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Examination of English Theses Written on "Critical Thinking" in Türkiye between 2000-2021

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Abstract

The aim of the research is to evaluate the master's and doctoral theses written in English on critical thinking in our country according to various criteria. Postgraduate theses were accessed from the website of the Council of Higher Education by writing "critical thinking" in the thesis scanning part. In the study, 57 theses, which were written between the years 2000-2021 and have permission to be published, were analyzed by content analysis method. Data were analyzed using SPSS. According to the results obtained, these studies, most of which are master's theses, are mostly carried out with female researchers, the theses are mostly consulted by male faculty members, professor doctor faculty members provide thesis advisory more than others and it has also been observed that more studies are carried out on critical thinking especially in Middle East Technical and Çukurova Universities on the basis of universities, and in the Central Anatolia Region on a regional basis. In addition, considering the years when the theses were made, it has been concluded that more theses were made between 2015-2021, it was preferred more to have three-person thesis juries, the number of pages between 101-200 and titles consisting of 11-20 words, also, there are more theses with 0-5 sub-problems, more students' opinions are taken, the sample size is mostly between 0-5 and there are studies conducted with the mixed method.

Key Words

Critical thinking
Thesis evaluation
Türkiye
English theses

About Article

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Introduction

In today's information age, while people have to cope with many variables at the same time, they also need to maintain healthy social relations, develop the ability to adapt to the environment and protect it. It is not enough to access information in this context because how to integrate knowledge into everyday life is also of great importance, and the way one thinks also shapes one's behavior.

We live in the world of information and the amount of information is increasing every day. Both increased dependence on science and technology and other rapid innovations require people with the skills to successfully find and implement this information. People should know to think critically, think carefully, be able to simplify a problem in the complexities of the changing world. As Albert Einstein once said, "everything should be as simple as possible, but not simpler." Learning critical thinking to keep up with the rapidly changing world is becoming one of the most important skills. People need the ability to think critically (CT) to not only take advantage of the world's great opportunities but also to direct their lives and learning.

Critical thinking has a vital importance in modern education today as it was 2400 years ago. That's why researchers are looking for the best ways to teach critical thinking to students, especially younger students. Critical thinking is not a skill that every individual has, but it is a skill that can be developed when supported (Demirel, 1999). The development of critical thinking is built on a set of pioneering skills that develop from early childhood through adolescence and adulthood. Therefore, there are many factors that affect the development of critical thinking (Ormrod, 2018). Pioneering skills such as social and emotional development, experience, play, communication, mental representations of the environment, and abstract thinking skills form the basis of critical thinking skills in children (Murphy, et al., 2014). Shaw (1997) states that education can and should be done to influence social, moral and intellectual discovery by stimulating critical thinking behaviors in young people. Developing students' critical thinking skills is an important part of education, while education prepares students for real-life challenges. In the last few decades with the increasing importance of education, most of the teachers / trainers are trying to focus on activities that develop students' critical thinking skills.

Although critical thinking is a seemingly new concept and its importance is mostly accepted, it has a long history dating back to ancient Greek times (Facione, 1990). Critical thinking, one of the high-level thinking skills, has been one of the most widely researched and discussed agendas among educators, scholars, and scientists, as it has benefited individuals from facilitating their efforts to understand the world. In addition, critical thinking increases the quality of thought and human life quality by enabling one to get away from lies, misconceptions, dogmas, false beliefs and baseless arguments (Presseisen, 1985).

Since the beginning of critical thinking was based on Ancient Greece, Socrates was the first to define it. Socrates made people think by asking questions in his time. Today, this method is known as Socratic method of interrogation. Davis (2003) says this method is the most popular method of critical thinking. Davis (2003) offers teachers suggestions on how to conduct Socratic interrogation in a learning environment. According to him, in his critical thinking model teachers should respect the ideas of the students, repeat what is spoken at certain intervals, not ask yes/no questions, wait a few seconds before receiving answers from the student, schedule course flow and ask important questions, ask clear, understandable questions, continue the discussion environment in the classroom and draw the attention of the students to the discussion.

According to Özmen (2008), Socrates' method of questioning was persistent and cynical as it showed people that they did not know much about what they were thinking. However, since the beginning of the last century, critical thinking has become easier to understand, starting to become more involved in cognitive work. According to Lewis and Smith (1993), while psychologists tried to define critical thinking, they also emphasized problem solving. According to Bailin (2002), researchers tried to observe behaviors and skills to define critical thinking, since it is impossible to observe the stages of thinking. Sternberg (1986) defines critical thinking as a process. According to him, critical thinking is a technique that people use to solve problems, make decisions and explore

new perspectives. According to Willingham (2008), critical thinking; multidimensional approach to the problem, being open to new ideas and reasoning logically.

One of the most important definitions of critical thinking was made in a panel of the American Philosophical Association, in which a group of theorists and critical thinking and evaluation experts took part. In this panel, critical thinking skills were divided into 'cognitive' and 'dispositional'. After the panel, after two years of work, the Delphi report was published and the Delphi technique was defined as the attitude of self-control that resulted in critical thinking, analysis, inference, and interpretation (Demir, 2008).

As can be seen, many different definitions and studies have been put forward about critical thinking. In fact, this subject has attracted the attention of many disciplines and has been the subject of studies in the field of education. With the aim of integrating critical thinking into education, in 1956 Benjamin Bloom and a group of educators developed a framework for classifying the goals and objectives of education. This system, which extends from remembering information to evaluation, consists of six categories and each layer has a different level of thinking skill. When ordered from simple to complex; this classification, which is knowledge-comprehension-application-analysis-synthesis-evaluation, was rearranged in 2001 by Lorin Anderson and a group of cognitive psychiatrists. While 'synthesis' is in the fifth rank in Bloom's taxonomy, it is in the sixth rank under the name of 'creation' in the rearranged form. In the field of education, the 'creation' step is known as the highest critical thinking skill.

One of the educational goals of our age is to equip individuals with the highest level of thinking skills. In order to achieve this, it is necessary to make students adopt the concept of critical thinking. Critical thinking should be taught to students from an early age because this skill enables students to critically look at different situations in daily life and facilitates the processes of keeping up with the flow of life. It is the duty of teachers to provide students with intellectual equipment and to prepare them for the information age.

Many people have trouble forming their thoughts in a logical and coherent order. Therefore, the difficulties faced by a critical thinker also differ from person to person. To clarify this issue, some researchers have divided these difficulties into groups. Vaughn (2010) suggested that there are two barriers to critical thinking. The first is the obstacles to how we think, and the other is the difficulties about what we think. The first of these obstacles is related to psychological factors such as our motivation and desires, and the second is the obstacles that arise as a result of philosophical decisions. As knowledge accumulates over time, some people accept information directly without questioning it. However, this is a wrong attitude. Because the critical thinker never says enough about knowledge. He even continues to question the knowledge he has. “Knowledge is a prerequisite but not sufficient. It is also necessary to understand the principles that govern a particular field” (Momentus, Snippets, Spirals, 2013).

In the mid-20th century, it was John Dewey who first used the terms “critical/reflective thinking” in the field of education. According to him, education should serve to develop the ability to “learn to think”. In the light of Dewey's ideas, students were placed at the center of the teaching and learning environment. Teaching methods and techniques such as cooperative learning and role-playing were designed in accordance with Dewey's ideas.

In summary, the tools and resources of the critical thinker have greatly increased throughout the history of CT, and a large number of well-known names dealing with various major disciplines have contributed to its development. What is most important in the field of education, however, is the development of basic standards for critical thinking.

In the modern era, critical thinking is seen as a vital element in education because it is believed to improve students' ability to understand arguments significantly and help students critically evaluate what they have learned in the classroom in order to produce well. In the modern era, critical thinking is seen as a vital element in education because it is believed to improve students' ability to understand arguments significantly and help students critically evaluate what they have learned in the classroom in order to produce well. Critical thinking activities should be designed critically and used in teaching and learning to stimulate students' minds and provide them with the opportunity to analyze

and synthesize situations. When we look at the literature, it is seen that the thesis or article reviews on critical thinking (Akkaş and Memiş, 2020; Batur and Özcan, 2020; Gönül, Başar and Demir, 2021) have been increasing in recent years in our country. However, since these studies do not specifically focus on critical thinking theses written in English, this study aims to analyze postgraduate theses written in English for the sake of critical thinking.

Method

Within the scope of this research, first of all, the English theses, which were published when the keywords "Critical Thinking" were typed on the thesis search page of the Council of Higher Education and were allowed to be published, were downloaded. 57 studies between the years 2000-2021 obtained from the survey were subjected to detailed examination. In this direction, while determining the theses to be examined, attention was paid to the fact that the theses were in the field of education.

Study group

The study group of the research consists of 47 master's theses and 10 doctoral theses written in English on "critical thinking" in the field of education. These theses were conducted in Türkiye between the years 2000 and 2021, and they are allowed to be accessed in the National Thesis Center. While determining the documents, the criteria that were taken into consideration were the theses being accessible at the National Thesis Center and the content of the theses being about critical thinking.

Data Collection Tool

In the study, which was prepared by adopting the qualitative research method, the data were obtained by the document analysis method. In the analysis of the data, a form consisting of 20 predetermined criteria was used. The criteria were determined according to the criteria in previous similar studies. The data was collected based on graduating degree of the study (master's – doctoral thesis), gender of the author, gender of the advisor, the title of the advisor, the geographical region of the university, the university, institute and year of the thesis, the number and titles of the jury participating in the defense, the number of words in the title of the thesis, the location of the research, the number of pages of the thesis, the number of sub problems/objectives, the method used, the distribution of techniques and models, the distribution of thematic topics, the sample size, the number of results, the number of suggestions given and the number of resources used.

Data analysis

The data of the postgraduate theses examined with the help of the SPSS package program were tried to be analyzed and the findings were tabulated and interpreted according to the sub-problems. Data is collected according to graduate degree of the study (master's-doctoral thesis), gender of the author, gender of the consultant, title of the consultant, geographical region of the university, university where the thesis was written, institute and year of the thesis, the number and titles of the jury participating in the defense, the number of words in the title of the thesis, the location of the research, the number of pages of the thesis, the number of sub-problems/objectives, the method used, the technique and model distribution, the thematic topic distribution, the sample size, the number of results reached, the number of suggestions given and the number of resources used.

Findings

Findings are arranged in tables in accordance with the order of the sub-problems addressed in the research.

Table 1. Situation of thesis by graduate degree

Postgraduate degree	Frequency (f)	Percent (%)
Master	47	82.4
Doctor's Degree	10	17.5
Total	57	100.0

Looking at Table 1, it is understood that master's theses on critical thinking outnumber doctorate theses. 82.4% of these theses are master's theses and 17.5% are doctorate theses. The reason

for the high number of master's theses can be shown as the fact that there are more master's programs in universities.

Table 2. Situation in terms of thesis author's gender

Gender	Frequency (f)	Percent (%)
Female	38	66.6
Male	19	33.3
Total	57	100.0

Looking at the Table 2, it is seen that the number of male researchers is less than the number of female researchers on critical thinking. 66,6% of the theses studied in the reseach were prepared by women and 33,3% of the theses were prepared by men. This may be due to the fact that the number of female students in master's and doctoral programs is higher than the number of male students.

Table 3. Situation in terms of the thesis advisor gender

Gender	Frequency (f)	Percent (%)
Female	25	43.8
Male	31	54.3
Unspecified	1	1.7
Total	57	100.0

Looking at Table 3, it is seen that male faculty members mostly provide in counseling in postgraduate studies on critical thinking. In these studies, 54,3 % of the advisors were male, while 48,8% were female advisors. The reason for this may be that male advisors participate more in studies on critical thinking. Another reason may be that the number of male academicians is higher than the number of female academicians.

Table 4. Situation in terms of thesis advisor's title

Title	Frequency (f)	Percent (%)
Professor	20	35.8
Associate Professor	16	28.7
Assistant Professor	9	15.7
Doctoral Lectural (Dr)	11	19.2
Unspecified	1	1.7
Total	57	100.0

When Table 4 is examined, it is seen that mostly the professors provide the advisory in the studies on critical thinking. Accordingly, 35,8% of the advisors are professors, 28,7% are associate professors, 15,7 % are assistant professors, and 19,2% are doctoral lecturers. The fact that a high percentage of doctoral or graduate students have worked with professors in these theses on critical thinking shows that these studies are carried out under the supervision of expert in the field.

Table 5. Situation in terms of the geographical region of the university

Geographical region	Frequency (f)	Percent (%)
Central Anatolia	24	42.1
Marmara	15	26.3
Mediterrenian	12	21.5
Black Sea	2	3.5
Aegean	2	3.5
Eastern Anatolia	2	3.5
Total	57	100.0

When Table 5 is examined, it is seen that the theses on critical thinking are mostly studied in the universities which are located in the Central Anatolia Region with the rate 42,1%. The fact that the number of universities in the Central Anatolia Region is higher than other regions directly affects the number of master's and doctoral programs. This may be the reason why the studies conducted are

mostly concentrated in the Central Anatolia Region. When the studies are examined, it is seen that the distribution to other geographical regions is Marmara Region (26,3%), Mediterranean (21,5%), Black Sea Region, Aegean Region and Eastern Anatolia Region (3,5%). While the most studies were in the Central Anatolia Region, it was revealed that there was no English study for critical thinking in the South East Anatolia Region.

Table 6. Situation by the universities where the thesis was conducted

University	Frequency (f)	Percent (%)
Çukurova University	8	14
Gazi University	7	12.3
Bahçeşehir University	3	5.3
Çağ University	2	3.5
Dokuz Eylül University	2	3.5
Ahi Evran University	1	1.7
Atatürk University	1	1.7
Marmara University	3	5.3
Boğaziçi University	2	3.5
Yıldız Technical University	1	1.7
Akdeniz University	2	3.5
Balıkesir University	1	1.7
Ondokuz Mayıs University	1	1.7
Uludağ University	1	1.7
Başkent University	1	1.7
Yeditepe University	1	1.7
Onsekiz Mart University	1	1.7
Middle East Technical University	8	14.0
Karadeniz Technical University	1	1.7
Bilkent University	3	5.3
Hacettepe University	2	3.5
Kafkas University	1	1.7
İstanbul University	1	1.7
Eskişehir Anadolu Univeristy	2	3.5
Ankara University	1	1.7
Total	57	100.0

Table 6 shows the distribution rates of theses according to universities. Considering the number of universities in our country, it is seen that there are not many master's and doctoral theses on critical thinking. The reason for this may be that although critical thinking is not a new concept in our country, the preference for writing in English is low. As seen in the table, most studies in the field of critical thinking were conducted at Çukurova University and Middle East Technical University with a rate of 14%. Being in the first place of these two universities may be due to the fact that the foundation years go back. Gazi University is in the second place with a rate of 12,3%. Bahçeşehir, Marmara, and Bilkent Universities take the third place with a rate of 5,3%. Çağ, Dokuz Eylül, Marmara, Boğaziçi, Akdeniz, Karadeniz Technical University, Hacettepe and Eskişehir Anadolu Univesities follow with 3,5%. On the other hand, it is seen that studies are carried out in the remaining universities (Ahi Evran, Atatürk, Yıldız Teknik, Balıkesir, Ondokuz Mayıs, Uludağ, Başkent, Yeditepe, Onsekiz Mart, Kafkas, İstanbul University, Ankara University). When the distribution ratio of the universities in the Central Anatolia Region is summed up, it is seen that most studies were done in this region, which supports table 5. In table 6, it is noteworthy that there is no university in South East Anatolia where thesis on critical thinking is done.

Table 7. Situation according to the institutes where the thesis was conducted

Institute	Frequency (f)	Percent (%)
Institute of Social Sciences	29	50.8
Institute of Educational Sciences	26	45.6
Institute of Science	1	1.7
Institute of Postgraduate Education	1	1.7
Total	57	100.0

When Table 7 is examined, the Institute of Social Sciences ranks first with 50,8% of 29 theses on critical thinking. Then, there is the Faculty of Educational Sciences with 26 theses and 45,6%. The reason why the most thesis among the institutes is in the Institute of Social Sciences may be due to the later establishment of the Institutes of Educational Sciences and therefore the fact that the branches related to education stand within the Institute of Social Sciences for years. One study was conducted in English at the Institutes of Science and Postgraduate Education.

Table 8. Situation according to the years of the thesis

Years	Frequency (f)	Percent (%)
2000-2005	2	3.5
2006-2010	16	28.7
2011-2014	11	19.2
2015-2021	28	49.1
Total	57	100.0

When looking at the distribution of theses by years, it is seen that more theses on critical thinking have been written in recent years. 28 theses written between 2015-2021 prove this. The least thesis was conducted between 2000-2005. The increase in the number of theses as we get closer to the present shows that more studies were conducted in English in the field of critical thinking.

Table 9. Situation according to the number of juries in thesis defence

Number of juries	Frequency (f)	Percent (%)
2	2	3.5
3	30	52.6
4	1	1.7
5	14	24.5
Unspecified	10	17.5
Total	57	100.0

Table 9 shows the number of juries participating in the thesis defense. Information about the jury couldn't be reached in the 10 theses examined. When we look at the table, it has been found that the number of juries of 6 and 7 people participating in the defense is not available. In the table, the jury with 3 lecturers comes first with 52.6%. This rate is followed by the 5 lecturers with 24.5%. The number of juries was determined by the defense with a ratio of 3.5% to 2, and a jury with 4 lecturers has the minimum percentage with 1.7%. Although the thesis juries are formed based on the operations of the relevant institutes that include the departments of the Council of Higher Education within the scope of the frameworks, with this study, it has been tried to reveal the number of juries preferred by our institutes and thesis advisors.

Table 10. Title of faculty members in the jury

Title	Frequency (f)	Percent (%)
Professor	54	30.6
Associate Professor	43	24.4
Assistant Professor	31	17.6
Doctoral Lecturer (Dr)	38	21.5
Unspecified	10	5.6
Total	176	100.0

Looking at the table 10, it is seen that 30,6% of the theses studied in English are professors, 24,4% are associate professors, and 17,6% are assistant professors. There are 38 juries having the title of doctoral lecturer (Dr) with a rate of 17,6. Most of the lecturers holding the title of Doctor (Dr) belong to Bilkent University. It is noticed that the ratios are not far from each other. In the 10 theses examined, the titles of the faculty members were not specified. Considering the table showing the titles of thesis advisors, the guidance of the instructors with the most professor titles supports the table 10.

Table 11. Situation in terms of word count in the title

Title word count	Frequency (f)	Percent (%)
0-10	5	8.7
11-20	40	70.1
21 and more	12	21.5
Total	57	100.0

The title part of an academic work is very important in terms of understanding what the subject is, so it should be carefully prepared. The use of unnecessary words both confuses the reader and drowns the researcher in unnecessary details. The title should be written as short as possible and should reflect the research content. Titles should not exceed fifty (50) letters (Karasar, 2018).

When the number of titles of the theses is examined in table 11, it is seen that 8,7% of the theses consist of 0-10 words. The range of 11-20 has the highest rate, constituting 70,1% of the works. Theses with 21 and more words account for 21,5%. When we look at the table in general, we see 12 theses with 21 and more words. Considering that the theses are written in a foreign language, it can be concluded that the adverb used, and the prepositions increase the number of words.

Table 12. Situation according to the location of research

Residential area	Frequency (f)	Percent (%)
City	40	70.1
District	10	17.5
Region	1	1.7
Unspecified	6	10.5
Total	57	100.0

When the table 12 is examined, it is seen that 70,1% of the studies were conducted in the provinces. The reason for this can be considered as the fact that universities are generally located in the city centers and the work is carried out in the central districts close to there. 17,5% of the studies were located in the districts and in 10,5% of the studies, the settlement conducted was not specified. In one of the theses, the place of residence is not mentioned. It is a study on the examination of English books. This study was prepared by the Faculty of Educational Science of Akdeniz University. In other words, it may be right to give an example of qualitative studies in this context. In the research, it is seen that only 1 thesis was made on a regional basis with 1,7%.

Table 13. Situation in terms of page count

Page count	Frequency (f)	Percent (%)
0-100	18	31.5
101-200	28	49.1
201-300	7	12.2
301 and more	4	7.1
Total	57	100.0

Looking at table 13, it is seen that the theses are examined in terms of the page count. While 31,5% of the examined theses were made in the range of 0-100 pages, it is seen that mostly, 49,1% of the theses were studied between 101-200 pages. Next, the theses between 201-300 are seen with a rate of 12,2%, while the thesis between 301 and more pages is seen with a rate of at least 7.1%. It is

understood that in the examined theses, research questions, methods, techniques, and the work's being a doctoral thesis or not increased the number of pages of the research.

Table 14. Situation in terms of the number of sub- objectives

Sub- problem- Number of objectives	Frequency (f)	Percent (%)
0-5	46	80.7
6-10	11	19.2
Total	57	100.0

In table 14, it is seen that the studies are examined according to the number of sub-objectives. Here it is striking that in theses prepared on critical thinking, sub-problems or goals are determined mostly between 0-5. This range covers 80,7% of the overall study. It is seen that 11 theses were made in the range of 6-10, which constitutes 19,2% of the total rate. Taken together with the next table, it is seen that fewer sub-problems are raised in studies using quantitative and mixed designs. Looking at the studied theses, the aim of trying to reveal the views of students, teachers, teacher candidates or lecturers about critical thinking or the relationship of critical thinking with different variables is seen. In addition, it is noticed that these aims reveal the situation that differs according to various variables.

Table 15. Situation in terms of method, technique, and model

Method, technique, and model	Frequency (f)	Percent (%)
Quantitative	11	19.2
Qualitative	7	12.2
Mixed	17	29.8
Experimental	5	8.7
Descriptive	6	10.5
Correlation Study	1	1.7
Action Research	1	1.7
Phenomenology	1	1.7
Survey Model	1	1.7
Unspecified	7	12.2
Total	57	100.0

In this study, the method titles of the theses were also examined. As a result of this examination, the information has been obtained according to the methods put forward by the thesis authors. In other words, the method that the researchers expressed for their work was taken as the basis without questioning. When table 15 is examined, it has been determined that researchers use mixed models with a rate of 29,8%. The mixed model gives flexibility to the research, and the researcher gets the chance to use both quantitative and qualitative methods as needed while doing his research. While using the quantitative method, researchers want to prove and present their research results through numbers. Quantitative method ranks second in theses with 19,2%. Qualitative method was used with 12.2% of the examined theses. There are 7 theses that didn't specify which technique was used at the same rate. Descriptive method was used in 6 theses with a rate of 10,5%. It is seen that experimental designs are used with a rate of 8,7% in theses. Experimental design and quasi-experimental design allow the researcher to practice without wasting time, as they provide the opportunity to work with the prepared groups. On the other hand, it was understood that correlation study, action research, phenomenology and survey techniques (1,7%) were studied in one thesis.

Table 16. Situation in terms of hematic subject distribution

Distribution of thematic subject	Frequency (f)	Percent (%)
Teacher Candidate Opinion	12	19.3
Student Opinion	37	59.6
Teacher Opinion	6	9.6
Instructor's Opinion	5	8.6
Document Review	2	3.2
Total	62	100.0

In table 16 it is seen that 59,6% of the theses of critical thinking refer to student opinion and 19,3% reflect the opinion of the pre-service teacher. When the opinion of the teacher comes in the third place, the opinion of the lecturer comes in the fourth place with a rate of 8,6%. The lowest rate is included in the document review with a rate of 3,2%. The majority of the theses examined consist of the opinions of the teacher candidates and students. The distribution of thematic topics in this way is welcomed in terms of students' self–criticism, reviewing their critical thinking skills and raising awareness. On the other hand, it is seen that very little space is given to the views of teachers, instructors, and written documents.

Table 17. Situation in terms of sample / study group size

Sample/ study group size	Frequency (f)	Percent (%)
0-50	19	33.3
51-100	14	24.5
101-200	11	19.2
201- 300	2	3.5
300 and more	6	10.5
Unspecified	5	8.7
Total	57	100.0

The sample part of the research is critically important. After determining the appropriate methods and techniques for the research to be conducted, the appropriate sample should be selected. Studies proceed through this sample. When the relevant table is examined in the study, it is seen that the rate of theses with samples between 0-50 is 33,3%. While the selected groups between 51-100 constitute 24,5% of the study, the sample size between 101-200 is 19,2%. The sample size between 201-300 takes the last place with 3,5%. While the sample selection between 300 and more constitutes 10,5% of the study, there are 5 theses with a rate of 8,7% and their sample is not specified. Although creating a sample is fast and practical way of obtaining information, it becomes difficult to generate statistical data in a thesis with a large sample size and generalizing information becomes difficult.

Table 18. Situation in terms of number of result

Number of results	Frequency (f)	Percent (%)
0-5	32	56.1
6-10	20	35.8
11-20	5	8.7
Total	57	100.0

The conclusion part of the thesis is as important as the other parts. In the conclusion section, people who do not know about the thesis can also have information. The conclusion part, created as a result of long studies, research and analysis, sheds light on the readers. The table above shows various ranges in terms of the number of results. At most 0-5 results were found in the theses. This constitutes 56,1% of the research. The range of 6-10 consists of 20 theses and has a rate of 35,8%. The research results, which are expected to be parallel to the purpose of the research, are the sources where descriptive results are mostly presented from sources such as students and teachers for purposes such as critical thinking skills, orientations, and attitudes, and the results related to their relationship with various variables are the sources of the research.

Table 19. Situation in terms of the number of suggestions

Number of suggestion	Frequency (f)	Percent (%)
0-5	29	50.8
6-10	24	42.1
11-15	3	5.2
16-20	1	1.7
Total	57	100.0

The suggestions given in the thesis are extremely important in terms of forming ideas for new thesis studies related to critical thinking. When the related table is examined, it is seen that the most suggestions were given in 29 theses with a rate of 50,8%, between 0-5. The range of 6-10 covers a rate of 42,1%. While there are 3 theses with 11-15 suggestions, there are 1 thesis between 16-20 suggestions with 1,7%. It is understood that the title of the suggestion, which is expected to be parallel to the results of the research, mostly consists of suggestions for the Ministry of National Education, school administrations, teachers, students and parents.

Table 20. Situation in terms of the number of references

Number of references	Frequency (f)	Percent (%)
0-100	28	49.1
101-200	27	47.3
201 and more	2	3.5
Total	57	100.0

At the end of the research report, references part is included to reinforce the accuracy of the information and to respect the owner of the information. In table 22, it is seen that 49,1% of the theses written on critical thinking used references between 0-100. While there are 27 theses and 47,3% references in the range of 101-200, there are 2 theses with 201 and above. It can be stated that the rate of foreign work in the sources is higher than the Turkish ones.

Discussion, Conclusion and Suggestions

People face many problems in both social and business lives. In some cases, these problems can be easily solved, but sometimes they can be complicated to deal with. In order to get rid of this confusion, it is necessary to adopt the right approach first. Analyzing the events and finding the solution steps help people greatly. At this point, the critical thinking approach helps to eliminate problems by providing analytical thinking competence.

Critical thinking as a high-level thinking skill is evaluating the accuracy and reliability of the information. Today, when the flow of information is intense, critical thinking has become a necessity for children in preschool, middle childhood and adolescence, to be protected from deception and to reach the right information (Tozduman Yaralı, 2019). The mind, which does not think critically, cannot produce alternative ways to the problems. Sometimes it experiences chaos and the problems become more complex. Therefore, gaining critical thinking skills is important to determine the right step for a solution. For this reason, critical thinking research become important.

In this study, 57 theses written in English between the years of 2000-2021 in Türkiye were examined. There are 47 master's and 10 doctoral theses which are scanned with the keyword "critical thinking."

When the data related to the postgraduate degrees of the theses in the study are analyzed, it is seen that the number of postgraduate theses on critical thinking is higher than the doctoral theses. The reason for this can be considered as fewer people do doctorate in our country or not many doctoral theses have been written on the subject of critical thinking.

Considering the data in terms of the gender of the thesis author, it is understood that there are many female lecturers whose thesis is on the subject of critical thinking. This may be due to the high number of female lecturers in our country.

When the data on the situation of the study in terms of the gender of the thesis advisor are examined, it is seen that the number of male advisors is higher than the number of female advisors. This may be due to the fact that advisors generally consist of assistant professors, associate professors, and professors.

When the data on the situation of the study in terms of the title of thesis advisor are examined, it is seen that the number of professors is higher. The title of professor is followed by the title of associate professor.

According to the data of the study about the geographical regions, it is understood that most studies were carried out in the Central Anatolia Region. The reason for this may be that many of the well-established universities are located in the Central Anatolia Region. The Central Anatolia Region is followed by the Mediterranean and Marmara. It has been seen that the Black Sea, Aegean, and Eastern Anatolia Regions are the geographical locations that do the least research on the subject of critical thinking.

When the data of the situation according to the universities where the thesis was made are examined, it is seen that the universities that wrote the most theses on the subject of critical thinking are Middle East Technical University and Çukurova.

When we look at the universities, where the theses are made, it is seen that most of the theses on the subject of critical thinking were written in the institute of social sciences. The reason for this may be that educational sciences institutes were established later in our country.

When the data on the situation of the theses according to the years are examined, it is seen that most theses were written between 2015-2021. The reason for this may be that the concept of critical thinking has attracted the attention of educators more. As we approach today, it is understood from the increase in studies on critical thinking that this concept will be an integral part of education in raising new generations. According to the research, the least theses written on critical thinking are between 2000-2005.

When the data are analyzed according to the number of juries participating in the thesis defense of the research, it is observed that the number of juries is generally 3 or at least 4 people. In these juries, it was noticed that there were more academicians with the title of professor and lecturer.

Findings on the title of those in the defense jury are examined and it is seen that the number of lecturers who has the title of professor is the highest. According to the data, it can be understood that the number of lecturers who has the title of Assistant Professor is the least. Considering the table showing the titles of thesis advisors, the number of professor advisors takes the first place. This supports Table 10.

When the data showing the number of words in the title are examined, it is seen that the majority of the titles are between 11-20. The title that has the minimum number of word is between 0-10. Considering that the theses were written in a foreign language, it can be concluded that the adverbs and prepositions increase the number of words.

In the study, the data are examined in terms of the settlement where the research is conducted, is seen that the majority of the theses are made on the basis of provinces. The reason for this may be that the collection and the analysis of the data become more difficult as the region grows.

The data are examined in terms of the number of pages, it is seen that mostly the theses written about critical thinking are between 101-200 pages. Looking at this range of pages, it may be due to the fact that there are not many doctoral theses on critical thinking.

When the data are examined in terms of the number of sub-objectives, it is seen that the number of sub – objectives are mostly between 0-5. The reason for this may be that as the number of objectives in the theses increases, the amount of subjects to be searched will also increase.

Looking at the data in terms of the method, technique and model used, it can be concluded that mixed models are used more. Mixed models gives flexibility to the research and the researcher gets the chance to use both quantitative and qualitative methods as needed while doing his research. However, it has been observed that one thesis is based on correlation study, action research, phenomenology and survey model techniques.

When the data on the thematic topic distribution were examined, it was seen that in most of the theses, students' opinions were taken in most of the theses. The reason for this may be that many of the theses are on the effect or development of critical thinking on students.

When this study is evaluated in terms of sample/study group size, it can be seen that the rate of theses that has the most samples between 0-50 is 33,3%. It is determined that there was at least 201-300 sample selection.

In the studies, the most memorable part for the reader is the conclusion part. When the data were examined in terms of the number of results, it was found that the number of results between 0-5 was higher. The fact that the number of sub-objectives is between 0-5 can be seen as the reason why the number of results is between 0-5.

When the data is examined in terms of the number of suggestions, it is seen that the suggestions between 0-5 and 6-10 are in the majority. According to the study, it is understood that suggestions are given as much as the number of goals.

When the data is analyzed according to the number of references, it is seen that the majority is between 0-100. As the number of sources in a research increases, the information richness of that research also increases. We have stated that the number of pages of most of the examined theses is between 101-200, and according to this number of pages, it can be considered reasonable that the number of bibliographies is between 101-200.

The results of the research are similar in many ways to the results of the research prepared by Akkaş and Memiş (2020). In the related study, the researchers examined 268 theses between 1999-2019 and it was seen that these studies were mostly master's theses, and the quantitative research method was used at a rate of 80%. The sample of the study is mostly teacher and teacher candidates' opinions.

Another thesis evaluation study about critical thinking was conducted in 2021. (Gönül, Başar&Demir, 2021). In the article prepared, it is important that the increase in the critical thinking studies which have become more valuable today, and the general tendencies of the studies are examined. In the study in which similar criteria were examined, 332 theses between 1999-2020 were evaluated using the content analysis method. It is seen that most of these theses, which are analyzed using frequency and percentage techniques, are master's theses. It is understood that the number of female researchers is higher and male faculty members are mostly thesis advisors. It is observed that the theses examined were mostly studied at Gazi, Çukurova, Hacettepe and Atatürk Universities. In this context, it has been found that most thesis is prepared in Central Anatolia Region. Similarly, in the study, it was seen that there was a thesis jury of mostly 3 people and titles consisting of 11-15 words were preferred. The range of 0-5 is the most preferred range as the number of sub-problems.

The data obtained as a result of this study can be a guide for the researchers. More detailed studies can be conducted on the deficiencies mentioned in the evaluation. For example, as a result of the study, it was seen that the opinions of teachers and instructors were not included much. However, the views of teachers and instructors who train students on critical thinking are very valuable. More research on these views and attitudes would be beneficial in terms of removing the obstacles to critical thinking. Again, as a result of this study, it is striking that most of the theses prepared in English on critical thinking are master's theses. However, it is thought that there is a need for doctoral theses in this field.

Considering the number of universities in our country, it is expected that more academic studies have been carried out in the field of critical thinking. Since these studies are limited to 26 universities and there is no study in the Southeastern Anatolia Region. These studies should be focused on the universities or regions where critical thinking studies are rare. This approach will be useful for mental processes such as reasoning, analyzing, and evaluation to reach more people.

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