



Reading Fluency as an Indicator of Reading Comprehension

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Abstract

This study examined the relationship between fourth grade primary school students' reading habits/conditions/situations and their comprehension regarding what they read. For this purpose, a correlational survey method was used in the study. 90 fourth-grade students who were attending a state primary school in the center of Kütahya participated to the study. Firstly, there are four separate tests: a fill in the blank test which measures reading as a process, a short answer test which measures remembering, multiple choice test which measures both superficial and in-depth meaning linking and open-ended questions which measure meaning linking skills) were administered to the students. Then, students were asked to read loudly 409-word narrative text and students' voices were recorded. The records were analyzed by experts to determine the number of words that students read per minute, students' reading mistakes and their prosody. Pearson correlation analysis was used to determine the relationship between fluent reading skills and reading comprehension. Moreover, multiple regression analysis was conducted to examine the predictive power of reading skills for comprehension. The findings of the study demonstrated that fluent reading was an indicator of comprehending; prosody predicted in-depth meaning linking better than the other fluent reading skills; correct reading skills predicted superficial meaning linking better. The findings also revealed that there was a weak correlation between reading speed and comprehension.

Key Words

Prosody, Reading Fluency, Reading Comprehension, Reading Measurement and Evaluation.

The Measurement of Reading

When the relevant literature was examined, it is seen that there are many approaches for measuring the reading skill. It is possible to classify these approaches as traditional and contemporary approaches (Aslanoğlu, 2007). Measuring mostly low level mental skills (i.e. recognizing word, phonetic knowledge, spelling, memory etc.) is the base in traditional approach (Levande, 1993). According to contemporary approaches used for the measurement of the reading, the main aim should be to identify to what extent students use reading comprehension skill in real life situations (Ozuru, Rowe, O'Reilly, & McNamara, 2008; Pearson & Valencia, 1988)

Whether it is the process or result of the reading should be evaluated as the other most important point that should be taken into account while deciding how and for what the reading skill will be measured. Reading is a process mostly with cognitive aspects including the perception of written symbols, to know letters voice, the comprehension of information, relating this information both with interlocutors and other prior knowledge; it also encompasses emotional and psychomotor behaviors. Therefore, reading as a result can be evaluated understanding, comprehending and using the information mentioned or implied in the text (Razi, 2008).

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Table 1.
The Relationship between Prozody Skill and Reading Comprehension

	Blank completing	Multiple choice	Deep understanding	Short answer	Prozody	
Blank completing	r	1				
Multiple choice	r	.651**	1			
Deep understanding	r	.283**	.194	1		
Short answer	r	.650**	.580**	.205	1	
Prozody	r	.249*	.096	.847**	.107	1

* $p > .05$; ** $p > .005$

Fluent Reading

It is possible to meet many definition of reading fluency in relevant literature. For example, Samuels (2006) defined reading fluency as comprehending the text when vocalizing. Vilger (2008) explained it as the reading of the readers in an appropriate speed and accurate manner with his/her natural voice. Allington (2006) also described reading fluency as expressing the meaning in the text with an appropriate voice tone with prozody. Hasbrouck and Tindal (2006); Fuchs, Fuchs, Hosp, and Jenkins (2009) added to this definitions that fluency in reading is the indicator all other components of reading including comprehension. In this respect, not reading fluently may be defined as making many reading mistakes reading monotony and with an unnatural voice, intermittent and very slowly (Allington, 2006; Vilger, 2008).

It can be said that there is consensus about what the necessary reading skills are for observing fluent reading. These include accuracy (knowing the word), reading speed (automaticity), and prozody (Allington, 2006; Bashir & Hook, 2009; Fuchs, Fuchs, Hamlett, Walz, & Germann, 1993; Hasbrouck & Tindal, 2006; Hudson, Lane, & Pullen, 2005; Klauda & Guthrie, 2008; Pikulski & Chard, 2005; Rasinski, 1989, 2004; Vilger, 2008).

Aim of the Study

The main aim of the reading is to understand what you read. The evaluation of reading comprehension has vital importance for teaching reading skills and developing it. In this study, the relationship between fourth grade primary school students'

reading habits/conditions/situations and their comprehension regarding what they read.

Method

In this study, on the basis of quantitative research method a correlational survey was employed.

Population and Sample

The population of the study was composed of fourth-grade students who were attending state primary schools in the center of Kütahya in the 2012-2013 academic year. The sample of the study was 90 fourth-grade students who were attending a state primary school in the center of Kütahya. 52 (57.8%) female and 38 (42.2%) male students participated in the study.

Procedure

Used wrong analysis scale was adapted to Turkish by Akyol (2008). The specialists criterions (Büyüköztürk, 2006; Karaca, 2006; Tekin, 1997; Yılmaz, 1998) has been considered for other tests' criterion and reliability analysis. Finally, each student was asked to read a text loudly titled "Chest" in an isolated environment where the voices of the students were recorded using the scores that experts gave to students according to scale of Zutell and Rasinski, (1991). Voice recordings were listened to by three field experts, who specialized in reading fluency. They identified the students' reading speeds and their reading mistakes. The prozody scores of the students was calculated. When there was a difference between experts' scoring, the record was

Table 2.
The Relationship between Reading Speed and Reading Comprehension

	Blank completing	Multiple choice	Deep understanding	Short answer	Reading speed	
Blank completing	r	1				
Multiple choice	r	.651**	1			
Deep understanding	r	.283**	.194	1		
Short answer	r	.650**	.580**	.205	1	
Reading speed	r	.197	.161	.398**	-.010	1

* $p > .05$; ** $p > .005$

Table 3.
The Relationship between the Number of Mistakes and the Reading Speed

		Blank completing	Multiple choice	Deep understanding	Short answer	The number of mistakes
Blank completing	r	1				
Multiple choice	r	.651**	1			
Deep understanding	r	.283**	.194	1		
Short answer	r	.650**	.580**	.205	1	
The number of mistakes	r	-.555**	-.791**	-.146	-.529**	1

* $p > .05$; ** $p > .005$

listened to again and it was tried to reach a consensus. The results were loaded into the computer. Correlation and multiple regression analysis were carried out.

Results and Interpretation

In this section findings of research are interpreted by giving tables.

As shown in Table, there was a statistically significant positive relationship between blank completing and needing deep understanding tests [between the scores from blank completing test and prozody $r = .249$, $p < .05$ and between the score from deep understanding and prozody $r = .847$, $p < .005$].

The reading speed of students and the scores that they got from tests are presented in Table 6. There was a statistically significant relationship between the scores gotten deep understanding and reading speed [the relationship between them $r = .398$ and $p < .005$].

When the Table 3 is examined, it is seen that there was a statistically significant negative relationship among

the number of mistakes and the scores from blank completing, multiple choice, and short answer tests [between number of mistakes and the scores from blank completing test $r = -.555$; between number of mistakes and the scores from multiple choice test $r = -.791$, and between number of mistakes and the scores from short answer tests $r = -.529$ and $p < .005$].

As presented in Table 4, especially in-depth meaning linking, was predicted by fluent reading skills more accurately. 76% of the variance in in-depth meaning linking was accounted by fluent reading skills. Prozody was better in the prediction of in-depth meaning linking compared to other skills. Also, it can be said that accurate reading skills were more effective than speed of reading for reading comprehension. Although the relationship between reading speed and scores from short answer test was not statistically significant, it was negative.

Discussion

It was found that the relationship between the speed of reading and especially in-depth meaning linking was

Table 4.
The Prediction of Reading Comprehension by Fluent Reading Skills

	Fluent Reading Skills	B	Standard Error	β	t	Zero-order r	Partial r
In-depth Meaning Linking	Constant	9.769	1.391		7.022**		
	Speed	.059	.014	.218	4.117**	.406	.212
	Prozody	.969	.065	.792	14.943**	.850	.770
	Accuracy	.071	.040	.091	1.763	.187	.091
Multiple choice	Constant	14.326	2.626		5.455**		
	Speed	.063	.027	.153	2.301*	.244	.149
	Prozody	.009	.123	.005	.072	.008	.005
	Accuracy	.916	.075	.790	12.21**	.800	.788
Short answer	Constant	16.210	2.394		6.770**		
	Speed	-.009	.025	-.033	.356	-.039	-.033
	Prozody	.095	.110	.081	.865	.093	.079
	Accuracy	.390	.068	.524	5.713**	.527	.523
Blank completing	Constant	26.582	9.341		2.846**		
	Speed	.162	.096	.147	1.680	.178	.143
	Prozody	.897	.435	.181	2.060*	.217	.176
	Accuracy	1.705	.270	.541	6.325**	.563	.540

* $p > .05$; ** $p > .005$

low. However, the literature clearly indicates that one of the specific characteristics for competency in reading is reading the text at an appropriate speed (Adams, 1990; Jenkins & Jewell, 1993; Klauda & Guthrie, 2008; Logan, 1997; Talada, 2007). One could speculate from this finding that it is necessary to reach a reading speed parallel to speaking speed; readers who reach this speed cannot be thought as comprehending faster; even speed reading may influence comprehension negatively and students who read slowly may have problem in comprehending.

A significant relationship was found between prosody skill and generally comprehension, especially in-depth meaning linking. Baştuğ (2012) also determined that prosody was the most significant one both on the comprehension and writing skills. It can be said that prosody is the better predictor of reading comprehension in all of the reading skills. Accurate reading is especially has an effect on both memory and recognizing skills. LaBerge and Samuels's (1974) ideas also confirm this finding.

According to the results of the study, fluent reading can be used while measuring the students' reading comprehension, comparing their measurement results or in diversifying the measures. This result can also be interpreted that by helping students to acquire fluent reading skills, you also help them to develop skills regarding reading comprehension.

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