The Relations between Reading Comprehension and Reading Fluency: Their Reciprocal Roles as an Indicator and Predictor[1]

Kasım YILDIRIM[2], Seyit ATEŞ[3],
Fatih Çetin ÇETİNKAYA[4] & Dudu KAYA TOSUN[5]

ABSTRACT

In the current research, we aimed to explore the relations between reading comprehension and reading fluency and their connections with each other as an indicator and a predictor. For this overall aim, a total of 100 students from the seventh-grade level were enrolled. This research took place in fall semester, 2015, in Turkey's Denizli province. The participants from all grade levels were willing and available to take part in the present study. Informed consent letters were obtained from all of the participants and their parents or guardians. The participants were relatively homogenous and of middle socioeconomic (SES) status. They ranged in age from 13 through 15 years. For the measures of fluency, components were taken from students' oral reading of the same texts including narrative and expository according to grade levels. After then, the students' reading comprehension levels were assessed. Every comprehension test for the grade levels included a narrative text and an expository text, and 12 questions were prepared for every text, six of which were literal and another five of which were inferential. The path analyses were used to identify the relations between reading fluency and reading comprehension. According to the results of the research, some recommendations were given.

Key Words: Reading comprehension, Reading fluency, Reading success

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[2] Ph.D. - Mugla Sitki Kocman University, kasimyildirim@mu.edu.tr - ORCID: 0000-0003-1406-709X
[3] Ph.D. - Gazi University, seyitates@gmail.com - ORCID: 0000-0002-4498-0376
[4] Ph.D. - Duzce University, fatihcetincetinkaya@gmail.com - ORCID: 0000-0002-9843-6747
[5] Ph.D. - Ministry of National Education, dudukaya@gmail.com - ORCID: 0000-0002-1929-9407

INTRODUCTION

Learn to read is one of the important achievements in childhood period. Because, reading is the requirement of learning and academic success (Paris, 2005). The overall aim of learn to read is making meaning from texts (Veenendaal, Groen, & Verhoeven, 2016). Without drawing meaning, reading just the words in the texts has not any purpose. The thing, which motivates the reader reading more, is making meaning (Caldwell, 2008).

There are some underlying factors making reading process difficult or easy. Reading comprehension is a complex task including a variety of cognitive skills. Beside these skills affecting reading comprehension, reading fluency also is another important component helping the readers to extract the meaning from the texts (Cain, Oakhill, & Bryant, 2004; Caldwell, 2008). Because of this reason, the success in reading fluency is a crucial phase for becoming proficient readers (Kuhn, & Schwanenflugel, 2008).

Reading fluency not only is word recognition accuracy and automaticity but also it includes chunking the text into significant segments. Additionally, it requires giving attention the significant connections in sentences and between sentences based on morphologic knowledge and punctuation while it is read (Pretorius, & Spaull, 2016). This definition stresses the component of reading fluency including accuracy, automaticity, and prosody (Hudson, Pullen, Lane, & Torgesen, 2009; Kuhn, Schwanenflugel, & Meisinger, 2010; Nichols, Rupley, & Rasinski, 2009; Rasinski, 2014). In that regard, it is contended that reading fluency is the ability to read a text accurately, quickly, and with expression. Fluency is important because it provides a bridge between word recognition ad comprehension (Grabe, 2004; Veenendaal, Groen, & Verhoeven, 2014).

Considering the studies related to exploring the relations between reading fluency and reading comprehension, there have been a variety of studies in different grade levels at elementary school. In the study (Pretorius, & Spaull, 2016), the relations between reading comprehension and reading fluency was investigated at fifth-grade students. The study conducted by Baker, Smolkowski, Katz, Fien, Seeley, Kame'enui, and Beck (2008) investigated the effects of reading fluency on reading development, reading difficulties, and reading comprehension from first grade through third grade. According to the results obtained from the studies of Veenendaal, Groen, and Verhoeven (2015) and Duncan, McGeown, Griffiths, Stothard, and Dobai (2016), there were positive relations between reading fluency and comprehension in third and fourth grades. Similar to these results, the study of Park, Chaparro, Preciado, and Cummings (2015) documented that reading fluency had the positive and significant effects on reading comprehension levels of the third-grade students. Additionally, Cañizo Suarez, and Cuetos' (2015) study revealed that the lack of reading fluency resulted in reading comprehension problems. All the studies, which are given, have shown the positive relations between reading fluency and reading comprehension.

The reading-driven scientific studies national and international scale have documented that reading fluency is a strong and significant predictor of reading comprehension (Roehrig, Petscher, Nettles, Hudson, & Torgesen, 2008; Pearce, & Gayle, 2009; Petscher, & Kim, 2011; Grasparil, & Hernandez, 2015; Ulu, 2016). In contrast to this, some of the studies documented that reading fluency is a result of reading comprehension sufficiency (e.g., Pikulski, & Chard, 2005). Fuchs, Fuchs, Hosp, and Jenkins (2001) claimed that having sufficient background knowledge and making extracting meaning from a text help any reader to read fluently. The

other study focusing on the proficient reader and the readers with reading difficulties showed that the readers having high reading comprehension levels had high-level reading fluency. It may be contended that the relations between reading fluency and reading comprehension is reciprocal as the indicator and the predictor. However, given the studies relevant to reading fluency and reading comprehension in Turkey, there is a need for doing research to explore their reciprocal relations. That is why, this research aimed to explore the reciprocal relations between reading fluency and reading comprehension.

The Purpose of the Study

In this research, the researchers investigated the reciprocal relationship as an indicator and a predictor between components of reading fluency and reading comprehension. The main research questions addressed in this investigation were:

1. What sort of bidirectional associations do occur between reading fluency and reading comprehension components in expository text reading?

2. What sort of bidirectional associations do occur between reading fluency and reading comprehension components in narrative text reading?

METHOD

Participants

The present study aimed to explore the relations among the components of reading fluency and reading comprehension among Turkish students. A total of 100 students from seventh grade level were enrolled in the study. This research took place in fall semester, 2015, in Turkey's Denizli province. The participants were willing and available to take part in the present study. Informed consent letters were obtained from all of the participants and their parents or guardians. The participants were relatively homogenous and of middle socioeconomic (SES) status. They ranged in age from 13 through 14 years. The participants were not identified as learning disabled and their reading development was felt to be within grade level expectations according to their classroom teachers and the school counselor. All of the participants in the research were considered typically developing readers by their teachers. The predominant language (native language) of the students from all grade levels was Turkish and the students were not fluent speakers of English.

Measures and Procedures

Students were asked to read a grade-appropriate narrative text and expository text and answer a set of comprehension questions related to the passages. The texts for reading comprehension and the components of reading fluency from seventh grade level were chosen from a collection of graded Turkish expository and narrative texts (Akyol, Yildirim, Ates, Cetinkaya, & Rasinski, 2014). We employed measures of reading comprehension, developed by the authors of the present study in Turkish. Twelve comprehension questions were prepared for every text, of which half were literal and another half were deep/inferential. Every test consisted of 12 questions included multiple-choice and open-ended questions. The actual student reading had a fixed time condition, as previous research has shown that additional/unlimited time did not enhance the performance of nondisabled students and fixed time limits allowed ample time for the great majority of students to complete the test (e.g., Alster, 1997; Bridgeman, Trapani, & Curley, 2004).

Prior to the study, the texts and accompanying questions were reviewed by the experts in reading education to the extent to which the texts adequately corresponded to reading domain objectives of the grade levels Turkish language arts curriculum and the questions adequately measured comprehension of the texts. The experts also verified that each comprehension question was appropriate to test development standards and the students' reading levels. Correct responses to each question were scored as 1 point, and incorrect answers were scored as 0 points. Total scores ranged from 0 to 12. In the present study, we used Kuder-Richardson Formula 20 (KR20) as a measure of internal consistency reliability for measures with dichotomous choices. Although Cronbach's Alpha is usually used for scores that fall along a continuum, it will produce the same results as KR20 with dichotomous data (0 or 1) (Kuder, & Richardson, 1937; Cortina, 1993; Tabachnick, & Fidell, 2007). The comprehension tests' internal consistency reliabilities ranged from .72 to .77 KR20 coefficients for the total of 12 questions. These coefficient values indicated that the scores obtained from the comprehension tests had acceptable internal consistency and the scores of the students from the tests had a homogeneous construct.

Students were tested individually and asked to read orally the passage corresponding to their grade level placement. The students were asked to read the text in their best or most expressive voice and were told that they would be asked questions about what they had read following their reading. During the oral reading, the researcher administering the test marked any uncorrected word recognition errors made by the student as well as marking the text position of the student at the end of one minute of reading in order to determine reading rate, a measure of word recognition automaticity. Prosody or expressive reading, a second element of fluency, was measured by independent evaluators listening to the student reading of the grade-level text and then rating the prosodic quality of the oral reading using a multi-dimensional fluency scale or rubric that describes levels of competency on various elements of prosody: expression and volume, phrasing, smoothness, and pace (Rasinski, 2004a). The rubric was developed by Rasinski (2004b) and adapted by Yildiz, Yildirim, Ates, and Cetinkaya (2009) for Turkish students. Previous research with readers of English has demonstrated the rubric to be a reliable and valid measure of prosody (Rasinski, Homan, & Biggs, 2009; Paige, Rasinski, & Magpuri-Lavell, 2012). The Turkish adaptation of the scale has the following four main dimensions: (a) expression and volume, (b) phrasing, (c) smoothness, and (d) pace. Students' scores can range between a minimum of 4 and a maximum of 16.

FINDINGS

The data obtained from the students' reading narrative texts included measures of word recognition automaticity (words read correctly per minute), prosody (rating of expressiveness using the multi-dimensional fluency scale–scores ranged from 4-16), answers to comprehension questions (scores ranged from 0-12). Means and standard deviations by for the three variables according to narrative text reading were presented in Table 1.

Table 1. *Means and standard deviations for reading fluency and reading comprehension components in narrative text reading*

Grade		N	M	SD
	Literal Comprehension	100	2.52	1.07
7	Deep Comprehension	100	2.44	1.16
	Prosody	100	12.75	2.63
	Automaticity	100	111.17	26.19

In order to determine the relationship between measures of fluency and comprehension, correlations were calculated among the key variables by grade level and presented in Table 2. All correlations were found to be statistically significant and substantial.

Table 2. *Correlations between measures of fluency and comprehension components in narrative text reading*

Grade	Automaticity-Literal	Automaticity-Deep	Prosody-Literal	Prosody-Deep
7	.26**	.54**	.20*	.53**

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

Given the robust correlations between fluency and reading comprehension components, we ran structural model with AMOS and Mplus at seventh grade level to determine the relationship of the fluency variables and comprehension. Those results were presented in path diagram below.
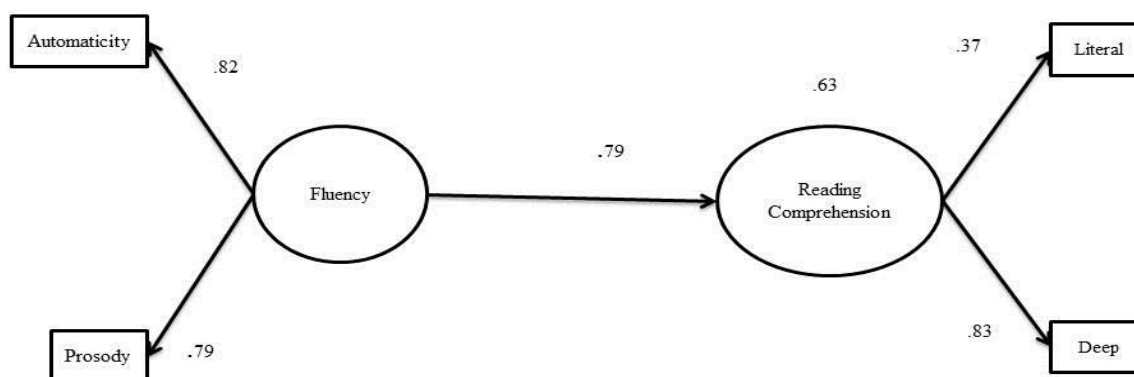

Figure 1. *The relationship between reading fluency and reading comprehension in expository text reading*

Note. The single-headed arrows show standardized regression coefficients and direct effects in the path model. All the coefficients are significant in the model. Since there were not enough constrains and residuals in the model, the model did not produce sufficient degree of freedom value. Due to this reason, the fit indices, which would be wrong, were not reported.
*p<.05. **p<.01. ***p<.001.

The results of the model indicated that reading fluency explained 63% of variance in reading comprehension. Additionally, it made significant contribution to the prediction of

reading comprehension (β=.79, *p*=.010). In addition, the indicators of reading fluency and reading comprehension in the model were statistically significant. The measurement (CFA) model showing the relations as indicators between reading fluency and reading comprehension components were presented in the path diagram below.
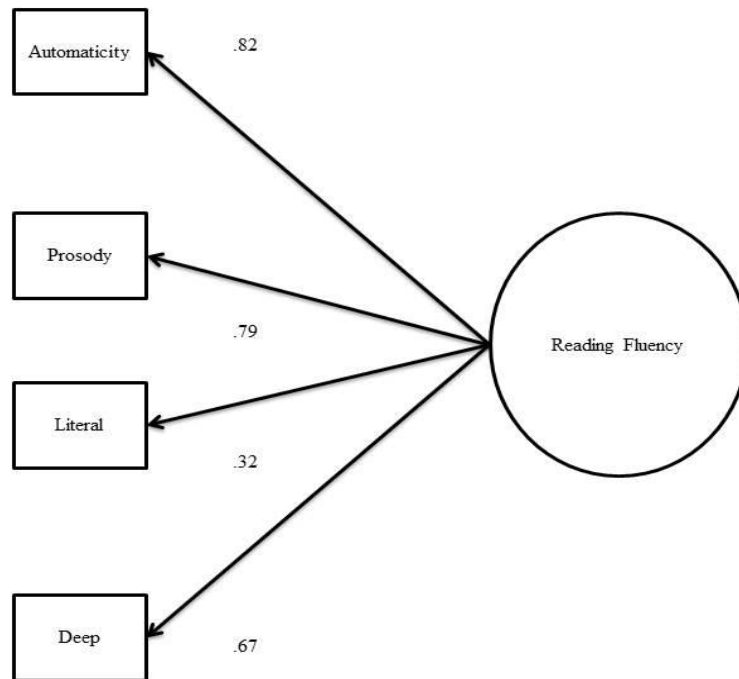

Figure 2. *The CFA model showing the roles of the variables as indicators in narrative text reading*
Not. ***p<.001

For the full sample, the model yielded good fit indices. When reviewed overall model fit summary indices in the model, the χ^2 test yielded a value of 2.455, which was evaluated with 2 degrees of freedom, had a corresponding p-value of .293. The χ^2/df was 1.227. Additionally, the RMSA was .048. The TLI was .98 and CFI was 99. Moreover, SRMR was .0324. We would say that all of the indices suggested that the model appeared by the structural equation model analysis was a good fit to the data. Means and standard deviations by for the three variables according to expository text reading were presented in Table 3.

Table 3. *Means and standard deviations for reading fluency and reading comprehension components in expository text reading*

Grade		N	M	SD
7	Literal Comprehension	100	2.41	1.22
	Deep Comprehension	100	1.22	1.06
	Prosody	100	11.89	2.81
	Automaticity	100	92.47	25.68

In order to determine the relationship between measures of fluency and comprehension, correlations were calculated among the key variables by grade level and presented in Table 4. All correlations were found to be statistically significant and substantial.

Table 4. *Correlations between measures of fluency and comprehension components in expository text reading*

Grade	Automaticity-Literal	Automaticity-Deep	Prosody-Literal	Prosody-Deep
7	.33**	.38**	.37*	.38**

*Note. **p<.01*

Given the robust correlations between fluency and reading comprehension components, we ran the structural model with AMOS and Mplus at seventh grade level to determine the relationship of the fluency variables and comprehension. Those results were presented in path diagram below.
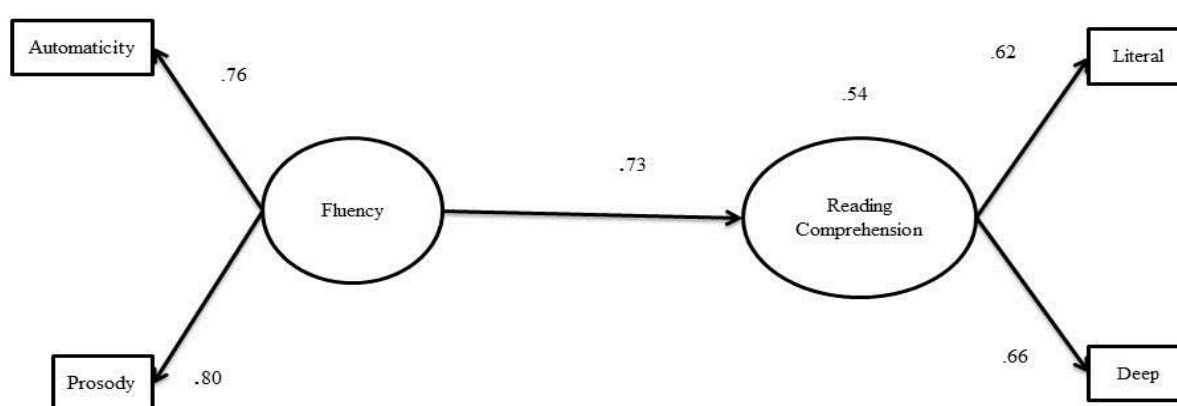

Figure 1. *The relationship between reading fluency and reading comprehension in expository text reading*

Note. The single-headed arrows show standardized regression coefficients and direct effects in the path model. All the coefficients are significant in the model. Since there were not enough constrains and residuals in the model, the model did not produce sufficient degree of freedom value. Due to this reason, the fit indices, which would be wrong, were not reported.
***p<.001.

The results of the model indicated that reading fluency explained 54% of variance in reading comprehension. Additionally, it made significant contribution to the prediction of reading comprehension (β=.73, *p*=.000). In addition, the indicators of reading fluency and reading comprehension in the model were statistically significant. The measurement (CFA) model showing the relations as indicators between reading fluency and reading comprehension components were presented in the path diagram below.

The measurement (CFA) model showing the relations as indicators between reading fluency and reading comprehension components were presented in the path diagram below.
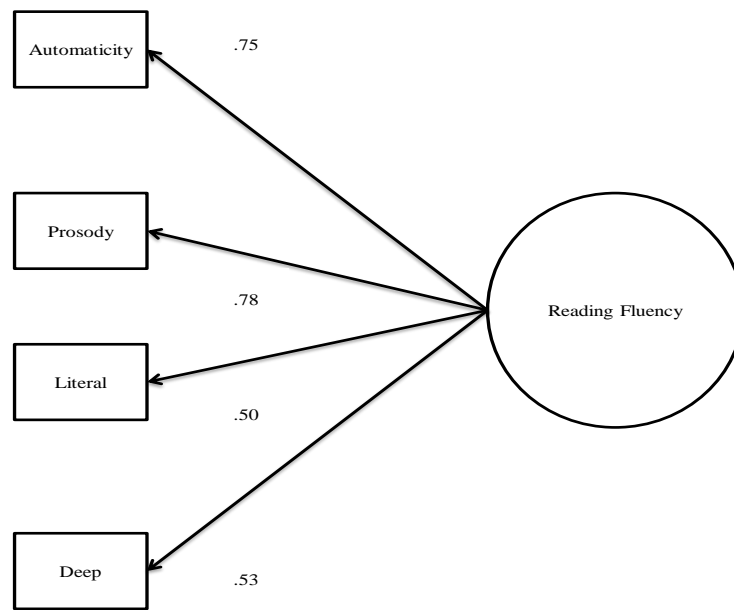
Figure 2. *The CFA model showing the roles of the variables as indicators in expository text reading*

Not. ***p<.001

When reviewed overall model fit summary indices in the model, the χ^2 test yielded a value of 5.242, which was evaluated with 2 degrees of freedom, had a corresponding *p*-value of .073. The χ^2/df was 2.621. Additionally, the RMSA was .128. The TLI was .88 and CFI was 96. Moreover, SRMR was .0501. We would say that all of the indices suggested that the model appeared by the structural equation model analysis was a good fit to the data.

RESULT AND DISCUSSION

Reading fluency is acknowledged as one of the underlying factors for reading comprehension. It is contended that there are reciprocal relations between reading comprehension and reading fluency. In other words, while reading comprehension skill may help reader to read a text accurately, quickly, and with expression, reading a text accurately, quickly, and with expression may help reader to derive meaning (Kuhn, & Schwanenflugel, 2015). The current research aimed to explore the reciprocal relations between reading fluency and reading comprehension. The present research findings showed that there were statistically significant reciprocal relations between reading comprehension and reading fluency. These findings were consistent with the previous research (Paige, Rasinski, & Magpuri-Lavell, 2012; Dickens, & Meisenger, 2016; Duncan et al., 2016; Pretorius, & Spaull, 2016).

The other result of the research showed that while reading fluency accounted for 63% of the variance in reading comprehension in narrative text reading, it predicted 54% of the variance in reading comprehension in expository text reading. This finding documented that reading fluency is good predictor of reading comprehension. Any reader having deficiency in reading fluency spends most of her/his attention to reading words one by one. Since the reader makes more pauses and repetition when she/he reads, they result in decreasing of

word recognition automaticity and lead to reading comprehension problems (Schwanenflugel, & Kuhn, 2008). Previous research also has underscored that reading fluency is a strong predictor of reading comprehension (Roehrig et al., 2008; Pearce, & Gayle, 2009; Petscher, & Kim, 2011; Grasparil, & Hernandez, 2015; Ulu, 2016).

Additionally, another result of the study revealed that prosody, automaticity, literal and inferential comprehension skills were good and significant indicators of reading fluency in both narrative and expository text reading. In addition, they were strong indicators of reading comprehension as well. In that regard, it would be argued that good readers in reading comprehension may have more advantage to read a text fluently. The research, which argue that reading comprehension is an indicator of reading fluency, has indicated that reading comprehension makes readers read a text fluently (Fuchs et al., 2001; Jenkins, Fuchs, Van Den Broek, Espin, & Deno, 2003; Pikulski, & Chard, 2005; Canizo et al., 2015). The research exploring reciprocal relations between reading fluency and reading comprehension supports this argument (Yildirim, & Rasinski, 2014; Yildiz, Yildirim, Ates, Fitzgerald, Rasinski, & Zimmerman, 2014). The study of Klauda and Guthrie (2008) showed the reciprocal relations between reading comprehension and reading fluency. In the research, reading fluency appeared as a strong predictor of reading comprehension and as well as reading comprehension was a good indicator of reading fluency. All previous research findings were consistent with the present research findings.

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TÜRKÇE UZUN ÖZET

Okuduğunu Anlama ve Akıcı Okuma Arasındaki İlişkiler: Gösterge ve Yordayıcı Değişken Olarak Karşılıklı İlişkileri[6]

Kasım YILDIRIM[7], Seyit ATEŞ[8], Fatih Çetin ÇETİNKAYA[9] & Dudu KAYA TOSUN[10]

GİRİŞ

Okumayı öğrenmek, çocukluk döneminin en büyük başarılarından biridir. Çünkü okuma, öğrenme ve akademik başarı için temel bir beceridir (Paris, 2005). Alfabetik kuralların kazanılmasıyla başlayan okumayı öğrenme sürecinin nihai amacı, yazılı metinlerden anlam çıkarmayı öğrenmektir (Veenendaal, Groen, & Verhoeven, 2016). Okuma, bu süreci kolaylaştıran ya da zorlaştıran çeşitli faktörlerle etkileşim halindedir. Okuduğunu anlama, pek çok farklı bilişsel beceri ve süreçleri içeren karmaşık bir görevdir. Okuyucunun anlamı yapılandırmasında etkili olan bu bilişsel becerilerle birlikte özellikle akıcı okumanın okuduğunu anlamada önemli bir gösterge olduğu belirtilmektedir (Cain, Oakhill, & Bryant, 2004; Caldwell, 2008). Bu nedenle öğrencilerin akıcı okuma aşamasında başarılı olmaları yetkin bir okuyucu olmaları yönünde önemli bir eşiktir (Kuhn, & Schwanenflugel, 2008). Akıcı okuma (hızlı, doğru ve doğal tonlamayla okuma becerisi) okuduğunu anlamanın bir göstergesi olarak ifade edilmektedir (Grabe, 2004; Veenendaal vd., 2014).

Akıcı okuma ve okuduğunu anlama arasındaki ilişkileri araştırmaya yönelik çalışmalar incelendiğinde ilkokulda farklı sınıf seviyelerinde çeşitli çalışmalara rastlanmaktadır. Pretorius ve Spaull (2016) tarafından yapılan bir çalışmada beşinci sınıf öğrencilerinde okuduğunu anlama ve akıcı okuma arasındaki ilişkiler incelenmiştir. Baker, Smolkowski, Katz, Fien, Seeley, Kame'enui ve Beck (2008) tarafından yapılan çalışmada, akıcı okuma gelişimi, okuma zorlukları ve birinci sınıftan üçüncü sınıfa kadar okuduğunu anlama üzerindeki etkileri incelenmiştir. Veenendaal, Groen ve Verhoeven (2015) ve Duncan, McGeown, Griffiths, Stothard ve Dobai (2016) çalışmalarından elde edilen sonuçlara göre, üçüncü ve dördüncü sınıflarda akıcı okuma ve anlama arasındaki olumlu bir ilişki olduğu belirtilmektedir. Bu sonuçlara benzer şekilde, Park, Chaparro, Preciado ve Cummings (2015) tarafından yapılan çalışmada akıcı okumanın üçüncü sınıf öğrencilerinin okuduğunu anlama düzeyleri üzerinde olumlu ve anlamlı bir etkisi olduğu sonucu elde edilmiştir. Bunun yanında Cañizo Suarez ve Cuetos'un (2015) çalışması, akıcı okuma eksikliğinin okuduğunu anlama problemlerine yol açtığını ortaya koymaktadır. Sözü edilen tüm çalışmalar, akıcı okuma ile okuduğunu anlama arasındaki pozitif ilişkileri göstermesi bakımından önemli görülmektedir.

Öte yandan akıcı okumanın, okuduğunu anlama üzerinde yordayıcı etkisi olduğunu gösteren hem uluslararası hem de ulusal ölçekte çalışmalar (Roehrig, Petscher, Nettles,

Hudson, & Torgesen, 2008; Pearce, & Gayle, 2009; Petscher, & Kim, 2011; Grasparil, & Hernandez, 2015; Ulu, 2016) bulunmaktadır. Akıcı okumanın yordayıcı rolünün aksine anlama yeterliliğinin bir sonucu olduğunu gösteren çalışmalar (Pikulski, & Chard, 2005) da bulunmaktadır. Jenkins, Fuchs, Broek, Espin ve Deno (2003) iyi okuyucular ve okuma güçlüğü çeken okuyucularla gerçekleştirdikleri çalışmanın sonunda okuduğunu anlamada daha iyi olan öğrencilerin akıcı okumada da daha iyi oldukları ifade edilmektedir. Bu durum akıcı okuma ve okuduğunu anlama ilişkisinin karşılıklı olarak hem bir yordayıcı hem de bir gösterge olarak gerçekleştiğini ortaya koymaktadır. Ancak özellikle ulusal ölçekte bu karşılıklı ilişkinin araştırıldığı çalışmaların yeterli sayıda olmaması nedeniyle daha fazla araştırmaya ihtiyaç duyulmaktadır. Bu bağlamda bu araştırmada, akıcı okuma ve okuduğunu anlama hem bir gösterge hem de bir yordayıcı olarak ele alınmakta ve nasıl ilişkiler gösterdiği incelenmektedir. Bu bağlamda bu araştırmanın amacı, okuduğunu anlama ile akıcı okuma arasındaki ilişkileri hem gösterge hem yordayıcı rol olarak karşılıklı olarak incelemektir. Bu amaç doğrultusunda şu sorulara yanıt aranmaktadır:

1. Bilgi verici metinlerde okuduğunu anlama ve akıcı okuma arasındaki karşılıklı ilişkiler nasıl ortaya çıkmaktadır?
2. Hikâye edici metinlerde okuduğunu anlama ve akıcı okuma arasındaki karşılıklı ilişkiler nasıl ortaya çıkmaktadır?

YÖNTEM

Araştırma, 2015 yılının sonbahar döneminde, Türkiye'nin Denizli ilinde 7. sınıflarda öğrenim gören toplam 100 öğrenci ile gerçekleştirilmiştir. Tüm sınıflardan çalışmaya katılmak için istekli olan öğrenciler seçilmiştir. Çalışma için tüm katılımcılardan ve ebeveynlerinden/velilerinden bilgilendirilmiş onay mektupları alınmıştır. Araştırma, orta sosyoekonomik düzeydeki okullardaki öğrencilerle yürütülmüştür. Katılımcılar 13-15 yaş aralığında olup herhangi bir öğrenme güçlüğü olmayan öğrencilerdir. Ayrıca sınıf öğretmenleri tarafından okuma gelişimlerinin sınıf seviyesine uygun olduğu belirtilmiştir.

Akıcı okumaya ilişkin araştırma verileri araştırmacılar tarafından önceden hazırlanan ve tamamı aynı olan hikâye edici ve bilgi verici metinlerin öğrenciler tarafından okunmasıyla elde edilmiştir. Sonrasında öğrencilerin okuduklarını anlamaları değerlendirilmiştir. Araştırmacılar tarafından geliştirilen anlama testi her metin için 6'sı basit, diğer 6 tanesi ise çıkarımsal anlamaya yönelik hazırlanan toplam 12 sorudan oluşmaktadır. Çalışmadan önce, metinler ve metinlerle ilgili sorular, Türkçe öğretim programları ve kazanımlarına uygunluğu ile soruların metinleri anlamaya yönelik yeterliliği bakımından okuma eğitimi uzmanları tarafından incelenmiştir. Uzmanlar ayrıca her anlama sorusunun test geliştirme standartlarına ve öğrencilerin okuma seviyelerine uygun olduğunu doğrulamıştır. Her soruya verilen doğru cevaplar 1 puan, hatalı cevaplar ise 0 puan olarak değerlendirilmiştir. Toplam puanlar 0 ile 12 arasında değişmektedir. Okuduğunu anlama testlerinin güvenirliklerini belirlemede Kuder-Richardson Formula 20 (*KR*20) iç tutarlılık güvenilirlik ölçüsü olarak kullanılmıştır. Anlama testinin iç tutarlılık güvenilirliği toplam 12 soru için *KR*20 katsayıları 0.72 ile 0.77 arasında değişmektedir. Bu katsayı değerleri, anlama testlerinden elde edilen puanların kabul edilebilir iç tutarlılığa sahip olduğunu ve öğrencilerin testlerden aldıkları puanlarının homojen bir yapıya sahip olduğunu göstermektedir.

Veri toplama aşamasında öğrencilerden metni en iyi veya en anlamlı sesleriyle okumaları istenmiş ve okuduktan sonra okudukları hakkında sorular sorulacağı

söylenmiştir. Sözlü okuma sırasında, testi uygulayan araştırmacı, öğrencinin yaptığı düzeltilmemiş kelime tanıma hatalarını işaretlemiş, aynı zamanda okuma hızını, kelime tanıma ölçüsünü belirlemek için öğrencinin bir dakikalık okuma sonunda okuduğu bölümü işaretlemiştir. İkinci bir akıcı okuma unsuru olan prozodi, öğrencinin okuduğu metnin kayıtlarını dinleyen bağımsız değerlendiriciler tarafından ölçülmüş ve daha sonra Rasinski (2004b) tarafından geliştirilen ve Türkçeye Yıldız, Yıldırım, Ateş ve Çetinkaya (2009) tarafından uyarlanan çok boyutlu akıcılık ölçeği ile değerlendirilmiştir. Ölçekte ifade ve ses düzeyi, anlam üniteleri ve tonlama, pürüzsüzlük ve hız olmak üzere dört alt boyut bulunmaktadır. Ölçekten alınabilecek en düşük puan 4 ve en yüksek puan 16'dır.

BULGULAR

Akıcı okuma ve okuduğunu anlama ölçütleri arasındaki ilişkiyi belirlemek için anahtar değişkenler arasındaki tüm korelasyonların istatistiksel olarak anlamlı olduğu bulunmuştur. Değişkenler arasındaki path modelin sonuçları, hikâye edici metinlerde akıcı okumanın okuduğunu anlamadaki varyansın % 63'ünü açıkladığını göstermektedir. Ayrıca akıcı okuma, okuduğunu anlamada gösterge olarak önemli katkılarda bulunmuştur (β=.79, p=.010). Modeldeki akıcı okuma ve okuduğunu anlama değerleri istatistiksel olarak anlamlı bulunmuştur. Tüm veriler için, modelin uyum iyilik değerlerinin uygun olduğu görülmektedir. Be nedenle tüm değerlerin, yapısal eşitlik modeli analizi ile ortaya çıkan modelin verilere uygun olduğu söylenebilir. Ayrıca otomatiklik, prozodi, basit ve çıkarımsal anlama arasındaki tüm korelasyonların da istatistiksel olarak anlamlı olduğu görülmektedir. Bilgi verici metinler için test edilen modelin sonuçları, akıcı okumanın okuduğunu anlamadaki varyansın % 54'ünü açıkladığını göstermektedir. Ek olarak, okuduğunu anlamada gösterge olarak önemli katkılarda bulunmuştur (β=.73, p=.000). Ayrıca, modeldeki akıcı okuma ve okuduğunu anlama değerlerinin de istatistiksel olarak anlamlı olduğu görülmektedir.

Akıcı okuma, okuduğunu anlama için temel faktörlerden biri olarak kabul edilmektedir. Okuduğunu anlama ve akıcı okuma arasında karşılıklı ilişkiler olduğu ileri sürülmektedir. Başka bir deyişle, okuduğunu anlama becerisi okuyucunun bir metni doğru, hızlı ve ifadeyle okumasına ve okuyucunun anlam çıkarmasına yardımcı olmaktadır (Kuhn, & Schwanenflugel, 2015). Bu nedenle bu araştırmada akıcı okuma ve okuduğunu anlama arasındaki karşılıklı ilişkilerin araştırılması amaçlanmaktadır. Bu araştırmadan elde edilen bulgular okuduğunu anlama ile akıcı okuma arasında istatistiksel olarak anlamlı ilişkiler olduğunu göstermektedir. Bu bulgular literatürdeki önceki çalışmalarla tutarlılık göstermektedir (Paige, Rasinski, & Magpuri-Lavell, 2012; Dickens, & Meisenger, 2016; Duncan vd., 2016; Pretorius & Spaull, 2016). Araştırmanın bir diğer sonucu olarak, akıcı okumanın hikâye edici metinde okuduğunu anlamadaki varyansın% 63'ünü oluşturduğunu, bilgi verici metinde okuduğunu anlamadaki varyansın% 54'ünü açıkladığını göstermektedir. Bu bulgu, akıcı okumanın okuduğunu anlamanın iyi bir yordayıcısı olduğunu ortaya koymakta ve ilgili literatür ile tutarlılık sağlamaktadır (Roehrig vd., 2008; Pearce, & Gayle, 2009; Petscher, & Kim, 2011; Grasparil, & Hernandez, 2015; Ulu, 2016).

Çalışmanın bir başka sonucu da hem hikâye edici hem de bilgi verici metinlerde prozodi, otomatiklik, basit ve çıkarımsal anlama becerilerinin akıcı okumanın önemli göstergeleri olduğunu ortaya koymuş olmasıdır. Ayrıca, bu değişkenler aynı zamanda okuduğunu anlamanın da güçlü göstergeleridir. Bu bağlamda, okuduğunu anlamadaki iyi okuyucuların bir metni akıcı bir şekilde okuma konusunda daha avantajlı olabileceği

söylenebilir. Araştırmada akıcı okuma, okuduğunu anlama kavramının güçlü bir yordayıcısı olarak ortaya çıkmış ve okuduğunu anlama, akıcı okumanın iyi bir göstergesi olmuştur. Önceki tüm araştırma bulguları bu araştırmada elde edilen bulgularla tutarlılık göstermektedir.

Anahtar Sözcükler: Okuduğunu anlama, Akıcı okuma, Okuma başarısı