



Examining Graduate Dissertations in the Field of Critical Thinking: A Case from Turkey¹

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ABSTRACT

Purpose: The aim of this study is to conduct content analyses of graduate dissertations about critical thinking skills in the field of educational sciences in Turkey and to document general trends in dissertations. **Research Methods:** This study is constructed using qualitative research methods and techniques. A document review was used to gather data in the study. One hundred eighty-six dissertations, available from the National Dissertations Center in the Higher Education Council, have been analyzed in terms of various variables.

Findings: Depending on the gathered data, it is clear that critical thinking has been studied since 1999 and

a majority of the dissertations have been written for a master's degree. It is also revealed that descriptive research has been more favored than experimental research. Studies have been primarily conducted through quantitative data gathering methods. The dissertations have mainly been written by undergraduate students using primarily data collection tools consisting of scales. **Implications for Research and Practice:** This study reveals which theses were studied in Turkey mostly in terms of research methods, sample/study group characteristics, data collection tools, and subject areas concerning critical thinking. Therefore, new research about critical thinking should focus on experimental designs and in-depth analyses of critical thinking through qualitative methods.

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Introduction

Thinking is one of the most significant features of mankind and an inherent part of our daily lives. Complex problems which we encounter throughout our lives necessitate higher order thinking skills. One such skill, critical thinking, is vital to adapt to a complex world. It is a strategy for active and systematic questioning and problem solving and enables us to understand, evaluate and investigate facts, to solve existing problems and to make a particular decision. Levy (2010) has pointed out some principles of critical thinking skills, such as realizing relations among ideas, comprehending poorly-stated ideas, reasoning, understanding guidance through expressions and being objective and open-minded.

Critical thinking has three dimensions, comprising analytic evaluating and creative components. Critical thinkers analyze thoughts in order to evaluate, and they evaluate them in order to improve (Paul & Elder, 2006). It is a way of thinking through analyzing, evaluating and reconstructing matter, content or a problem. It is a process in which an individual guides, disciplines, observes and corrects his own thinking. Briefly, critical thinking is self-directed, self-disciplined, self-monitored and self-regulated thinking (Paul & Elder, 2002). While plausibility, clarity, depth, and intentionality are the main features of critical thinking; analyzing, interpretation, inference, self-confidence, problem solving, decision making, and effective communication emerge as the required skills (Ennis, 1989; Facione, 1990; McKnown, 1997; Halpern, 2002; Paul & Elder, 2006; Fisher, 2007; Nosich, 2012). Critical thinkers accept that it is not the only true way to understand an argument (Mayer & Goodchild, 1990). People who use critical thinking skills effectively try to truly understand situations and demonstrate them clearly; they also consider different opinions while doing so. They have the skills to explain an opinion with its bases, ask appropriate questions and evaluate it; and to make logical interferences and to create assumptions on dissertation bases. Moreover, they create all dissertations fast, efficiently, responsively and in a convincing manner (Ennis, 2011). The definition by Ennis (2011) contains the most important characteristics of critical thinking. According to Browne & Keeley (2010), it is necessary for critical thinker to possess values such as autonomy, curiosity, and lowliness in addition to respecting others' thoughts.

The ability to think critically has been identified as one of the most important competencies of the 21st century (Voogt & Roblin, 2012). Especially in recent years, studies on critical thinking have increased (e.g., the research of Cakmak & Civelek (2013), Emir (2013), Gedik (2013), Kucuk & Uzun (2013), Turan, Aydin, & Ugulu (2013), Alkin-Sahin, Tunca & Ulubey (2014), Børhaug (2014), Condon & Valverde (2014), Demir & Kaya (2015), Kocak, Kurtlu, Ulas & Epcacan (2015), Kucukali & Akbas (2015), Sahin, Cakmak & Hacimustafaoglu (2015), Atabaki, Keshtiaray & Yarmohammadian (2015), Cai & Sankaran (2015), Gupta, Burke, Mehta & Greenbowe (2015), Aybek & Aslan (2016), Tekin, Aslan, & Yagiz (2016), Ulger (2016), etc.).

It is important to analyze dissertations to provide guidance to new research. Determining how broad critical thinking skills are dealt with and how thoroughly

they need to be studied is significant for further research to progress cumulatively. Analyzing the scientific dissertations in a field of study will provide information about how deep and extensive it is and reveals a general view of the field in question. Trends and findings of studies in the field of education play a significant role in guiding researchers who want to carry out study on related fields. This study, designed in the light of the needs mentioned, has been conducted in order to systematically examine the graduate dissertations concerning critical thinking skills in educational sciences and present a general overview of the scientific studies, such as graduate dissertations, about critical thinking skills in Turkey. Given the trend of dissertations conducted on critical thinking skills, this study, therefore, contributes to the literature. A literature review shows that there are not any studies regarding analysis of graduate dissertations on critical thinking skills. It is believed that the results of this study will help new researchers to extend the scope of the academic studies which they will do in the future and to make relevant decisions.

Sub-problems of the research are defined as follows. Concerning graduate dissertations on critical thinking in educational sciences, how are they distributed in terms of:

1. Years and levels
2. Research methods (designs)
3. Data collection methods
4. Characteristics of samples
5. Data collection tools
6. Distribution of studies carried out in an experimental method
 - A. In terms of experimental designs
 - B. In terms of subject areas/courses in which research is conducted

Method

Research Design

This study has been constructed using qualitative research methods and techniques. Qualitative research provides conclusions to be presented based on codes and categories by reading data one after the other (Merriam, 1998, p.58). Document review was used to gather data in the study. Document review includes the analysis of written materials comprising information about cases to be studied (Yildirim & Simsek, 2011).

Research Sample

The dissertations analyzed in this study are limited to those accessible as full PDF files or abstracts through the National Dissertations Center in Higher Education Council since March 1, 2015. For that reason, no sampling method has been used in this study. Two hundred thirteen registered dissertations have been accessed through the Council by scanning the key term "critical thinking." One hundred fifty-three dissertations were at a Master's degree level and sixty of them were doctoral theses. In addition, 173 of the dissertations were fully accessible whereas 40

dissertations were restricted. The information needed for the restricted dissertations was supplied by means of abstracts through the National Dissertations Center. Of all the papers analyzed, 191 were written in Turkish and 22 were written in English. Of the 213 dissertations, 80 were from the Educational Sciences Institute, 13 from the Institute of Science, 16 from the Health Institute and 104 from the Institute of Social Sciences. After a general overview, 27 of the dissertations were omitted due to methodological differences and the lack of a clear basis for the information needed; thus, content analysis was carried out with 186 dissertations.

Research Instruments and Procedures

In order to analyze graduate dissertations concerning critical thinking skills in terms of specific variables, a thesis analysis form, developed by the researchers, was used as the data collection tool. This form consists of sections for release years, levels, research methods, data collection methods, characteristics of sample/study group, data collection tools, designs used for experimental studies and subject areas/courses in which the research was performed. In addition, in order to separately analyze the dissertations using descriptive and experimental models, categories were formed by determining features and sizes of the dissertations using two distinctive methods. Afterwards, each thesis was analyzed by coding with this form and the data was saved.

Validity and Reliability

For internal validity of this research, conceptual framework was used as a guide in the process of preparing data collecting tools and collecting data. In order to increase external validity, which is related to generalizability of the results, it was briefly explained how data were collected and which methods were followed in the data analysis process for all information related to how the research was conducted. Concerning internal reliability, research questions were stated obviously and presented as consistent with other steps of the research. Additionally, analysis was examined independently by two researchers and comparisons of results of analysis were done for reliability of data analysis. As a result of comparisons, it was determined which analysis results were close and a consensus was reached regarding categories and sub-categories. Necessary arrangements were completed for external reliability in regard to data collecting tools and data obtained and findings from the results of the data collection were determined by expert opinions.

Data Analysis

Content analysis was used to analyze the collected data. Content analysis is defined as a general title for some text analysis that includes comparisons, contrasts, and categorization of data in order to test the given hypothesis. Raw materials for content analysis could be any documents or communication media (Gall, Gall & Borg, 2007). In other words, content analysis is a kind of scanning conducted to reveal some features of a particular text, book, or document by digitizing those features.

In this process, digitizing scales must be developed in advance (Karasar, 2009). Dissertations classified by the researchers were discussed in the group and conflicts

about the classifications were resolved in order to increase the reliability of the data. Data collected with thesis classification forms have been saved in a database. Data from this database was then analyzed with SPSS 16.0 and the results were presented descriptively after being transformed into frequency and percentage tables.

Results

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Release Years and Levels

First of all, in this research graduate dissertations concerning critical thinking were analyzed in terms of their release year and level. The results showed that graduate dissertations included Master's and Ph.D. dissertations, and the release years spanned the period from 1999 to 2014. Table 1 shows the descriptive statistics about Master's and Ph.D. dissertations concerning critical thinking in terms of their release years.

Table 1

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Years and Levels

| Level | Year | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Master's | f | 1 | 0 | 1 | 3 | 2 | 2 | 6 | 3 | 6 | 12 | 18 | 17 | 21 | 15 | 15 | 9 | 131 |
| | % | 0.5 | 0 | 0.5 | 1.6 | 1.1 | 1.1 | 3.2 | 1.6 | 3.2 | 6.5 | 9.7 | 9.1 | 11.3 | 8.1 | 8.1 | 4.8 | 70.4 |
| Ph.D. | f | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 4 | 7 | 3 | 4 | 4 | 7 | 5 | 10 | 5 | 55 |
| | % | 0 | 0 | 1.1 | 0 | 0 | 1.1 | 1.1 | 2.2 | 3.8 | 1.6 | 2.2 | 2.2 | 3.8 | 2.7 | 5.4 | 2.7 | 29.6 |
| Total | f | 1 | 0 | 3 | 3 | 2 | 4 | 8 | 7 | 13 | 15 | 22 | 21 | 28 | 20 | 25 | 14 | 186 |
| | % | 0.5 | 0 | 1.6 | 1.6 | 1.1 | 2.2 | 4.3 | 3.8 | 7.0 | 8.1 | 11.8 | 11.3 | 15.1 | 10.8 | 13.4 | 7.5 | 100 |

As Table 1 indicates, the fewest number of dissertations were in 1999 (f=1) and the greatest number of dissertations were in 2011 (f=28). It is seen in the table that from the year 1999 to 2014, the number of dissertations about critical thinking gradually increased, whereas in 2014, the number dropped to 14. However, this decrease is thought to be caused by a delay in transferring dissertations to the digital platform. Thus, considering the distribution of studies in terms of years, it can be said that there is an ongoing interest for researchers in critical thinking. In addition, out of a total number of 186 dissertations, 131 were for master's degrees (70.4%) and 55 were for doctoral degrees (29.6%). This indicates that more doctoral studies are conducted on the topic of critical thinking.

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Research Methods

The dissertations analyzed in this study are generally classified descriptive and experimental categories in terms of research methods. One scale development study is presented separately, as it could not be classified in either category. The distribution of graduate dissertations concerning critical thinking in terms of research methods is given in Table 2.

Table 2

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Research Methods

| Research Method | f | % |
|-------------------|-----|------|
| Descriptive | 109 | 58.6 |
| Experimental | 76 | 40.9 |
| Scale Development | 1 | 0.5 |
| Total | 186 | 100 |

Table 2 indicates that 109 studies (58.6%) were conducted using a descriptive method while 76 studies (40.9%) used an experimental method. There is one dissertation that used scale development concerning critical thinking. It is apparent that the number of descriptive studies is much greater than the other methods.

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Data Collection Methods

The methods of the studies analyzed are categorized in different ways. Dissertation studies are analyzed in three categories in terms of data collection, namely qualitative method (observation, interview and document review), quantitative methods (some statistical techniques applied), and mixed methods (both qualitative and quantitative). Distribution of graduate dissertations concerning critical thinking in terms of data collection methods is given in Table 3.

Table 3

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Data Collection Methods

| Data Collection Method | f | % |
|------------------------|-----|------|
| Quantitative | 123 | 66.1 |
| Qualitative | 11 | 5.9 |
| Mixed | 51 | 27.4 |
| Unspecified | 1 | 0.5 |
| Total | 186 | 100 |

Table 3 indicates that 123 studies (66.1%) used a quantitative data collection technique, 11 studies (5.9%) used a qualitative data collection technique, and 51 studies (27.4%) used a mixed method in which both qualitative and quantitative methods are taken into consideration. In one study the data collection method was

unspecified. Quantitative data collection methods provide research with the opportunity to reach more generalizable but more superficial data, whereas qualitative data has low generalizability but presents deeper data. In the dissertations analyzed in this study, it is clear that quantitative data was preferred. This is followed by the dissertations in which a mixed method was used and the number of studies with qualitative method was relatively small. This indicates that more studies carried out with qualitative or mixed methods are needed.

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Sample Characteristics

Descriptive and experimental studies were analyzed in terms of sample/study group characteristics. The results of this analysis show that the research related to critical thinking was carried out with varying participants. Distribution of participants as the sample group of graduate dissertations concerning critical thinking is given in Table 4.

Table 4

Distribution of Graduate Dissertation Concerning Critical Thinking in Terms of Sample Characteristics

| Participants | Descriptive | | Experimental | | Total | |
|---|-------------|------|--------------|------|-------|------|
| | f | % | f | % | f | % |
| University | 28 | 25.7 | 21 | 27.6 | 49 | 26.3 |
| Students | 9 | 8.3 | 6 | 7.9 | 15 | 8.1 |
| Primary school students (1 st , 2 nd , 3 rd , 4 th grades) | 6 | 5.5 | 21 | 27.6 | 27 | 14.5 |
| Secondary school students (5 th , 6 th , 7 th , and 8 th grades) | 15 | 13.8 | 17 | 22.4 | 32 | 17.2 |
| Teachers | 26 | 23.9 | 1 | 1.3 | 27 | 14.5 |
| High school Students | 10 | 9.2 | 10 | 13.2 | 21 | 11.3 |
| Administrators | 2 | 1.8 | 0 | 0 | 2 | 1.1 |
| Various | 6 | 5.5 | 0 | 0 | 6 | 3.2 |
| Lecturers | 1 | 0.9 | 0 | 0 | 1 | 0.5 |
| *Others | 6 | 5.5 | 0 | 0 | 6 | 3.2 |
| Total | 109 | 100 | 76 | 100 | 185** | 100 |

*6 studies are under "others" category as they are document review studies.

**1 study is excluded as it was a scale development study.

As Table 4 demonstrates, the studies generally consisted of university students (34.4%) and primary/secondary school students (31.7%). In addition, after a close look, 49 of the university students (26.3%) were teacher candidates and the remaining 15 studies (8.1%) deal with students from other faculties. It is surprising that there were relatively few studies with administrators (1.1%), important participants in the education process, and lecturers (0.6%). It can be said that

researchers preferred to work with university students because the sample is easy to access. In six of the studies mentioned, data have been gathered from various participant categories, such as students at different grades, teachers and students, lecturers and university students. It is thought that gathering data from various sample groups will enrich study results. Six other studies in the research had no participants since they were document analyses.

When samples from descriptive and experimental studies are examined in detail, it is clear that studies with teacher candidates outnumbered other studies. Teachers were preferred in descriptive studies and primary school students were preferred in experimental studies. In addition, there seems to be only one study with teachers in experimental studies, but there are no studies with administrators or lecturers.

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Data Collection Tools

When data collection tools used in dissertations concerning critical thinking are examined, it is seen that more than one tool could be used in a single study and scales are mostly used (f=147) as data gathering tools in dissertations. Interview forms (f=32) and document review (f=20) are the most commonly preferred data collection tools after scales. It is also revealed that some previously-developed scales to assess critical thinking skills were selected in the dissertations. Scales for critical thinking used in the dissertations (f=147) were thoroughly examined and the results are presented in Table 5.

Table 5

Distribution of Graduate Dissertations Concerning Critical Thinking in Terms of Scales Applied

| Scale Applied | f |
|---|-----|
| California Critical Thinking Disposition Inventory (Facione, Facione & Giancarlo, 1998) | 52 |
| Cornell Critical Thinking Test (Ennis & Millman, 1985) | 28 |
| Watson- Glaser Critical Thinking Appraisals (1937) | 18 |
| Critical Thinking Scale (Demir, 2006) | 7 |
| The Ennis-Weir Critical Thinking Essay Test (Ennis & Weir, 1985) | 3 |
| Critical Thinking Scale (Semerci, 2000) | 2 |
| Holistic Critical Thinking Scoring Rubric (Facione & Facione, 1994) | 2 |
| Critical Thinking Tendency Scale (Ricketts & Rudd, 2005) | 1 |
| Critical Thinking Skills Scale (Ozdemir, 2005) | 1 |
| Critical Thinking Scale (Derelioglu, 2004) | 1 |
| Others | 32 |
| Total | 147 |

Table 5 reveals that the scale developed by Facione, Facione and Giancarlo (1998) and adapted to Turkish by some researchers was more frequently used (f=52) than other scales in the studies about critical thinking. The Cornell Critical Thinking Test

(f=28) and Watson-Glaser Critical Thinking Appraisals (f=19) were also adapted to Turkish by the researchers and are the most preferred scales to profound critical thinking competency. The Critical Thinking Scale by Demir (2006) in the Turkish language (f=7) was also used by various researchers. Finally, scales developed and used by researchers for their own studies are classified under the “others” category.

Distribution of Graduate Dissertations with Experimental Methods

Distribution in terms of experimental designs used. Some types of experimental designs such as pretest-posttest control group experimental designs, are stronger or have higher scientific value than others, such as one-group experimental designs (Karasar, 2009). Therefore, dissertations were examined in terms of experimental designs. The distribution of experimental dissertations concerning critical thinking in terms of their designs is given in Table 6.

Table 6

Distribution of Experimental Dissertations Concerning Critical Thinking in Terms of Experimental Designs Used

| <i>Experimental Design</i> | <i>f</i> | <i>%</i> |
|--|----------|----------|
| Pretest-Posttest Control Group Experimental Design | 64 | 84.2 |
| The One-Group Pretest-Posttest Quasi-Experimental | 3 | 3.9 |
| The One-Group Repeated Measures Design | 1 | 1.3 |
| Unspecified | 8 | 10.5 |
| Total | 76 | 100 |

Table 6 indicates that experimental dissertations are generally conducted using a pretest-posttest control group experimental design (f=64). Although there are different types of experimental designs in the literature, the dissertations analyzed in this research focused generally on three types of experimental designs. Also the designs of experimental dissertations were not clearly explained.

Distribution in terms of fields or subjects in which research is conducted. Experimental dissertations are analyzed according to the subject areas in which they are conducted and the sample from which they are carried out. Results reveal that experimental studies were carried out with university students in their courses of English (2), Classroom Management (2), Science History (1), Principles and Methods of Teaching (2), Plant Physiology (1), General Physics Lab (1), General Biology (1), Science Lab Applications (1), Physics (1), General Biology Lab (1), Infectious Diseases and Clinical Microbiology (1), Development and Learning (1), Assessment and Evaluation (2), Teaching Technologies and Material Development (1). The findings prove that experimental studies are generally carried out with students from departments of education. In the studies with primary and secondary school students, it is clear that there are studies conducted mostly in Social Science (12) and Science (11) classes, with other studies in Information Technologies (1), English (1), Social Studies (2), Turkish (5), Computer Programming (1) and Math (4) classes. In studies with high school students, there is not a particular subject, but rather there are experimental studies in Biology (2), Chemistry (2), Physics (1), Analytical

Geometry (1), English (1), and Geography of Turkey(1) classes. In addition, it was also revealed that some specific classes, outside the curriculum, were arranged to develop critical thinking for teachers, university, and high school students, and then experimental studies were carried out. In four studies, it is not clear what class the study was conducted in.

Discussion and Conclusion

In this study, a total number of 186 graduate dissertations in the National Dissertations Center in Higher Education Council have been analyzed. It is confirmed that there has been an ongoing interest in studies concerning critical thinking since the first study in 1999 (e.g., the research of Akbiyik (2002), Irfaner (2002), Ay (2005), Guzel (2005), Aybek (2006), Karadeniz (2006), Erus (2007), Unal (2007), Kalkan (2008), Zayif (2008), Sahin (2009), Yoldas (2009), Celik (2010), Demirhan (2010), Ozensoy (2011), Dilek-Eren (2011), Ayaz (2012), Turan (2012), Cam-Aktas (2013), Selcuk (2013), Turan (2014), Topuz (2014), etc.). The analysis has revealed that the Master's dissertations about critical thinking outnumber the doctoral theses and the maximum number of studies conducted was in the year 2011.

It is also seen that descriptive studies are preferred over experimental studies when studies about critical thinking are concerned. Similarly, Arik & Turkmen (2009), Erdem (2011), Fazliogullari & Kurul (2012), Gomleksiz & Bozpolat (2013), Kucukoglu & Ozan (2013), Hazir Bikmaz, Aksoy, Tatar & Atak Altinyuzuk (2013), Ozan & Kose (2014), Kurt & Erdogan (2015), Koc (2015), and Kozikoglu & Senemoglu (2015) point out that descriptive method and quantitative data collection method are primarily used in studies. As for data collection methods, studies with quantitative data collection methods are mostly preferred followed by studies with a mixed method and there are a small number of studies that use the qualitative method. Fazliogullari & Kurul (2012) also emphasized that theses done in the field of educational science had a positivist paradigm. Arik & Turkmen (2009) indicated in their study that studies with qualitative method are not favored since they require a longer time to conduct. In this regard, it can be said that researchers opt for quantitative studies, which are concluded in a relatively short time compared to qualitative method.

It is clear that scales as data collection tools stand out as quantitative method is mainly favored in critical thinking studies. Therefore, it is thought that more studies with qualitative and mixed methods in which data collection tools, such as interviews and observations, are used to collect detailed information about critical thinking. In order to obtain detailed information about critical thinking, Kurt & Erdogan (2015), in their research about the studies in curriculum evaluation in Turkey, Selcuk & Palanci (2014), in their analytical research about the studies published in *Education and Science*, Goktas et al. (2012), and Fazliogullari & Kurul (2012) in their research about the studies in educational sciences in Turkey, have concluded that quantitative studies are published more and scales such as attitude, perception and personality tests, and surveys are used more than other kinds of data collection tools. Gomleksiz & Bozpolat (2013) indicated in their research that scales

and surveys are mainly used in the studies they have analyzed. The main reason why scales and surveys are mostly preferred in studies concerning critical thinking may be that they can reach more people and it is more economical to gather data with dissertation tools in terms of time and cost. However Sert, Kurtoglu, Akinci, & Seferoglu (2012) stated that collecting reliable and realistic data should be focused prior to collecting more data in the research. Sozbilir & Kutu (2008) also expressed that using multiple methods and data collecting tools will positively affect the validity and reliability of results of research. Within this scope, it can be expressed that using various measurement tools and qualitative and quantitative data collecting methods together in the research enable researchers to determine more powerful information in terms of validity and reliability.

Critical thinking studies involve mostly university students. Within dissertation studies, the ones with pre-service teachers are predominant, whereas there are not sufficient numbers of studies with students from other schools. It is also note worthy that the number of studies with administrators and lecturers are scarce. Similarly, in many studies analyzing educational research conducted in Turkey, the participants are mainly university students (Arik & Turkmen, 2009; Fazliogullari & Kurul, 2012; Selcuk & Palanci, 2014; Ozan & Kose, 2014). Also Goktas, et al. (2012), Hazir Bikmaz, et al. (2013), and Selcuk & Palanci (2014) have concluded in their studies that research at an undergraduate level is mostly conducted with students from the faculty of education. Therefore, the findings in this study show parallelism with the findings of the studies in literature.

In the dissertations concerning critical thinking it is clear that scales are mainly preferred as data collection tools and the California Critical Thinking Disposition Inventory, which has been adapted in Turkish, is primarily used. Similarly Aybek, Aslan, Dincer, & Coskun-Arisoy (2015) pointed out that the California Critical Thinking Disposition Inventory was mostly used in order to determine the critical thinking skills of preservice teachers. The Cornell Critical Thinking Test and the Watson-Glaser Critical Thinking Appraisals are among the scales mostly chosen to reveal critical thinking competence. The Critical Thinking Tendency Scale was developed for university and high school students (Aybek & Celik, 2007). It has a higher reliability coefficient (Emir, 2013) and researchers prefer to study mostly with university students, which might account for the reason why this scale is widely used.

It was determined that studies conducted using an experimental method are generally designed with a pretest-posttest control group experimental design like the studies of Kutlu and Schreglmann (2011) and Turan, Aydin, and Ugulu (2013). In studies with experimental methods, it was observed that significant results are generally obtained in favor of the experimental group. In addition, the findings about which sample group is studied in which course/class revealed that the studies are carried out in large fields of study. While the studies in primary and secondary schools concentrate on social science and science classes, there is not a piling-up in any particular field of study in other samples. In this regard, it is thought that

experimental studies of critical thinking levels in other fields of study rather than social Science and science in primary and secondary schools will enrich the literature.

In conclusion, this study provides information about the tendencies in graduate dissertations regarding researchers' focuses concerning critical thinking in Turkey. In other words, this study is informative for who intend to study critical thinking skills in the field of educational sciences. It revealed which dissertations were studied in Turkey most in terms of research designs, data gathering methods, sample/study group characteristics, data collection tools, experimental patterns used for applied studies and subjects in which research is performed concerning critical thinking. In this study in which 186 dissertations were analyzed, it is seen that the number of dissertations about critical thinking has gradually increased since the first dissertation was done in 1999, reaching a maximum number of dissertations done in 2011. Additionally, the descriptive method has been widely preferred compared to the experimental method and qualitative research. The dissertations examined generally were carried out with university students. Also, scales were mostly used as data gathering tools and the California Critical Thinking Disposition Inventory, which is adapted in Turkish, is primarily used in dissertations. Additionally, the studies conducted using an experimental method are generally designed with a pretest-posttest control group, and significant results of these studies are generally obtained in favor of the experimental group.

New researchers may examine this thinking skill using different methods, samples, designs, or different data collection tools. In other words, new research about critical thinking should focus on experimental designs, in-depth analysis of critical thinking through the qualitative method, other university students rather than pre-service teachers, and other graders rather than university students. Also, analyzing the articles published and dissertations written abroad, comparing the results of national and international studies, and conducting similar studies about other thinking skills can contribute to literature and further studies.

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Eleştirel Düşünme Becerileri Konusunda Yapılan Lisansüstü Tezlerin İncelenmesi: Türkiye Örneği

Atf:

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Özet

Problem Durumu: Düşünme insanoğlunun en önemli özelliklerinden biri ve günlük hayatımızın ayrılmaz bir parçasıdır. Eleştirel düşünme olayları anlamak, değerlendirmek, incelemek, var olan bir problemi çözmek için veya bir konuda karar vermek için gerçekleştirilen aktif ve sistematik bir sorgulama ve problem çözme stratejisidir. Özellikle son yıllarda Türkiye’de eleştirel düşünmeye ilişkin araştırmalar artış göstermiştir. Bu araştırmaların analiz edilerek yeni yapılacak araştırmalara yol göstermesi önemli görülmektedir. Eleştirel düşünme becerilerinin sıklıkla hangi boyutlarıyla ele alındığının, hangi boyutlar bakımından incelenmeye ihtiyaç duyulduğunun ortaya konulması araştırmaların birikimli ilerlemesi bakımından oldukça önemlidir. Bunun yanı sıra bir alanla ilgili yapılmış bilimsel tezlerin analiz edilmesi, o konunun derinliği ve yaygınlığı hakkında bilgiler verebilir ve incelenen alanın genel görünümünü ortaya çıkarabilir.

Araştırmanın Amacı: Bu çalışmanın amacı eleştirel düşünme becerileri ile ilgili olarak Türkiye’de eğitim bilimleri alanında yapılmış olan lisansüstü tezlerin içerik analizini yapmak ve tezlerdeki genel eğilimleri belirlemektir.

Araştırmanın Yöntemi: Çalışma nitel araştırma yöntem ve teknikleri kullanılarak yapılandırılmıştır. Verilerin toplanmasında doküman incelemesi yönteminden yararlanılmıştır. Araştırmada YÖK Ulusal Tez Merkezi’de bulunan 186 tez yayın yılı, düzeyi, araştırma yöntemi, veri toplama yöntemi, örneklem özellikleri,

kullanılan veri toplama araçları, deneysel çalışmalar için kullanılan deney deseni ve uygulamanın yapıldığı dersler boyutlarında analiz edilmiştir.

Araştırmanın Bulguları: Elde edilen verilere dayalı olarak, eleştirel düşünmenin 1999 yılından itibaren çalışmaya başlandığı ve konuyla ilgili tezlerin önemli bir bölümünün yüksek lisans düzeyinde yapıldığı ve betimsel araştırmaların deneysel araştırmalara göre daha çok tercih edildiği görülmüştür. Yapılan tezlerde nicel veri toplama yöntemiyle yürütülen çalışmaların tercih edildiği; bunu karma yöntemin takip ettiği ve nitel yöntemde yapılan çalışmaların oranının düşük olduğu ortaya konmuştur. Tezlerde daha çok üniversite öğrencileriyle çalışıldığı ve veri toplama aracı olarak sıklıkla ölçeklerin kullanıldığı saptanmıştır. Bunlar arasında “Kaliforniya Eleştirel Düşünme Eğilimleri Ölçeği” en sık kullanılan ölçektir. Deneysel yöntemle yapılan çalışmaların genellikle kontrol gruplu ön test-son test deneysel desene göre tasarlanmış olduğu ve bu tür çalışmaların çoğunlukla Sosyal Bilimler ve Fen Bilimleri derslerinde yürütüldüğü belirlenmiştir.

Araştırmanın Sonuçları ve Önerileri: Bu çalışmada eleştirel düşünme becerileri ile ilgili olarak YÖK Ulusal Tez Tarama Merkezindeki toplam 186 lisansüstü düzeyde tez incelenmiştir. 1999 yılında yapılan ilk çalışmadan günümüze kadar eleştirel düşünme ile ilgili çalışmalara olan ilginin sürdüğü, konunun en fazla 2011 yılında çalışıldığı saptanmıştır. Yapılan incelemelerde eleştirel düşünme ile ilgili olarak yüksek lisans tezlerinin doktora tezlerine göre sayıca daha fazla olduğu ve betimsel araştırmaların deneysel araştırmalara göre daha çok tercih edildiği belirlenmiştir. Veri toplama yöntemi bakımından ise daha çok nicel veri toplama yöntemiyle yürütülen çalışmaların tercih edildiği; bunu karma yöntemin takip ettiği ve nitel yöntemde yapılan çalışmaların oranının düşük olduğu ortaya konmuştur. Eleştirel düşünme ile ilgili çalışmalarda nicel araştırmaların daha fazla tercih edilmesine bağlı olarak veri toplama araçlarında ölçeklerin ön plana çıktığı görülmektedir. Bu bağlamda eleştirel düşünme konusuna ilişkin daha derinlemesine bilgilerin edinilebilmesi amacıyla görüşme, gözlem gibi veri toplama yöntemlerinin kullanıldığı daha fazla sayıda nitel ve karma araştırmaya ihtiyaç olduğu düşünülmektedir. Eleştirel düşünme ile ilgili çalışmalarda ölçek ve anketlerin daha çok tercih edilmesinin temel nedeni olarak, bu araçların daha çok kişiye ulaşabilme olanağı tanınması ve bu araçlarla veri toplama sürecinin zaman ve maliyet açısından daha ekonomik olması gösterilebilir. İncelenen tezlerde çalışma grubunun/örneklem çöğunlukla üniversite öğrencilerinden oluştuğu görülmüştür. Bunlar arasında da öğretmen adayları ile yapılan çalışmalara ağırlık verildiği gözlenmiştir. Ayrıca yönetici ve öğretim elemanları ile de oldukça az sayıda araştırma yürütülmüş olması dikkat çekici bulunmuştur. Benzer şekilde Türkiye’de gerçekleşen eğitim araştırmalarının incelendiği birçok çalışmada da örneklem/katılımcıların çoğunlukla üniversite öğrencilerinden oluştuğu görülmektedir. Eleştirel düşünme ile ilgili olarak yapılan tezlerde veri toplama aracı olarak daha çok ölçeklerin tercih edildiği ve ağırlıklı olarak Türkçeye uyarlanması yapılan “Kaliforniya Eleştirel Düşünme Eğilimleri Ölçeği”nin kullanıldığı görülmektedir. “Cornell Eleştirel Düşünme Ölçeği”i ve “Watson-Glaser Eleştirel Akıl Yürütme Gücü Testi” de eleştirel düşünme gücünü ortaya koymak amacıyla sıklıkla

tercih edilen ölçeklerdir. Deneysel yöntemle yapılan çalışmaların genellikle kontrol gruplu ön test-son test deneysel desene göre tasarlandığı saptanmıştır. Deneysel yöntemle yapılan arařtırmalarda genellikle deney grubu lehine anlamlı sonuçlar elde edildiđi gözlenmiştir. Ayrıca arařtırmaların seçilen örneklem gruplarıyla hangi derslerde/konu alanlarında yürütüldüklerine ilişkin elde edilen bulgular, çalışmaların çok çeşitli konu alanlarında yapıldığını göstermiştir. İlköğretim birinci ve ikinci kademede yapılan arařtırmalar en çok Sosyal Bilgiler ve Fen Bilimleri derslerinde yoğunlaşırken, diđer örneklem gruplarında özel olarak bir konu alanında yığılma olmadığı görülmektedir. Bu bakımdan ilköğretim düzeyinde yürütülecek çalışmalarda, Sosyal Bilgiler ve Fen Bilimleri dışındaki derslerde çalışılmasının ilgili alan yazına zenginlik katacađı düşünölmektedir. Eleştirel düşünme becerilerinin karşılaştığı olayları sorgulayan ve problemleri rahatlıkla çözebilen bireyler yetiştirme konusundaki önemi, bu konuda yapılacak çalışmaların değerini daha da arttırmaktadır. Bu çalışma, eleştirel düşünme ile ilgili yöntem, örneklem ve konu alanı açısından az çalışılmış arařtırmalara yönelik bilgi vermektedir. Bu bakımda yeni arařtırmacılara ışık tutacađı düşünölmektedir. Yeni yapılacak arařtırmalarda, eleştirel düşünme becerileri ile ilgili yayımlanmış makalelerin ve yurt dışında yapılmış tezlerin incelenmesinin, yurt içi ve yurt dışında yapılmış arařtırma sonuçlarının karşılaştırılmasının ve benzeri çalışmaların diđer düşünme becerileri ile ilgili yapılmasının alan yazına katkı sağlayacađı düşünölmektedir.

Anahtar Kelimeler: Üst düzey düşünme becerileri, yüksek lisans tezi, doktora tezi, doküman incelemesi, içerik analizi.