



Investigation of pre-service teachers' critical reading self-efficacy

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Abstract

Critical thinking has become an important skill in today's intensive information flow. Because individuals need to reach the right source by evaluating the information. The development of critical thinking requires the acquisition of critical reading skills. Critical reading is the reading of individuals by questioning and evaluating text. In this research, critical reading self-efficacy of pre-service teachers were examined in terms of variables of gender, grade level, the department studied, mothers' educational background, fathers' education background and daily internet usage time. The sample of the current research was composed of 345 pre-service teachers. The data collection process, Critical Reading Self-Efficacy Perception Scale was used. To analyze data, Mann Whitney U and Kruskal Wallis H-tests were used. As a result of Mann Whitney U-test, a significant difference was defined in critical reading self-efficacy according to the department studied. As a result of Kruskal Wallis H-test a significant difference was defined in critical reading self-efficacy and questioning, inference, analysis and evaluation sub-dimensions according to mothers' educational background, and in critical reading self-efficacy and finding similarities and awareness sub-dimension according to daily internet usage time.

Keywords: Critical reading; pre-service teachers; self-efficacy.

Introduction

Reading skill is one of the skills acquired during the basic education process as a result of a specific program application. In Turkish Language Institution (TDK) Dictionary (2017), it is defined as "to analyze and vocalize the letters and signs which create a writing". However, today it is asked a person to build the meaning apart from just vocalizing and understanding and to convey the meaning which he defines in his mind to the context. According to Sadioglu and Bilgin (2008), in this century, individuals are exposed to an intense amount of information. During the intense information flow, it is thought that teaching "critical reading" and "critical thinking" skills to the children would be beneficial to reach reliable information. In 2005-2006, in the renewed curriculum, it was emphasized to improve the students' critical thinking skills.

The "critical reading" concept is based on critical hypothesis and pedagogical applications. Hence, Nussbaum (1998) has indicated that critical reading is related to one's political life and making a systemical and critical research about one's own actions. Likewise, Serafini (2003) has

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indicated that it is required to provide experiences around the texts which are about current and past components, their effects on the person. Fairclough (1992) has emphasized that the reader creates a meaning by interpreting and producing the texts again at the end of the critical reading process (cited in Wallace, 2003). It is understood that critical reading skill is associated with the theoretical bases of critical hypothesis of the researches.

Critical Reading

In the national and international literature, there are different definitions of “critical reading” concept. According to Yıldız (2008: 135), it has been defined as “gaining questioning habits about the texts, thinking deeply about the content, reaching their own truths by evaluating contradictions”. In the international literature, Deboer (1946) has defined critical reading as “the type of reading that distinguishes the reader from irrelevant data, displays skepticism, evaluates the reliability of evidence and results, and is largely active in the passive position” (cited in Wolf, King & Huck, 1968, p.445). By Wallace and Wray (2011: 4), critical reading has been defined as “explaining the interpreting based on some opinions and observations with the reasons”. Another definition has said that critical reading is “to evaluate the opinions which are found in the written texts, through comparing the suitability of some standards and results” (Roe, Smith & Burns, 2011, p.319). With reference to the definitions, the “critical reading” concept can be defined as “differentiating the facts and opinions by giving them meaning and questioning the context in the text with specific standards and norms, being able to see the difference between important information and unimportant ones, reaching judgements through evaluating the alleged opinions with supportive proofs”.

The researchers have indicated how a critical reader's features should be depending on the content of the critical reading concept. A critical reader has dealt with whether the claims are supported by some proofs or not and whether the writers eloquently discuss the topic or not (Wallace & Wray, 2011). Similarly, Sadioğlu and Bilgin (2008) have indicated that the reader should reach a conclusion by measuring the supported opinion. According to Aşılıoğlu (2008) the reader should check the consistency of ideas by questioning the text within the framework of who, when, where, why and how questions. Karasakaloğlu, Saracaloğlu and Yılmaz-Özelçi (2012) have indicated that by emphasizing the teachers' role to improve this skill, it is required for the students to ask questions, guess, deduce and create class environments where new ideas are supported to make the students decide by themselves. It is expected from 21st century's readers to reach a solution by compositing their own knowledge and experiences and evaluating the proofs offered to the opinions, rather than accepting the context in the texts. In another word, the importance of being active rather than staying passive during the process has been emphasized.

The studies have shown that the individuals could not gain critical reading skill (Hall & Piazza, 2008; Karadağ, 2014; Piazza, 2006; Sidhu, Kaur, Lim & Chan, 2016; Zheng, 2014). Hall and Piazza (2008) have indicated that the students have shown no interest in reading and discussing of the texts which exceed their opinions, some students gained this skill with difficulty, Karadağ (2014) has pointed that the primary education pre-service teachers' have not seen themselves as critical readers and writers, Sidhu et. al. (2016) indicated that the post-graduate students have had limited the skills like questioning and evaluating, Piazza (2006) has started that the students have had resistances against understanding the texts which are not compatible with their own culture and social expectations, Zheng (2014) has indicated that the students have not been glad about reading the reports they prepared in terms of the critical reading. In this respect, there is a need to make qualified studies for gaining and improving high-level skills.

The intensification of written and visual communication tools such as books, magazines, newspapers, TV, internet and so on can make people's lives easier in terms of information acquisition, but at the same time it may lead their acquisition of unnecessary, incorrect and incomplete information (Özensoy, 2012). Therefore, instead of accepting all new information without questioning it individuals should question and criticize it and search for its correctness. In

today's society, the importance of educating individuals who can communicate effectively with their environment and who can critically look at what is happening around them has increased. It is expected that pre-service teachers will always have access to the correct information and therefore, it is important for them to gain critical reading skills (Gündüz, 2015). It is reported that one of the problems in Turkish educational system is the lack of success in teaching higher level cognitive skills which in turn is due to the fact that individuals cannot acquire critical reading skills (Aşılıoğlu, 2008). In this respect, it has become very important for pre-service teachers to acquire critical reading skills. On the other hand, when critical reading skills are not improved from basic education, it becomes much more difficult to teach these skill in later years. For instance, Sever (2003) argues that the basis of critical reading skills is laid in childhood. Practices in critical literacy has been began to be used in native language courses to make children ready to live in information society (Hoody, 2008). Apol, Sakuma, Reynolds and Rop (2002) argued that critical reading is necessary for children not only to read something but also to perceive the world around them (through advertising, news reports, pop culture, and the others). They also stated that that the first step to help children develop critical reading skills is to improve pre-service teachers' critical reading skills.

Teachers have significant roles to play in improving students' critical reading skills. It is observed that students have given importance to developing skills such as flexible thinking, information access and evaluation. The teacher who is supposed to make his/her students gain the critical reading skills is expected to both show his/her critical reading skills and have knowledge about the text selection, using the suitable techniques, preparing functional learning-teaching processes, and so on (Maltepe, 2016). In this respect, Ateş (2013) stated that educators should include tools in the learning process that cover written and visual elements such as news and articles. It is very significant that pre-service teachers should acquire such necessary roles. Karabay, Kuşdemir-Kayıran and Işık (2015) argue that identifying the critical reading skills of pre-service teachers is very critical in designing teacher training programs to produce much more qualified teachers. There are studies dealing with the effects of training based on the critical reading principles, the critical literacy approach, multiple intelligence theory and digital stories on pre-service teachers' critical reading skills (Alqatanani, 2017; Kızılay, 2014; Özensoy, 2012; Sultan, Rofuiddin, Nurhadi & Endah, 2017; Topçuoğlu-Ünal & Tekin, 2013). On the other hand, a limited number of studies focuses on their critical reading self-efficacy perceptions in related to their gender, grade level, and department (Aybek & Aslan, 2015; Karabay et al., 2015; Küçükoğlu, 2008; Murathan, Yetiş, Uğurlu & Murathan, 2017; Topçuoğlu-Ünal & Sever, 2013).

This situation will help them to understand the context which is based on real and imaginary components and improve their evaluation skills by supporting the written elements with visual and audial components which provide the context to concretize. With reference to these ideas, the present study examines the pre-service teachers' critical reading skills. The attitudes and behaviors of the parents are also important in childhood in which the foundation of children's critical reading skills are laid. Therefore, if parents choose quality texts to read to children and discuss the with children, they can significantly contribute to the development of their children's critical reading skills. Belet and Dal (2010) suggested that in order to improve pre-service teachers' critical reading skills it is necessary to select interesting stories, to tell stories during classes, to exercise reasoning on texts, to make pre-service teachers active participants in the reading process and to support stories with different materials and activities such as drama. In the current study the focus is on the effects of parents' educational background on the development of materials and provision of optimal conditions to improve pre-service service teachers' critical reading skills. Pre-service teachers intensely use technological devices to acquire information. However, they need to have critical reading skills to evaluate the usefulness of information they collect and come across using internet. It is reported that texts in mass media assist pre-service teachers and other student groups to deveop a habit of discussing and reflecting on information they come across (Sultan et al., 2017). On the other hand, pre-service teachers also use internet for other purposes rather than

collecting information. In this respect, it is necessary to investigate whether time that pre-service teachers spend on the internet has an effect on their self-efficacy perceptions concerning critical reading skills. In the present study the effects of various factors on pre-service teachers' self-efficacy about critical reading skills, including gender due to the fact that female students acquire literacy skills earlier, grade level to identify the efficacy of reading education at university, the departments they attend in terms of the linguistic skills, parents' education which is considered to be an effective factor on achievement of individuals and time they spend on the internet. In this respect, it is expected that the study will provide valuable information in determining the critical reading skills of pre-service teachers in a reliable and valid way and contribute to provide more qualified critical reading education practices. On the other hand, the present study is important in terms of determining the variables that affect the pre-service teachers' self-efficacy perceptions about critical reading to guide the theoretical and practical aspects of education to be given to pre-service teachers.

The Aim of the Research

The purpose of this study was to evaluate the pre-service teachers' critical reading self-efficacy perception. The answers of the research questions below were sought:

1. Are there any differences according to genders?
2. Are there any differences according to grade level?
3. Are there any differences according to the department studied?
4. Are there any differences according to the mothers' educational background?
5. Are there any differences according to the fathers' educational background?
6. Are there any differences according to daily internet usage?

Method

Research Model

In the current research, one of the descriptive models survey model was used. Survey models are approaches which aim to determine the background or current situations (Karasar, 2005).

The Study Group

The study group of the current research consisted of 345 undergraduate students studying primary education and Turkish language education departments in the Faculty of Education of a state university in the 2016-2017 educational year. Of the students, 167 were studying in undergraduate programs of primary education education, and 178 of them were studying undergraduate programs of Turkish language education. A convenience sampling method was used in order to accelerate the study by studying with an easily accessible situation (Yıldırım & Şimşek, 2011). The reason for including pre-service teachers attending primary education and Turkish language education departments in the study was to have higher number of participants and their volunteer in participating the study.

The Data Collection Tools

The personal information form collects information about the variables like the students' gender, grade level, the department studied, mothers' and fathers' educational backgrounds and daily internet usages. Critical Reading Self-Efficacy Perception Scale was developed by Karadeniz (2014). The researcher revealed that the scale was constituted of 5 sub-dimensions. The variation is 53.85%. Cronbach Alfa factor of it was .937. It was seen that the fit indices ($\chi^2/df=2.04$, SRMR=.04, GFI=.91, AGFI=.90) of the model created with the structure of the five-factor scale was enough.

Data Analysis

Non-parametric tests were used when the parametric tests' assumptions were not met in data analysis. The normality test was applied. Mann Whitney U-test was used to determine if the students' self-efficacy perceptions changed according to gender and the department studied variables; Kruskal Wallis H-test was applied to determine if the students' self-efficacy perceptions showed a change according to their grade level, mothers' and fathers' educational backgrounds, and daily internet usages. All analyses done in the study were made with SPSS 21.0 program and significance level of .05 was used.

Assumption

The data obtained are limited to the data obtained from the Critical Reading Self-Efficacy Perception Scale. It was assumed that teacher candidates voluntarily responded to the scale.

Results

The descriptive statistic values regarding the sub-dimensions of the pre-service teachers' critical reading self-efficacy perceptions have been presented in Table 1

Table 1

The Descriptive Statistic Values Regarding the Sub-dimensions of Critical Reading Self-Efficacy Perceptions

| Sub-Dimensions | N | \bar{X} | SS |
|--------------------------------------|-----|-----------|------|
| Questioning | 345 | 39.54 | 5.13 |
| Deduction | 345 | 19.48 | 3.13 |
| Analysis | 345 | 27.70 | 4.18 |
| Evaluation | 345 | 22.99 | 3.94 |
| Finding similarities and differences | 345 | 20.49 | 3.02 |

Arithmetic mean of the pre-service teachers' questioning sub-dimension is 39.54 and standard deviation is 5.13, deduction sub-dimension arithmetic mean is 19.48 and standard deviation is 3.13, analysis sub-dimension arithmetic mean is 27.70 and standard deviation is 4.18, evaluation sub-dimension arithmetic mean is 22.99 and standard deviation is 3.94, finding similarities and differences arithmetic mean is 20.49 and standard deviation is 3.02.

The perception sub-dimensions change according to genders have been showed in Table 2.

Table 2

Critical Reading Self-Efficacy Perception Sub-dimensions' Results of Mann-Whitney U-test according to Gender

| Sub-Dimensions | Gender | N | Rank order | Sum of orders | U | Z | p |
|--------------------------------------|--------|-----|------------|---------------|----------|-------|-----|
| Questioning | Female | 192 | 179.26 | 34418 | 13486 | -1.31 | .19 |
| | Male | 153 | 165.14 | 25267 | | | |
| Deduction | Female | 192 | 179.33 | 34431.50 | 13472.50 | -1.32 | .18 |
| | Male | 153 | 165.06 | 25253.50 | | | |
| Analysis | Female | 192 | 173.04 | 33223.50 | 14680.50 | -.00 | .99 |
| | Male | 153 | 172.95 | 26461.50 | | | |
| Evaluation | Female | 192 | 180.25 | 34607.50 | 13296.50 | -1.52 | .12 |
| | Male | 153 | 163.91 | 25077.50 | | | |
| Finding similarities and differences | Female | 192 | 173.99 | 33405.50 | 14498.50 | -.20 | .83 |
| | Male | 153 | 171.76 | 26279.50 | | | |

According to Table 2, there are no significant differences detected between the perception sub-dimensions according to genders ($p > .05$). In every dimension, the female students have a higher rank order.

The pre-service teachers' critical reading self-efficacy perception sub-dimensions changes according to grade level have been showed in Table 3.

Table 3

Critical Reading Self-Efficacy Perception Sub-dimensions' Results of Kruskal Wallis H-test according to Grade Level

| Sub-Dimensions | Grade Level | N | Rank order | sd | X ² | p |
|--------------------------------------|-------------|----|------------|----|----------------|-----|
| Questioning | 1 | 84 | 178.64 | 3 | .442 | .93 |
| | 2 | 98 | 173.50 | | | |
| | 3 | 83 | 169.81 | | | |
| | 4 | 80 | 169.78 | | | |
| Deduction | 1 | 84 | 166.58 | 3 | .491 | .92 |
| | 2 | 98 | 174.82 | | | |
| | 3 | 83 | 176.39 | | | |
| | 4 | 80 | 174 | | | |
| Analysis | 1 | 84 | 169.69 | 3 | .575 | .90 |
| | 2 | 98 | 178.99 | | | |
| | 3 | 83 | 173.04 | | | |
| | 4 | 80 | 169.09 | | | |
| Evaluation | 1 | 84 | 182.28 | 3 | 5.31 | .15 |
| | 2 | 98 | 171.33 | | | |
| | 3 | 83 | 153.40 | | | |
| | 4 | 80 | 185.64 | | | |
| Finding similarities and differences | 1 | 84 | 182.28 | 3 | 1.73 | .62 |
| | 2 | 98 | 171.33 | | | |
| | 3 | 83 | 153.40 | | | |
| | 4 | 80 | 185.64 | | | |

According to Table 3, there are no significant differences between the perception sub-dimensions according to grade level ($p > .05$).

The perception sub-dimensions changes according to the department studied have been showed in Table 4.

Table 4

Critical Reading Self-Efficacy Perception Sub-dimensions' Results of Whitney U-test according to the Department Studied

| Sub-Dimensions | Department Studied | N | Rank order | Sum of orders | U | Z | p |
|--------------------------------------|----------------------|-----|------------|---------------|----------|-------|-----|
| Questioning | Primary Ed. | 167 | 180.07 | 30072.50 | 13681.50 | .20 | .97 |
| | Turkish Language Ed. | 178 | 166.36 | 29612.50 | | | |
| Deduction | Primary Ed. | 167 | 172.81 | 28859.50 | 14831.50 | -.03 | .97 |
| | Turkish Language Ed. | 178 | 173.18 | 30825.50 | | | |
| Analysis | Primary Ed. | 167 | 176.07 | 176.07 | 14351 | .30 | .57 |
| | Turkish Language Ed. | 178 | 170.12 | 170.12 | | | |
| Evaluation | Primary Ed. | 167 | 193.67 | 32342.50 | 11411.50 | -3.75 | .00 |
| | Turkish Language Ed. | 178 | 153.61 | 27342.50 | | | |
| Finding similarities and differences | Primary Ed. | 167 | 174.05 | 29066.50 | 14687.50 | -.19 | .84 |
| | Turkish Language Ed. | 178 | 172.01 | 30618.50 | | | |

According to Table 4, there is a significant difference between sub-dimension evaluation in favor of primary education pre-service teachers according to their department studied ($p < .05$). While there are significant differences in terms of questioning, analysis, and finding similarities and differences, it has been detected that primary education pre-service teachers' mean rank is higher ($p > .05$).

The perception sub-dimensions changes according to their mothers' educational background have been showed in Table 5.

Table 5

Critical Reading Self-Efficacy Perception Sub-dimensions' Results of Kruskal Wallis H-test according to Their Mothers' Educational Background

| Sub-Dimensions | Mothers' Educational Background | N | Rank Order | sd | X ² | p | Significant Difference |
|--------------------------------------|---------------------------------|-----|------------|----|----------------|-----|------------------------|
| Questioning | Primary school | 141 | 162.55 | 4 | 11.81 | .01 | 1-5 |
| | Middle school | 74 | 174.70 | | | | 2-5 |
| | High school | 95 | 181.75 | | | | 3-5 |
| | University | 31 | 169.92 | | | | 4-5 |
| | Masters degree | 4 | 326 | | | | |
| Deduction | Primary school | 141 | 164.32 | 4 | 14.87 | .00 | 1-5 |
| | Middle school | 74 | 182.22 | | | | 2-5 |
| | High school | 95 | 180.87 | | | | 3-5 |
| | University | 31 | 145.90 | | | | 4-5 |
| | Masters degree | 4 | 331.50 | | | | |
| Analysis | Primary school | 141 | 168.26 | 4 | 12.26 | .01 | 1-5 |
| | Middle school | 74 | 183.94 | | | | 2-4 |
| | High school | 95 | 164.06 | | | | 3-5 |
| | University | 31 | 175.32 | | | | 4-5 |
| | Masters degree | 4 | 332 | | | | |
| Evaluation | Primary school | 141 | 179.65 | 4 | 13.22 | .01 | 1-4 |
| | Middle school | 74 | 187.14 | | | | 1-5 |
| | High school | 95 | 157.26 | | | | 2-4 |
| | University | 31 | 142.03 | | | | 2-5 |
| | Masters degree | 4 | 290.88 | | | | 3-5 4-5 |
| Finding similarities and differences | Primary school | 141 | 173.75 | 4 | 6.95 | .13 | - |
| | Middle school | 74 | 170.62 | | | | |
| | High school | 95 | 165.25 | | | | |
| | University | 31 | 183.47 | | | | |
| | Masters degree | 4 | 293.50 | | | | |

According to Table 5, a difference has been detected that pre-service teachers', who have mothers with master's degree, critical reading self-efficacy perception in the scope of questioning, deduction and analysis have advantages. In the scope of the evaluation, a significant difference has been found on the students who have parents with bachelor's or master's degree ($p < .05$). While there are no significant difference in terms of similarities and differences, it was found that the students' mean rank who have mothers with master's degree was higher ($p > .05$).

The perception sub-dimensions change according to fathers' educational background have been showed in Table 6.

Table 6

Critical Reading Self-Efficacy Perception Sub-dimensions' Results of Kruskal Wallis H-test according to Their Fathers' Educational Background

| Sub-Dimensions | Fathers' Educational Background | N | Rank Order | sd | X ² | p |
|----------------|---------------------------------|-----|------------|----|----------------|-----|
| Questioning | Primary school | 80 | 182.78 | 4 | 6.45 | .16 |
| | Middle school | 72 | 149.72 | | | |
| | High school | 109 | 170.50 | | | |
| | University | 77 | 187.42 | | | |
| | Masters degree | 7 | 181 | | | |

| | | | | | | |
|--------------------------------------|----------------|-----|--------|---|------|-----|
| Deduction | Primary school | 80 | 169,28 | 4 | 4.74 | .31 |
| | Middle school | 72 | 184.71 | | | |
| | High school | 109 | 158.65 | | | |
| | University | 77 | 184.19 | | | |
| | Masters degree | 7 | 195.36 | | | |
| Analysis | Primary school | 80 | 172.93 | 4 | 3.80 | .43 |
| | Middle school | 72 | 175.63 | | | |
| | High school | 109 | 160.68 | | | |
| | University | 77 | 184.60 | | | |
| | Masters degree | 7 | 211 | | | |
| Evaluation | Primary school | 80 | 178.14 | 4 | 4.56 | .33 |
| | Middle school | 72 | 183.38 | | | |
| | High school | 109 | 156.67 | | | |
| | University | 77 | 179.24 | | | |
| | Masters degree | 7 | 193.21 | | | |
| Finding similarities and differences | Primary school | 80 | 172.31 | 4 | 5.93 | .20 |
| | Middle school | 72 | 186.94 | | | |
| | High school | 109 | 159.79 | | | |
| | University | 77 | 173.94 | | | |
| | Masters degree | 7 | 232.93 | | | |

According to Table 6, while there are no significant differences detected between the perception sub-dimensions ($p > .05$).

The perception sub-dimensions changes according to daily internet usages have been showed in Table 7.

Table 7

Critical Reading Self-efficacy Perception Sub-dimensions' Results of Kruskal Wallis H-test according to Daily Internet Usages

| Sub-Dimensions | Daily Internet Use | N | Rank Order | sd | X ² | p | Significant Difference |
|----------------|--------------------|-----|------------|----|----------------|-----|------------------------|
| Questioning | Less than 1 hour | 28 | 200.95 | 3 | 3.75 | .28 | - |
| | 1-3 | 132 | 163.26 | | | | |
| | 3-5 | 115 | 173.57 | | | | |
| | More than 5 | 70 | 179.26 | | | | |
| Deduction | Less than 1 hour | 28 | 192.91 | 3 | 4.40 | .22 | - |
| | 1-3 | 132 | 176.39 | | | | |
| | 3-5 | 115 | 176.66 | | | | |
| | More than 5 | 70 | 152.63 | | | | |
| Analysis | Less than 1 hour | 28 | 187.09 | 3 | .790 | .85 | - |
| | 1-3 | 132 | 172.13 | | | | |
| | 3-5 | 115 | 169.12 | | | | |
| | More than 5 | 70 | 175.38 | | | | |
| Evaluation | Less than 1 hour | 28 | 180.88 | 3 | 4.49 | .21 | - |
| | 1-3 | 132 | 180.90 | | | | |
| | 3-5 | 115 | 175.35 | | | | |
| | More than 5 | 70 | 151.10 | | | | |

| | | | | | | | |
|--------------------------------------|------------------|-----|--------|---|-------|-----|-----|
| Finding similarities and differences | Less than 1 hour | 28 | 245.23 | 3 | 19.81 | .00 | 1-2 |
| | 1-3 | 132 | 168.25 | | | | 1-3 |
| | 3-5 | 115 | 160.56 | | | | 1-4 |
| | More than 5 | 70 | 175.51 | | | | |

According to Table 7, while there are no significant differences detected between the perception questioning, deduction, analysis and evaluation in the scope of similarities and awareness according to their daily internet usages, it has been found that mean rank of the students' who use internet less than one hour is higher ($p > .05$). In terms of finding similarities and differences, it has been shown that there is a significant difference in favor of individuals using internet less than one hour according to daily internet usage ($p < .05$).

Conclusion and Discussion

While there are no significant differences between pre-service teachers' questioning, deduction, analysis, evaluation sub-dimensions related to similarities and awareness according to genders, it has been found that the female students' mean rank is higher. The research findings fit the researches (Aybek & Aslan, 2015; Gündüz, 2015; Murathan et al., 2017; Topçuoğlu-Ünal & Sever, 2013). According to the studies of Güven and Çam-Aktaş (2013), Sadioğlu and Bilgin (2008), and Özmutlu, Gürler, Kaymak & Demir (2014), elementary school students' critical reading self-efficacy a significant difference has been found. Aşlıoğlu and Yaman (2017) found a significant difference between female and male pre-service teachers in favor of the former group. There is limited number of studies dealing with the effects of gender on critical reading skills. Therefore, it is limited to make connections between the previous findings and the findings of the existing research.

There are no significant differences found between pre-service teachers' questioning, deduction, analysis, evaluation, similarities and awareness sub-dimensions according to grade levels. The research findings fit the researches (Aybek & Aslan, 2015; Özmutlu et al., 2014). Having no significant difference according to the grade levels has been thought that the subjects which are in study program do not consist any learning outcomes regarding the students' critical reading skills or the provided education do not have any effect. The reason why there was no significant difference in the pre-service teachers' perceptions about their self-efficacy on critical reading skills based on grade level may be that critical reading was not adequately covered in teacher education programs.

The outcomes of the current study have revealed that there is a significant difference in favor of the primary education pre-service teachers according to their department sub-dimension evaluation. In the study of Karabay et al. (2015), a significant difference has been found in favor of Turkish language education pre-service teachers. Because it has not been encountered much to the researches which examine the critical reading skill according to the department studied, the findings could not be associated with the results of the research the results of the research.

According to the findings of the present study, the students whose mothers have a master degree show a significant difference in favor of them in terms of mothers' educational background pre-service teachers' critical reading self-efficacy perception regarding deduction, analysis and evaluation. According to the findings of the current study, it might be said that the educational background of the mothers affects the critical reading self-efficacy perception. In the researches, similar findings have been found. In the research of Güven and Çam-Aktaş (2013), a significant difference has been found in the scores of 5th grade students' critical reading self-efficacy, in favor of the students whose mothers have a high school or undergraduate degree when compared to the ones whose mothers are illiterate. In the research conducted by Özmutlu et al. (2014), the middle school students' critical reading self-efficacy perceptions according to mothers' educational background, a significant difference has been found in favor of the students whose mothers have a master degree. The reason of this might be that the ones whose mothers have an undergraduate or

graduate degree are introduced to children's literature in an earlier age in preschool teaching. In this process, the curiosity that will affect the child's academic and social development will be effective in his/her literacy skills. Cantekin (2012) states that students need guidance in developing critical thinking and reading skills. In improving these skills educators are active at schools, but parents are also active in out of school contexts. Therefore, it is important that how much parents are aware of critical reading skills and how they employ these skills. According to Sever (2003), starting from this period, that interacting with stimuli contributes positively to children's cognitive and affective development should be regarded as the basic principle. The mentioned stimuli are expected to contribute to children's conceptual and textual assessment skills.

While there is no significant difference found in the pre-service teachers' critical reading self-efficacy perception's sub-dimensions according to fathers' educational background, the present study, students' mean rank whose fathers have a master degree is higher. The research findings match the researches which have been done. In the research conducted by Gündüz (2015), Özmutlu et al. (2014), Sadioğlu and Bilgin (2008), it has been detected that there is no significant difference in the students' critical reading self-efficacy perception according to fathers' do educational background. The reason of this is that the mothers play a more active role than the fathers' in the children's cognitive development. Because we still live in a male-dominated system, and men are more dominant in terms of earning their family's keep and provide the security in our country, so it causes to be accepted that the child education is the role of the mothers.

In terms of finding similarities and differences, there is a significant difference detected in favor of the individuals who use internet less than one hour. The research findings match the findings of the research carried out by Güven and Çam-Aktaş (2013). In the research, it is seen that there is a significant difference in critical reading scores of the 5th grade students in favor of the students who use the internet 1-2 hours daily when compared to the ones who use the internet 3-4 and 5 hours. In the research, in respect of the duration of daily internet usage, a significant difference is seen in the 5th grade students' critical reading scores, in favor of the students who use internet 1-2 hours daily when compared to the ones who use the internet more than 3-4 and 5 hours. Internet provides a lot of opportunities at the point of critical reading development. Thanks to social applications like Facebook, especially Twitter, forums, the individuals can learn different perspectives of writers on the same topic. As a result of analyzing and evaluation of the ideas, the individual can brighten up the uncertainties or contradictions in his/her mind. When the internet usage purpose in our country is checked, it has been understood that it is used mostly for social media, watching videos and listening to music. When we evaluate the internet usage purpose in our country, it is an expected result that the duration of the excess internet usage does not affect critical reading level. Özonat (2018) states that starting from primary education, it is necessary for individuals to use media products correctly, to be able to look at every message in media with caution, to evaluate these messages and to create meaning from these messages in order to educate individuals who could reach the level of questioning and high awareness. In this direction, pre-service teachers who are media consumers should develop self-efficacy perceptions about critical reading.

It should not be forgotten that the societies that will be effective in the future will be the ones that could reach the conclusions by evaluating the information they encounter in the intensive information stack. Pre-service teachers, who will play an important role in shaping the society, criticize and investigate the accuracy of the information they receive from outside rather than accepting it as it is. In short, critical reading is one of the most significant skills that individuals should acquire. The findings of the study are important in terms of identifying the elements to be considered in order to improve critical reading skills in the field of teacher training.

Some suggestions can be made according to the research findings:

- The development of critical reading skills can be suggested through activities such as comparing the ideas of the different writers' works, determining the similarities or differences about the content of the subjects by the students.
- Newspapers or scientific magazines can be used as the materials. When reading skills are emphasized, focusing on the development of reading comprehension skills in primary education period, can contribute positively to the development of critical reading skills.
- To the researchers, examining critical reading self-efficacy perception of the students who study in different universities in terms of different variables (such as number of the books read, the purpose of the internet usage, and new literacy skills) and researching the effect of the different educations in developing of this perception can be suggested.
- The qualitative research methods can be applied to reveal the causes of this finding when considering the effect of mothers' educational background on critical reading ability. These skills-enhancing courses and activities may be included in the educational programs. Especially, it is expected that the technology-assisted education which is given as qualified will provide a significant benefit.

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