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## INVESTIGATION OF READING FLUENCY AND READING COMPREHENSION LEVELS OF FOURTH-GRADE SYRIAN PRIMARY SCHOOL STUDENTS

*Research article*

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# INVESTIGATION OF READING FLUENCY AND READING COMPREHENSION LEVELS OF FOURTH-GRADE SYRIAN PRIMARY SCHOOL STUDENTS

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## Abstract

This study aimed to examine the fluency and comprehension levels of fourth-grade Syrian students in a public school in Konya. The research design employed a relational survey approach, with a sample size of 47 students. The study analyzed the students' reading fluency components, which included accurate reading, reading speed (automaticity), and prosody, across three text types: narrative, informative, and poetry. Additionally, the students' reading comprehension abilities were assessed across these three text types. The students' reading performances were videotaped and their responses to reading comprehension questions were audio-recorded. Upon analysis of the data, it was revealed that the Syrian students' accurate reading percentages was generally at the level of free and improvable reading. The lowest percentage being in poetry. The majority of the students' reading speeds were below 100 words per minute in all three text types. Their prosodic scores were mostly at the worrying reading level in narrative text and improvable reading level in informative and poetry types. The students' reading comprehension scores were low, with the highest scores in narrative text and the lowest in informative text. The study found a low positive correlation between reading comprehension and accurate reading and a high positive correlation between reading comprehension and reading speed and prosody. Therefore, the students' low reading speed and prosody skills were found to be the causes of their low reading comprehension levels.

*Keywords:* Reading fluency, immigrant students, reading comprehension

## 1. Introduction

Migration is commonly defined as the geographic movement of people (Giddens & Sutton, 2014). However, it is a multifaceted phenomenon that impacts various dimensions of social life. Turkey, undergo significant demographic, social, cultural, economic, political, and educational changes. The continuous migration to Turkey, especially by the Syrian population, has resulted in a challenging mobility in these domains. Among the affected groups, children are arguably the most vulnerable. Despite receiving various forms of support to adapt to daily life, persisting educational challenges are evident.

The authorities established "Temporary Education Centres" to address the educational disruption experienced by children who settled in Syrian refugee camps during the initial stages of migration to Turkey (2011-2012). Initially, the centres were established under the assumption that the Syrians would eventually return to their country. Thus, the language of instruction was Arabic, and the curriculum followed the Syrian education system. However,

with the continued influx of migrants, the number of centres grew, and the Turkish Ministry of National Education (MoNE) appointed administrators to oversee them. The curriculum was revised, and Turkish language instruction were incorporated. In 2016, the Department of Migration and Emergency Education was established to address the long-term settlement of the Syrians in Turkey. As part of the revised education policy, the MoNE decided to phase out the Temporary Education Centres and integrate Syrian students into public schools under the ministry's jurisdiction (Erdoğan, 2018).

Many studies have been conducted on the transfer of Syrian students to schools affiliated with the Ministry of National Education and their education in the same classes with Turkish students, and they have found that problems arise (Bulut, Kanat Soysal, & Gülççek, 2018; Çakmak, 2018; Ergen & Şahin, 2019; Sözer & Işiker, 2021; Şensin, 2016; Tunga, Engin, & Çağıltay, 2020; Yıldız-Yılmaz & Demir, 2021). Language is one of the main problems identified in these studies. It has been observed that there is a problem of comprehension in the classroom due to the insufficient knowledge of Turkish by Syrian students. Particularly in the Turkish language teaching course, the difficulty of Syrian students in learning to read and write, their inability to read the given text, and their inability to understand what they read pose obstacles to achieving the goals and outcomes of the course (Erdem, Kaya, & Yılmaz, 2017; Işıkdoğan Uğurlu & Kayhan, 2018; Karaağaç & Güvenç, 2019; Polat, 2019).

In the context of Turkish language teaching, reading skills involve the ability to read a text fluently. Fluency in reading consists of accurate reading, reading speed (automaticity), and prosodic features (Baştuğ & Akyol, 2012; Bursuck & Damer, 2007; Hudson et al., 2005; Mercer & Pullen, 2005; Rasinski, 2006). Fluent reading is also essential for facilitating reading comprehension (Kuhn et al., 2010). The accuracy of reading is measured by the ratio of the number of words correctly read by the student to the total number of words in the text (Keskin & Akyol, 2014). Students who have developed the skills of recognizing and differentiating words and who can use letters and sounds harmoniously while reading the text, have an increased rate of accuracy (Deveci, 2019). Difficulties in fluent reading may arise from a lack of development in initial reading and writing skills. Therefore, it is essential for children to first acquire the ability to read words correctly (Baştuğ & Şenel, 2019).

The improvement in reading speed is a result of the development of proper reading skills, which in turn enhances reading fluency. Reading speed is defined as the ability to read words rapidly and automatically (Paige, Rasinski, & Magpuri-Lavell, 2012; Samuels, 2006). In broader terms, automaticity refers to the ability to perform a task effortlessly and quickly (Deeney, 2010). According to Stahl and Kuhn (2002), in the context of reading instruction, automaticity is the capability to quickly establish a connection between word and meaning. Consequently, the acquisition of automaticity in reading results in a more proficient reading process.

Prosody, which includes intonation, stress, and timing, is another important element of fluent reading, referred to as 'prosodic reading.' Prosodic reading involves breaking down sentences into meaningful units at appropriate times and in appropriate ways. Meaningful units play a significant role in language proficiency and increase the comprehensibility of language (Dowhower, 1991; Schreiber, 1991; Yıldız, Yıldırım, Ateş, & Çetinkaya, 2009). Thus, prosodic reading is considered a critical factor in the reading comprehension process (Kuhn, Schwanenflugel, & Meisinger, 2010; Rasinski, 2004, 2006; Schrauben, 2010). Students who can read prosodically use the morphological, syntactic, and semantic cues in the text to disambiguate meaning and comprehend what they are reading (Veenendaal, Groen, & Verhoeven, 2015).

Reading comprehension is a fundamental aspect of reading and involves the process of comprehending and understanding the content of written material (Yılmaz, 2006). The process of reading comprehension involves integrating various elements of the written text, including vocabulary, grammar, phonology, and comprehension, to extract meaning and understand written material (Goodman & Goodman, 2001; Gough & Tunmer, 1986). What the student is expected to do in reading comprehension is to analyze the thought expressed in the text using the student's prior knowledge. Therefore, reading comprehension is actually a cognitive process and is closely related to the student's academic life. Students who have difficulty recognizing words and spend too much time on this process cannot allocate sufficient cognitive resources to comprehension (Ribeiro, Cadime, Freitas, & Viana, 2016; Swanson & O'Connor, 2009). Students who cannot read words correctly and automatically will also have problems with their reading comprehension (Baydık, 2012). Difficulties in reading comprehension can arise from misreading words, reading at a slow pace, and poor prosodic reading skills. Conversely, the ability to comprehend text supports fluency, as a strong comprehension of the text leads to automaticity in reading. Notably, it has been demonstrated that prosodic reading skills are directly associated with reading comprehension. There is a statistically significant relationship between fluent reading and reading comprehension (Başaran, 2013; Calet, Defior, & Palma, 2015; Clin, Wooley, & Heggie, 2009; Çetinkaya, Ateş, & Yıldırım, 2016; Kim, Wagner, & Foster, 2011; Ribeiro, Cadime, Freitas, & Viana, 2016; Veenendaal, Groen, & Verhoeven, 2016).

Syrian students have acquired partial proficiency in reading and writing Turkish through the intensive and dedicated efforts of their primary school teachers. However, this has not been sufficient to resolve the challenges associated with the education of Syrian students (Alkalay, Kırıl, & Erdem, 2021; Bozan, Akçay, & Karahan, 2021; Cırtı Karaağaç & Güvenç, 2019; Çerçi & Canalıcı, 2019; Kiremit, Akpınar, & Tüfekci Akcan, 2018; Saklan & Karakütük, 2022; Tanrikulu, 2017; Tunagür & Kardaş, 2021). This is because Syrian students face significant challenges in understanding Turkish texts, even those that they can read and write. Consequently, the educational process of Syrian students is hindered at this point, leading them to continue their education without attaining complete mastery of the Turkish language. This problem compounded exponentially for each Syrian student. Recently, numerous studies have been conducted on the education of Syrian students in Turkey. These studies mostly focus on the perspectives of educators and students on the current situation (Bulut, Kanat Soysal, & Gülçiçek, 2018; Gültutan & Kan, 2019; Kapat & Şahin, 2021-Koçoğlu & Yanpar Yelken, 2018; Özenç & Saat, 2019; Polat, 2019; Şahin & Boylu, 2020) and the challenges experienced by Syrian students during the adaptation process (Cırtı Karaağaç & Güvenç, 2019; Ertekin Yıldız, 2019; Kırıl & Beyli, 2021; Sur & Çalışkan, 2012; Tunagür & Kardaş, 2021; Uçar & Kan, 2020). However, an important aspect has been overlooked: although Syrian students are promoted to the next grade alongside other Turkish students in their classes, it is unclear to what extent they have mastered the basic skills in the Turkish language instruction that they should have acquired in the previous grade. Therefore, this study aimed to investigate the reading fluency and reading comprehension of Syrian students.

The purpose of this study was to determine the levels of fluency and comprehension of Syrian primary school students in the fourth grade. To achieve this overall purpose, the following research questions were addressed:

1. What are the fluent reading skills of students in terms of different text types (including narrative, informative, and poetry)?
  - 1.1. What are the accurate reading percentages of students by text type?
  - 1.2. What is the reading speed of students by text type?
  - 1.3. What are the prosody scores of students by text type?

2. What are the reading comprehension levels of students by text types (including narrative, informative, and poetry)?
3. Is there a relationship between the fluent reading skills and reading comprehension levels of students?

## 2. Method

This study used the relational survey model to evaluate the reading fluency and comprehension levels of Syrian primary school students in the fourth grade. The survey research method identifies specific characteristics of a population representing the universe based on past or current issues, to track changes over time, and to describe the existing situation (Büyüköztürk et al., 2020; Christensen, Johnson, & Turner, 2020; Karasar, 2005). The relational survey model enables the determination of the degree of change in two or more variables, the level of a phenomenon, and the significant differences between variables, thus facilitating a better understanding of the phenomena under study and future predictions (Fraenkel & Wallen, 2009; Gürbüz & Şahin, 2018; Hocaoğlu & Akkaş Baysal, 2019).

### 2.1. Study Group

This study was conducted in a public primary school located in the Karatay district of Konya province in Turkey, an area with a high concentration of Syrian families. The sample of the study group was selected using criterion sampling as part of purposive sampling. Criterion sampling involves the inclusion of participants who have certain characteristics or meet certain criteria to obtain the best data sources suitable for the research purpose (Mills & Gay, 2018; Patton, 2014). The main criteria for this study were that the students were of Syrian origin, literate and in the fourth grade. In the Turkish education system, primary school lasts four years, and students enroll secondary school after the fourth grade. The fluency and comprehension of Syrian students in the fourth grade were examined to indicate their readiness for secondary school. A total of 68 Syrian fourth-grade students, 39 (57%) girls and 29 (43%) boys, participated in this study. Based on information obtained from preliminary interviews with primary school teachers, 21 illiterate students were excluded from the study. As a result, a total of 47 Syrian fourth graders, 28 (60%) girls and 19 (40%) boys, participated in the study. 30 (64%) of these students are attending Arabic language course learning to reading and writing in their native language. 17 (36%) of them are being taught at home by their families. As a result, all students have literacy skills in their native language.

### 2.2. Data Collection Tools

The study employed various tools to evaluate the fluency and comprehension levels of Syrian students. Specifically, reading texts were used during reading performances, while reading performances were recorded via video, and their answers to reading comprehension questions were audio-recorded.

#### 2.2.1. Reading Texts:

Narrative, informative, and poetry were used as text types to determine the students' reading performance. "All texts describe either an event, an idea, or an emotion. Here, it is possible to classify texts describing an idea as informative texts, texts describing an event as narrative texts, and texts describing emotions as poetry" (Başaran & Akyol, 2009, p. 12). The researchers decided to select texts from the textbooks approved by the MoNE, which the students had never encountered before, to obtain data for the research. However, during the preliminary interviews with the primary school teachers of the classes where the research data would be collected, it was understood that the Syrian students' willingness and ability to use Turkish were not excellent. Therefore, texts were selected from all three grade levels and shared with fourth-

grade teachers in four different schools where Syrian students were concentrated. An expert teacher was consulted in the selection of these texts. The texts shared with the teachers were as follows: An informative text called "Atatürk'ün Yaşamı", a poetry called "Trafik Işıkları" and a narrative text called "Kırk Haramiler" at the fourth-grade level; an informative text called "Termit Kolonisi", a poetry called "Yokuş" and a narrative text called "Kirpi Masalı" at the third-grade level; and "Bilge Hangi Sporu Yapacak?", an informative text called "Sihirli Sözcükler" and a poetry called "Konuksever" at the second-grade level. Table 1 shows the distribution of grade levels preferred by the teachers.

Table 1. *Text preferences of primary school teachers*

Primary Schools	Teachers	4 <sup>th</sup> Grade-Level	3 <sup>rd</sup> Grade-Level	2 <sup>nd</sup> Grade-Level
School A	Teacher 1			✓
	Teacher 2			✓
	Teacher 3			✓
School B	Teacher 4		✓	
	Teacher 5			✓
	Teacher 6	✓		
School C	Teacher 7			✓
	Teacher 8		✓	
	Teacher 9			✓
School D	Teacher 10		✓	
	Teacher 11		✓	
	Teacher 12			✓

As indicated in Table 1, the majority of the primary school teachers recommended the use of second-grade-level texts in the study. Based on their input and the suggestions of the field expert, it was decided to incorporate second-grade level texts in the study. The selected texts were taken from a book published by a private publishing house that is recommended by the MoNE for use in the second-grade level of primary school starting from 2022. Details of the texts used in the study are provided in Table 2.

Table 2. *Texts used in the study*

Text name	Text type	Number of words
Bilge Hangi Sporu Yapacak?	Narrative	206
Sihirli Sözcükler	Informative	141
Konuksever	Poetry	49

### 2.2.2. Reading Comprehension Assessment Form:

The reading comprehension assessment form is a set of open-ended questions developed to evaluate the reading comprehension of students involved in the study for each text type. The reading comprehension questions were prepared according to the descriptions in the reading comprehension section of Ekwall and Shanker's (1988; as cited in Akyol, 2013) The Reading Inventory. The form comprises three basic comprehension questions and two in-depth comprehension questions for every text. Basic comprehension is a way of extracting the easiest meaning from the read text, and at the same time, questions based on simple comprehension require remembering or finding and repeating information clearly expressed in the text (Akyol, 2013; Yıldırım, 2012). Questions based on in-depth understanding require thinking skills and

require the reader to search many sources within or outside the text to find the correct answer to the question (Cerdan et al., 2009). The questions were created by the researchers and finalized after undergoing review by a field expert.

### 2.2.3. Video Recordings:

Video recordings serve as a valuable tool for researchers, allowing them to gather information about teaching methods and student interactions in the classroom. By observing verbal and non-verbal interactions, as well as classroom mobility and student placement, researchers can gain insight into the dynamics of the classroom environment (Johnson, 2014; Mills, 2003). In this study, video recordings were made on the process of reading the texts presented to the students in each session. The recordings were later analyzed for various factors, such as voice tone, sitting posture, hand-arm movements, and finger tracking. Table 3 provides additional information on the video recordings in relation to the different text types used in the study.

Table 3. *Video and audio recording data*

Text name	Text type	Video recording duration	Audio recording duration
Bilge Hangi Sporu Yapacak?	Narrative	329 min. 15 sec	152 min. 36 sec
Sihirli Sözcükler	Informative	253 min. 40 sec	125 min. 41 sec
Konuksever	Poetry	145 min. 27 sec	68 min. 56 sec

### 2.2.4. Audio Recordings:

Audio recordings were used to capture the students' responses to the reading comprehension questions. As it was not feasible to anticipate the writing proficiency of all students, their reading comprehension was evaluated orally. It was also noted that the students could articulate their thoughts more freely verbally. Information concerning the audio recordings employed in the study is presented in Table 3.

## 2.3. Data Collection

Before starting the data collection, the researchers visited the classrooms to familiarize themselves with the pupils. During this prolonged period, cameras were installed in the classrooms (without video recording) to acclimatize the students with their presence. Subsequently, ethical clearance was obtained from the Selcuk University Faculty of Education's Scientific Ethics Evaluation Board (dated 18.04.2023, protocol number E.505705). The consent form and scientific ethics approval form, which included the research purpose, were distributed to the students and signed by their parents, with the primary school teachers also involved in this process. Afterward, in coordination with the school administration, a hall (reading room) was selected, which met the requirements for quietness, brightness, and appropriate width for recording the reading sessions.

The research data were collected by means of video recordings capturing the reading performance of one text type per day, followed by audio recordings of the students' responses to the reading comprehension questions immediately after the reading task. The fourth-grade Syrian students were called into the reading room in accordance with the class list, and the process was repeated daily. Table 4 shows an overview of the daily data collection process, starting from the researchers' initial visit to the school.



Table 4. *The process of research school visit*

Date	Purpose of visit	Time spent in school
10/04/2023	Meetings and interacting with students	Second, third and fourth courses hours
24/04/2023	Narrative text -reading records	All days long
25/04/2023	Informative text -reading records	All days long
26/04/2023	Poetry -reading records	All days long
27/07/2023	“Thank you” visit	Third and fourth courses hours

As depicted in Table 4, the researchers conducted their data collection at the research school from 10 to April 27, 2023. The recording of the narrative text reading performance was executed on 24/04/2023, the informative text reading recording was carried out on 25/04/2023, and the poetry reading recording was conducted on 26/04/2023. Throughout the data collection process, one researcher was responsible for recording the reading aloud, while the other recorded the reading comprehension questions. The day following the completion of data collection, the researchers visited the classrooms one last time to express their gratitude.

#### 2.4. Data Analysis

The data collected on fluent reading in this study were analyzed using methods outlined in the literature for analyzing the components of fluent reading. The accurate reading percentage was determined by dividing the number of correctly read words by the total number of words (excluding misread words) and then multiplying this result by 100 (accurate reading percentage = the number of correctly read words / the total number of words read X 100) (Rasinski et al., 2017). The interpretation of the students' accurate reading percentage is as follows: scores with a percentage of correct reading of 96% and above indicate the free reading level, scores between 90% and 95% indicate the improvable reading level, and scores of 89% and below indicate the worrying reading level (Vaughn & Linan-Thompson, 2004).

In determining the students' reading speeds, the total number of words read by each student was first calculated, and the total reading time in seconds was determined. Next, the number of words that the student read correctly was subtracted from the total number of words, and the correct reading time in seconds was calculated. Finally, the student's reading rate was calculated by dividing the correct reading time by the total reading time (reading speed = the number of words read correctly x 60 / the total reading time in seconds) (Hudson et al., 2005). Based on the number of words read per minute, reading speed was interpreted according to grade and season, using the ranges presented in Table 5 (Rasinski, 2010).

Table 5. *Ranges of word numbers to read by primary school students in a minute*

Grade Level	Fall	Winter	Spring
2	30-80	50-120	70-130
3	50-110	70-120	80-140
4	80-130	90-140	100-140

The study used the Reading Prosody Rubric developed by Zutell and Rasinski (1991) and adapted into Turkish by Yıldız et al. (2009) to calculate the reading prosody scores of Syrian students. The rubric comprises expression and volume, semantic units and intonation, smoothness, and speed dimensions. Each dimension is rated on a scale of 1-4 points, with 4 points being the highest score. The total reading prosody scores for each student ranged from 4 to 16. In interpreting the students' “prosody scores between 13 and 16 were assumed to



represent the free reading level, scores between 9 and 12 the improvable reading level, and scores between 8 and below the worrying reading-level” (Aşıkcan & Saban, 2021, p. 28).

In this study, students' reading comprehension scores were evaluated using the approach developed by Ekwall and Shanker (1988), which was adapted into Turkish by Akyol (2013). The evaluation involved asking five open-ended questions, three aimed at assessing easy comprehension and two aimed at evaluating in-depth comprehension. The students' responses were scored as "2" points for complete answers to questions focused on easy comprehension, "1" point for partially correct answers, and "0" points for unanswered questions. For questions aimed at assessing in-depth comprehension, "3" points were given for complete answers, "2" points for answers with some deficiencies (more than half), "1" point for partially correct answers, and "0" points for unanswered questions. The reading comprehension level was determined by dividing the sum of the scores obtained by the sum of the maximum scores and multiplying by 100 ( $comprehension\ level/percentage\ [CP] = \frac{easy\ comprehension\ score\ [ECS] + in\ depth\ comprehension\ score\ [I-DCS]}{total\ possible\ easy\ comprehension\ score + total\ possible\ in\ depth\ comprehension\ score} \times 100$ ).

In this study, Jamovi software (version 2.3.21) was used for the statistical analysis of the fluency and comprehension scores of Syrian primary school students in the fourth grade. The normality assumption of the score distributions was assessed using the Shapiro-Wilk test. The test results (see Table 6) revealed that, except for the total reading speed of the students (skewness = 0.15; kurtosis = -0.93;  $p > .05$ ), the total percentage of correct reading scores (skewness = -2.53; kurtosis = 8.40), prosody scores (skewness = -0.05; kurtosis = -1.11), and reading comprehension level (skewness = 1.18; kurtosis = 1.49) did not follow a normal distribution ( $p < .05$ ) (Tabachnick & Fidell, 2012). To examine the relationship between reading fluency and reading comprehension scores, Spearman rank correlations were used.

Table 6. Normality of the research data

	Skewness	Kurtosis
Percentage of correct reading	-2.53	8.40
Reading speed	0.15	-0.93
Prosody score	-0.05	-1.11
Percentages of reading comprehension	1.18	1.49

$p > .05$

### 3. Findings

This study aimed to determine the fluency and comprehension levels of Syrian fourth-grade primary school students, and the data were analyzed about the research questions.

The results related to the research question "What are the students' fluency skills according to text types (narrative, informative and poetry)?" are presented results below tables. Tables 7 and 8 present the accurate reading percentage results.

Table 7. Accurate Reading Percentages of Students

Student	Narrative text			Informative text			Poetry		
	Correctly read words	Misread words	Accurate reading percentage	Correctly read words	Misread words	Accurate reading percentage	Correctly read words	Misread words	Accurate reading percentage
S1	191	15	93	127	14	90	46	3	94
S2	195	11	95	126	15	89	45	4	92
S3	199	7	97	131	10	93	44	5	90
S4	204	2	99	141	0	100	47	2	96
S5	205	1	99	139	2	98	48	1	98
S6	194	12	94	130	11	92	46	3	94
S7	195	11	95	137	4	97	47	2	96
S8	187	29	91	106	35	75	41	8	84
S9	195	11	95	137	4	97	46	3	94
S10	194	12	94	137	4	97	47	2	96
S11	202	4	98	134	7	95	48	1	98
S12	199	7	97	136	5	96	47	2	96
S13	206	0	100	140	1	99	48	1	98
S14	182	24	88	132	9	94	43	6	88
S15	171	35	83	119	22	84	41	8	84
S16	201	5	97	133	8	94	44	5	90
S17	175	31	85	108	33	76	40	9	82
S18	189	17	92	129	12	91	45	4	92
S19	204	2	99	138	3	98	47	2	96
S20	202	4	98	139	2	98	48	1	98
S21	185	21	90	117	24	83	37	12	75
S22	205	1	99	138	3	98	49	0	100
S23	204	2	99	136	5	96	42	7	86
S24	189	17	92	127	14	90	41	8	84
S25	195	11	95	131	10	93	46	3	94
S26	193	13	94	126	15	89	44	5	90
S27	203	3	98	135	6	96	45	4	92
S28	155	51	75	93	48	66	36	13	73
S29	203	3	98	136	5	96	45	4	92
S30	204	2	99	137	4	97	48	1	98
S31	205	1	99	141	0	100	49	0	100
S32	202	4	98	139	2	98	49	0	100
S33	183	23	89	123	18	87	38	11	77
S34	191	15	93	133	8	94	44	5	90
S35	202	4	98	136	5	96	47	2	96
S36	200	6	97	135	6	96	47	2	96
S37	198	8	96	131	10	93	48	1	98
S38	193	13	94	125	16	89	45	4	92
S39	183	23	89	122	19	86	42	7	86
S40	190	16	92	120	21	85	44	5	90
S41	170	36	82	111	30	79	35	14	71
S42	196	10	95	136	5	96	46	3	94
S43	141	65	68	72	69	51	22	27	45
S44	205	1	99	140	1	99	47	2	96
S45	199	7	97	135	6	96	46	3	94
S46	201	5	97	128	13	91	46	3	94
S47	202	4	98	139	2	98	48	1	98

Student	Narrative text			Informative text			Poetry		
	Correctly read words	Misread words	Accurate reading percentage	Correctly read words	Misread words	Accurate reading percentage	Correctly read words	Misread words	Accurate reading percentage

The accurate reading percentage, scores 96% and above indicate *the free reading level*, scores between 90% and 95% indicate *the improvable reading level*, and scores of 89% and below indicate *the worrying reading level* (Vaughn & Linan-Thompson, 2004).

According to the detailed analysis of the accurate reading percentages of Syrian students in terms of text type, as presented in Table 7, is seen that:

In the narrative text, 23 students were at the free reading level, 15 students were at the improvable reading level, and 9 students were at the worrying reading level.

In informative text, 22 students were at the free reading level, 12 students were at the improvable reading level, and 13 students were at the worrying reading level.

In the poetry, 18 students were at the free reading level, 17 students were at the improvable reading level, and 12 students were at the worrying reading level.

In terms of the number of reading errors made by students in each text type, Table 7 shows that in the narrative text, 1 student (S13) did not make any reading mistakes, 4 students (S5, S22, S31, S44) made 1 reading mistake, and 1 student (S43) made the most reading mistakes (65 mistakes). In the informative text, 2 students (S4, S31) did not make any reading mistakes, 2 students (S13, S44) made one reading mistake, and 1 student (S43) made the most reading mistakes (69 mistakes). For the poetry, 3 students (S22, S31, S32) did not make any reading mistakes, 7 students (S5, S11, S13, S20, S30, S37, S47) made 1 reading mistake, and 1 student (S43) made the most reading mistakes (27 mistakes).

Table 8 presents a statistical comparison of the accurate reading percentages of the students across different text types.

Table 8. *Statistical comparison of the accurate reading percentages*

Text type	N	$\bar{x}$	Sd	Min	Max
Narrative text	47	93.8	6.46	68	100
Informative text	47	91.3	9.36	51	100
Poetry	47	90.6	9.81	46	100

According to Table 8, the average accurate reading percentage for Syrian students is highest for narrative text ( $\bar{x}$ =93.8), followed by informative text ( $\bar{x}$ =91.3), and then poetry ( $\bar{x}$ =90.6). Furthermore, the text type with the lowest accurate reading percentage is poetry (45%), followed by informative text (51%), and then narrative text (68%).

Tables 9 and 10 present the results related to reading speed.

Table 9. Reading speed of students

Student	Narrative text			Informative text			Poetry		
	Correctly Read words	Total reading time (Sec)	Reading speed	Correctly Read words	Total reading time (Sec)	Reading speed	Correctly Read words	Total reading time (Sec)	Reading speed
S1	191	160	72	127	72	106	46	45	61
S2	195	130	90	126	88	86	45	51	53
S3	199	273	44	131	201	39	44	84	31
S4	204	125	98	141	106	80	47	40	71
S5	205	96	128	139	89	94	48	32	90
S6	194	207	56	130	200	39	46	87	32
S7	195	262	45	137	222	37	47	101	28
S8	187	158	71	106	126	50	41	52	47
S9	195	362	32	137	331	25	46	121	23
S10	194	246	47	137	179	46	47	92	61
S11	202	127	95	131	106	74	46	47	59
S12	199	164	73	136	122	67	47	38	74
S13	206	177	70	140	151	56	48	58	50
S14	182	382	29	132	332	24	43	110	23
S15	171	327	31	119	285	25	41	98	24
S16	201	108	112	133	78	102	44	35	75
S17	175	593	18	108	520	12	40	160	15
S18	189	391	29	129	340	23	45	136	20
S19	204	407	30	138	351	24	47	140	20
S20	202	145	84	139	97	86	48	45	64
S21	185	250	44	117	195	36	37	35	63
S22	205	163	75	138	105	79	49	28	105
S23	204	241	51	136	171	48	42	83	30
S24	189	220	52	127	152	50	41	48	51
S25	195	250	47	131	165	48	46	57	48
S26	193	175	66	126	118	64	44	50	53
S27	203	133	92	135	92	88	45	26	104
S28	155	210	44	93	128	44	36	46	47
S29	203	138	88	136	94	87	45	36	75
S30	204	210	58	137	137	60	48	51	56
S31	205	188	65	141	132	64	49	42	70
S32	202	158	77	139	111	75	49	46	64
S33	183	229	48	123	158	47	38	53	43
S34	191	179	64	133	127	63	44	59	45
S35	202	176	69	136	123	66	47	38	74
S36	200	428	28	135	292	28	47	97	29
S37	198	240	50	131	162	49	48	56	51
S38	193	315	37	125	208	36	45	73	37
S39	183	780	14	122	524	14	42	184	14
S40	190	360	32	120	232	31	44	83	32
S41	170	725	14	111	477	14	35	149	14
S42	196	263	45	136	190	43	46	61	45
S43	141	643	13	72	335	13	22	100	13
S44	205	127	97	140	90	93	47	29	97
S45	199	573	21	135	398	20	46	132	21
S46	201	164	74	128	103	75	46	37	75

Student	Narrative text			Informative text			Poetry		
	Correctly Read words	Total reading time (Sec)	Reading speed	Correctly Read words	Total reading time (Sec)	Reading speed	Correctly Read words	Total reading time (Sec)	Reading speed
S47	202	181	67	139	129	65	48	42	69

Students in the fourth-grade of primary school are expected to read 100 to 140 words per min in the spring term (Rasinski, 2010).

According to the detailed analysis of the reading speeds of Syrian students in terms of text type, as presented in Table 9, is seen that:

- In the narrative text, 2 students read between 100-140 words and 45 students read less than 100 words.
- In the informative text, similar to the data in the narrative text, 2 students read between 100-140 words and 45 students read less than 100 words.
- In the poetry, 2 students read between 100-140 words and 45 students read less than 100 words.

In the narrative text, 2 students (S5, S16) had reading speeds over 100 words per minute, with S5 reading at a speed of 128 (205 words in 96 seconds) and S16 reading at a speed of 112 (201 words in 108 seconds). The student with the lowest reading speed in this text type was S43, who had a speed of 13 (141 words in 643 seconds). S39 and S41 both had speeds of 14, with S39 reading 183 words in 780 seconds and S41 reading 170 words in 725 seconds. In the informative text, 2 students (S1, S16) had reading speeds over 100 words per minute, with S1 reading at a speed of 106 (127 words correctly read in 72 seconds) and S16 reading at a speed of 102 (133 words correctly read in 78 seconds). The student with the lowest reading speed in this text type was S17, who had a speed of 12 (108 words in 520 seconds). In the poetry, 2 students (S22, S27) had reading speeds over 100 words per minute, with S22 reading at a speed of 105 (48 words in 28 seconds) and S27 reading at a speed of 104 (45 words in 26 seconds). The student with the lowest reading speed in this text type was S43, who had a speed of 13 (22 words in 100 seconds).

Table 10 presents a statistical comparison of the reading speeds of the students across different text types.

Table 10. *Statistical comparison of the reading speeds*

Text type	N	$\bar{X}$	Sd	Min	Max
Narrative text	47	57.1	27.3	13	128
Informative text	47	53.1	26	12	106
Poetry	47	49.9	24.5	13	105

According to Table 10, the mean reading speed of Syrian fourth-grade students varied across different text types with the highest average reading speed observed in narrative text ( $\bar{X}$ =57.1), followed by informative text ( $\bar{X}$ =53.1) and poetry ( $\bar{X}$ =49.9). The lowest reading speed is observed in informative text (12 words), followed by narrative text and poetry (13 words). On the other hand, the highest reading speed is observed in narrative text (128 words), followed by informative text (106 words) and then poetry (105 words).

Tables 11 and 12 present the results related to prosody scores.

Table 11. Total prosody scores of students

Student	Narrative text	Informative text	Poetry
S1	11	13	10
S2	12	10	10
S3	6	8	11
S4	11	11	11
S5	16	14	16
S6	11	10	9
S7	6	5	5
S8	7	6	6
S9	6	5	4
S10	8	8	10
S11	14	12	11
S12	8	10	12
S13	8	8	9
S14	4	4	5
S15	7	5	6
S16	14	12	11
S17	4	4	5
S18	7	4	5
S19	7	5	5
S20	14	10	11
S21	11	11	13
S22	12	12	9
S23	8	6	6
S24	10	9	12
S25	11	9	12
S26	11	10	11
S27	15	16	16
S28	10	9	11
S29	13	12	15
S30	10	10	10
S31	9	9	6
S32	13	12	14
S33	10	9	9
S34	12	11	14
S35	14	12	16
S36	8	9	9
S37	9	9	12
S38	5	4	6
S39	4	4	4
S40	4	4	4
S41	4	4	4
S42	5	4	6
S43	5	4	6
S44	14	12	15
S45	4	4	4
S46	12	12	13
S47	11	10	13

Prosody scores; between 13-16 were assumed to represent *the free reading level*, between 9 -12 *the improvable reading level*, and between 8 and below *the worrying reading-level*" (Aşıkcan & Saban, 2021).

According to the detailed analysis of the prosody scores of Syrian students in terms of text type, as presented in Table 7, is seen that:

- In the narrative text, 9 students were at the free reading level, 17 students were at the improvable reading level, and 21 students were at the worrying reading level.
- In informative text, 3 students were at the free reading level, 25 students were at the improvable reading level, and 19 students were at the worrying reading level.
- In the poetry, 10 students were at the free reading level, 20 students were at the improvable reading level, and 17 students were at the worrying reading level.

Upon analyzing the students' prosodic scores, it was found that 1 student (S5) achieved a full score of 16 in the narrative text, while another student (S27) attained the same feat in the informative text. Moreover, 2 students (S5, S35) obtained a full score in the poetry. In contrast, when examining the lowest scores, it was determined that 5 students (S14, S17, S17, S39, S40, S41) in the narrative text, 9 students (S14, S17, S18, S38, S39, S40, S41, S42, S43) in the informative text, and 5 students (S9, S39, S40, S41, S45) in the poetry received only one point.

Table 12 presents a statistical comparison of the prosodic scores of the students across different text types.

Table 12. *Statistical comparison of the prosodic score*

Text type	N	$\bar{X}$	Sd	Min	Max
Narrative text	47	9.26	3.47	4	16
Informative text	47	8.53	3.32	4	16
Poetry	47	9.4	3.75	4	16

According to the findings presented in Table 12, the mean reading prosody scores for Syrian students are reported as follows: poetry ( $\bar{X}$ =9.40), narrative text ( $\bar{X}$ =9.26), and informative text ( $\bar{X}$ =8.53). Notably, the lowest prosody score recorded across all text types was four points, whereas the highest score attained was 16 points.

The results related to the research question "What are the reading comprehension levels of students by text types (including narrative, informative, and poetry)?" are presented results below tables. Tables 13 and 14 present the reading comprehension level results.

Table 13. *Reading comprehension scores and percentages of students*

Student	Narrative text			Informative text			Poetry		
	ECS	I-DCS	CP	ECS	I-DCS	CP	ECS	I-DCS	CP
S1	3	1	33	5	2	58	3	1	33
S2	4	2	50	3	0	25	3	1	33
S3	2	1	25	2	0	17	3	2	42
S4	2	1	25	3	0	25	3	1	33
S5	6	5	92	5	4	75	6	5	92
S6	4	2	50	3	1	33	3	1	33
S7	2	0	17	1	0	8	2	0	17
S8	2	0	17	1	0	8	2	0	17
S9	1	0	8	2	0	17	1	0	8
S10	3	1	33	1	1	17	4	1	42
S11	5	4	75	3	1	33	3	2	42
S12	2	1	25	2	1	25	3	1	33
S13	2	0	17	1	1	17	2	1	25

Student	Narrative text			Informative text			Poetry		
	ECS	I-DCS	CP	ECS	I-DCS	CP	ECS	I-DCS	CP
S14	2	0	17	1	0	8	2	0	17
S15	2	0	17	2	0	17	2	0	17
S16	6	3	75	4	1	42	4	2	50
S17	1	0	8	1	0	8	2	0	17
S18	1	1	17	1	0	8	1	0	8
S19	2	0	17	1	0	8	1	0	8
S20	4	2	50	3	1	33	4	1	42
S21	3	1	33	2	1	25	3	1	33
S22	3	1	33	3	1	33	2	0	17
S23	2	0	17	1	0	8	1	0	8
S24	3	2	42	2	1	25	3	1	33
S25	3	1	33	2	0	17	2	1	25
S26	4	2	50	3	1	33	4	1	42
S27	6	5	92	6	4	83	6	5	92
S28	4	1	42	2	1	25	3	1	33
S29	5	2	58	3	1	33	5	3	67
S30	3	1	33	3	0	25	4	1	42
S31	2	1	25	2	0	17	1	0	8
S32	5	2	58	4	1	42	4	2	50
S33	2	1	25	3	0	25	2	1	25
S34	4	2	50	2	1	25	5	3	67
S35	5	3	67	3	1	33	6	5	92
S36	3	1	33	2	1	25	2	1	25
S37	1	0	8	2	0	17	3	1	33
S38	2	1	25	1	1	17	2	1	25
S39	2	0	17	2	0	17	2	1	25
S40	1	0	8	1	0	8	1	0	8
S41	2	0	17	1	0	8	1	0	8
S42	3	0	25	2	1	25	3	1	33
S43	2	0	17	1	0	8	2	1	25
S44	6	3	75	3	1	33	6	4	83
S45	1	0	8	1	0	8	1	0	8
S46	4	2	50	3	1	33	4	1	42
S47	4	1	42	3	1	33	5	1	50

Reading comprehension level/percentages; scores of 90% and above indicate *the free comprehension level*; between 50-89% indicate *the improvable comprehension level*, and 49% and below indicate *the worrying comprehension level* (Akyol, 2013).

According to the detailed analysis of reading comprehension percentages of Syrian students in terms of text type, as presented in Table 13, is seen that:

- In the narrative text, 2 students were at the free comprehension level, 13 students were at the improvable comprehension level, and 33 students were at the worrying comprehension level.
- In the informative text, 3 students were at the improvable comprehension level, and 44 students were at the worrying comprehension level.
- In the poetry, 3 students were at the free comprehension level, 6 students were at the improvable comprehension level, and 38 students were at the worrying comprehension level.



In the process of analyzing the elementary comprehension scores, it was observed that 3 students (S5, S27, S44) achieved full points (6 points) in the narrative text, 1 student (S27) in the informative text, and 4 students (S5, S27, S35, S44) in poetrays. On the other hand, the lowest score of 1 point was assigned to 6 students (S9, S17, S18, S37, S40, S45) in the narrative text, 14 students (S7, S8, S10, S13, S14, S17, S18, S19, S23, S38, S40, S41, S43, S45) in the informative text, and 7 students (S9, S18, S23, S31, S40, S41, S45) in poetry.

When examining the scores for the in-depth comprehension assessment, it was found that 2 students (S5, S27) received a score of 5 points in the narrative text, 2 students (S5, S27) obtained a score of 4 points in the informative text, and 3 students (S5, S27, S35) achieved a score of 5 points in poetry. In contrast, the lowest score was recorded by 16 students S7, S8, S9, S13, S14, S15, S17, S19, S23, S37, S39, S40, S41, S42, S43, S45) in the narrative text. For the poetry, 22 students (S2, S3, S4, S7, S8, S9, S14, S15, S17, S18, S19, S23, S25, S30, S31, S33, S37, S39, S40, S41, S43, S45) received a score of 0 points, indicating that they failed to demonstrate any understanding of the poetry content. In additionally, 14 students (S7, S8, S9, S14, S15, S17, S18, S19, S22, S23, S31, S40, S41, S45) did not obtain any points at all in the poetry section of the test.

Table 14 presents a statistical comparison of the reading comprehension percentages of the students across different text types.

Table 14. *Statistical comparison of the reading comprehension percentage*

Text type	N	$\bar{X}$	Sd	Min	Max
Narrative text	47	35.1	22.3	8	92
Informative text	47	24.7	16.1	8	83
Poetry	47	34.2	22.7	8	92

According to Table 14, the mean reading comprehension percentages of Syrian fourth-grade students varied across different text types, with the highest average percentage observed in narrative text ( $\bar{X}=35.1$ ), followed by poetry ( $\bar{X}=34.2$ ) and informative text ( $\bar{X}=24.7$ ). While the lowest reading comprehension percentages of the students in all text types were 8, the highest were narrative text and poetry (92%), followed by informative text (83%).

The results related to the research question "*Is there a relationship between the fluent reading skills and reading comprehension levels of students?*" are presented results in Table 15.

Table 15. *The relationship between reading fluency and reading comprehension*

	Reading fluency component	Coefficient of correlation	<i>p</i>
Reading comprehension	Accurate reading percentage	0.308	0.035*
	Reading speed	0.791	0.001**
	Prosody	0.906	0.001**

\*  $p < .05$ , \*\*  $p \leq .01$

Table 15 displays the results of the Spearman Rank Difference Correlation analysis, which examines the relationship between Syrian students' fluency and comprehension levels. The data revealed a low positive correlation (.308) between reading comprehension and the accurate reading percentage, while a high positive correlation is observed between reading comprehension and reading speed (.791) as well as prosody (.906).

#### **4. Conclusion and Discussion**

This study aimed to investigate the reading fluency and reading comprehension skills of Syrian students in the fourth-grade of a primary school in Turkey. 47 Syrian students participated in the study. In the study, a total of three texts, one informative, one narrative, and one poetry, given to the students in the second-grade Turkish textbook, taking into account the experts' opinions. The students' fluency was analyzed in terms of reading accurate, reading speed, and prosodic aspects. Then, the students were asked a total of five reading comprehension questions, two in-depth and three easy. Finally, the relationship between Syrian students' fluency and reading comprehension was analyzed.

According to findings, Syrian students generally perform at the free reading level and the improvable reading levels, as determined by the accurate reading percentages. The majority of students perform at the free -reading level in narrative texts, whereas the free reading level is slightly lower in informative texts. This situation is an indication that students' cognitively active vocabulary is not at a sufficient level. This is because the cognitively active vocabulary has a direct impact on reading fluency (Pulido, 2007; Segalowitz, 2007; Shimono, 2019). From early childhood, students are familiar with the structure of narrative texts. In addition, the words in stories are more familiar to them (Dymock, 2007). The parents read stories and fairytales to their children at an early age. Therefore, they become familiar with these texts before the school. In poetry, the majority of students perform at the improvable or a worrying comprehension level, indicating difficulties in analyzing poetry while reading. These results contradict previous studies in the literature (Çayır, 2014; Kesik & Polat, 2023; Özhan, 2019; Türkmenoğlu & Baştuğ, 2017), which suggest that students can more easily grasp word patterns and analyze words when rhyming words are present. Poetry develops within the linguistic existence of the society in which it is born and has meaning for the individuals in the society for whom it is written. For it is not only a language that they share, but also a religion, a history and certain cultural values. Therefore, poetry, like any other literary genre, is dependent on culture (Tellioglu, 2018; Yücetoker & Bahar, 2015). In this respect, it can be said that Syrian students have difficulties with the accurate reading of a Turkish poetry.

In terms of reading speed, which is another key component of fluent reading, the majority of the study group read less than 100 words across all three types of texts. According to Rasinski (2010), the reading speed of Syrian students is low compared to the upper- and lower-word limits expected to be read per minute, based on grade level and season. Moreover, when compared according to text type, it was found that the reading speed of Syrian students ranged from high to low in narrative, informative, and poetrays, respectively. According to the automaticity theory, better readers can decode words faster, resulting in a higher reading speed. When these results are considered in this context, it can be concluded that the words in narrative texts are more familiar to the students. Consistent with the findings on accurate reading and reading speed by text type, previous studies in the literature also indicate a preference for narrative text type (Baştuğ, 2012; Kanık Uysal & Bilge, 2018; Paige et al., 2015).

Syrian students' reading prosody scores are generally at the worrying reading level, indicating that they do not pay sufficient attention to stress and intonation when reading texts. An analysis by the type of text revealed that the majority of students scored at the worrying level on narrative texts, at an improvable level on informative texts, and at an improving level on poetrays. A study by Derman et al. (2017) found that Arab students of Turkish, a second language, had difficulties reading with accent because of the addition of syllables. This is because Turkish is an agglutinative language. The addition of many syllables to a word is the result of the fact that the word has new sounds. Therefore, Syrian students have difficulties pronouncing and stressing such words (Demirci, 2015). Interestingly, the Syrian students'

prosody scores were better for poetry. This is probably because reading melodic and interactive texts with rhyming patterns can support appropriate prosody during reading (Lane et al., 2009). However, previous studies in the literature have also shown that prosody scores do not vary significantly by text type (Özhan, 2019).

Although Syrian students have a higher accurate reading percentage, their reading speed and prosody are lower. This shows that, while reading, students tend to focus on decoding words accurately rather than attending to the linguistic rhythm and intonation of the text, leading to slower reading speed and neglect of prosodic features. One explanation for Syrian students' low reading fluency may stem from the structural differences between Arabic, their first language, and Turkish, the language they are learning. Arabic is written from right-to-left, while Turkish follows a left-to-right spelling order. Consequently, Syrian children's visual-motor coordination system may be adapted to Arabic spelling, hindering their ability to read in Turkish. This difference in spelling between the two languages is particularly significant given its effect on the speed of saccades during reading, which is known to impact reading fluency. Another contributing factor may be related to the orthographic complexity of Arabic. In Arabic, not all vowels are included in the spelling of words, with a vowel added to a consonant through the diacritical mark, or "haraka," depending on whether the letter appears at the beginning, middle, or end of the word. Furthermore, Arabic does not make a distinction between upper- and lower-case letters. In contrast, Turkish, as an agglutinative language, contains an array of affixes, which significantly increase the number of syllables in words (Göksel & Kerslake, 2005). The variety and number of suffixes, combined with the unfamiliarity of Syrian students with Turkish phonology, sound order, affixes, and affix order, pose challenges to their reading comprehension, leading to errors such as skipping syllables, reading by rounding, going back to the beginning, and rereading the word. In conclusion, the structural and orthographic differences between Arabic and Turkish present unique challenges to Syrian students when learning to read Turkish as a foreign language. These challenges may contribute to their low reading fluency, which may be attributed to an overemphasis on accurate word recognition rather than prosody during reading.

As such, the phonetic, morphological, and syntactic typology of the Turkish language appears to have a significant influence on the Syrian student's acquisition of Turkish. This assertion is supported by existing studies on this subject. For instance, Özenç and Saat's (2019) investigation into the challenges faced by Syrian students in the classroom revealed difficulties with pronunciation, letter omission, writing errors, and different language structures. Likewise, Demirci (2015) found that the Arabic equivalent of the letter 'h' has multiple Turkish equivalents, leading to mispronunciations and interchangeability of letters such as o-u, ö-ü, p-b. Yıldız (2016) noted that Syrian students sometimes omit letters such as 'ö, ü, ş, ç, ı, ğ', which are not present in the Arabic alphabet. Er, Biçer, and Bozkırlı (2012), based on their research into teaching Turkish to foreign students, also concluded that Turkish's phonetic features pose difficulties for foreign learners, particularly with respect to certain sounds such as 'ğ, ş, ç, ı'.

The study results reveal that Syrian students' low reading comprehension scores pose a significant challenge in their ability to understand texts. The inability of the students to answer even basic questions indicates their struggles to comprehend what they read, and they merely vocalize the text. There are several factors that may account for this issue with reading comprehension. One potential reason is that Syrian students may lack adequate familiarity with the Turkish language, and their language skills may be insufficient for comprehending text. Deficiencies in grammatical structure, vocabulary, and syntax may adversely affect their ability to comprehend Turkish texts. Moreover, Syrian students' unfamiliarity with Turkish culture and social structure may also pose a challenge to their understanding of cultural references

present in the text, such as traditions, norms, idioms, and proverbs. Differences in educational backgrounds between the two cultures may also account for the low reading comprehension scores. As Syrian students come from a distinct educational system, their comprehension of Turkish texts may differ due to varying literacy skills, strategies for comprehending texts, and experience with text analysis. The fact that Syrian students are exposed to a different curriculum in Turkish classrooms from their home country's education system may make it challenging for them to comprehend the texts they read. Other variables, such as placement in a different grade level, a mismatch between learning needs and curriculum, and age, and so on, may further explain the low reading comprehension levels of Syrian students.

When analyzing the reading comprehension scores of the Syrian students who participated in the study based on different text types, it was observed that the highest scores were obtained from the narrative text type while the informative text type yielded the lowest scores. Similar results have been reported in the literature. For instance, Başaran and Akyol (2009) investigated the effect of informative and narrative texts on the reading comprehension and attitude toward the text of fifth-grade students and found that students comprehended narrative texts better than informative texts. Likewise, Hamzadayı and Batmaz (2022) conducted a study on the factors influencing reading comprehension and concluded that text type has a significant effect on reading comprehension, with the narrative text type being more comprehensible than other text types. This result can be attributed to several factors such as the greater frequency of exposure to narrative texts from an early age, the distinct text schemes that students create in their minds, and the semantic density of words in informational texts (Graesser, Golding, & Long, 1991).

The final subproblem of the study revealed a significant relationship between the reading fluency and reading comprehension of Syrian students. Various studies in the literature, such as Good et al. (2001), Hiebert (2012), Kim (2011), Rasinski (2005, 2009), Yildirim (2013), Yıldırım and Ateş (2012), Yildirim and Rasinski (2014), and Yildiz et al. (2014), have also explored this relationship and found a high level of positive correlation between prosody, a component of fluent reading, and reading comprehension. Similarly, several studies, including Dedeali and Saracaloğlu (2010) and Kuşdemir Kayıran and Katırcı Ağaçkiran (2018), have reported a positive correlation between reading speed, another component of fluency, and reading comprehension. However, due to reading anxiety, Syrian students were unable to read at a sufficient speed, leading to low levels of reading comprehension. These findings suggest that prosodic reading significantly influences text comprehension (Kuhn et al., 2010; Therrien, 2004). Students who can read a text at a conversational speed exhibit greater reading competence, which may indicate higher levels of reading comprehension. Conversely, students who read slowly often struggle to remember and understand the text as a whole due to the prolonged duration of reading. Dökmen (1990) suggests that fast readers comprehend more, whereas slow readers comprehend less. Furthermore, the relationship between accurate reading and reading comprehension is positive but weak. Reading comprehension is linked to accurate reading to some extent because failure to recognize words in a text can impede text comprehension. However, reading accuracy alone is not a strong predictor of reading comprehension as it entails complex cognitive processes (Oakhill, Cain, & Elbro, 2015). The weak positive correlation between accurate reading and reading comprehension in this study supports this view.

In light of the experiences gained from the present research, the followings can be suggested:

1. As the fluency and comprehension of the students in the study were found to be at a generally worrying level, the students' parents and primary school teachers can also be part of the research in order to reveal the reasons for this in future research.

2. Focus group interviews can be used to identify the issues that students have with fluency and comprehension.
3. In order to improve the fluency and comprehension of these students, new studies may involve experimental or action research.

### **5. Limitations**

This study is limited to Syrian students in the fourth grade of primary school and to the texts that were given to these students to read. In addition, the study was carried out in a public school only.

## References

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