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A CASE STUDY AND THE NEEDS ANALYSIS FOR DETERMINING SECONDARY SCHOOL STUDENTS' READING SKILLS

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Abstract:

This study aims to determine the secondary school students' conditions and needs about reading and reading comprehension skills. According to this aim, the research process was structured as a case study that identifies reading and reading comprehension problems. Therefore, the research process was prepared according to the holistic-single case design of the case study. The research question is focused on: What are the secondary school students' needs regarding the problems they face in reading and reading comprehension processes? In this context, qualitative and quantitative data were collected through questionnaires, observation forms and semi-structured interviews to determine the students' needs and to make analyzes via these data. Quantitative data were collected from 307 secondary school students. Then, qualitative data were obtained from the participants who were identified as homogeneous sampling in this group. The data collected during eight weeks were analyzed by the quantitative and qualitative data analysis methods. According to the results of the analysis, it was found out that the students were affected by the factors that affect reading comprehension, physical factors that affect reading, reading difficulties and reading and reading comprehension problems. According to these findings, it was determined that the students have commonly the reading problems such as not caring about reading comprehension, lack of expectation against reading, get bored from the reading process, tiredness from reading, distraction, skipping reading, making habit of reading problems, not knowing punctuation, mixing letters. Based on these problems, students' needs for reading and reading comprehension were determined. To meet students' needs, suggestions were given on how reading and reading comprehension education to be designed.

Keywords: reading skills, reading problems, students, case study, needs

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1. Introduction

Reading is a cognitive process that realizes the schematization between the mind and the text. Reading and reading comprehension skills were examined in different aspects depending on the process of structuring reading in mind. In this context, reading and reading comprehension are closely related to the cognitive processes which are vocalizing the letters or signs that make up the writing, analyzing and realizing the text, making meaning between the author and the reader, and deriving meaning from the written symbols (Akyol, 2007; Demirel, 1999; Çifti and Temizyürek, 2008; Temizkan, 2009). Based on these relations reading comprehension is the process of structuring in the mind with the previous knowledge by including reading comprehension information, sorting, classifying, associating, questioning and evaluating the information related to these relationships, reading comprehension is the process that includes examining, sorting, classifying, associating, questioning and evaluating information, and which also constructs the reader's previous knowledge in the mind allowing them to be acted cognitively (Güneş, 2009).

Although the reading process is structured in the mind, external factors have a significant impact on reading comprehension. This effect is closely related to reading motivation. It was determined that external factors such as recognition, social, competition, and adaptation were effective in reading motivation (Wang and Guthrie 2004). Therefore, external factors play a decisive role in the development of students' attitudes towards reading culture or reading. Because reading process has a wide range of affective, cognitive and behavioral aspects. According to the researchers, the aesthetic pleasure and the desire for reading constitute the affective element. In addition, the thoughts constitute the cognitive element while reading conditions which forms in a suitable environment constitutes the behavioral element (Özbay and Uyar, 2009: 633). Depending on its aspects; reading differs according to cognitive and affective processes and has mental depth (Bamberger, 1990). Besides, it was determined that the information and values given by parents to children about the reading process had an impact on children's attitudes towards reading (Black and Young 2005). Some of the factors in the socio-economic conditions and educational system have also been found to have an impact on students' reading habits and attitudes (İşcan, Arıkan and Küçükaydın, 2013).

Internal and external factors that are effective in the student's reading process should be handled effectively in education. Because to be neglected or not to be handled adequately in the process of reading education shall cause some problems related to reading and reading comprehension over time. In this context, it is necessary to focus on the causes of reading and reading comprehension problems. In the process of reading and reading comprehension, it was determined that there were different reading errors such as reading different words, reading incorrectly, making additions, removing syllables, reading the part incorrectly, skipping, repeating, and hanging out more than necessary (Koçer, 2011). In addition, other common reading errors are seen as not

understanding the relationship between symbol and sound, reversing, relocating letters, difficulty in spelling, reading according to the estimation, mixing words or letters (Akyol, 1994). These identified problems cause some difficulties in the reading and reading comprehension process. Gough and Tunmer (1986) classify reading difficulties in three ways depending on the degree of difficulty. The first group constitutes those who are described as *dyslexia* in the literature. Although these readers understand the written text read by someone else, they have difficulty while analyzing the word during the reading process. The second group is defined as specific reading comprehension difficulties. These are persons who can do word analysis but have difficulties in understanding verbal language to process information snippets in the text. The third group consists of persons with *mixed* reading difficulties (Gough and Tunmer, 1986; Tunmer and Greaney, 2010; Nation, 2005; Catts and Kamhi, 2005, cited in Güldenoğlu, Kargın and Miller, 2015: 83). There is a need for an effective reading education to prevent reading problems due to these difficulties. Because in the research, it was determined that activities that will increase children's reading speed with reading difficulties improve the reading comprehension level (Hudson, Lane and Pullen, 2005). In the study, it was aimed to determine students' problems for reading difficulties and to eliminate these problems. For this purpose, the students were given education with the strategies used in reading problems and reading comprehension problems. As a result of the education, it was determined that these student's reading problems such as repetition, spelling, skipping syllables and words, making additions, reading without paying attention to wrong reading and making errors for punctuation marks were reduced (Kardaş İşler and Şahin, 2016).

Reading problems and reading comprehension problems should not be considered only in the scope of Turkish courses. The reason for this is the effect of reading problems and reading comprehension problems on students' learning in other lessons. Because, in the research, it was determined that the students with inadequate reading skills and habits experienced important problems in most of the lessons in the school in general (Temizkan, 2009: 32). In the other study, the effect of fluent reading skills on understanding and solving the problem was examined. At the end of the study, it was determined that there is a close relation between fluent reading skills and comprehension and problem-solving skills (Tuohimaa, Aunola, and Nurmi, 2008). In a similar study, the relation between reading comprehension and problem-solving strategies education was examined. In this study conducted with experimental and control groups, it was determined that the experimental group involved in strategy training provided improvement in problem-solving skills (Ulu, Tertemiz and Peker, 2016). In another experimental study, the effect of prospective teachers' reading and reading comprehension success on mathematics achievement was examined. In this context, data were collected from the participants by using the Turkish and mathematics achievement test which required reading and comprehension. As a result of the study, it was determined that reading comprehension skills had a significant effect on the participants' mathematics achievement (Tatar and Soylu, 2006).

Reading education arrangements should be well planned to eliminate reading difficulties and problems and to prepare a more effective reading process. In the first stage of this planning, difficulties related to readers' reading skills and their needs should be determined. Because education services should be structured according to the needs which are very important in the education process. In this context, Tyler states the need in education as the basic knowledge, attitude, and skills given to the student with the educational objectives (Tyler, 1949). In this context, the needs analysis related to language education is the process of collection and analysis of subjective and objective knowledge to define and validate the curriculum objectives that meet students' language learning needs (Brown, 1995, cited in Harrison and Vanbaelen, 2013: 4). This is also closely related to needs analysis and due diligence that are the first stage of curriculum development. Therefore, it is seen that the study based on needs analysis and due diligence is a prerequisite especially in the process of preparing the curriculum (Koçer, 2011: 161). As a result of this important relationship, in this study which focuses on the problems in reading and reading comprehension processes, due diligence and needs analysis are conducted. Firstly, the conditions related to the students' problems (difficulties) in the process of reading and reading comprehension were identified, and then these conditions were analyzed. Depending on these conditions (problems/difficulties), students' needs related to reading and reading comprehension were identified and examined. By these two important steps, the study sought answers to the following research questions.

- 1) According to the results of the survey, how are the students' perceptions about the problems/difficulties experienced in reading and reading comprehension processes?
- 2) According to the observation form and the results of the interviews, what are the students' problems/difficulties experienced in the reading and reading comprehension process?
- 3) According to the results of the collected data, what are the students' needs regarding the problems/difficulties they face during the reading and reading comprehension process?

2. Material and Methods

This study, which was conducted to examine the difficulties in reading and reading comprehension processes, was arranged according to the stages of *the holistic-single case design* (Yin, 2003). The quantitative and qualitative data were collected from the participants by the questionnaire, observation form, and interview form. Thus, to meet the needs determined according to the results reached, conditions affecting reading and reading comprehension were determined. Based on these procedures, the research process was carried out according to the steps of the case study. Because the important thing in the case study is to reveal the previously unknown subject. By extension, it has functions such as forming the basis for future researches or guiding them (Yıldırım and Şimşek, 2013). Therefore, this study focuses on identifying prominent conditions and

needs. In this context, data were collected from teachers and students to analyze the conditions and needs related to reading and reading comprehension in this research process. Therefore, problems/difficulties in reading and reading comprehension processes constitute the unit of analysis which is the only holistic case. The originality of the research is the analysis of the needs arising from these problems/difficulties with the data collected from teachers and students and determining their characteristics.

2.1 Sample group

The data of the study were collected from the 5th and 6th-grade students of four state secondary schools in Muş city center and Turkish lesson teachers working in the related schools. The reason for choosing the 5th and 6th grades as a sample is that in the interviews with teachers, the difficulties of reading and reading comprehension are seen more in these classes throughout Muş province. Permissions have been obtained from the relevant units for the application. In this context, the protocol signed between Muş Alparslan University Faculty of Education and Provincial Directorate of National Education in 2019 was benefited. Before the application, information about the students' reading skills was taken from the Turkish lesson teachers. Classes with higher reading difficulties were determined by the purposeful sampling method. Because in the purposeful sampling method, according to the aim of the research, the participants must meet certain criteria and have certain characteristics. This sample is also preferred for studying in one or more special cases for the same research purpose (Büyüköztürk, et al. 2018). The demographic characteristics of the students determined according to the purposive sampling method are given in the Table 1.

The questionnaire prepared in the first step of the study was completed by 327 students in two weeks. In the surveys, 28 students who stated that they had difficulty reading and reading comprehension were determined according to *homogeneous sampling method*. This sampling aims to investigate in detail a specific subgroup by working in more detail with a small, homogeneous group (Yıldırım and Şimşek, 2013; Patton, 2014). This sample group was observed together with the prospective teachers in the Turkish Education Department who volunteered to participate in the study. The prospective teachers were given two-week training in the scope of Comprehension Techniques I: Reading Education Lesson about how to make the observation process, using observation form, and doing the interview. At the end of the training, prospective teachers willing to participate in the research process were identified. Thus, the data collected within the scope of the observation form were collected with 20 prospective teachers under the guidance of the researcher.

2.2 Data collection process

The research process was carried out within the scope of the research permission described in Article 5, 6 and 7 of the Joint Protocol Signed between Muş Alparslan University Faculty of Education and Muş Provincial Directorate of National Education. Besides, before the application, the administrators of the relevant schools were informed

about the purpose of the research, data collection tools, and data collection process. After the approval and acceptance of the school administration, implementation schools were determined. Data were collected for eight weeks. The data collection process was collected in three steps.

In the first step, a questionnaire developed by the researcher was used. During one week, a questionnaire was applied to the students in the sample group. Before the questionnaire was applied, information about the research process and the questionnaire was shared with the students. Volunteer students participated in the questionnaire.

In the second step, the students were observed by the researcher and prospective teachers using observation forms. Observations were made during Turkish lessons and reading hours. Thus, the research process has been arranged in a way that does not affect the curriculum of the students. By the authentic learning environment in the classroom, up to three observers participated in the observation process. To observe all the students in the classroom, the observers made their observations alternately. Thus, each student was observed twice.

The third step includes semi-structured interviews done with students and teachers. As a result of the observations, interviews were conducted with 15 students who had significant reading problems and difficulties in reading comprehension. Before the interview, the students were informed about the purpose and process of the interview. It was explained that only volunteer students will be interviewed. The students who accepted the interview were interviewed in about 20 minutes. The information given by the student was written by the researcher and recorded. To examine in detail the relevant student's problems and difficulties with reading and reading comprehension, his/her Turkish teacher was also interviewed. For the interview to be conducted voluntarily, the teacher was informed about the research process and the interview. The interview process was written and recorded with the teacher's permission. Semi-structured interviews were conducted with each teacher about the relevant student's difficulties with reading and reading comprehension experienced. These interviews were completed in approximately 20 minutes. These interviews with teachers and students were completed in two weeks.

2.3 Data Collection Tools

Quantitative and qualitative data were used to identify the needs and difficulties of reading and reading comprehension. When the frequency of their use is examined, qualitative data are used more because the research process is a case study. Depending on the purpose of the research and research questions, *the diversification approach* was used in the data collection process. In line with the purpose of this approach, it is aimed to examine in detail the difficulties and needs of reading and reading comprehension. For this purpose, it is aimed to collect different but more complementary data and more convincing data about the results achieved (the difficulties and needs of reading and reading and reading and reading comprehension) (Morse, 1991; McMillan and Schumacher, 2000). The

characteristics of the data collection tools of the research consisting of observation form, questionnaire, and semi-structured interview form are as follows.

A. The questionnaire

The questionnaire was developed by the researcher. The dimensions and the items of the questionnaire were prepared according to the factors, conditions, and problems determined for reading and reading comprehension in the literature review. In this context, students' feelings and thoughts related to the problems identified during the reading and reading comprehension process were examined. To examine and evaluate the reliability, validity and application process of the questionnaire prepared by this method was applied to 30 students in the 6th grade in Muş city center. The collected data were examined together with 3 subject field experts in the measurement and evaluation department in education. According to this pilot application, the questionnaire was evaluated together with the experts. As a result of this evaluation, about the first dimension of the questionnaire, it was determined that two items measured the same situation and two items were not suitable for the research purpose. Therefore, these items were excluded from the survey. Because all items of the third dimension appropriately to the study there wasn't the elimination of items for this dimension. And since one item was very close to another and one item was not understood by the students they were eliminated from the fourth dimension of the questionnaire. After this improvement and revision, the questionnaire was completed. Thus, the questionnaire, which consists of 51 items, the 5-point Likert and four dimensions, was completed before application. The first dimension of the questionnaire includes items related to the factors affecting the students' reading comprehension process. The second dimension includes items related to the physical problems experienced by the students during the reading process. The third dimension includes items related to reading difficulties and the fourth dimension includes the effects of reading and reading comprehension difficulties on students. The questionnaire was applied to 327 secondary school students. 11 students answered the questionnaire outside the aim of the study and 9 students answered the questionnaire incomplete. For these reasons, these participants' questionnaires were eliminated during the review process. As a result of these eliminations, questionnaires given by 307 students were examined. The questionnaire was completed during one lesson hour in each class.

B. The observation form

For the observations made during the research process to be reliable, the researcher should observe during his observations without interfering with the situation and disturbing the person he is observing (Bailey, 1982). The observation form developed by the researcher was used to determine the students' problems and difficulties in the process of reading and reading comprehension. The dimensions and items of the observation form were prepared according to the results of the data collected from the questionnaire. The factors that affect reading and reading comprehension determined by the questionnaire formed the dimensions of the observation form and the contents of the items. Depending on these findings, the observation form consists of three dimensions. The first dimension includes the items dealing with reading difficulties. In this context,

20 items were prepared. In the second dimension of the observation form, physical problems that negatively affect the reading process are emphasized. In this context, the students' physical problems during the reading process were examined with 7 items. In the third dimension of the observation form, reading errors were examined with 13 items prepared in this context. As a result of the survey, 28 students who had problems with reading and reading comprehension were examined with the observation form. Each student was observed twice, and the problems and difficulties of reading and reading comprehension experienced by these students were determined as *None, Sometimes* and *Often*.

C. Semi-structured interview form

A semi-structured interview form was used to interview students who were found to have reading problems after the survey and observation. According to the students' conditions and needs in this context, difficulties in the reading comprehension process, reading problems due to physical factors were discussed. The interviews were done with each participant recorded by writing. Each interview was completed in 15-20 minutes. As a result of this interview, the students' needs regarding reading and comprehension difficulties were determined qualitatively. At the same time, 8 Turkish lesson teachers were interviewed to examine the students' needs regarding their reading difficulties in more detail. The sections of the semi-structured interview form were prepared according to the information provided by the students in the questionnaire and observation form. Based on voluntariness principle, interviews with each teacher about 20 minutes were recorded by writing.

2.4 Data Analysis

The data were analyzed both quantitatively and qualitatively. The data collected within the scope of the survey were analyzed quantitatively. The percentages and frequencies of the data in the four dimensions of the questionnaire were analyzed using frequency analysis of SPSS. These quantitative analyses aim to determine the general factors affecting reading comprehension, physical factors affecting reading and reading comprehension, reading difficulties (problems), and the effects of reading/reading comprehension problems on students. Thus, the percentages and frequencies of these variables affecting reading and reading comprehension were determined. Due diligence and needs analysis of the students' reading and reading comprehension skills were performed. At this step, the effect of basic independent variables such as gender and number of spoken languages on reading and reading comprehension was also examined. In this context, how gender and monolingualism-bilingualism variables make a significant difference in reading and reading comprehension were examined according to Mann Whitney U-Test.

In the observation form developed for the observations, the frequency of the problems experienced by the student during the reading process was examined. The reading problems experienced by each student who was observed twice were mentioned as none, sometimes and often in the related dimension of the observation form. Then, for

each item, the levels of reading problems experienced by the student were calculated and the results reached were shown in the table.

The qualitative data collected within the scope of the interviews were analyzed by the qualitative data analysis. As a result of the observations, a semi-structured interview process was prepared for each student and Turkish lesson teacher in accordance with the reading difficulties. Descriptive analysis was used to analyze interview data about reading difficulties and problems. This descriptive analysis aims to identify the students' needs in this context by revealing the causes of reading and reading comprehension problems. The descriptive analysis was conducted within the framework of the topics (themes) determined during the research. Thus, a descriptive analysis based on the examination of documents related to a specific subject area was used (Yıldırım and Şimşek, 2013: 256-258). Interviews with students and teachers were recorded by writing. At the last step, these interviews were examined and the subjects were formed.

3. Results and Discussion

In this section, findings, and results related to the analysis of the data collected from the participants through the questionnaire, observation and interview form are given. In this context, firstly the survey results were analyzed. As a result of this analysis, according to the difficulties experienced by secondary school students in reading and reading comprehension process, it was determined how their perceptions, feelings, and thoughts about themselves were. In this context, to examine the reading skills of the students who think that they have difficulty in reading and reading comprehension, questionnaire items were adapted to the observation form, and an observation form was prepared. With this observation form, the reading skills of 28 students who had difficulty reading were observed. During the observation process, interviews were conducted with related students and teachers to examine in detail the causes of the students' reading problems who were found to have difficulties in reading and reading comprehension. The items of these interviews were determined according to reading difficulties determined in both questionnaire and observation forms. Thus, the interview items differed depending on the related students' difficulties in reading and reading comprehension. Therefore, the items in the interview were prepared as semi-structured. The findings reached according to these three steps are given in the relevant sections below.

3.1 Results of the first Research Question

In this section, a survey study was conducted to determine the secondary school students' perceptions about reading and reading comprehension problems. 307 students expressed their feelings and thoughts about reading and reading comprehension difficulties with the questionnaire. In this context, the frequency analysis for the students' responses was made. As a result of the analysis, the students' answers for each difficult conditions are given in the relevant tables below. In the questionnaire, reading problems and reading comprehension difficulties were evaluated in five different dimensions.

In the first dimension of the questionnaire was examined on how often students use the methods and strategies that support their reading and reading comprehension skills. In this context, 18 items were prepared. Methods, strategies, and techniques that affect reading and reading comprehension before, during and after reading were added to the questionnaire as items. When Table 2 is examined, it is seen that participants generally use techniques that support reading and reading comprehension by answering as *Often* and *Always*. But among these, the *Never* and *Very Less* ranges were selected for the reading techniques given in I5 (I underline the important places in the text), I6 (I make a story map while reading a story), and I16 (I can make a concept map to better understand the text). Therefore, it is seen that these techniques are not used much.

In the second dimension of the questionnaire, the extent of how the participants are affected by the physical factors affecting reading and reading comprehension is examined. It is seen that these factors are not generally effective on the students' reading and reading comprehension skills. Because when Table 3 is examined, it is seen that most of the students were not affected by these physical factors except I1. Students stated that they followed the text with tools such as fingers and pens (I1).

In the third dimension of the questionnaire, reading problems (difficulties) that were frequently seen in the literature were added as items to the questioner. Thus, the participants' feelings and thoughts about how often they experience these problems (difficulties) were examined. When Table 4 is examined, it is seen that students' thoughts were not affected by these problems (difficulties) that prevent reading and reading comprehension. In particular, the majority of students stated that they did not have problems such as spelling (I11) stuttering (I12) and reversing syllables and words (I13) during reading. On the other hand, some of the students stated that they repeat some letters, syllables, words, and sentences while reading (I4). The most common reading problem in this section is reading again to understand a sentence or paragraph that it reads very often (I2). Because more than half of the students have experienced this problem sometimes, often and always.

In the fourth dimension of the questionnaire, the effect of reading and reading comprehension problems on students was examined. Therefore, the purpose of this section is to focus on these topics: reading motivation, reading excitement, awareness of reading difficulties, reading performance in reading comprehension, reading expectations, reading needs for academic achievement. Via the 13 items prepared according to this aim, the participants' efforts to meet their needs for reading and reading comprehension by using people, methods, techniques, materials were examined. As can be seen in Table 5, students indicated that they mostly used the following methods: Correcting by reading the words which read wrongly (I1), using fluent reading enhancing techniques to better read and understand the texts (I3), and using different sources (journal, newspaper, book, television, internet ...) rather than textbooks to better read and understand the texts do not use resources such as methods, techniques, and materials that support reading and reading comprehension. It may be an incomplete evaluation to state that students do not

have needs in this context. Because, the following aspects about the reading skills need to be determined: reading motivation, reading excitement, reading difficulties, awareness levels related to reading difficulties, performances to solve reading problems, reading expectations, awareness levels related to reading needs within the academic achievement. When the answers were examined, it is seen that the students' knowledge, skills, and awareness in this context are insufficient.

3.1.1 The Effect of Independent Variables on Students' Perception of Reading and Reading Comprehension

In this section, the effect of gender and the number of languages on the students' perceptions about reading and reading comprehension difficulties was examined. The Mann Whitney U-Test was used to investigate the significant differences between the independent variables (bilingual-monolingual status and gender) and dependent variables (reading and reading comprehension difficulties). In this context, firstly, the relation between students' bilingual and monolingual status and their perception of reading and reading comprehension was examined. The differences between bilinguals' and monolinguals' perceptions about reading and reading comprehension difficulties were analyzed according to Mann Whitney U-Test. The significance value was determined as p < .05. Depending on this significance value, the statistically significant difference was not obtained between the factors affecting the reading comprehension of the monolingual and bilingual groups. Because it was found that the significant value of the items is as p > .05. There is not a significant difference between the items (Table 6).

In Table 7, how the differentiation of the answers given by the male and female students to reading and reading comprehension difficulties according to Mann Whitney U-Test results was given. In the first dimension of the questionnaire, a statistically significant difference was obtained between the changes in the answers given for I4 (Z=-2,43; p=0,015<0,05). When the rank averages are examined, it is seen that this statistical difference is in favor of female students ($X_{\text{female}}=164,06$; $X_{\text{male}}=141,01$). More specifically, girls tend to underline important points in the text more than boys. In this dimension, a statistically significant difference was obtained between the changes in the responses given for I6 (Z=-2,11; p=0,035< 0,05). When the rank average is examined, it is seen that the statistical difference is in favor of female students ($X_{\text{female}} = 162,74$; $X_{\text{male}} = 142,72$). Therefore, the female students' need for using story mapping while reading the story is higher more than male students' need. A statistically significant difference was obtained between the changes in the responses given for I7 (Z=-2,92; p=0,003<0,05). When the rank average is examined, it is seen that the statistical difference is in favor of female students (X_{female} =166,02; X_{male} =138,48). Therefore, female students tend to express their thoughts about the text they read more than male students. A statistically significant difference was obtained between the changes in the answers given for I15 (Z=-2,58; p=0,010<0,05). When the rank average is examined, it is seen that the statistical difference is in favor of female students ($\overline{X}_{\text{female}} = 165,08$; $\overline{X}_{\text{male}} = 139,70$). In other words, the level of female students' self-evaluation regarding reading and reading comprehension is higher than male students.

In the second dimension, a statistically significant difference was obtained between the changes in the responses given for I1 (Z=-2,41; p=0,016<0,05). When the average of these rankings is examined, it is seen that the difference is in favor of female students statistically ($\overline{X}_{\text{female}}=164,25; \overline{X}_{\text{male}}=140,77$). Therefore, it can be said that female students tend to follow a document by finger, pen, etc. when reading more than the male students. In the third dimension, a statistical significant difference was obtained between the changes in the responses given for I2 (Z=-2,16; p=0,031<0,05). When the rank average is examined, it is seen that the statistical difference is in favor of female students (X_{female} =163,33; X male=141,95). In other words, female students have a higher level of need to read again text to understand a sentence or paragraph. A statistically significant difference was obtained between the changes in responses given for I5 in this dimension (Z=-2,02; p=0,043<0,05). When the rank average is examined, it is seen that the statistical difference is in favor of male students ($\overline{X}_{\text{female}}=145,85$; $\overline{X}_{\text{male}}=164,52$). Therefore, male students' level of not adjusting the tone and emphasis of reading is higher than female students. A statistically significant difference was obtained between the changes in the responses given for I11 (Z=-2,06; p=0,040<0,05). When the mean of these answers is examined, it is seen that the statistical difference is in favor of male students (\overline{X} _{female}=147,79; \overline{X} male=162,02). According to the answers given, male students have a higher level of spelling during reading more than female students.

3.2 Results of the Second Research Question

The data at this stage of the study were collected from 28 students who stated that they had difficulty reading and reading comprehension through the questionnaire. These students' demographic characteristics are given in Table 8. It was found that they frequently experienced reading and reading comprehension problems in four dimensions. In the two observations, the observation form prepared by the researcher was used. The items in the observation form were prepared in accordance with the answers given by 28 students in their questionnaires. Items in the fourth dimension of the questionnaire (the effects of reading and reading problems on the student and the student's performance to overcome these problems) were not given in this section. Because the effects of reading problems and reading comprehension problems on the students' performance to overcome these problems were examined through interviews. The findings and conclusions reached in this context are given in detail in the next section (3.3).

To collect the data in this section, 28 students who were found to be homogeneous for the research were observed twice in the lesson environment. In the first observation, two prose texts were selected from the reading text of the week. In the second week, two poems were selected from the reading texts of that week and the students read to these four texts. The difficulties in reading and reading comprehension identified during these two observation periods were identified as *none, sometimes* and *often*.

In the first dimension of the observation form, the observation results related to whether the participants used the methods, techniques, and strategies they used to overcome the difficulties they experienced in reading and reading comprehension were included. The results of the two observations were given in Table 9. With 20 items prepared in this context, students were observed before, during and after reading. These items are listed as follows. Whether the student makes preparations for the reading process before reading the text (I1), whether the student refers to related alternative texts to better understand the text (I2), whether they investigate the meaning of unknown words (I3). The following items were examined in order to observe the problems with the students' reading comprehension in the reading process: providing excitement control during reading in order to identify students' reading comprehension problems in the reading process (I4), Underlining important places in the text (I5), using specific reading strategies for reading comprehension (I6), creating a story map (I7), paying attention to punctuation (I8). The following items were examined in order to observe the comprehension level of the students after reading: associating what they read with their life (I9), associating the information in the reading process with the existing information (I10), asking questions about what they do not understand in the text (I11), doing criticism about the text (I12), giving information about main ideas and sub-ideas or subthemes of the text (I13), associating images correctly with text (I14), associating title with text (I15), asking questions about sections that s/he does not understand in the text (I16), separating the introduction, development and conclusion parts of the text (I17), summarizing text (I18), doing self-evaluation about his/her process of reading and reading comprehension (I19), doing peer-evaluation about his/her process of reading and reading comprehension (I20). The students' reading and reading comprehension levels were determined to depend on the answers given by the students in this context.

The data collected under these items are given in the first dimension of the first and second observations in Table 9. The observation results about the students' reading difficulties determined according to these items were marked as *none, sometimes and often*. These frequency values determined in the first and second observations were calculated and given in Table 9. When the table is examined, it is determined that students do not have so much reading and reading comprehension problems in this dimension. The observation recorded as *none* indicated that the students did not perform the necessary reading and reading performances (preparation, activity, task, etc.) before, during and after the reading process. At the same time, the observation recorded as *sometimes* indicated that the students did not perform the necessary and reading comprehension enough.

In the second dimension of the observation form, observation results related to physical problems affecting students' reading and reading comprehension were examined. According to the two observations made in this context, the results of seven items are given in Table 9. In the observation, the difficulties experienced by the students during reading were determined as follows: following the text with finger, pen, etc. to read (I1), using glasses when reading (I2), using a hearing aid (I3), not notice punctuation during reading (I4), sitting in the front of board to see the text (I5), make complaints about the inability to read texts (I6), cannot see the pictures or figures in texts (I7). The answers were given as *none, sometimes and often* were collected separately and shown in Table 9. According to the collected data, students' problems of reading and reading comprehension in the second dimension were observed. However, this result, which is designated as *none* in this section, has a different meaning from the previous section. Because this finding shows that students do not usually experience physical problems that affect their reading and reading comprehension skills. In this context, it was determined that related physical problems were seen at *sometimes* and *often* levels in some students (in a small number). The students were interviewed to determine the causes of these problems. The findings in the scope of these observations are given in the next section.

At this stage of the research, students were observed within the scope of reading problems in the third dimension of the observation form. The readings made by the students with the following items prepared in this context are determined as *none*, sometimes and often: skipping some letters, syllables, words, sentences, paragraphs (I1), reading again to understand a sentence or a paragraph (I2), having difficulty to read words or phrases when reading aloud (I3), repeat some letters, syllables, words, and sentences during reading (I4), cannot adjust tone and accent while reading (I5), cannot read any text (I6), scrambling some letters during reading (I7), cannot control breathing during reading (I8), doing mumbling during reading (I9), adding letters, syllables, and words to the text during reading (I10), spelling or stuttering during reading (I11), reversing syllables and words during reading (I12), pausing for a long time during reading (I13). The data collected on these items are shown in the third dimension of the first and second observations in Table 9. When the table is examined, it is observed that students often or sometimes have problems with reading and reading comprehension in this dimension. It has been observed that students cannot read and understand what they read because of these problems which are identified as frequent and sometimes. As seen in the table, some of these problems are seen more frequently. Interviews were conducted with the students to determine and examine students' reading and reading comprehension problems. The findings in the scope of these observations are given in the next section.

3.3 Results Related to the Third Research Question

As a result of the questionnaire and reading observations, interviews were conducted with the students with reading problems. Interviews with 28 students were planned to understand the causes of the problems. However, only 15 students accepted the interview. Some of these students refused to accept the interview by stating that they had no reading difficulties, while some of them stated that they did not want to participate in

the interview. Therefore, the interview process was conducted voluntarily with 15 students. Although five students accepted the interview, they did not give the answers appropriate for the research. For this reason, this section contains interviews with 10 students.

Semi-structured interviews were conducted with the students based on reading and reading comprehension problems. The interview was conducted approximately 15-20 minutes. To better investigate and determine the causes of these problems, their Turkish lesson teacher was also interviewed. Thus, the teachers' findings in this context were benefited. Interviews with ten students and their teachers revealed that students were not aware of most of the problems that they experienced in general. Therefore, students could not answer all the questions asked in the Interviews. They answered the questions with closed-ended answers as "I don't know, no, yes". The following findings were reached about the reading problems that the students were aware of and wanted to talk about.

During the interview with S1, it was determined that the student did not know the reason for many problems during the observation period and was not aware of these problems. The student only explained the reasons for his two problems. In this context, he was asked to summarize the texts to determine whether he understood what he read. But the student could not summarize the texts. When the reason was asked, he said that he could not fully understand the text to read it properly. Because of these conditions, it is determined that the student attaches importance to just reading more than reading comprehension during the reading process. At the same time, when asked the reason for skipping a line he made during the reading process, he stated that this was due to his inability to concentrate on reading. When the student was asked about his thoughts about reading and reading comprehension skills, he stated that he read more slowly than his friends and he stopped doing more performance for better reading and comprehension. The Turkish teacher was also asked about this student's reading problems. During the interview with S2, the student was asked about the reason for the intense excitement he experienced during reading. For this question, the student answered as: I get excited during reading a text when I'm with people who I don't know. Then the student was asked about why he did not understand the text. The student explained that he did not have any expectations from the reading comprehension process as follows: I do not understand anything from the texts I read, just my teacher says to me "read", and I do it. To determine other factors that affect a student's reading and reading comprehension, he was asked what problems might affect his reading and reading comprehension. The student expressed that the main source of these problems is related to communication problems with his friends. He explained these conditions as follows: They underestimate me. They don't usually take me to their team, because they prefer different children to play games. That's why I'm staying alone. In the interview with his Turkish lesson teacher, the teacher stated that he excites so much during reading because he read slower during reading than his friends. The problems experienced by the student in reading and reading comprehension were stated by the teacher as follows: Because my student was only able to learn to read at the end of 5th grade. He

needs to improve himself to understand what he reads, and he needs time. The communication problems that the student stated that affect his reading skills were stated by the teacher as follows. The child isolated himself from the classroom environment because his physical development is less than his friends and his friends do not take him among themselves. We study in partnership with the school counseling service to solve this problem.

During the interview with S3, she was asked why she followed the words constantly with her finger. The student stated this problem as follows. I forget where I stayed in the text I read. I follow the words with my finger to avoid skipping. I didn't know this was wrong. She explained the problem of not ending some words during reading as "No, I do not realize. Most of the time I don't understand the text. For this problem, she said that I just notice that the text is finished". The student explained the reasons why she was so excited during reading: I don't know exactly why, sometimes I think that I can't read well maybe this could be one of the reasons. Her teacher listed the causes of these problems as: "Some of the students have made this a habit. She follows with their fingers in order not to lose the place she read. This student did not read enough books, so her vocabulary knowledge is very less. Since her vocabulary knowledge is not enough, sometimes she cannot see the words as a whole. And so she can't complete the word". Then the teacher added the following information: Since this girl is a 5th-grade student, she just encounters most of the words in the text. This problem may arise from the student's fear of not being able to understand or read the words. I think this student excites so much because she doesn't have good breath control in reading aloud. In the interview with S4, she was asked why she cannot pronounce some sounds and *why she read by murmur during reading.* The student explained these conditions as follows: I've made this a habit. And I can't read quietly. At the same time, the student was asked about the reasons for the decrease in tone during the reading and the tremor of her hands and feet. The student explained this problem as follows: Because some of my friends read very well while I can't read, that's why I get excited. The student's teacher evaluated these problems as follows: Because this student cannot perform silent reading and cannot read at all silently when I said to her. Although I met with her family to prevent excitement, I did not get a positive result. It is normal for students of this age to have excitement during reading. Because they learned reading late.

During the interview with S5, she was asked why he needed to follow the text with a pen during reading. The student said that *this problem is getting habitual and he knows that it is not correct*. Her teacher stated that *not being with students since primary education caused a disconnection in terms of teacher-student*. Therefore, she stated that *they are aware of these students who have reading problems but they cannot help all students because of the high number of students*. **S6** has difficulty pronouncing sounds during reading. The student associated this reason for the intense excitement she has. At the same time, *the student associated the reason for following the text with her finger during the reading is not to lose the place of the text. The student stated that she did not pay attention to the punctuation marks during reading. The teacher evaluated the student's problems as follows: <i>This student gets excited while reading the text because she has feelings of extreme shame and excitement in the classroom. She also rushes to read the text as soon as possible to finish. During the interview with S7, the reasons for the*

problems with reading and reading comprehension were asked. The student connected the causes of his reading problems to environmental factors. The student explained that *he was taking care of the animals during his stay at home and therefore he could not spend time on his lessons because he was tired in the evening. He also stated that he has eleven sisters and brothers, therefore, he has no study environment, and his family is not interested in his education. In addition, the student stated that he has negative feelings for reading because he was rebuked by his teacher for not being able to read well in primary school.* He added that *he did not want to go to school because of these problems and he was voluntarily taken out of school and took a break to school for a while.* His teacher stated that *this child came from the village and he does not give enough importance to reading. Therefore, this student reads slower than his peers and he cannot comprehend.* The teacher stated that *he noticed these conditions in the collective reading activity he organized in the classroom. It was determined that while his friends went one page ahead during reading, this student stey behind because he read the back page very slowly.*

During the interview with S8, the student was asked about the reasons for her problems as changing the tone of voice, gradually decreasing the volume and breathtaking before the word ends. The student explained the causes of her problems as follows. *I get up early in the morning, I go to school, I join classes, I get tired* ... To determine the causes of **S9**'s reading and reading comprehension problems, student was asked about the reasons for not comprehension and not making inferences. The student explained her reading problems as follows: *I don't understand what I read, but teachers want me to read.* The student explained why she did not pay attention to punctuation marks as: *In the lesson they only process point and comma, therefore they know functions of these punctuation marks but they do not know the others, so they do not pay attention to other punctuation marks.*

The student explained that in the lesson they only learned point and comma subjects, which they know functions of point and comma that's why they do not pay attention to other punctuation marks. At the same time, the student read some letters (confusing the letter Ş with the letter S) the same because she was unaware that she has made a mistake and believed that they were both the same. In this context, similar results were determined in the interview with the teacher. S10 was asked the reasons for his reading difficulties such as misreading the many words, inability to summary the text, and reading the same text but not understanding. The student associated these problems with the family problems he has experienced. The student explained these problems as follows: I'm very unhappy, I am far away from my family and stay in a dormitory. That's why I can't think of anything except my family, and I don't care much about my lessons even though I have problems. At the same time, the student stated that he experienced fear and excitement because he confused some letters during reading. In the interview with his teacher, the following details were obtained. This student got behind from his friends because he learned reading late. It is seen that these problems are reflected in the students' reading skills since he is a new student in this school.

4. Recommendations

Based on the findings and conclusions reached in the research, it is necessary to determine the students' conditions and meet their needs in reading and reading comprehension. Depending on these conditions and needs, the following suggestions are made for researchers and educators.

- Methods, strategies, and techniques that support reading and reading comprehension should be more included in the curriculum, textbooks and student workbooks. Thus teachers' and students' awareness should be increased for students to use these methods, strategies, and techniques more during Turkish lessons and reading hours.
- Experimental studies with a higher sample size should be conducted to examine the students who have reading difficulties more comprehensively. In this regard, data from different regions of Turkey should be collected.
- Stakeholder roles in reading education need to be increased to assist students in their reading and reading comprehension problems. In this context, studies are needed to examine the roles and effects of friends, families, local government organizations, and non-governmental organizations in developing reading skills. In these researches, it is necessary to examine how these stakeholders should be included in education in cooperation with the school to determine the educational activities that will support students' reading and reading comprehension skills. Therefore, a rich, effective and diverse learning environment will be provided to meet students' reading needs.
- It was determined that gender and bilingual factors were effective in reading skills. In this context, experimental studies are needed to reach more detailed findings. Based on the findings to be reached, reading teaching processes that support students should be prepared.
- To organize reading comprehension more constructively, the process steps that the student could do before reading, during reading and after reading should be given in more detail. Especially in master and PhD thesis studies, how to organize reading education successfully and functionally depending on these three processes should be examined experimentally.
- In this study, it was found that although there were not many physical problems that would affect the students' reading skills; some students have difficulty in reading because of the disorder in their eyes. Especially because of financial problems, some students could not go to the doctor and some of the students' glasses numbers could not be changed. The Ministry of National Education and the Ministry of Health should work together to identify these students and meet their needs. In this context, students' needs about diagnosis and treatment must be met.
- Reading education practices should be organized in order to ensure students' awareness of their reading difficulties. Particularly, Turkish lesson teachers and

classroom teachers should receive more detailed vocational training in this context.

- Students' psychological problems directly affect their reading motivation, which is an affective and cognitive process. In this context, there is a need for research based on the joint study of Turkish lesson teachers and advisory teachers. Thus, students who have reading and reading comprehension problems should be directed to experts such as advisory teachers, child psychologists, and child psychiatrists. After these students receive the necessary psychological support, they can be given supportive reading training to improve their reading skills.
- Researchers should examine the causes and reasons for the reading depression which results due to the inability to read and comprehend.

5. Conclusion

The factors that affect students' reading and reading comprehension skills and the effects of these factors on students' reading motivation were examined from different aspects. In this context, it was evaluated how often the students used the methods, strategies, and techniques before, during and after reading to support their reading skills. The results showed that students benefit from these methods, strategies, and techniques. However, the frequency of the students' using these methods, strategies, and techniques in the education process is insufficient. Because the level of using these methods, strategies, and techniques at all times and frequently is below 60%. This result indicates that there is a significant need for more effective reading and reading comprehension process. This need is that students are not aware of using effective methods, strategies, and techniques to support their reading process done with methods, strategies, and techniques has an effect on students' reading attitudes and achievements (Aktaş and Bayram, 2018; Bozkurt, 2005; Çakıroğlu, 2007; Doğan, 2002; Pesa and Sommers, 2007; Kılıç, 2003).

According to the survey conducted with the questionnaire, it was observed that the students stated that they did not experience reading difficulties in general. Because the 14 reading difficulties given in the questionnaire were seen between 1% and 12% (this value is very less). Similarly, the frequency of these reading difficulties (as always) is between 2% and 11% (this value is very low). Therefore, students stated that they did not experience reading difficulties at a high level.

With the last dimension of the questionnaire, the students' reading difficulties and problems (motivation problems during reading and reading comprehension process, reading excitement, levels of awareness about reading difficulties, their performance to solve reading problems, reading expectations, and the reading problems that affect academic achievement) were examined. According to the results, students are not aware of these problems which affect their reading skills negatively and they cannot make use of the elements that support their reading. In this context, the students' reading needs should be met well. Environmental factors are important for solving these problems. In

this scope, it was stressed that the environmental factors were found to be effective for solving problems in the reading and reading comprehension process (Kaldan, 2007; Kovacioğlu, 2006). In this context, students with reading difficulties should support their reading skills by using the resources (person, material, etc.) in their environment. At the same time, it is necessary to add content to students' learning materials (the textbooks, workbooks, etc.) that are will enable students to practice with their close environment. Because reading and reading comprehension skills development training should not be limited to between student and text. To meet this need, family, friends, and society should be included in the reading process. Therefore, reading education resources should be prepared and designed on a group-based basis as well as being an individual. One of the main sources of deficiency in this context is the Secondary School Turkish Lesson Curriculum. Because objectives of reading and reading comprehension in the curriculum were generally prepared student-oriented. The main reason for this is that the content of grammar is given together with the content of reading skills in general (MEB, 2018; MEB, 2006). Therefore, the contents related to reading skill are stacked between the text and grammar. In this way, students cannot go beyond the teacher and text alternative to solve the problems they have experienced in reading. However, the close environment, especially the family, should be included in the reading process.

The independent variables that bilingualism and gender effects reading and reading comprehension skills were examined. In this context, it was examined how the differentiation status of bilingual and monolingual students' reading and reading comprehension difficulties according to Mann Whitney U-Test results. As a result of the analysis, it was observed that there was no significant difference between the two groups. According to students the factor of being bilingual or monolingual does not have much effect on their reading and reading comprehension skills. However, in the observations and interviews, a different finding was obtained from this result. Because in the observations and interviews, it was determined that bilingual students had more difficulties in reading and reading comprehension than monolingual students. As a result, as determined in previous studies, the bilingualism factor is effective in reading and comprehension skills (Bayat, 2017; Bialystok, 2007; Sarı, 2002). At the same time, it was determined that the gender factor was effective on some items of all dimensions. Because it has been seen that the boys' and girls' perceptions about reading and reading comprehension have changed in some items. In this context, especially these items have differed significantly: In the first dimension I4, I6, I7, I15; in the second dimension I1, I2 in the third dimension I2, I5, I11 and in the fourth dimension I7, I9 and I10. This result supports previous research findings (Akın, 2016; Baki, 2019; Jafarigohar and Behrooznia, 2012).

With the observations, it was examined whether the students use effective methods, techniques, and strategies to overcome the difficulties in reading and reading comprehension. As a result of the study, it was determined that the students did not perform the necessary procedures for reading and reading comprehension before, during and after reading. The reason for this may be related to the students' low awareness about

the reading process. In particular, students are not aware of the preparations required before reading. Therefore, reading education should be prepared effectively. And in Turkish lessons, students should be guided about what they will do before, during and after reading. Thus, students can better understand the text they read. In the third stage of the observation, it was determined that the students frequently experienced 13 problems/difficulties related to reading and reading comprehension. The main point is that some of the students are not aware of these reading difficulties or do not accept these conditions. The main reason for this condition is the fact that students cannot recognize themselves as metacognitive, as seen in previous studies. At the same time, the lack of awareness in this context has an important role (Baydık, 2011; Melanlıoğlu, 2014; Riany, 2010).

It is very important for the students to accept the difficulties experienced in reading and reading comprehension and to be aware that some reading problems can be solved. In this context, there is a need for reading education practices which will increase students' awareness in this aspect. Interviews were conducted with the students who were found to have difficulty reading as a result of the questionnaire and observation. All students with reading difficulties did not participate in the interview process. As a result of the interview with the students and teachers, the reasons for not accepting interview are as follows: not wanting to accept the problems, hesitation from the interview process, excessive anxiety, not believing to solve the problem he/she has experienced, the student's character specialty, hopelessness, learned helplessness, irrelevance to reading education. The solution to solve these problems is student's acceptance of his/her reading problems and searching for the way of solutions for his/her problems. Because, as emphasized in the previous studies, the fact that students with learning difficulties accept problems and seek solutions for her/his problems is an important and effective factor in the process of solving the problem. Because this factor was also observed in children with reading difficulties (Armağan Yıldız, 2004; Urfalı Dadandı and Şahin, 2018; Melanlıoğlu, 2014). For this reason, especially students who have reading difficulties should gain awareness about the solution to their problems. In this context, it is necessary to prepare the teaching processes that will increase the students' awareness through experimental studies.

At the same time, it was determined that some psychological problems that students have had negative effects on reading and reading comprehension. In this context, it will be more effective for Turkish lesson teachers and advisory teachers to study together. Because, as a result of the interview with five students with reading difficulties, it was determined that these children have very serious psychological problems related to their family. Therefore, these students did not focus on questions related to reading difficulties. They answered these questions within the scope of the familial problems they experienced. These profound psychological problems prevent the student from focusing on the reading process. This condition negatively affects student's reading motivation and communication which should be continuous with the text.

During the interviews, it was determined that the students more frequently experienced such problems with reading and reading comprehension as irrelevance for reading comprehension, no expectation against reading, be bored with the reading process, giving out during reading, losing the line s/he reads due to concentration problems, the habit of reading problems, not knowing punctuation, mixing letters. It was also determined in previous studies that some of these reading problems were frequently performed by students (Beşgöl, 2015; Cain and Oakhill, 2006; Yılmaz, 2008). The main reason for these problems, which are common in this study, is the students' deficiencies regarding reading education stemming from the previous classes. Because in the interviews with the teachers, it was found that these students usually started to read late. The teachers stated that students who have problems in this context usually learn to read in the fifth grade or later. Therefore, they stated that these students' reading and reading comprehension skills improved less than their classmates. Besides, in the interviews of students and teachers, it was determined that factors such as the indifference of the family and the inability of the students to spend sufficient time to read (because of the working) also affected their reading skills negatively.

During the interviews, it was determined that students with reading difficulties experienced reading depression. Because these children think that they cannot overcome their reading problems by comparing themselves with their friends during the reading process. Reading depression is caused because of some problems that children experience with reading difficulties such that acceptance of reading failure (learned helplessness), dislike reading activities, see reading as a compulsory activity rather than a fun and useful activity, refusing to participate in reading activities, having negative affective reactions such as fear, panic, and excitement against reading. In particular, some of the students did not want to participate in the interview because of these problems. On the other hand, it was found out that these reading depressions have serious and negative effects on the students' reading and reading comprehension skills who accepted to join the interview. It was seen that although the researchers examined the reading difficulties or problems in different aspects they did not focus much on the reading depression (Armagan Yıldız, 2004; Baydık, 2011; Beşgöl, 2015; Cain and Oakhill, 2006; Urfalı Dadandı and Şahin, 2018; Melanlıoğlu, 2014; Riany, 2010; Yılmaz, 2008). In the observations and interviews conducted in this research, it was determined that students were affected by reading depression due to the inability to read and comprehend the text. This depression prevents positive factors such as students' expectations of reading and their focus on reading success. Because it was determined that these students accepted their reading problems with learned helplessness and they were in despair. Therefore, it was determined that these students' perceptions of their reading skills were generally negative. To overcome these problems, students' positive perceptions are important. Because the children's perception of reading difficulties about themselves is a very effective factor in the process of reading and reading comprehension (Akın, 2016; Küçükcaymaz, 2011; Riany, 2010).

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Appendix

| Variables | Category | f | % |
|----------------------------|-------------|-----|-----|
| Gender | Female | 173 | 56 |
| | Male | 134 | 44 |
| | Total | 307 | 100 |
| Number of languages spoken | Bilingual | 175 | 57 |
| | Monolingual | 131 | 43 |
| | Total | 307 | 100 |
| Glasses | 5 | 122 | 40 |
| | 6 | 185 | 60 |
| | Total | 307 | 100 |

Table 1. The sample group's demographic characteristics

Table 2: Students' answers about the factors affecting reading comprehension

| | Items | I | less | Sometimes | e | ıys |
|---------|---|---------|-------------|-----------|-------|--------|
| No. | | % Never | % Very less | | Often | Always |
| Factors | affecting reading comprehension | % | % | % | % | % |
| I1 | I make preparations before I read it. | 11 | 10 | 23 | 18 | 38 |
| I2 | In the process of reading, I investigate the meaning of words which I do not know. | 9 | 10 | 29 | 17 | 35 |
| I3 | I ask questions about what I don't understand in the text. | 6 | 13 | 22 | 22 | 37 |
| I4 | I underline the important places in the text. | 9 | 8 | 19 | 15 | 49 |
| 15 | I use special reading strategies to understand the text that I read. | 34 | 21 | 17 | 13 | 15 |
| I6 | I make a story map while reading a story. | 51 | 18 | 15 | 8 | 8 |
| I7 | I read by doing attention to punctuation. | 8 | 10 | 13 | 17 | 52 |
| I8 | I explain my thoughts about the text I read. | 9 | 13 | 29 | 18 | 31 |
| 19 | While reading I determine the main theme and the supporting theme of the text. | 11 | 21 | 20 | 18 | 30 |
| I10 | I associate images correctly with events in the text. | 10 | 15 | 23 | 20 | 32 |
| I11 | I can make the right association between text and title. | 9 | 16 | 17 | 17 | 41 |
| I12 | I read similar texts to better understand the text. | 22 | 14 | 24 | 19 | 21 |
| I13 | I can distinguish between the introduction, development and conclusion parts of the text. | 15 | 14 | 18 | 14 | 39 |
| I14 | I can summarize the text I read. | 4 | 7 | 11 | 15 | 63 |
| I15 | I evaluate myself about reading and reading comprehension. | 6 | 13 | 22 | 24 | 35 |
| I16 | I can make a concept map to better understand the text. | 41 | 19 | 17 | 11 | 12 |
| I17 | I can draw pictures of the text to better understand the text. | 11 | 10 | 24 | 17 | 38 |
| I18 | I can criticize the accuracy of the knowledge in the text I read. | | | | | |

| | Table 3: Physical factors affecting reading and reading | comp | ittitti | 101011 | | |
|--|---|--|---|--|--|---|
| | Items | % Never | ° Very less | Sometimes | Often | ° Always |
| | Physical factors affecting reading and reading comprehension | % | % | % | % | % |
| I1 | While reading a text, I follow the writings with a finger, a pen, etc. | 33 | 10 | 13 | 7 | 37 |
| I2 | I use glasses when reading. | 87 | 4 | 2 | 2 | 5 |
| I3 | I'm using a hearing aid. | 93 | 2 | 3 | 1 | 1 |
| I4 | I don't notice punctuation marks when reading. | 54 | 8 | 16 | 6 | 16 |
| 15 | I sit in the front of the board to see the writing on the board better. | 56 | 11 | 13 | 7 | 13 |
| I6 | I cannot see the pictures in the reading texts. | 66 | 7 | 5 | 5 | 17 |
| | Table 4: Reading problems (difficulties) |) | | | | |
| No. | Items | н | less | Sometimes | c | Always |
| | | Neve | Very | | Ofter | AI |
| Read | ing problems (difficulties) | % Never | [%] Very less | % Some | % Ofter | AI |
| Read I1 | While reading, I skip some letters, syllables, words, sentences, | % 77 | 6 % Very | | 5 % Often | IV |
| | While reading, I skip some letters, syllables, words, sentences, paragraphs. | | | % | % 2 12 | |
| I1 | While reading, I skip some letters, syllables, words, sentences, | 77 | 9 | % 8 | 2 | 4 |
| I1 I2 | While reading, I skip some letters, syllables, words, sentences, paragraphs.I read it again to understand a sentence or a paragraph.I have difficulty to read words or phrases when reading aloud.I repeat some letters, syllables, words, and sentences while | 77 20 | 9 13 | % 8 21 | 2 12 | 4 34 |
| I1 I2 I3 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. | 77 20 58 | 9 13 14 | % 8 21 14 | 2 12 6 | 4 34 8 |
| I1 I2 I3 I4 | While reading, I skip some letters, syllables, words, sentences, paragraphs.I read it again to understand a sentence or a paragraph.I have difficulty to read words or phrases when reading aloud.I repeat some letters, syllables, words, and sentences while reading. | 77 20 58 49 | 9 13 14 18 | % 8 21 14 17 | 2 12 6 5 | 4 34 8 11 |
| I1 I2 I3 I4 I5 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. I repeat some letters, syllables, words, and sentences while reading. I can't adjust my tone and accent while reading. | 77 20 58 49 56 | 9 13 14 18 14 | % 8 21 14 17 13 | 2 12 6 5 8 | 4 34 8 11 9 |
| I1 I2 I3 I4 I5 I6 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. I repeat some letters, syllables, words, and sentences while reading. I can't adjust my tone and accent while reading. I can't read any text. | 77 20 58 49 56 67 | 9 13 14 18 14 14 11 | % 8 21 14 17 13 11 | 2 12 6 5 8 2 | 4 34 8 11 9 9 |
| I1 I2 I3 I4 I5 I6 I7 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. I repeat some letters, syllables, words, and sentences while reading. I can't adjust my tone and accent while reading. I can't read any text. I'm scrambling some letters while reading. | 77 20 58 49 56 67 59 | 9 13 14 18 14 11 15 | % 8 21 14 17 13 11 16 | 2 12 6 5 8 2 5 | 4 34 8 11 9 9 5 |
| I1 I2 I3 I4 I5 I6 I7 I8 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. I repeat some letters, syllables, words, and sentences while reading. I can't adjust my tone and accent while reading. I can't read any text. I'm scrambling some letters while reading. I can't control breathing while I'm reading. | 77 20 58 49 56 67 59 64 | 9 13 14 18 14 11 15 11 | % 8 21 14 17 13 11 16 12 | 2 12 6 5 8 2 5 4 | 4 34 8 11 9 9 5 9 |
| I1 I2 I3 I4 I5 I6 I7 I8 I9 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. I repeat some letters, syllables, words, and sentences while reading. I can't adjust my tone and accent while reading. I can't read any text. I'm scrambling some letters while reading. I can't control breathing while I'm reading. I'm mumbling during reading. When I read the text, I add letters, syllables, and words to the | 77 20 58 49 56 67 59 64 67 | 9 13 14 18 14 11 15 11 13 | % 8 21 14 17 13 11 16 12 9 | 2 12 6 5 8 2 5 4 6 | 4 34 8 11 9 9 5 9 5 9 5 |
| I1 I2 I3 I4 I5 I6 I7 I8 I9 I10 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. I repeat some letters, syllables, words, and sentences while reading. I can't adjust my tone and accent while reading. I can't read any text. I'm scrambling some letters while reading. I can't control breathing while I'm reading. I'm mumbling during reading. When I read the text, I add letters, syllables, and words to the text. | 77 20 58 49 56 67 59 64 67 72 | 9 13 14 18 14 11 15 11 13 8 | % 8 21 14 17 13 11 16 12 9 11 | 2 12 6 5 8 2 5 4 6 2 | 4 34 8 11 9 5 9 5 9 5 7 |
| I1 I2 I3 I4 I5 I6 I7 I8 I9 I10 I11 | While reading, I skip some letters, syllables, words, sentences, paragraphs. I read it again to understand a sentence or a paragraph. I have difficulty to read words or phrases when reading aloud. I repeat some letters, syllables, words, and sentences while reading. I can't adjust my tone and accent while reading. I can't read any text. I'm scrambling some letters while reading. I can't control breathing while I'm reading. I'm mumbling during reading. When I read the text, I add letters, syllables, and words to the text. I spell the text during reading. | 77 20 58 49 56 67 59 64 67 72 82 | 9 13 14 18 14 11 15 11 13 8 7 | % 8 21 14 17 13 11 16 12 9 11 5 | 2 12 6 5 8 2 5 4 6 2 3 | 4 34 8 11 9 9 5 9 5 7 3 |

Table 3: Physical factors affecting reading and reading comprehension

| | Table 5: The effect of reading and reading comprehension pre- | roblei | ms on | stude | ents | |
|-----|---|--|------------|-----------------|---------------|--------------|
| No. | Items | $^{\!$ | Agree less | Agree sometimes | % Agree often | Always agree |
| | The effect of reading and reading comprehension problems | | % | % | | |
| I1 | I correct words that I read incorrectly. | 24 | 15 | 14 | 12 | 34 |
| I2 | I can't control my excitement during reading. | 47 | 17 | 18 | 6 | 12 |
| I3 | I use techniques that improve reading fluently to better read and understand the text. | 38 | 11 | 14 | 9 | 28 |
| I4 | I get support from my family to better read and understand the text. | 57 | 11 | 10 | 9 | 13 |
| I5 | I use sources other than textbooks (journal, newspaper, book, television, Internet) to better read and understand the text. | 36 | 16 | 16 | 10 | 22 |
| I6 | I need my teachers' help to better reading and understanding the text. | 53 | 14 | 17 | 7 | 9 |
| Ι7 | I don't want to participate in class for reading activities, because I don't understand any of the texts. | 72 | 9 | 5 | 6 | 8 |
| I8 | Since I don't understand texts that I read, this factor affects my success in other lessons (science, mathematics, etc.) as negative. | 66 | 11 | 9 | 5 | 9 |
| 19 | I don't want to come to school, because I have difficulty reading and reading comprehension. | 80 | 5 | 5 | 4 | 6 |
| I10 | I can't follow the classroom rules (not to speak without permission, interrupt my friend), because I have difficulty reading and reading comprehension. | 79 | 5 | 5 | 2 | 9 |
| I11 | I don't like my teacher's homework given on reading. | 70 | 5 | 5 | 4 | 16 |
| I12 | I don't like Turkish lesson, because I have difficulty reading and reading comprehension. | 69 | 4 | 7 | 5 | 15 |
| I13 | I'm afraid I won't go to high school because I have difficulty reading and reading comprehension. | 70 | 5 | 10 | 4 | 11 |

Table 5: The effect of reading and reading comprehension problems on students

Table 6: The result of Mann Whitney U-Test for score comparison of bilingual and monolingual

| | Item | Group | N | Mean rank | Sum of rank | U | Z | р |
|---------------------|------|-------------|-----|--------------|-------------|-------|------|---------|
| The first dimension | I4 | monolingual | 131 | 163,26 | 21387,50 | 10314 | - | 0,090** |
| | | bilingual | 176 | 147,11 | 25890,50 | 10000 | 1,69 | |
| | I8 | monolingual | 131 | 164,91 | 21603 | 10099 | - | ,055** |
| | | bilingual | 176 | 145,88 | 25675 | | 1,92 | , |

* p < ,05

** no significant difference

Hülya Sönmez A CASE STUDY AND THE NEEDS ANALYSIS FOR DETERMINING SECONDARY SCHOOL STUDENTS' READING SKILLS

| Table 7: Result of the Mann Whitney U-test for comparison of male and female score changesDimensionItemGroupNMean rankSum of rankUZp | | | | | | | | | | | | | |
|--|----------------|--------|------------------------------------|--------|----------|-------|-------------|--------|--|--|--|--|--|
| Dimension | Dimension Item | | Item Group N Mean rank Sum of rank | | | | | р | | | | | |
| | I4 | female | 173 | 164,06 | 28382,50 | 9850 | 7 42 | ,015* | | | | | |
| | 14 | male | 134 | 141,01 | 18895,50 | | -2,43 | ,015 | | | | | |
| | I6 | female | 173 | 162,74 | 28154 | 10079 | -2,11 | ,035* | | | | | |
| | 10 | male | 134 | 142,72 | 19124 | | -2,11 | ,035 | | | | | |
| Ę | I7 | female | 173 | 166,02 | 28722 | 9511 | -2,92 | ,003* | | | | | |
| sio | 17 | male | 134 | 138,48 | 18556 | | -2,72 | ,005 | | | | | |
| First dimension | I15 | female | 173 | 165,08 | 28558,50 | 9674 | -2,58 | ,010* | | | | | |
| First dime | 115 | male | 134 | 139,70 | 18719,50 | | -2,38 | ,010 | | | | | |
| | T 1 | female | 173 | 164,25 | 28415 | 9818 | 0.41 | 01.6% | | | | | |
| d Isio | I1 | male | 134 | 140,77 | 18863 | | -2,41 | ,016* | | | | | |
| Second dimension | I2 | female | 173 | 149,33 | 25834 | 10783 | -1,77 | ,076** | | | | | |
| Sec | 12 | male | 134 | 160,03 | 21444 | | -1,// | ,076 | | | | | |
| | I2 | female | 173 | 163,33 | 28256,50 | 9976 | -2,16 | ,031* | | | | | |
| | 12 | male | 134 | 141,95 | 19021,50 | | -2,10 | ,031 | | | | | |
| u | I5 | female | 173 | 145,85 | 25232 | 10181 | -2,02 | ,043* | | | | | |
| Isic | 15 | male | 134 | 164,52 | 22046 | | -2,02 | ,043 | | | | | |
| Third dimension | I11 | female | 173 | 147,79 | 25567,50 | 10516 | -2,06 | ,040* | | | | | |
| dir | 111 | male | 134 | 162,02 | 21710,50 | | -2,00 | ,040 | | | | | |
| | I7 | female | 173 | 147,59 | 25533 | 10482 | -1,81 | ,070** | | | | | |
| | 17 | male | 134 | 162,28 | 21745 | | -1,01 | ,070 | | | | | |
| ų | I9 | female | 173 | 148,78 | 25739 | 10688 | -1,67 | ,095** | | | | | |
| Fourth dimension | 17 | male | 134 | 160,74 | 21539 | | -1,07 | ,070 | | | | | |
| Fourth dimens | I10 | female | 173 | 148,38 | 25669,50 | 10618 | -1,77 | ,077** | | | | | |
| Foı dir | 110 | male | 134 | 161,26 | 21608,50 | | -1,// | ,077 | | | | | |

* p < ,05 ** no significant difference

| Table 8: The second sample gr | oup's demographic characteristics | |
|-------------------------------|-----------------------------------|----|
| Variables | Category | f |
| Gender | Female | 20 |
| | Male | 8 |
| | Total | 28 |
| Number of languages spoken | Bilingual | 20 |
| | Monolingual | 8 |
| | Total | 28 |
| Class level | 5 | 15 |
| | 6 | 13 |
| | Total | 28 |

| | | | | | | | Tab | ole 9: | Obs | serv | vati | on d | of stu | Ident | ts' re | adin | g dif | ficu | lties | | | | | | | | |
|-------------------|----------------------|-------------------------|---------------------------|------|----------|-------|--------|-------------------|----------|-----------------|-------|------|----------------|------------------------|--------|------|----------|--------|-------|-------|----------|-------|-----------------|------|----------|-------|-------|
| | | | | | | | | First observation | | | | | Second observa | | | | | | | vatio | ion | | | | | | |
| | Properties | | Properties First dimensio | | | on | Second | | | Third dimension | | | | First dimension | | | | Second | | | | Th | Third dimension | | | | |
| | | | | | | | | di | imens | ion | | | | | | | | | | d | lime | ensio | n | | | | |
| Student no. | Gender ⁱⁱ | language ⁱⁱⁱ | Glass | None | Sometime | Often | Total | None | Sometime | Often | Total | None | Sometime | Often | Total | None | Sometime | Often | Total | None | Sometime | Often | Total | None | Sometime | Often | Total |
| S ^{iv} 1 | F | В | 6 | 9 | 10 | 1 | 20 | 5 | 1 | 1 | 7 | 2 | 5 | 6 | 13 | 8 | 11 | 1 | 20 | 5 | 1 | 1 | 7 | 2 | 5 | 6 | 13 |
| S2 | М | В | 5 | 5 | 10 | 5 | 20 | 4 | 1 | 2 | 7 | 3 | 6 | 4 | 13 | 2 | 15 | 3 | 20 | 4 | 2 | 1 | 7 | 3 | 10 | - | 13 |
| S3 | F | В | 5 | 11 | 8 | 1 | 20 | 3 | 1 | 3 | 7 | 3 | 2 | 8 | 13 | 7 | 11 | 2 | 20 | 3 | 1 | 3 | 7 | 3 | 1 | 9 | 13 |
| S4 | Μ | В | 6 | 14 | 1 | 5 | 20 | 4 | 2 | 1 | 7 | 1 | 2 | 10 | 13 | 14 | 1 | 5 | 20 | 4 | 2 | 1 | 7 | 2 | 2 | 9 | 13 |
| S5 | F | В | 5 | 2 | 10 | 8 | 20 | 4 | 2 | 1 | 7 | 2 | 2 | 9 | 13 | 2 | 12 | 6 | 20 | 4 | 2 | 1 | 7 | 2 | 2 | 9 | 13 |
| S6 | F | В | 5 | 7 | 7 | 6 | 20 | 5 | 2 | - | 7 | 2 | 10 | 1 | 13 | 6 | 6 | 8 | 20 | 5 | 2 | - | 7 | 2 | 10 | 1 | 13 |
| S7 | F | В | 5 | 16 | 2 | 2 | 20 | 6 | - | 0 | 7 | 5 | 5 | 3 | 13 | 14 | 4 | 2 | 20 | 6 | - | 1 | 7 | 3 | 7 | 3 | 13 |
| S8 | F | Μ | 6 | 14 | 4 | 2 | 20 | 7 | - | - | 7 | 3 | 4 | 6 | 13 | 10 | 9 | 1 | 20 | 5 | 2 | - | 7 | 3 | 5 | 5 | 13 |
| S9 | F | В | 5 | 13 | 6 | 1 | 20 | 6 | - | 1 | 7 | 3 | 4 | 6 | 13 | 13 | 6 | 1 | 20 | 6 | - | 1 | 7 | 3 | 4 | 6 | 13 |
| S10 | Μ | В | 6 | 10 | 8 | 2 | 20 | 3 | 3 | 1 | 7 | 1 | 8 | 4 | 13 | 10 | 4 | 6 | 20 | 3 | 3 | 1 | 7 | 1 | 3 | 9 | 13 |
| S11 | F | В | 5 | 10 | 9 | 1 | 20 | 6 | 0 | - | 7 | - | 2 | 11 | 13 | 9 | 10 | 1 | 20 | 6 | 1 | - | 7 | 1 | 1 | 11 | 13 |
| S12 | Μ | М | 5 | 2 | 9 | 9 | 20 | 5 | 2 | - | 7 | 8 | 5 | - | 13 | 2 | 9 | 9 | 20 | 7 | - | - | 7 | 9 | 4 | - | 13 |
| S13 | F | Μ | 5 | 6 | 12 | 2 | 20 | 4 | 3 | - | 7 | 3 | 3 | 7 | 13 | 6 | 12 | 2 | 20 | 4 | - | 3 | 7 | 3 | 7 | 3 | 13 |
| S14 | F | В | 6 | 17 | 2 | 1 | 20 | 6 | 0 | 1 | 7 | 6 | 4 | 3 | 13 | 13 | 7 | - | 20 | 6 | 1 | - | 7 | 5 | 5 | 3 | 13 |
| S15 | F | В | 6 | 5 | 8 | 7 | 20 | 5 | 2 | - | 7 | 3 | 7 | 3 | 13 | 5 | 7 | 8 | 20 | 5 | 2 | - | 7 | 3 | 7 | 3 | 13 |
| S16 | F | В | 5 | 14 | 5 | 1 | 20 | 3 | 1 | 3 | 7 | - | - | 13 | 13 | 17 | 3 | - | 20 | 4 | 2 | 1 | 7 | - | - | 13 | 13 |
| S17 | F | В | 6 | 10 | 5 | 5 | 20 | 4 | 2 | 1 | 7 | 4 | 3 | 6 | 13 | 7 | 5 | 8 | 20 | 4 | 2 | 1 | 7 | 4 | 2 | 7 | 13 |
| S18 | F | Μ | 5 | 12 | 8 | - | 20 | 7 | - | - | 7 | 9 | 4 | - | 13 | 7 | 13 | - | 20 | 7 | - | - | 7 | 9 | 4 | - | 13 |
| S19 | F | Μ | 5 | 10 | 8 | 2 | 20 | 5 | 1 | 1 | 7 | 3 | 10 | - | 13 | 10 | 8 | 2 | 20 | 5 | 1 | 1 | 7 | 3 | 10 | - | 13 |
| S20 | Μ | В | 5 | 8 | 11 | 1 | 20 | 5 | 2 | - | 7 | 2 | 6 | 5 | 13 | 4 | 13 | 3 | 20 | 5 | 2 | - | 7 | 2 | 6 | 5 | 13 |
| S21 | M | | 5 | 10 | 10 | 10 | 20 | 6 | - | 1 | 7 | 3 | 3 | 7 | 13 | 5 | 13 | 2 | 20 | 5 | 1 | 1 | 7 | 4 | 9 | - | 13 |
| S22 | M | | 6 | 3 | 11 | 6 | 20 | 4 | 1 | 2 | 7 | 6 | 1 | 6 | 13 | 3 | 16 | 1 | 20 | 4 | 2 | 1 | 7 | 6 | 6 | 1 | 13 |
| S23 | M | | 6 | 10 | 8 | 2 | 20 | 5 | 2 | - | 7 | 3 | 4 | 6 | 13 | 10 | 8 | 2 | 20 | 5 | 2 | - | 7 | 3 | 4 | 6 | 13 |
| S24 | F | В | 6 | 10 | 9 | 1 | 20 | 4 | 3 | - | 7 | 1 | 3 | 9 | 13 | 7 | 9 | 4 | 20 | 4 | 3 | - | 7 | 1 | 4 | 8 | 13 |
| S25 | F | M | 6 | 10 | 5 | 5 | 20 | 7 | - | - | 7 | 12 | 1 | - | 13 | 10 | 3 | 7 | 20 | 7 | - | - | 7 | 13 | - | - | 13 |
| S26 | F | B | 5 | 8 | 7 | 5 | 20 | 5 | 1 | 1 | 7 | 1 | 1 | 11 | 13 | 5 | 12 | 3 | 20 | 5 | 1 | 1 | 7 | 1 | 2 | 10 | 13 |
| S27 | F | В | 6 | 15 | 4 | 1 | 20 | 6 | - | 1 | 7 | - | 6 | 7 | 13 | 13 | 6 | 1 | 20 | 6 | 1 | - | 7 | 1 | 6 | 6 | 13 |
| S28 | F | Μ | 6 | 9 | 9 | 2 | 20 | 4 | 2 | 1 | 7 | 8 | 2 | 3 | 13 | 9 | 9 | 2 | 20 | 4 | 2 | 1 | 7 | 5 | 8 | - | 13 |

ⁱⁱ F: Female/ M: Male

ⁱⁱⁱ B: Bilingual / M: Monolingual

^{iv} S Student

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