

## A Content Analysis Related to Theses in Environmental Education: The Case of Turkey (2011-2015)

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### Abstract

Environmental chemistry has been a research subject for master thesis and doctoral dissertations since the end of 1980s. Because of the wide usage of in literature, it is essential to draw a framework about the subject. For this reason, content analysis is conducted to analyze master thesis and doctoral dissertations about Environmental Education, which were published in the last five years, 2011-2015. In this study 69 master thesis and 18 doctoral dissertations were analyzed regarding; “publication date, total page number, academic title of the advisors, gender of authors, research type, research model, sampling method, sample size, grade level of sample and analysis method”. Result of the study indicates that quantitative methods are preferred in master thesis, on the other hand mixed type methods are preferred in doctoral thesis and also “convenience sampling” was frequently preferred as sampling method and sample size was generally about “301-350 people” because researchers preferred survey model.

**Keywords:** environmental education, content analysis, master’s thesis, doctoral dissertations

### 1. Introduction

#### 1.1 Introduce the Problem

Inclusion of topics related to environment, especially environmental problems, in teaching environment and also teachers’ perspectives and perceptions about environment are important issues (Markle, 2008). Because, people’s perceptions and behaviors about environment are not positive (Lynch, 2001). Teachers are role model for students and their attitudes and behaviors about environment could affect students (Yang, 1993). Environmental problems and researches to solve these problems have become a major research area for environmental educators and by the way it has directed researchers to study environmental issues (Lynch, 2001). Educational research plays an important role in the development of the national education systems (Çepni, 2005). The development of national education systems may be affected by scientific documents such as; research reports, projects and journals. Main sources for educational researchers are studies and published researches in the field. These researches may be in various forms such as research journal, book, book chapter, book review, oral presentation – poster presentation in congress and letter to editor. In these studies, post-graduate studies have an important place. Because, lots of studies are mainly based on these studies. Research methods and data analysis methods should be reviewed regularly by researchers in order to figure out related literature, because science is an active process and develops day by day.

Rate of researches about development of education process has increased significantly, especially in recent years. Some of these researches form the basis for educational reform, some of them tests the reliability of previous studies by a review of literature (Karadağ, 2009). These studies are aimed to improve the quality and functionality of education process. Mortimore (2000) stated the educational research as a process of recording, analyzing and publishing data, which are obtained in field specific research process by specific methods. Research is basically a process of searching, learning, revealing and informing, in brief it is an enlightenment process. So it is a process of collecting and analyzing data, which is necessary to pass a desirable situation than the status quo. This quest, which is facilitated by research, may not be the first in the universe. Most of the researches are a kind of “search again” (Karasar, 2010).

Nowadays, lots of studies are being conducted about various topics by independent researchers, institutes and institutions. The rapid increase of research reveals also a number of problems with it. There could be a contradiction about results. Results of researches about a specific topic may support each other’s, however some results may contradict with other results. Besides, when making a research about a subject, it is difficult to reach all researches on that subject and also it takes a lot of time (Karadağ, 2009). Nowadays in Turkey, quantitative indicators of postgraduate education are increasing

steadily, as in all levels of education. There are numerous post-graduate studies in institute of social sciences, institute of natural and applied sciences and also other institutes, however citations, which are considered as an indicator of the impact the value of the information produced in the thesis, are not at the desired level (Demir, 2008). In this case, it reveals the need of checking information in thesis regarding scientific criteria, as in all scientific process (Karadağ, 2009).

### *1.2 Purpose of this Study*

Since the late 1980s in Turkey, environmental education has been a subject of some master theses and doctoral dissertations. There is a need of determination the general framework on environmental education, because lots of studies have been conducted on the subject. In this context, research problem of this research is; “What is the trend in master thesis and doctoral dissertations about environmental education in the years 2011-2015 in Turkey?”

In order to examine research question, these sub research questions were asked: In Turkey;

1. What is the distribution of studies regarding whether master thesis or doctoral dissertations?
2. What is the distribution of studies regarding published date?
3. What is the distribution of studies regarding total page number?
4. What is the distribution of studies regarding advisors academic title?
5. What is the distribution of studies regarding researchers' gender?
6. What is the distribution of studies regarding research method?
7. What is the distribution of studies regarding research model?
8. What is the distribution of studies regarding sampling method?
9. What is the distribution of studies regarding grade level of sample?
10. What is the distribution of studies regarding sample size?
11. What is the distribution of studies regarding data analysis method?

## **2. Method**

In this qualitative study, document analysis method was used. In qualitative studies, content analysis is usually used for document analysis. Content analysis is a systematic process to identify relationship in data, so it plays a communicative role (Merriam, 2013). Content analysis is a kind of interpretation, which is aimed to reveal common aspects of text, intended for classification and construction the common aspects through generalization quantification (Gökçe, 2006).

Main purpose of content analysis in research is to reveal concepts and relations, which will help to interpret the collected data. For this purpose, collected data should be conceptualized, after the concepts should be organized in a logical way and the themes, which describe data, should be identified. Concepts lead us to the theme, by the way the theme helps to organize concepts and also it can make the concepts more understandable. In this context, data is identified through content analysis and the hidden truth could be revealed (Yıldırım & Şimşek, 2006).

### *2.1 Data Collection*

In order to conduct a document analysis, firstly relevant documents should be accessible (Yıldırım & Şimşek, 2006). In this study 238 records, belongs to 1988-2015 years, were accessed in Turkish Council of Higher Education Thesis Center by keywords “environmental education” in subject of “education” (<https://tez.yok.gov.tr/UlusalTezMerkezi/giris.jsp>). Thesis related to the research topics were published since 1988 till 2015. Unfortunately, some theses are not permitted to publish, especially the former thesis. For this reason this research is limited to theses, which were published in last 5 years. By the way this research could enlighten the current trends in environmental chemistry. So this research covers the accessible master thesis and doctoral dissertations completed between 2011 and 2015, and content analysis is conducted with these master thesis and doctoral dissertations. Target population of this research is master thesis and doctoral dissertations about environmental chemistry in Turkey. This study covers 87 graduate studies as; 69 master thesis and 18 doctoral dissertations.

In document analysis, researcher should check originality of the documents. Analyzed documents were accessed by web page of Council of Higher Education Thesis Center and tags of the documents are accessible on the web site. Two expert researchers checked the validity and reliability of this research. Experts analyzed the documents if topics of the documents are appropriate for focus of this study or not. Also they checked the originality of the documents.

When documents were accessed and checked for originality, researcher would focus on the documents. At this point, all documents, analyzed in this research and also other sources, were carefully read by researcher and researcher comprehended all content.

In data analysis part, a decision should be made, whether all documents are analyzed in single data set or these documents are analyzed through other data collection tools (observation and interview) in a complex way (Yıldırım & Şimşek, 2006). In this study, documents were analyzed in single data set. Documents are acquired from primary data sources, therefore observation and interview are not held in the study. Document analysis is processed exhaustive on purpose of the study.

## 2.2 Data Analysis

These steps are followed in document analysis:

- a. *Sample selection from data set*: Studies, in the subject of environmental education, are carried out in different disciplines. 238 graduate studies are identified about environmental education, but some of them are not permitted to Access, especially former ones. For this reason this study is limited to graduate studies completed in last five years, by the way this study covers up to date data. So this research covers the accessible master thesis and doctoral dissertations completed between 2011 and 2015, and content analysis is conducted with these master thesis and doctoral dissertations. Target population of this research is master thesis and doctoral dissertations about environmental chemistry in Turkey. This study covers 87 graduate studies as; 69 master thesis and 18 doctoral dissertations.
- b. *Developing categories*: In the literature, there are similar qualitative studies (Temel, Şen & Yılmaz, 2015; Öntaş, 2015; Atmaca & Öntaş, 2014; Selçuk, Palancı, Kandemir & Dündar, 2014; Polat, 2013; Çiltaş, Güler & Sözbilir, 2012; Sert, Kurtoglu, Akıncı & Seferoğlu, 2012; Yılmaz, 2012; Erdem, 2011; Yücedağ & Erdoğan, 2011; Karadağ, 2010; Tatar & Tatar, 2008; Ulutaş & Ubuz, 2008). Identified categories in these studies guide for developing categories. Dissertations and thesis were read carefully and categories were developed, which help to deal with research problem by revealing similarities and common aspects. In the context of this study, mainly four categories were developed regarding research criteria. The first category is *formal characteristics of research*, which includes; graduate level, published date, total page number, advisor's academic title and gender of author. Second category is *general properties of studies*, which includes; research type and model. Third category is *characteristics of sample*, which includes; sampling method and sample size. Fourth category is *data analysis characteristics*, that includes; data analysis methods.
- c. *Unit of analysis*: Unit of analysis is defined as consistent with categories of the research. Unit of analysis involves *themes and codes*. Each category in this research involves specific themes. First category involves "graduate level of study", "published date", "total page number", "advisor's academic title" and "gender of author", second category involves; "research type", and research model", third category involves; "sampling method", "education level of sample" and "sample size", fourth category involves; "data analysis method" as themes.
- d. *Quantification*: Data, which collected via document analysis and coding forms, presented in tables by means of frequency and percentage.
- e. *Data Processing*: Documents collected from Council of Higher Education Thesis Center, which is public database, so all individual can access the documents in this study. The analysis of these documents could expose the common outcome of the studies.

## 3. Findings

Findings and comments are stated regarding sub research questions.

### 3.1 Distribution of Master Thesis and Doctoral Dissertations

Graduate studies on the subject of environmental education are classified as master and doctoral level in Table 1.

Table 1. Distribution of Master Thesis and Doctoral Dissertations

Level of Study	f	%
Master	69	79,31
Doctoral	18	20,69
<b>TOTAL</b>	<b>87</b>	<b>100</b>

Table 1 indicates that; graduate studies published in the subject of environmental education consist of 69 master thesis and 18 doctoral dissertations. 79% of the studies are master thesis and 21% of the studies are doctoral dissertations.

### 3.2 Publication Date (2011-2015)

Publication dates of thesis in the subject of environmental education are listed in Table 2.

Table 2. Distribution of Thesis Regarding Publication Date

Publication Date	Master Thesis		Doctoral Dissertation		TOTAL	
	f	%	f	%	f	%
2011	19	27,54	8*	44,44*	27	31,03
2012	26*	37,68*	3	16,67	29*	33,33*
2013	13	18,84	5	27,78	18	20,69
2014	7	10,14	1	5,56	8	9,20
2015	4	5,80	1	5,56	5	5,75
<b>TOTAL</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

Thesis in the subject of environmental education were most frequently (33%) published in 2012, 29 thesis. Similarly the most frequently (38%) master thesis published in 2012, 26 master thesis. On the other hand, the most frequently (44%) doctoral dissertations were published in 2011, 8 doctoral dissertations. More studies were conducted on the subject of environmental education between 2011 and 2013; the trend is reduced in 2014 and 2015.

### 3.3 Total Page Numbers

Total page numbers of the studies are listed in Table 3.

Table 3. Distribution of Total Page Numbers

Total Page Numbers	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
0-50	1	1,45	0	0,00	1	1,15
51-100	32*	46,38*	0	0,00	32*	36,78*
101-150	24	34,78	3	16,67	27	31,03
151-200	10	14,49	3	16,67	13	14,94
201-250	1	1,45	6*	33,33*	7	8,05
251-300	0	0,00	2	11,11	2	2,30
301 ve üzeri	1	1,45	4	22,22	5	5,75
<b>TOTAL</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

The most frequent (37%) total page number is in the range of “51-100 pages”, 32 thesis. Similar result revealed for master thesis, the most frequent (46%) total page number is in the range of “51-100 pages”, 32 master thesis. On the other hand, when we look at doctoral dissertations, the most frequent (33%) total page number is in the range of “201-250 pages”, 6 doctoral dissertations.

### 3.4 Advisor's Academic Title

Frequency distribution of advisor's academic title is listed in Table 4.

Table 4. Distribution of Advisor's Academic Title

Academic Title	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
Prof. Dr.	23	33,33	11*	61,11*	34*	39,08*
Assoc. Prof. Dr.	16	23,19	4	22,22	20	22,99
Assist. Prof. Dr.	30*	43,48*	3	16,67	33	37,93
<b>TOTAL</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

The most frequent (39%, f:23) academic title of advisor's is “Prof. Dr.”. When we analyze by master and doctoral level, the most frequent (43%, f:30) academic title of advisor's is “Assist. Prof. Dr.” in master thesis and the most frequent (39%, f:11) academic title of advisor's is “Prof. Dr.” in doctoral dissertations.

### 3.5 Gender of Author

Frequency distribution of author's gender is listed in Table 5.

Table 5. Distribution of Author's Gender

Gender	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
Female	52*	75,36*	10*	55,56*	62*	71,26*
Male	17	24,64	8	44,44	25	28,74
<b>TOTAL</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

Distribution of author's gender shows that female have more studies (71%, f:62) on the subject of environmental education in not only master level but also doctoral level.

### 3.6 Research Methodology

Frequency distribution of research methodology is listed in Table 6.

Table 6. Distribution of Research Methodology

Research Methodology	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
Quantitative	35*	50,72*	7	38,89	42*	48,28*
Qualitative	13	18,84	2	11,11	15	17,24
Mixed Type	21	30,43	9*	50,00*	30	34,48
<b>TOPLAM</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

The most favored research methodology is “quantitative” (48%, f:42) in total studies. Similarly, the most favored research methodology is “quantitative” (51%, f:35) in master thesis. On the other hand, The most favored research methodology is “mixed type” (50%, f:9) in doctoral dissertations.

### 3.7 Research Model

Research models of studies on the subject of environmental education are listed in Table 7.

Table 7. Distribution of Research Model

Research Model	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
Survey	37*	53,62*	6*	33,33*	43*	49,43*
Case Study	7	10,14	1	5,56	8	9,20
Correlation	8	11,59	2	11,11	10	11,49
Pre-experimental	5	7,25	1	5,56	6	6,90
Quasi-experimental	11	15,94	6*	33,33*	17	19,54
True-experimental	1	1,45	2	11,11	3	3,45
<b>TOTAL</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

The most favored research model is “survey” (54%, f:37) in total studies. This result is valid for master thesis. In doctoral dissertations, both “survey” and “quasi-experimental” are the most preferred methods (33%, f:6).

### 3.8 Sampling Method

Preferred sampling methods in studies are listed in Table 8.

Table 8. Distribution of Sampling Methods

Sampling Method	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
No sampling	4	5,80	0	0,00	4	4,60
Simple Random	14	20,29	3	16,67	17	19,54
Stratified Sampling	3	4,35	2	11,11	5	5,75
Cluster Sampling	5	7,25	1	5,56	6	6,90
Purposeful Sampling	13	18,84	4	22,22	17	19,54
Convenience Sampling	30	43,48*	8*	44,44*	38*	43,68*
<b>TOPLAM</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

The most preferred sampling method is “convenience sampling” (43%, f:30) in Table 8. This result is valid for both master thesis and doctoral dissertations.

### 3.9 Grade Level of Sample

Distribution of grade level of sample is listed in Table 9.

Table 9. Distribution of Grade Level of Sample

Grade Level of Sample	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
Pre-school (48-60 months old)	2	2,82	1	4,76	3	3,26
Primary School (1 <sup>st</sup> -4 <sup>th</sup> grade level)	5	7,04	2	9,52	7	7,61
Elementary School (5 <sup>th</sup> -8 <sup>th</sup> grade level)	28*	39,44*	2	9,52	30*	32,61*
High School (9 <sup>th</sup> -12 <sup>th</sup> grade level)	12	16,90	4	19,05	16	17,39
University Students	19	26,76	9*	42,86*	28	30,43
Teachers	7	9,86	4	19,05	11	11,96
<b>TOTAL</b>	<b>71</b>	<b>100</b>	<b>21</b>	<b>100</b>	<b>92</b>	<b>100</b>

Studies were mostly performed with Elementary school students (33%, f:30). This result is similar in master thesis (39%, f:28). On the other hand doctoral dissertations were mostly performed with University students (43%, f:9).

### 3.10 Sample Size

Sample size distribution of studies on the subject of environmental education is listed in Table 10

Table 10. Sample Size Distribution

Sample Size	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
0-50 people	17*	24,64*	5*	27,78*	22*	25,29*
51-100 people	9	13,04	4	22,22	13	14,94
101-150 people	7	10,14	1	5,56	8	9,20
151-200 people	6	8,70	1	5,56	7	8,05
201-250 people	2	2,90	1	5,56	3	3,45
251-300 people	4	5,80	0	0,00	4	4,60
301-350 people	24*	34,78*	6*	33,33*	30*	34,48*
<b>TOTAL</b>	<b>69</b>	<b>100</b>	<b>18</b>	<b>100</b>	<b>87</b>	<b>100</b>

The most preferred sample size is “301-350 people” for both master thesis and doctoral dissertations (34%, f:30) as shown in Table 10. Besides, second most preferred sample size is “0-50 people” (25%, f:22). This result is valid for both master thesis and doctoral dissertations.

### 3.11 Data Analysis Method

Distribution of data analysis method is listed in Table 11.

Table 11. Distribution of Data Analysis Method

Data Analysis Method	Master Thesis		Doctoral Dissertations		TOTAL	
	f	%	f	%	f	%
Item Analysis	10	4,17	7	8,64	17	5,30
Reliability Analysis	39*	16,25*	13*	16,05*	52*	16,20*
Factor Analysis	13	5,42	8	9,88	21	6,54
Dependent Group t-Test	12	5,00	1	1,23	13	4,05
Independent Group t-Test	34*	14,17*	7	8,64	41*	12,77*
Correlation	15	6,25	4	4,94	19	5,92
ANOVA	22	9,17	6	7,41	28	8,72
MANOVA	1	0,42	1	1,23	2	0,62
ANCOVA	2	0,83	1	1,23	3	0,93
Percentage/Frequency	40*	16,67*	11*	13,58*	51*	15,89*
Kruskal Wallis Test	9	3,75	3	3,70	12	3,74
Mann Whitney U Test	11	4,58	4	4,94	15	4,67
Chi Square	1	0,42	1	1,23	2	0,62
Wilcoxon Signed-Rank Test	2	0,83	2	2,47	4	1,25
Regression	3	1,25	2	2,47	5	1,56
Qualitative Analysis	26*	10,83*	10*	12,35*	36*	11,21*
<b>TOTAL</b>	<b>240</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>321</b>	<b>100</b>

As represented in Table 11, the most favored data analysis methods are; “Reliability Analysis” (16%, f:52), “Percentage/Frequency” (16%, f:51), “Independent Group t-Test” (13%, f:41) and “Qualitative Analysis” (11%, f:36). This result is also valid for master thesis and doctoral dissertations.

## 4. Results, Discussion and Conclusion

Analysis of results via *formal characteristics of research* category shows that; graduate studies about environmental education are often at master level. Main reason is high ratio of master thesis to doctoral dissertations. In Turkey, teachers are thought to prefer having master degree in order to support their professional development. On the other hand PhD training is mainly preferred for academic carrier. So, higher ratio of Ms students to PhD students, by the way ratio of master thesis to doctoral dissertations, is an expected result. Graduate studies on the subject of environmental education were frequently produced in 2011-2013 years. Reform on education faculties by Higher Education Council in 2011 and 2012 may have led to this result. In Turkey, education faculties are performing teacher education and training since 1982, after about 15 years that date Higher Education Council have taken over that mission and have made arrangements. Efficiency of this reform at first 8 years was criticized as if teachers could be trained with required knowledge and skills. By the way, another reform movement was started in 2006-2007. Effect of these reforms has been a subject of research. In 2011 and in 2012, this has been a trending research topic for researchers, but the trend is reduced in 2014 and in 2015. Another reason is that; researchers noticed alternative research topics and interest on the subject of environmental education is reduced. This result is also mentioned in other content analysis researches in literature (Temel, Şen & Yılmaz, 2015; Polat, 2013; Çiltaş, Güler & Sözbilir, 2012). Total page number of all graduate studies, also just master thesis, is in the range of “51-100 pages”. On the other hand total page number is in the range of “201-250” pages in doctoral dissertations. Doctoral dissertation are more complex studies, so higher page number of

doctoral dissertations than master thesis is naturally expected and similar result is found in literature (Polat, 2013).

Distribution of advisors' academic title shows that the most frequent academic title of advisor's is "Assist. Prof. Dr." in master thesis. A similar study has given the same result (Polat, 2013). On the other hand the most frequent academic title of advisor's is "Prof. Dr." in doctoral dissertations and it may be because of that PhD students prefer to study with "Prof. Dr." title holder advisors. Author of master thesis and doctoral dissertations are mainly females. This result may be different on other studies (Polat, 2013) and it could be a subject of another research.

If we analyze the results of all studies regarding *general properties of studies* category; the most favored research method is "quantitative" method. This result is valid for master theses, also there are similar results in literature (Temel, Şen & Yılmaz, 2015; Polat, 2013; Çiltaş, Güler & Sözbilir, 2012; Ulutaş & Ubuz, 2008). On the other hand the most favored research method is "mixed type" method in doctoral dissertations. This is an expected result, because mixed type method is especially preferred by researchers for doctoral dissertations (Temel, Şen & Yılmaz, 2015; Çiltaş, Güler & Sözbilir, 2012; Yılmaz, 2012; Ulutaş & Ubuz, 2008). In mixed type studies, quantitative data is supported with qualitative data, by the way data diversity is provided. This situation allows giving more in-depth knowledge of research. The most preferred research model is "survey" in both master thesis and doctoral dissertations. Because most of the graduate studies in Turkey are quantitative and survey is the most favored research model, as stated in literature (Çiltaş, Güler & Sözbilir, 2012; Sert, Kurtoğlu, Akıncı & Seferoğlu, 2012; Göktaş, Hasaıcebi, Varıřođlu, Akçay, Bayrak, Baran & Sözbilir, 2012; Gülbahar & Alper, 2009; Ulutaş & Ubuz, 2008). Quantitative studies are more favored regarding qualitative studies, due to it is quick and easy to; conduct, reach sample, collect data and analyze data.

Result of the study in *characteristics of sample* category indicates that the most favored sampling method is "convenient sampling" in both master thesis and doctoral dissertations. Researchers' choices of quantitative methods and survey model may have caused them to prefer convenient sampling method. In the literature, convenient sampling is stated as a favorable sampling method (Temel, Şen & Yılmaz, 2015; Sert, Kurtoğlu, Akıncı & Seferoğlu, 2012). Regarding the grade level of sample, master theses were mainly conducted with "Elementary school students (5<sup>th</sup>-8<sup>th</sup> grade)". On the other hand, doctoral dissertations were mainly conducted with "University students". There are similar results in literature (Polat, 2013; Yılmaz, 2012). Master students are already teachers and sample of the study could be their students. Similarly, most of PhD students are academicians and sample of their studies are university students. This argument is supported with the fact; they frequently preferred convenient sampling method. Most preferred sample size is "300-351 people" in both master thesis and doctoral dissertations. It is an expected result because preferred survey method generally conducted with high sample size. Second most preferred sample size is "0-50 people" and it may be due to experimental studies. Experimental studies generally conducted with two classrooms as experimental group and control group. Number of students in two classrooms is generally in that range. Also, another reason could be the requirement of at least 20-25 people for parametric analysis. Two groups, totally 45-50 people, provide the requirement for analysis of parametric tests. Similar results are also stated in literature (Polat, 2013; Çiltaş, Güler & Sözbilir, 2012; Tatar & Tatar, 2006; Ulutaş & Ubuz, 2008).

Result of the study under *Data analysis characteristics* category indicates the usage of reliability analysis and reporting data as frequency/percentage due to preferring quantitative methodology and survey model in both master thesis and doctoral dissertations. Besides, independent t-Test and similar tests could be used due to experimental methods (Temel, Şen & Yılmaz, 2015; Selçuk, Palancı, Kandemir & Dündar, 2014; Ulutaş & Ubuz, 2008). Doctoral dissertations are not only quantitative but also mixed-type. For this reason doctoral dissertations include qualitative data analysis.

In general the thesis seems to be more widely used method of quantitative research methods. This result should be criticized. Researchers should use qualitative methods and make detailed researches in order to support and interpret the quantitative result. In order to check predictive validity and reliability of studies, sample should be representative and appropriate for the applied method. Research findings and results should help and be a guide for educators and young researchers. Review of research topics, research methods and data analysis methods, which were used from past to present, could enlight current trend in education. Similar studies could help to determine current status of educational research in Turkey and in the world. Also, similar studies could be useful with extended data set, not only master thesis and doctoral dissertations but also other academic studies.

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