important contributions to the related literature. For this purpose, the concepts of reading anxiety, reading attitude and reading habits were explained and the conceptual link between these variables was revealed. The model for this research, which analyzed the effects of reading anxiety and reading attitude on reading habits as a result of screening the related literature, is presented in Fig.1.

![Figure 1. Research Model](image)

Within the framework of the above research model, the aim of this research is to determine the level of influence between secondary school students' attitudes towards reading anxiety, the variables of reading attitudes and reading habits, and how these variables predict each other and what their level of disclosure are. The hypotheses proposed to be tested within this framework are presented below.

- **H1**: Reading anxiety predicts the attitude towards reading at a meaningful level in the negative direction.
- **H2**: Attitude towards reading predicts reading habits at a meaningful level in the positive direction.
- **H3**: Reading anxiety predicts reading habits at a meaningful level in the negative direction.

**Method**

*Research Model*

This research, which was aimed at determining 5th, 6th, 7th and 8th grade students’ reading anxiety, the existence of the effects of their attitudes towards reading habits, how variables predict each other, and the level of explanations, was conducted in a relational screening model from the screening models. In this model, it is aimed to determine the existence and/or the degree of mutual exchange between two or more variables (Karasar, 2005). The theoretical model (Figure 1) supported by the relevant literature and relations between the model variables were tested through Structural Equation Modeling (SEM). SEM is a powerful statistical analysis method based on examining the relationships between multiple variables and then developing a theory by testing causality relationships between observed and latent variables (Byrne, 2010).
Study Group

Reading habits have been found to decline seriously at the secondary school level (Campbell & Kmiecik, 2004; Yalçın, 2006), despite the fact that the middle school period is a very critical stage when reading skills become a habit (Smith et al., 2012; Schatz & Krashen, 2006). However, as a result of the related field review, the attitude toward reading decreased based on age and grade levels (Akkılık, 2011; Baş, 2012; Çeçen & Deniz, 2015; Hayes, 2000; İşeri, 2010; McKenna et al., 2012; Schatz & Krashen, 2006). In addition, it has been found that there was a limited number of studies on the impact of reading anxiety on reading habits (Çeliktürk & Yamaç, 2015; Jalongo & Hirsh, 2010; Mohammadpur & Ghaforinia, 2015; Mohd. Zin & Rafik-Galea, 2010) and reading anxiety at the secondary school level (Melanlıoğlu, 2014a, 2014b). In this context, the tendency of the reading habit’s decline which is expected to develop based on the education level in the middle school can be considered as a serious problem in terms of education system. The analysis of the importance of secondary school level in developing reading habits, the decrease in reading habits and attitudes at this level, the limited number of studies on reading anxiety, the effect of these variables on reading habits and the relationship between variables suggests that this will make an important contribution.

Based on the current results, the research was aimed to carry out with the secondary school students. For this purpose, the study group was selected from the students attending a secondary school in the central province of Rize, under the Ministry of National Education. The school where the application was carried out was determined by simple random sampling from random sampling methods and the participants consisted of 341 students attending on the grades of 5th, 6th, 7th and 8th in the 2015-2016 academic year. When the demographic characteristics of the participants were examined, it was seen that 173 (50.7%) were female and 168 (49.3%) were male. 89 (26.1%) were on the 5th grade, 104 (30.5%) were on the 6th grade, 95 (27.9%) were on the 7th grade and 53 (15.5%) were on the 8th grade.

The school where the research was carried out was selected from schools in the middle socio-economic level in line with the information obtained as a result of the interviews with Rize Provincial Directorate of National Education. Application was conducted in a middle school in the middle socio-economic level and it was aimed to exclude the extreme samples which would affect the research results and to obtain the data in the mean values.

Data Collection

In this study, Reading Awareness Scale, Reading Attitude Scale, Reading Habit Scale and Personal Information Form were used to collect data. The data obtained in the study were collected during the fall semester of 2015-2016 academic year. In the beginning of the research, the school administrators were consulted after receiving the necessary permissions for the school to be applied by the Rize Provincial Directorate of National Education. Within the scope of the relevant school curriculum, all of the school teachers were interviewed separately and the necessary information was given to them about the research, the measurement tools and the application of measurement tools. Then, planning was made about the application of the scales by including teachers. On the basis of this planning, the Reading Habit Scale and the Personal Information Form were applied to the 5th, 6th, 7th and 8th graders at the same class hour on 19.11.2015 by their teachers under supervision of the researcher. Reading Awareness Scale and Reading Attitude Scale were applied to all grade levels on 27.11.2015 by their teachers at the same class hour. The application of the scales was carried out for a total of 90 minutes, 45 minutes in both stages. All participants were informed about the study by the researcher before the scales were filled in, and the names of the research ethics were kept secret.

Data Collection Tools

The data obtained within the scope of the study were collected through attitude scale related to reading anxiety, reading attitude and reading habit. The results of the validity and reliability of these scales are presented below.
Reading Anxiety Scale

The aim of this measurement tool is to detect negative feelings such as fear, anxiety and tension which cause students to develop a negative attitude toward reading in the reading process (Melanlıoğlu, 2014). Thus, it is aimed to determine the anxiety of reading which is one of the affective items which should be taken into consideration in the development of the students’ reading skills and to overcome the affective obstacles preventing the development of this skill of the student. This measurement tool developed by Melanlıoğlu (2014) in order to determine reading anxieties of secondary school students is named “Reading Anxiety Scale”. The scale was prepared with 5 Likert type, as “never (1)”, “very rarely (2)”, “occasionally (3)”, “usually (4)” and “always (5)”. An exploratory and confirmatory factor analysis was performed to determine the validity of the structure of the measuring tool.

The exploratory and confirmatory factor analysis were performed to determine the validity of the structure of this measurement tool. As a result of the explanatory factor analysis made on this measurement tool, it has been revealed that the scale consisted of 14 positive factors and three factorial structure as “planning the reading process”, “reading support elements”, “understanding and analysis of what is read”. To determine the reliability of the scale, the Cronbach Alpha internal consistency coefficient was used. For the whole scale, it was found to be .87; for the first factor, it was .81; for the second factor, it was .83 and for the third factor, it was .61. The confirmatory factor analysis of the scale by the researcher shows that the fit indices of the structural model is acceptable (χ²=1370.982, sd=91 (p<.01), RMSEA =.034, SRMR= .045, NFI=.97, GFI=.96, CFI=.99, NFI=.97, AGFI=.94).

For this research, the reading anxiety scale was tested for reliability and validity again, and these analyzes are given below.

Confirmatory Factor Analysis: Confirmatory Factor Analysis (CFA) results which were done to determine whether the original factorials of the reading anxiety scale were validated in this study are shown in Figure 2.
The goodness of fit index obtained as a result of the confirmatory factor analysis on the Reading Anxiety Scale was calculated as \(\chi^2/\text{sd}=3.70\) (\(p<.01\), GFI=.90, CFI=.87, NFI=.83, AGFI=.84, RMSEA=.90 and SRMR=.06). According to the Confirmatory Factor Analysis (CFA) results for the validity of the Reading Awareness Scale (RAS), the values of the goodness-of-fit index of the scale model with its structure consisting of three factors can be said to be acceptable (Hu and Bentler, 1999, Jöreskog and Sörbom, 1993). As a result of these analyzes, it can also be said that the factorial structures of the original form of the scale are also verified for this research, that is, this scale has sufficient validity.

**Reliability Analysis:** The Cronbach Alpha internal consistency coefficient was calculated to determine the reliability of reading anxiety scale as a whole and its sub-dimensions. As a result of this analysis, the Cronbach Alpha internal consistency coefficient of the scale which has 14 items and three factors was found to be .731 for the whole scale, it was .492 for its “reading process planning” aspect, it was .711 for its “reading support elements” aspect, and finally it was found to be as .646 for its “understanding and analysis of what is read” aspect. These results indicate that the instrument has a high level of reliability.

**Reading Attitude Scale**

There is a positive relationship between reading habit and reading attitude. The positive attitudes of the students toward reading are also increasing as they are interested in reading. In this context, analyzing the students' attitudes toward reading and increasing these attitudes in the positive direction have an important place in gaining reading skills. Through this measurement tool, it is aimed to determine the attitudes toward reading which is one of the most important factors in increasing the reading success and gaining this skill to the students.

This measurement tool developed by McKenna and Kear (1990) and adapted to Turkish by Çakıroğlu and Palancı (2015) is called “Scale for Attitude Toward Reading”. The scale was developed to determine the attitudes of middle school students toward reading with 4 Likert type as “very happy (4)”, “slightly happy (3)”, “slightly unhappy (2)” and “very unhappy (1)”. An exploratory and confirmatory factor analysis was performed to determine the validity of the instrument. The results of the exploratory factor analysis revealed that the scale had 20 items and two factors, which are “reading for fun” and “academic reading”. To determine the reliability of the scale, the Cronbach Alpha internal consistency coefficient was used, which was calculated as 0.84 for the whole scale. Confirmatory factor analysis of the scale by the researcher showed that the fit index of the structural model \(\chi^2/\text{sd} = 2.81\) (\(p<.01\), RMSEA=.04, SRMR=.045, CFI=.94, AGFI=.94) was at acceptable level.

Reliability and validity of the reading attitude scale was performed for this study again and these analyses are given below.

**Confirmatory Factor Analysis:** Confirmatory Factor Analysis (CFA) results which was done to determine whether the factorial structure of the reading attitude scale in its original form has been confirmed within the framework of this research are shown in Figure 3.
Confirmatory factor analysis of the Reading Attitude Scale revealed that the values of goodness of fit index were $\chi^2/df=2.154$, GFI:.900, CFI:.911, RMSEA:.058 and SRMR:.051. According to these results, it can be said that the values of goodness of fit index of reading attitude scale (RAS) are acceptable.

Reliability Analysis: The Cronbach Alpha internal consistency coefficient was calculated to determine the reliability of the whole Reading Attitude Scale and its sub-dimensions. As a result of this analysis, the internal consistency coefficient of Cronbach Alpha scale of 20 items and two factors was found to be .89; it was .88 for the “reading for fun” aspect and it was .87 for the “academic reading” aspect. These results indicate that the measurement tool has a high level of reliability.

Book Reading Habit Scale

Through this measurement, it was aimed to determine the level of reading habits of the students, as well as to reveal the behaviors and skills expected from students related to reading habits with concrete indicators. It is an indispensable requirement for students to have the habit of reading books so that they can perform other basic language skills proficiently. Because, the qualities such as the students’ book-carrying habits and their being guided towards narration by the information they learned from the books are the concrete indicators of students’ reading habits (Tok et al., 2015).
This measurement tool developed by Tok et al. (2015) to determine the reading habits of middle school students is named “Middle School Book Reading Habit Scale”. The scale was prepared with 5 Likert type as “I completely agree (5)”, “I agree (4)”, “I partially agree (3)”, “I disagree (2)” and “I absolutely disagree (1)”. An exploratory factor analysis was conducted to determine the validity of this instrument and it was revealed that the scale consisted of 15 items and three factorial structures consisting of “reflection of the books to the skills”, “relationship established with the book” and “turning towards narration with reference to the books”. To determine the reliability of the scale, the Cronbach Alpha internal consistency coefficient was used, which was calculated as .86 for the whole scale, .79 for the first factor, .77 for the second factor and .60 for the third factor. According to these results, it can be said that the scale is also reliable in terms of factors.

Reliability and validity of the reading attitude scale was performed for this study again and these analyzes are given below.

**Confirmatory Factor Analysis**: The results of Confirmatory Factor Analysis (CFA) which were conducted to determine whether the factorial structure of the reading attitude scale in its original form has been confirmed within the framework of this research are shown in Figure 4.

![Figure 4. Confirmatory Factor Analysis on the Reading Habit Scale](image)

It was seen that the values of the goodness of fit index obtained as a result of confirmatory factor analysis on the reading habits scale were $\chi^2$/df =2.143, GFI:.932, CFI:.956, RMSEA:.058 and SRMR:.037. According to these results, it can be said that the values of goodness fit index of the reading habits scale (RHS) are at acceptable level.
Reliability Analysis: The Cronbach Alpha internal consistency coefficient was calculated to determine the reliability of the Reading Habits Scale as a whole and its sub-dimensions. As a result of this analysis, Cronbach Alpha internal consistency coefficient of 15 items and three factors was calculated as .92 for the whole scale, .78 for the “Reflection of the books to the skills” aspect”, .76 for the “Relationship established with the book” aspect, and .83 for the “Turning towards narration with reference to the books” aspect. These results indicate that the instrument has a high level of reliability.

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 calculation of descriptive statistics for variables in the research and analysis of the relationships between variables, a structural equation modeling, which has an increasingly importance in social sciences recently, has been used. Before the SEM analysis, a two-step method that is commonly used in this analysis type was used to evaluate whether the data supported the model (Jöreskog & Sörbom, 1993; Meydan & Şeşen, 2011). First of all, the applied scales have been preliminarily reviewed, and it was determined that there were not any scales that were not filled in reliably and then the scales were coded by numbering and categorized. In the first stage, DFA’s were applied to determine the factor structure, validity and reliability of the scales included in the model. The DFA 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 fit well with the obtained data, were also confirmed for this study.

In the second stage, significant relations between the structures in the model have been evaluated. The assumptions related to this analysis were checked before the SEM analysis was started. The sample size, multivariate normality and multicollinearity assumptions required for this analysis have been tested. The efficient sample size recommended for SEM is 100-150 (Kline, 2011). The skewness and kurtosis values of each variable were calculated for univariate normality, which was a prerequisite for meeting the assumption of multivariable normality (Kline, 2011). In examining the assumption of multivariable normality, Mardia's normalized multivariate kurtosis coefficient was calculated (Raykov & Marcoulides, 2008). For the multicollinearity assumption, binary correlations were examined with VIF (variance increase factor) and tolerance values (Field, 2009; Montgomery & Peck, 1992). After ensuring the assumptions about the data set, the compatibility of the model with the data set as a whole has been examined. The maximum likelihood technique was preferred for the analysis of the parameters in the YEM. As a result of the analysis, the fit indices of $\chi^2/df$, CFI, GFI, TLI, NFI, IFI, RMSEA and SRMR were used in evaluating the model fit. The level of fit and interpretation of the fit indices as a result of the analyzes were given in Table 1 (Hu & Bentler, 1999; Klem, 2000; Kline, 2011)

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th>Perfect Fit</th>
<th>Acceptable Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2/df$</td>
<td>$0 \leq \chi^2/df \leq 2$</td>
<td>$2 &lt; \chi^2/df \leq 5$</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>IFI</td>
<td>$0.95 \leq \text{IFI} &lt; 1.00$</td>
<td>$0.90 \leq \text{IFI} &lt; 0.95$</td>
</tr>
<tr>
<td>TLI</td>
<td>$0.95 \leq \text{TLI} &lt; 1.00$</td>
<td>$0.90 \leq \text{TLI} &lt; 0.95$</td>
</tr>
<tr>
<td>CFI</td>
<td>$0.95 \leq \text{CFI} &lt; 1.00$</td>
<td>$0.90 \leq \text{CFI} &lt; 0.95$</td>
</tr>
<tr>
<td>GFI</td>
<td>$0.95 \leq \text{GFI} &lt; 1.00$</td>
<td>$0.90 \leq \text{GFI} &lt; 0.95$</td>
</tr>
<tr>
<td>NFI</td>
<td>$0.95 \leq \text{NFI} &lt; 1.00$</td>
<td>$0.90 \leq \text{NFI} &lt; 0.95$</td>
</tr>
</tbody>
</table>
Results

The findings of the research were presented in two parts. In the first part, descriptive statistics were given. In the second part, the variables included in the structural equation modeling and the assumptions of the relations between these variables, the explanation rates of the variables and the model fit were included.

Descriptive Statistics on Model Variables

Descriptive statistics related to the variables included in the research model (RBS, REWB, TNWRB, URP, RSE, UAR, RF, AR) are presented in Table 2.

According to Table 2, the arithmetic mean of all the variables in the model is above the midpoint of the related point range and these values vary between 6.586 and 31.507. This indicates that the participants have a positive average of the measured qualities. When the standard deviation values are examined, it is determined that these values are close to the mean values. The skewness and kurtosis values of the variables must be greater than |3.0| and |10.0|, respectively, in order to be able to assume univariate normality for the variables (Kline, 2011). According to this, the skewness values of the variables were observed to have changed between - .001 and -.847; and kurtosis values of them varied between -243 and .615. These findings suggest that univariate normality of the data was achieved.

In determining whether the assumption of multivariable normality was satisfied, Mardia's normalized multivariable kurtosis coefficient was calculated and found to be 6.074. The critical value for multivariate normality in order to achieve the assumption of this range was calculated according to the equation of P (p + 2) (p: number of observed variables) proposed by Raykov and Marcoulides (2008) and was found to be 80. According to Raykov and Marcoulides (2008), this value obtained from the equation for multivariable normality must be greater than the kurtosis coefficient. Since the value obtained from the equation (80) was greater than the multivariable kurtosis coefficient (6.074), it was seen that the assumption of multivariable normality was obtained. Binary correlations, were examined with VIF (variance increase factor) and tolerance values when testing the assumption of multicollinearity between variables in the model. As a result of the evaluations, the tolerance value was calculated to be greater than 0.20 and the VIF value was calculated to be less than 10 and the assumption of multicollinearity was obtained (Field, 2009; Montgomery & Peck, 1992).

Results related to Measurement Model

The results of the structural equation modeling created for the purpose of the research are presented in Figure 5.
The values of the goodness of fit index obtained as a result of structural equation modeling which was formed to determine the effect of reading anxiety and reading attitude on reading habits were seen to be $\chi^2/df = 5.566$, GFI = .93, CFI = .94, TLI = .90; NFI = .93; IFI = .94; RMSEA = .12 and SRMR = .09. According to these results, it can be said that the values obtained are acceptable. As a result of the structural model test, the factor loadings of the reading anxiety latent variable ranged from .34 to .91; while the reading attitude had the factor loadings between .90 to .01; and the factor loading of the reading habit latent variable was found as .86. The results of the structural equation modeling are presented in Table 3.

Table 3. Standardized Regression Weight Results Relating The Effects Of Reading Anxiety And Attitudes On Reading Habits

<table>
<thead>
<tr>
<th>Path</th>
<th>Road Coefficient ($\beta$)</th>
<th>Standardize 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 Anxiety $\rightarrow$ Reading Attitude</td>
<td>.08</td>
<td>.17</td>
<td>.12</td>
<td>1.35</td>
<td>.17</td>
</tr>
<tr>
<td>Reading Anxiety $\rightarrow$ Reading Habit</td>
<td>.20</td>
<td>.43</td>
<td>.11</td>
<td>3.89</td>
<td>***</td>
</tr>
<tr>
<td>Reading Attitude $\rightarrow$ Reading Habit</td>
<td>.60</td>
<td>.61</td>
<td>.07</td>
<td>8.63</td>
<td>***</td>
</tr>
</tbody>
</table>

*** Significant at $p < .01$ level
According to Table 3, the attitude towards reading was predicted by reading anxiety in positive direction and at insignificant level ($\beta=.08$, $p>.05$) and this result was not statistically significant ($p>.005$). In this context, the hypothesis of “H1: Reading anxiety predicts the attitude towards reading in positive direction and at significant level” is rejected. Reading habits were found to be predicted by reading anxiety in positive direction and at significant level ($\beta=.20$, $p<.01$), and these results were statistically significant ($p<.01$). On the other hand, the hypothesis of “H3: Reading anxiety predicts reading habits at a negative and significant level” has also been rejected, because, reading anxiety predicts reading habits at a positive level. Reading habits were found to be predicted in positive direction and at significant level ($\beta=.60$, $p<.01$) by the attitude towards reading, and these results were statistically significant ($p<.01$). In this context, the hypothesis of “H2: The attitude towards reading predicts reading habits in positive direction and at significant level” is accepted.

Table 4. Standardized Direct, Indirect, and Total Effect Size

<table>
<thead>
<tr>
<th>Estimated</th>
<th>$R^2$</th>
<th>Estimator</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading habit</td>
<td>.42</td>
<td>Reading anxiety</td>
<td>.20</td>
<td>.50</td>
<td>.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading attitude</td>
<td>.59</td>
<td>---</td>
<td>.59</td>
</tr>
<tr>
<td>Reading attitude</td>
<td>.01</td>
<td>Reading anxiety</td>
<td>.08</td>
<td>---</td>
<td>.08</td>
</tr>
</tbody>
</table>

According to Table 4, in the model in which the effect of reading anxiety and attitude on reading habits is tested, Reading anxiety ($d=.20$) and reading attitude ($d=.59$) directly influence reading habits and explain .42 of the total variance. The direct effect of reading anxiety on the reading attitude is pointless ($d=.08$), explains only .01 of the total variance. In other words, 42% of reading habits is explained by reading anxiety and attitudes. Given the indirect effects on the model, reading anxiety indirectly influences reading habits through reading attitudes ($d=.50$). When looked at the results in terms of total effect, it is seen that the most dominant predictor of reading habit is reading attitude with .59 total effect and it is followed by reading anxiety with .25 total effect.

Discussion, Conclusion and Suggestions

In this study, the effects of reading anxiety and attitude on reading habits were discussed and analyzed by structural equation modeling within the frame of structural hypotheses. As a result of the research, the hypothesis model established on the basis of the related literature was tested and it was determined that the reading anxiety and the attitude towards reading directly and significantly affected the reading habit. Moreover, reading habits are both directly and indirectly influenced by reading anxiety, and directly influenced by attitudes towards reading. The indirect effect of reading anxiety on reading habits was found to be higher than its direct effect. In addition, reading anxiety and attitudes towards reading clarified the 42% of reading habits, however, the attitude towards reading was found to be the most dominant predictor of reading habits. According to the results of the research, it can be said that the anxiety and attitude have an important effect on the reading habit and the attitude toward reading is the most important variable affecting the reading habit directly in the positive direction.

According to these results, it can be said that the reading habit will increase as the positive attitude towards reading increases. According to Balci (2009), as a result of positive attitude towards reading which is one of the most important factors affecting reading habits, the individual gradually routinizes reading. When the concept of habit is considered in terms of reading, it is possible to make conclusions about the existing observable reading frequency and the attitudes of the individual towards reading (Erkuş, 2003). One of the indicators of reading habits in this context is the regular reading activity (Tok et al., 2015). The frequency of the reading activity, that is, the repetition rate of the reading activity as a behavior, is a sign of having a positive attitude towards reading. According to Mori (2004), there is a significant relationship between positive attitude towards reading and the frequency of...
According to the results of the research, reading anxiety predicted the attitude towards reading in positive direction at insignificant level and it predicted the reading habit in the positive direction at significant level. On the other hand, in the field studies suggest that reading anxiety negatively affects the reading performance and the attitude toward reading (Murray & Janelle, 2003; Eysenck & Payne, 2006; Rafik-Galea, 2010; Saito et al., 1999; Sellers, 2000). As a result of the research, it was determined that the relationship between reading anxiety towards reading were positive, which is contrary to expectations. Because reading anxiety is defined as a variety of fear, anxiety, or phobia that causes negative emotional reactions towards reading (Jalongo & Hirsh, 2010). The anxiety experienced in the reading process interferes with the memory in the cognitive system that is responsible for the processing and prevents understanding (Carpenter, Miyake, & Just, 1995; Eynseck, 1979; Rafik-Galea, 2010), and causes distraction by decreasing concentration of the reader (Downing & Leong, 1982; Eysenck, 1985). In this context, emotions affect all stages of reading skills as well as learning to read (Jalongo & Hirsh, 2010), and reading behavior decreases as the level of anxiety increases (Çeliktürk & Yamaç, 2015; Melanlıoğlu, 2014a; Murray & Janelle, 2003). On the other hand, reading anxiety is reduced depending upon the development of reading skills (Maclntyre & Gardner, 1991). In order for reading to become a constant habit and accordingly for having pleasure while reading, it is necessary to keep interest and motivation alive as well as attitudes towards reading (Balç, 2009; Lawrence, 2007; McGeown et al., 2016). According to Melanlıoğlu (2014a), if it is desired for students to gain reading habits, firstly the levels of anxiety related to reading should be determined. The concept of reading is identical to “understanding”, and is revealing the meaning as a result of mental processes. This situation causes the cognitive strategies used in the reading process to influence the reading and comprehension process, thus it affects reading anxiety, reading attitude and reading habits, as well (Balç, 2009). In the research conducted by Rafik-Galea (2010), it was revealed that the students who had anxiety had difficulties to
understand and remember the specific points in the texts and their anxieties affected their reading skills. Similarly, Mohd. Zin and Rafik-Galea (2010) found that reading anxiety affected reading performance negatively, while Mohammadpur and Ghafoorinia (2015) found a negative relationship between reading levels and reading anxiety. Melanlıoğlu’s (2014b) experimental research on 6th grade students found that supra-cognitive strategies used in the reading process have a positive effect on reducing reading anxiety by providing awareness of the reading process. As a result, it can be said that reading anxiety has come to the forefront with a function that affects the various stages of the reading process negatively. From these results, it has been shown that the anxiety and attitude from the affective variables in transforming reading into a pleasurable habit which is one of the main objectives of education have an important effect. Taking the importance of middle school level in the acquisition and maintenance of reading habits, the elimination of adverse effects on these variables reveals the importance of the affective qualities of students in acquiring reading habits. Particularly considering the negative effect of reading anxiety on reading, it is thought that reducing this anxiety and supporting positive attitudes towards reading will have positive effects on reading habit acquisition.

As a result of the research, it is revealed that the reading habit affecting all vital acquisitions of the individual is directly affected by anxiety and attitude. It is seen that since 42% of the middle school students’ reading habits is explained by reading attitude and reading anxiety, 58% of them remains unexplained. From this result, it is possible to investigate the effects of other variables affecting reading habit by eliminating this limitation with other affective variables which will be included in the model. In order to transform reading into an enjoyable habit and increase the number of professional readers, some studies involving affective variables such as motivation, interest, self-efficacy, and perception which affect reading habits in the related literature can be studied through different samples. Although this research was limited to one middle schools in Rize city center, the validity and generalizability of the model can be tested by carrying out similar studies in different provinces and different school types. In addition, as a result of the research, the reasons for this effect of the reading anxiety, which has a direct and indirect effect on the reading habit, and its mediation effects can be examined by different models. Experimental studies can be conducted that reveal the indirect effect of reading anxiety on reading habits and explain the cause-and-effect relationship between reading habits and reading anxiety.

As a result of the research, it has been seen that the attitude towards reading especially in reading had an important influence on reading habits. As students develop positive attitudes towards their interests and favorite things, more emphasis can be placed on studies to promote reading in school, family and social life. However, it is suggested that reading anxiety positively effects reading habits, therefore, it is a necessity to have certain level anxiety in order to acquire reading habits and promote positive attitudes towards reading, and teachers should pay more attention to this issue. The direct, positive and high level effect of the attitude towards reading on the reading habits reveals the need for teachers to observe their attitudes towards reading. In this context, teachers’ revising their relationships with books and their tending to the activities that promote attitudes towards reading with a higher consciousness will provide significant contributions to the acquisition and development of reading habits.
References


