

Reading tendency scale: Validity and reliability study*

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ABSTRACT

The tendency to read is due to what individuals pay attention to while reading and choosing literary works. The aim of this study is to develop a scale of pre-service teachers' reading tendencies. The study group of the research consisted of 143 pre-service Turkish language teachers studying at Sinop University. Factor analysis was performed to ensure the validity of the data obtained at the end of the application. As a result of the factor analysis, a structure consisting of two factors named "intrinsic motivation" and "extrinsic motivation," which explains 38.55% of the total variance of the scale was determined. Cronbach's alpha reliability coefficients calculated to determine the reliability of the scale were found as 0.89 for intrinsic motivation, 0.82 for extrinsic motivation, and 0.91 for the overall scale.

Keywords: Reading, reading tendency, Turkish education.

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INTRODUCTION

Reading is defined as "the process of interpretation and explanation of signs and symbols perceived by the brain through the sound organs and eyes" (Ministry of National Education, 2006, p. 6). According to another definition, reading is "the process of seeing, perceiving, and comprehending a text, words, sentences, punctuation marks" (Kavcar et al., 2003, p. 41). These definitions relate to the physical dimension of reading. Real reading is the only way for the individual to perceive, interpret, and make sense of the external world. Reading is extremely important for the development of individuals. It helps them realize themselves.

The purpose of reading is not limited to vocalizing the letters next to each other. It is aimed to reach the depths of the meaning of the text and, most importantly, to reach the love of reading. Individuals who have acquired a love of reading can prioritize learning and reading in every period of their lives.

The love of reading has social benefits besides individual benefits. One of the important preconditions for creating a quality and conscious society is to raise individuals with a love of reading. The source of many problems faced by societies is the lack of reading. Problems in cultural adaptation are the main social problems. The role of the school, family, and the

environment is very important here (Zengin, 2003). In addition to these elements, the literary works read by individuals also have a very important role in cultural harmony. By determining the reading tendencies of individuals, reading literary works that can improve cultural harmony can be encouraged.

It cannot be denied that reading is a critical aspect of academic life. The basic condition for being successful in every field is to do enough reading and research in the field. In other words, the basic skill of almost all fields is to be a good reader (Kurudayıoğlu and Çelik, 2013).

Every good reader can gain many benefits individually. In addition, he can make many people around him a love of reading. It can be said that especially individuals whose parents read books are more curious and willing to read (Neuman, 1986, Strommen and Mates 2004).

Many social problems can be solved by reading. For this reason, every factor that affects reading should be evaluated in detail. When we look at the literature, it was determined that the studies on reading are related to reading attitude (Baştug and Keskin, 2013; Karahan, 2018; Yurdakal, 2018), reading habit (Gomleksiz, 2004), and reading motivation (Yildiz et al., 2013; Yıldiz, 2010). In recent years, many scale development studies related to reading have been carried out. However, it is seen that

the studies conducted focus on reading attitude and reading habits. Because of the power of reading to affect human and social life deeply, every detail of reading should be a subject of research. Therefore, the aim of the study is to develop a scale to determine the reading tendencies of pre-service Turkish language teachers. Within the framework of this purpose, the problem of the research was as follows: "What are the reading tendencies of pre-service Turkish language teachers

METHODOLOGY

This scale is a self-reported Likert measurement tool to determine the reading tendencies of pre-service Turkish language teachers. The scale consists of 2 factors and 28 items. Data regarding the working group in the scale development process and the process steps of the study are given below.

Study group

The study group of the research consists of 162 pre-service Turkish language teachers studying at Sinop University. Since the number of pre-service teachers is limited, no sample was taken. When determining the number of participants in factor analysis, five or ten times the number of items in the scale can be used as a criterion (Bryman and Cramer, 2002). Therefore, it can be said that the 143 pre-service Turkish language teachers who can be reached are sufficient.

Developing the scale

In the study, it was aimed to develop a scale to determine the reading tendencies of pre-service Turkish language teachers. Interviews were held with 15 pre-service Turkish language teachers studying at Sinop University. As a result of the interviews, an item pool of 48 items was created. To ensure the scope and appearance validity, an evaluation was made by 2 Turkish language education experts in terms of field and language. As a result of the regulations made in the light of these evaluations, the item pool was reduced to 42 items. Later, a pre-application was made to 52 pre-service Turkish language teachers. Fourteen items with item correlation below 0.4 were eliminated. Thus, the first 28-item scale form was obtained. The first scale form obtained in order to perform the reliability and validity procedures were applied to 143 Turkish teachers.

FINDINGS

In this section, findings regarding the validity and reliability studies of the "Reading Tendency Scale" are

given.

Findings regarding validity

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were performed to ensure the construct validity of the Reading Tendency Scale. EFA was performed first to examine the factor structure of the Reading Tendency Scale. As stated in the literature (Büyükoztürk, 2014; Seçer, 2015), attention has been paid to have item factor loading value at least 0.30, the difference between two high loading values of an item at least 0.10, and eigenvalues close to 1 in EFA. Principal Component Analysis and Direct Oblimin rotation method were used in the analysis.

Kaiser Meyer Olkin (KMO) and Bartlett tests were conducted to test the suitability of the data collected in the study group. Because KMO is higher than 0.60, and the Bartlett test is significant, it indicates that the data are suitable for factor analysis (Pallant, 2005).

The fact that the KMO is 0.78 and the Bartlett test is significant in Table 1 shows that the sample is suitable for factor analysis. As a result of EFA, the distribution of scale items according to dimensions, loading values, variance rates of factors, and total variance ratio are given in Table 2.

As a result of EFA, a 2-factor structure that explains 38.559% of the total variance was obtained. The first of these is the intrinsic motivation sub-factor consisting of items 1, 2, 3, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 23, 27 and 28. The second is the extrinsic motivation sub-factor consisting of items 4, 5, 6, 7, 19, 20, 21, 22, 24, 25 and 26.

Tabachnick and Fidel (2011) stated that the lower limit of item factor loading values should be 0.32. It is seen that item factor load values are ranked between 0.34 and 0.78 in the Reading Tendency Scale. The total variance value of the scale was found to be 38.55%.

In order to determine the relationship between the factors of the Willingness to Communicate in the Turkish Language Scale, the correlation between the factors was examined. It is recommended that the correlation coefficient obtained between the sub-dimensions should not be 0.90 and above in terms of the multiple correlation problem (Akbulut, 2010).

Table 1. KMO and Bartlett test results of reading tendency scale.

KMO compliance test	0.78
Bartlett's test of sphericity	
Estimated Chi-Square	1431.32
Degree of Freedom	378
Significance Level	0.00

The correlation data between the sub-dimensions of the Reading Tendency Scale seem in Table 3. It is understood from the data obtained that there is a significant relationship between the sub-dimensions of the scale.

Table 2. Reading Tendency Scale, according to factors, item factor loadings, and factor variances.

Item	Intrinsic motivation	Extrinsic motivation
1	0.671	
2	0.655	
3	0.570	
8	0.431	
9	0.713	
10	0.787	
11	0.443	
12	0.641	
13	0.615	
14	0.755	
15	0.406	
16	0.506	
17	0.563	
18	0.547	
23	0.468	
27	0.440	
28	0.344	
4		0.371
5		0.491
6		0.586
7		0.550
19		0.719
20		0.685
21		0.523
22		0.485
24		0.522
25		0.445
26		0.397
Total Variance		38.559%

CFA was conducted to test the appropriateness of the Reading Tendency Scale data obtained in EFA. The results are given in Table 4 and Figure 1.

When the CFA results in Table 4 are examined, it is seen that the value of χ^2/sd is 2.29. According to

Table 3. Correlation between the sub-dimensions of reading tendency scale.

Sub-factor	1	2
Intrinsic motivation	1.000	
External motivation	0.406	1.000

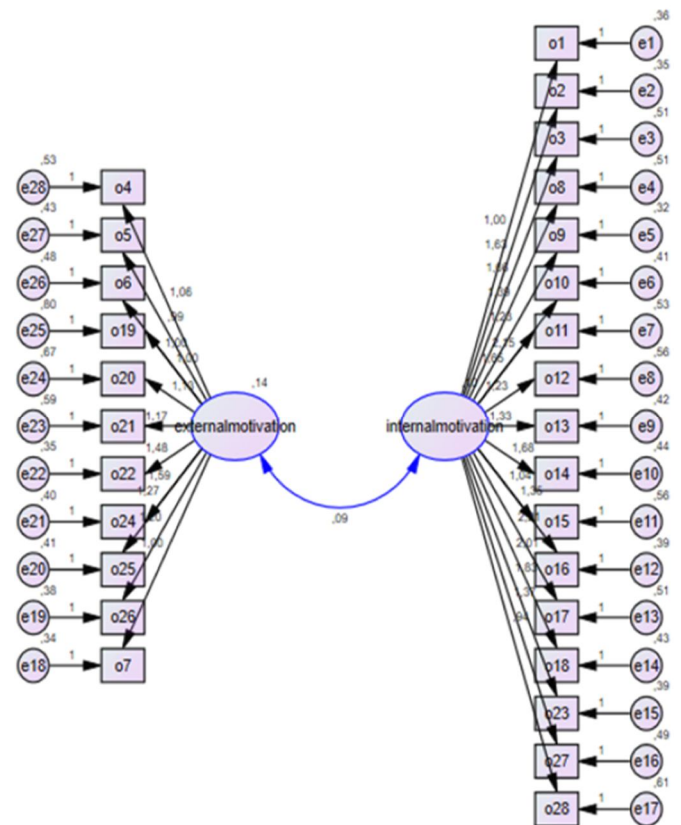


Figure 1. Factor loading values of reading tendency scale.

Karagöz (2016: 969), this value should be below 3. Other fit indices reached with CFA are: CFI = 0.87; GFI = 0.83; AGFI = 0.81; RMSEA = 0.07. It is regarded as an acceptable fit for CFI, GFI, and AGFI values close to 1 and RMSEA value below 0.08 (Karagöz, 2016: 969-972, 992). It can be said that the structural model created with these data obtained in CFA has good fit indices.

Findings regarding reliability

The Cronbach Alpha coefficient was used to determine

the reliability of the Reading Tendency Scale. Cronbach Alpha can be used to determine the reliability of graded scales of “questionnaire, where the responses are in two categories (0 or 1) and are not continuous, the graded attitude, interest, alienation, self-confidence, stress, self-efficacy, adoption, anxiety, etc. scales” (Sönmez and Alacapınar, 2014: 118). Cronbach Alpha was found as 0.89 in the intrinsic motivation sub-factor, 0.82 in the extrinsic motivation sub-factor, and 0.91 in the whole scale. The reliability coefficient value accepted in the field literature is 0.60. In this case, it can be said that the reliability of the Reading Tendency Scale is high.

CONCLUSION AND RECOMMENDATIONS

In this study, the validity and reliability study of the "Reading Tendency Scale" prepared for the pre-service teachers was conducted. The first 48-item form, which was created as a result of interviews with the pre-service teachers, was reduced to 42 items as a result of expert opinions and pilot application. Later, in the principal component analysis performed to determine the factor structure of the scale, it was seen that the scale formed a 2-factor, 28-item structure. Accordingly, the first factor, called intrinsic motivation, consists of 17 items, and the second factor, called extrinsic motivation, consists of 11 items. It was determined that these 2 factors explain 38.55% of the variance related to the scale.

As a result of EFA and CFA, a structure with 2 factors was obtained. The variance rates of the obtained factors were calculated as 31.04% (17 items) for the intrinsic motivation factor, 7.51% (11 items) for the extrinsic motivation factor, and 38.55% for the overall scale. It was determined that CFI: 0.87; GFI: 0.83; AGFI: 0.81; and RMSEA: 0.70 values obtained as a result of CFA had acceptable fit indices. Correlation analysis was performed to determine the criterion validity. In the analysis, it was determined that the scale is compatible and linear.

The reliability values of the scale were found to be 0.89 for the intrinsic motivation factor, 0.82 for the extrinsic motivation factor, and 0.91 for the overall scale. According to Albayrak (2004), it is sufficient to have a reliability value of 0.60 and above. Therefore, the values obtained show that both factors in the scale and the scale, in general, are reliable. These results show that the items in the sub-factors are compatible with each other.

It can be said that the 2-factor and 28-item scale obtained as a result of the analysis is a valid and reliable measurement tool that can be used in research. The following suggestions can be made to the researchers from the data obtained:

- The generalizability of the scale can be questioned by testing it on different groups.
- Relationships between personal, social, economic, etc. properties that may affect pre-service teachers' reading tendencies can be examined.

Conflict of interest statement

The author reports no conflict of interest. The author declares that the results of the study are presented clearly, honestly, and without fabrication, falsification, or inappropriate data manipulation.

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Appendix: Reading Tendency Scale

Items	Never	Sometimes	Most of the time	Always
1. I read to be informed	1	2	3	4
2. I read to express my feelings and thoughts better	1	2	3	4
3. I read books on universal values	1	2	3	4
4. I read the books recommended by the instructors.	1	2	3	4
5. I read the books recommended by my friends	1	2	3	4
6. I read the recommended books on social media	1	2	3	4
7. I read the books I see in advertisements on the internet	1	2	3	4
8. I read the books I like at book fairs or bookstores	1	2	3	4
9. I read to learn	1	2	3	4
10. I read to rest	1	2	3	4
11. I read in my spare time	1	2	3	4
12. I read to learn about the past	1	2	3	4
13. I read books that can keep my curiosity alive	1	2	3	4
14. I read works in which language is treated as an art	1	2	3	4
15. I take notes on what I read	1	2	3	4
16. I recommend the books I read to the others	1	2	3	4
17. I read all kinds of works	1	2	3	4
18. I love to read	1	2	3	4
19. I enjoy reading aloud tasks in lessons	1	2	3	4
20. I perform reading tasks related to the lessons	1	2	3	4
21. I follow some periodicals regularly	1	2	3	4
22. I read about the topics discussed in class	1	2	3	4
23. I read at every opportunity	1	2	3	4
24. I think I am a good reader	1	2	3	4
25. I read to get a career	1	2	3	4
26. I read to continue my school life successfully	1	2	3	4
27. I would like to have a rich library of my own	1	2	3	4
28. I use various techniques in order not to forget what I read.	1	2	3	4