

Readability of primary school 3rd grade Turkish and Social Studies textbooks

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Abstract

Textbooks are among the most commonly used educational tools. Therefore, texts in textbooks should ease learning, be readable and comprehensible. Readability can be simply defined as the level of a text's easiness/difficulty for its reader. Some significant studies on the readability of Turkish textbooks are Zorbaz (2007), Okur and Ari (2013), Bağcı and Ünal (2013) and Baş and İnan-Yıldız (2015). Studies on other textbooks include Kurnaz and Erdem (2012) (a study on language and expression textbooks), Köse (2009) (on biology textbooks) and Geçit (2010) (on social studies textbooks). The results of them reveal that some texts are not appropriate for students' educational levels and the level of difficulty varies according to text type. The aim of this study is to determine the readability levels of texts in primary school 3rd grade Turkish and Social Studies textbooks that are accepted to be used in 2015-2016 school year. The formula adapted to Turkish by Ateşman (1997) is used in this study. Only prose is analyzed and poetry is left out of the scope. The results show that the readability levels of both textbooks that are analyzed are easy. However, texts are not given in an order from easy to difficult.

Keywords: Readability, Turkish textbooks, Social Studies textbooks

1. Introduction

Textbooks, which are the main instruments of education and the most widely used teaching materials, are of great importance especially in primary school. These significant materials should have some qualifications. For example, they should be readable and comprehensible. They should also guide students to search and learn. Content of the textbooks should be designed in an order such as from easy to difficult (from simple to complex), from known to unknown, from concrete to abstract, etc. (Küçükahmet, 2004, p. 9). Length of sentences in a textbook should be appropriate for the standards. In primary school texts, the number of words in the longest sentence must not exceed 6 in the 1st grade, 8 in the 2nd grade, 10 in the 3rd grade, 12 in the 4th grade. The words and sentence structures should be appropriate for the level of students (Tertemiz, N., Ercan, L. & Kayabaşı, Y., 2004, p. 55).

Readability, a concept which is closely related to length of words and sentences in a text, is one of the most important qualities of a textbook. Hargis, Hernandez, Hughes, Ramaker, Rouiller and Wilde (1998) define readability as "the ease of reading words and sentences." Klare (1963) defines it as "the ease of understanding or comprehension due to the style of writing." Based on these definitions, readability can be simply defined as the level of a text's easiness/difficulty for its reader.

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In order to predict the readability level of a text, many formulas have been formed, such as Dale-Chall Readability Formula, Flesch Reading Ease Formula, Powers-Sumner-Kearl Readability Formula, Smog Readability Formula, Gunning Fog Index, Fry Graph Readability Formula, etc.

A formula cannot be applied to every language because of some structural differences between languages. Therefore, Ateşman (1997) adapted Flesch's formula, named as "ease of reading" into Turkish, by making necessary changes. Ateşman's (1997) formula is the first formula used for determining the readability levels of Turkish texts. It is frequently used in many studies on Turkish. Another formula for Turkish is Çetinkaya-Uzun Readability Formula (2010), which is formed just for Turkish. This formula is for only determining the readability levels of texts in 5-8 grades of school textbooks. As the aim of this study is to analyze 3rd grade textbooks, Ateşman's formula is preferred.

There are many studies on readability of Turkish textbooks. Temur (2002), by using Ateşman's (1997) formula, analyzed readability levels of 5th grade Turkish textbooks and found out that books published by different publishers for the same grades of students have different readability levels. Another finding of this research is that texts with very different readability levels are included in the same books and the order of these texts are given without considering the principle "from easy to difficult, from simple to complex" explained in Küçükahmet (2001) and Akyol (1998). Another study on Turkish textbooks is Lüle Mert (2013). In this study, Çetinkaya-Uzun Readability formula is used. The results reveal that different types of texts have different readability levels. Narrative texts are more compatible with the levels of target students when they are compared to informative texts. Other studies on Turkish textbooks are Zorbaz (2007), Solmaz (2009), Akkurt (2011), İskender (2013), Okur and Arı (2013), Bağcı and Ünal (2013), Baş and İnan-Yıldız (2015), Çiftçi, Çeçen and Melanlıoğlu (2007), Demir and Çeçen (2013), and Tosunoğlu and Özlük (2011).

Studies on the readability of social studies textbook include Geçit (2010) and Hızarcı (2009). Some studies on the readability of other textbooks are Günhan (2004), Güven (2010), Yürümez (2010), Erdem (2011), İzgi and Sezginsoy Şeker (2012), Geçit (2010) and Turan and Geçit (2010), Kurnaz and Erdem (2012) and Köse (2009).

2. Aim of the study

The aim of this study is to determine the readability levels of texts in primary school 3rd grade Turkish and Social Studies textbooks that are accepted to be used in 2015-2016 school year. Only prose is analyzed and poetry is left out of the scope. Sub-questions are as follows:

1. What is the length of words and sentences in the texts in the Turkish textbook?
2. What is the length of words and sentences in the texts in the Social Studies Textbook?
3. What are the scores and levels of readability of the texts in the Turkish textbooks?
4. What are the scores and levels of readability of the texts in the Social Studies textbooks?

3. Method

It is a descriptive study in which primary school 3rd grade Turkish and Social Studies textbooks that are accepted to be used in 2015-2016 school year are analyzed in terms of readability by

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applying the formula adapted to Turkish by Ateşman (1997) from Flesch's formula. The formula is given below.

$$\text{Readability Score} = 198,825 - 40,175 x_1 - 2,610 x_2$$

In this formula, x_1 means *average word length in syllables* and x_2 means *average sentence length in words*. To find the average word length, we divide the total number of syllables with the total number of words. To find the average sentence length, we divide the total number of words with the total number of sentences.

This formula is applied to at least 100-word-length texts. Therefore, the readability levels of a few texts that are too short are not calculated and left out of the scope of this study. For texts that have more than 100 words, only the first 100 words of the texts are chosen to be analyzed. If the last sentence is not finished when we count 100 words of a text, then the number of words (of that sentence) that are inside 100 words is divided into the number of total words of that sentence. For example, if it is a 4-word-sentence and the 3rd word of the sentence is the 100th word of the text, this sentence is counted as $\frac{3}{4}$ sentence, in other words, 0,75 sentence.

After average word length and average sentence length are found as explained above, the calculation is made by applying the formula. When the readability score is counted, the corresponding readability level determined by Ateşman (1997) is learned (See Table 1).

Table 1. Readability Scores and Readability Levels According to Ateşman (1997)

Readability Score	Readability Level
90-100	Very Easy
70-89	Easy
50- 69	Normal
30-49	Difficult
1-29	Very Difficult

4. Findings and discussion

Table 2 shows the length of words and sentences in the texts in the primary school 3rd grade Turkish textbook. The textbook average in terms of length of words is 2,598. The textbook average in terms of length of sentences is 7,316. Average readability score is 76,52432, which means most of the texts in this textbook are easy.

Table 2. Readability of 3rd grade Turkish textbook

No	Title	Length of Words (X1)	Length of Sentences (X2)	Readability Score	Readability Level
1	Komşu Kunduzlar	2,23	7,93	88,538	Easy
2	Dayanışmanın Böylesi	2,88	7,53	63,468	Normal
3	Yeni Kırmızı Topum	2,55	7,32	96,379	Very Easy
4	Mustafa Kemal'in Okul Hayatı	2,58	7,24	76,277	Easy
5	Verdiğin Sözü Unutma	2,68	4,69	78,915	Easy
6	Atatürk ve Çocuk	2,81	7,41	66,593	Normal
7	Gökkuşuğu Nasıl Oluşur?	2,72	8,47	67,442	Normal
8	Söğüt Ağacındaki Usta	2,71	6,85	72,072	Easy
9	Hava Tahmini Uzmanları	2,65	7,94	71,638	Easy
10	Kelaynak Kuşu	2,34	6,42	88,059	Easy
11	Cam Bülbül	2,50	7,90	77,768	Easy

Table 2. (Continues)

12	Küçük Bulutun Başından Geçenler	2,71	6,20	73,769	Easy
13	Yeryüzünün Gizemli Toprakları	2,54	7,75	76,552	Easy
14	Güneş Uykuda	2,66	7,14	73,324	Easy
15	Bugün Yağmur Yağarmı?	2,63	9,82	67,535	Normal
16	Çevreci Ayı	2,55	7,00	78,109	Easy
17	Aynadan Utanan Kız	2,40	5,97	86,823	Easy
18	Küçük Serçe	2,59	6,97	76,58	Easy
19	Nasrettin Hoca	2,65	8,22	78,867	Easy
20	Hatırlı Misafir	3,04	5,17	63,199	Normal
21	Keloğlan ve Sihirli Taş	2,30	7,69	86,351	Easy
22	Bozkırın Tuz Denizi	2,44	7,08	83,926	Easy
23	Anadolu	2,53	10	71,082	Easy
24	Van	2,43	8,88	78,023	Easy
25	Tahta At	2,83	5,31	71,819	Easy
-	Textbook Average	2,598	7,316	76,52432	Easy

As can be seen from Table 3, average length of words in the texts in primary school 3rd Grade Social Studies Textbook is 2,732. The textbook average with regard to length of sentences is 7,096. Average readability score is 73,097 and average readability level of the texts in this textbook is easy.

Table 3. Readability of 3rd grade Social Studies textbook

No	Title	Length of Words (X1)	Length of Sentences (X2)	Readability Score	Readability Level
1	Çantamı Hazırlıyorum	3,00	6,86	60,395	Normal
2	Ne Kadar Farklıyız?	2,61	6,87	76,037	Easy
3	Değerli Arkadaşım	2,81	6,45	69,098	Normal
4	İletişim Becerisi	2,98	7,06	60,676	Normal
5	Öfkene Hakim Ol	2,70	5,92	74,901	Easy
6	Saygı Duyarım	2,79	5,55	72,251	Easy
7	Demokrasinin Üstünlükleri	3,01	6,41	71,168	Easy
8	Ama Bu Haksızlık	2,76	5,41	73,822	Easy
9	Sorunlarımı Çözebilirim	2,60	6,60	77,144	Easy
10	Okulumun Tarihi	2,66	8,93	68,652	Normal
11	Bir Sorunumuz Var	2,98	7,45	59,658	Normal
12	Oyunun Sonu	2,62	6,66	76,184	Easy
13	Kurallar Seni Korur	2,94	6,25	64,397	Normal
14	Okul Bizim Yuvamız	2,72	5,32	75,664	Easy
15	İlk Yardım	2,38	6,84	85,356	Easy
16	Özel Günler	2,83	5,26	71,401	Easy
17	Milli Bayramlarımız	2,44	9,76	75,325	Easy
18	Atatürk'ten Mektup Var	2,83	7,62	65,242	Normal
19	Bilinçli Tüketici	2,98	7,69	59,032	Normal
20	Nasıl Öğrendin?	2,78	6,41	70,408	Easy
21	Bilgiye Ulaşmak	3,13	6,78	55,381	Normal
22	Trafik Kuralları	2,65	7,77	72,081	Easy
23	Kesinlikle Hayır!	2,74	6,42	71,989	Easy
24	Kime Söylemeliyim?	2,57	6,02	78,385	Easy
25	Bir Fikrim Var!	2,79	6,48	46,439	Difficult

Table 3. (Continues)

26	Ona Güveniyoruz	2,64	6,30	76,320	Easy
27	29 Ekim Cumhuriyet Bayramı	2,78	6,78	69,442	Normal
28	Benim Evim Güzel Evim	2,59	7,95	74,022	Easy
29	Hayalimdeki Ev	2,62	8,42	71,590	Easy
30	Ev Adresim	2,62	6,37	76,940	Easy
31	Evimizin Tarifi	2,76	6,96	69,776	Easy
32	Hangi Yöndeyim?	2,55	7,47	76,882	Easy
33	O da Çocukmuş	2,70	6,66	72,969	Easy
34	Birlikte Yaşama Sanatı	2,91	6,49	64,977	Normal
35	Kendimi Seviyorum	2,56	7,21	77,159	Easy
36	Sonunda Başardım	2,50	8,51	76,176	Easy
37	Ben Büyüyünce	2,86	6,33	67,403	Normal
38	Konuşmadan Anlaşmak	2,69	7,69	70,683	Easy
39	Ben mi, Siz mi?	2,56	5,83	80,761	Easy
40	Farklı Bakmak	2,79	5,88	71,390	Easy
41	Evde Sorun Var	2,80	5,55	71,849	Easy
42	Ben Yardım Ederim	2,47	5,76	84,559	Easy
43	Planlı Yaşamak	2,57	6,52	78,558	Easy
44	Paranı Tutumlu Harca	2,68	7,96	70,380	Easy
45	Saygılı Davranmak	2,57	6,20	79,393	Easy
46	İnsan Hak ve Hürriyetleri	2,64	9,66	67,550	Normal
47	Aferin	2,70	6,66	72,969	Easy
48	Amacıma Ulaştım	2,46	6,82	82,194	Easy
49	Denemeye Değer	2,50	6,90	80,378	Easy
50	Özenli Olalım	2,64	5,97	77,181	Easy
51	Yangın Var	2,75	6,66	70,961	Easy
52	Deprem	2,78	6,76	69,494	Normal
53	Ana Vatan	2,53	9,09	73,457	Easy
54	Vatandaşlık Görevlerimiz	2,92	7,90	60,895	Normal
55	Aynı Dünyanın İnsanlarıyız	2,88	9,52	58,273	Normal
56	Büyüdükçe	2,96	5,69	65,056	Normal
57	Üzgün Görünüyorsun	2,76	6,94	69,829	Easy
58	Benim Hayatım	2,41	6,12	86,030	Easy
59	Bana Göre Bir Meslek	2,80	5,88	70,988	Easy
60	Oralarda Hava Nasıl?	3,36	8,51	41,626	Difficult
61	Atatürk'ün Hayatı	2,74	13,23	54,215	Normal
62	Ulusal Lider	2,72	6,35	72,975	Easy
63	Bayrağım	2,69	7,90	70,135	Easy
64	Cumhuriyeti Yaşatmak	2,80	9,25	62,192	Normal
65	Hava Koşulları ve Trafik	2,81	7,41	66,593	Normal
66	Geçmişten Günümüze Ulaşım	2,71	8,50	67,766	Normal
67	Bilgisayar Çağı	2,94	6,30	64,267	Normal
68	Geçmişten Günümüze İletişim	2,77	6,45	70,705	Easy
69	Yerleşim Birimleri	2,48	7,29	80,164	Easy
70	Topaç	2,42	6,94	83,488	Easy
71	Müzeler	2,98	7,27	60,128	Normal
72	Birey, Toplum ve Çevre	2,84	8,58	62,334	Normal
73	Doğal Afetlerden Korunma	2,90	7,81	61,933	Normal
-	Textbook Average	2,732	7,096	73,097	Easy

The results indicate that readability levels of both textbooks designed for the same grade of students are the same. When the reading ability and reading comprehension of 3rd grade students are concerned, easy level as the average readability level of the textbooks may be considered appropriate. Total number of texts analyzed in Turkish textbook is 25; one text is found very easy, 19 of them are easy and 5 of them are normal. 73 texts in the Social Studies textbook are analyzed. 46 of them are easy, 25 of them are normal and 2 of them are difficult.

The textbooks may contain texts with different levels of readability; however, there should be an order from easy to difficult. The problem is that neither of the textbooks is designed to follow such an order.

5. Conclusion

The readability levels of the two textbooks that are analyzed are both easy. This indicates that there is a consistency between the textbooks designed for the same grades. However, texts are not given in an order from easy to difficult, which violates a common teaching principle named as *easy to difficult* (simple to complex) *principle*.

Readability formulas reveal just the quantitative properties of a text. They can be used as a starting point for determining the appropriateness of a text for the target readers. However, there are many criteria that should be considered when choosing a text to include in a textbook. Therefore, qualitative analysis should also be made.

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