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Examination of Main Trends in Geographical Education Research in Turkey

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Abstract

The main purpose of the present study is to examine the main tendencies of the articles published in the field of geography education between the years of 2008 and 2018 in Turkey. Within the scope of this purpose, this study examined the subject fields, research methods, data collection tools, data analysis techniques and sampling methods used in the geography education studies in the journals scanned by the SSCI, ESCI and ULAKBIM social sciences databases in Turkey. The study used the document analysis method, one of the qualitative research methods. The study evaluated 224 articles determined according to the purposeful sampling method from the related databases by using the Geography Education Article Classification Form (GEACF) and then analyzed the obtained pieces of data by using the content analysis method and finally made some interpretations. According to the findings of the study, in the last ten years in Turkey, the highest number of articles were published in 2010 (n=33) and the lowest number of articles were published in 2017 (n=13). It was also observed that, in the field of geography education, the highest number of articles were published in the Marmara Geography Journal; however, in the journals scanned in SSCI, a total of (n=17) articles were published in the last ten years. Moreover, the studies were also determined to show more interest in the subject areas of teacher training and learning/teaching; questionnaires and scales were generally used as a data collection tool; the frequency/percentage and content analysis methods were preferred in the analysis of data; quantitative and qualitative methods were generally used in studies on geography education; on the contrary, mixed methods were less frequently used.

Keywords

Geography Education, Research on Geography Education, Trends,Turkey

Geography, one of the oldest scientific fields among the academic disciplines (Stoltman, 2012), has been percieved differently in different periods of time and

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undergone transformations, causing differences to appear in contents and methods in the course of time (Öztürk, 2007). For example, while most people regard geography as a field of science taught at schools and univerisities with the purpose of putting forth the elements of world description and providing political and military knowledge (Lacoste, 2004), others perceive geography as a discipline being interested only in the physical elements of earth, teaching the names of mountains, hills, streams and capitals and providing encyclopedical knowledge (Doğanay, 1989; Arı, 2010; Lache, 2011). Geography having been percieved as a field of science studying on the description of earth in the first periods of history left its descriptive chacter to synthesis in the middle age (Arı, 2010). However, today, geography is not field of science having learners memorize the names of places and spaces, but it is an applied field of science indicating the interaction between humans, places and spaces and its consequences. In fact, according to Doğanay (2011) states that memorization has no place in this field of science and many subjects of geography include contents forcing individuals' imagination and broadening their horizons.

In our rapidly changing, dependent and complicated world, the science of geography and geography education provide various advantages (Hanson, 2004). However, Butt (2008) emphasizes the importance of geography education in today's world, which is rapidly changing and gradually becoming more globalized, and believes that geography education should be forward looking and future-oriented and help individuals understand the world around them, make reasonable decisions about various matters and develop positive identity. In today's world, geography education is experiencing revival and rejuvenation thanks to new technologies, research-based learning, problem solving based education, teaching programs and sustainability based approaches (İncekara, 2007). Gradually increasing dependence and globalization, impaired natural balance, depletion of resources and international problems enhance the importance of geographical studies in the world (Alam, 2010). However, it is observed that recent studies on geography education have concentrated on such matters as adaptation of technology to geography lessons, digital game based teaching, development of geographical skills, environmental and citizenship education and geographic information system (GIS) applications. However, when we look in the situation from the perspective of Turkey, it is clear that curriculum in teacher education having undergone some changes and developments have risen to prominence, but despite the recent developments, secondary educational institutions fall short of giving geography education at world standards (İncekara, 2007). Like in the other disciplines, in the field of geography education, academic studies are extremely important in terms of determining problems related to geography education and creating solutions, achieving the sustainability of developments, helping institutions to make decisions and direct their future policies (Kaya, 2013). However, one of the best ways of achieving this might be future scientific studies this field (Çifçi, 2017).

According to Apaydın (2009), studies play an important role in the development of field education. By examining studies in any discipline, current research trends can be

determined in that discipline. Research trends indicate how research studies change in the course of time and in what directions they change (Ozan and Köse, 2014). Taking in hand, examining and interpreting studies made in a certain field at periodical intervals with a systematic and integrative point of view are important in terms of guiding researchers to carry our studies in this field in the future (Kaya, 2013; Çalık and Sözbilir, 2014; Rohli and Binford, 2016). In fact, according to Ozan and Köse (2014), synthesizing the results of scientific studies made in a certain field affects future scientific studies, policies and practices. These syntheses provide an experimental basis for practices and guide practitioners.

When determining research trends, reserachers examine trends in studies made in certain years from various perspectives. These studies aiming to determine research trends can not only be used with the aim of predicting future events, but they can also be used to find out the past situation of a discipline under research. In other words, by using the data obtained within the framework of the time interval under research, researchers try to predict past or future situations of a discipline under investigation (Ozan and Köse, 2014). Since the development of academic disciplines closely depends on the richness of their literatures (Küçükoğlu and Ozan, 2013), the importance of examining, interpreting and evaluating studies in the field of geography education is clear for future studies and trends.

In the related literature, there are some studies revealing research trends both in the national area and the international area and in different disciplines. Bednarz (2000) examined the studies on geographical education published in the Journal of Geography between the years of 1988 and 1997 and revealed the main research subjects. Moreover, Lidstone and Williams (2006) examined the publications on geography education between the years of 1991 and 2006 and Incekara (2007) evaluated the international trends in secondary geography education and the current situation in Turkey. Again, Stoltman (2012) examined the papers presented in the congress held by the international geography union (IGU) and the commission of geography education (CGE) in 2012 and Esteves (2012) evalauted the post-graduate studies on geography education in Portugal. What's more, Şahin, Yıldız and Duman (2011) examined the master's and doctoral theses prepared in Turkey in the field of social studies education; Karadağ (2009) examined the doctoral theses prepared in the field of educational sciences in Turkey; Küçükoğlu and Ozan (2013) examined the post-graduate studies on primary education between the years of 2008-2012; Varışoğlu, Şahin and Göktaş (2013) examined the studies on Turkish education between the years of 2000-2011; Kahyaoğlu (2016) examined the studies on environmental education in Turkey. Again, Sözbilir and Kutu (2008), Ergun and Çelik (2011) and Wassink and Sadi (2016) aimed to reveal the main trends in the field of science education by examining the studies made in this field in Turkey. However, Çiltaş, Güler and Sözbilir (2012) examined the studies made in the field of mathematic education in Turkey between the years of 1987 and 2009; Topsakal, Çalık and Çavuş (2012) examined the studies made in the field of biology education in Turkey; Ozan and Köse (2014) examined the articles published in the field of education programs and teaching in Turkey between the years of 2007 and 2011; Alper and

Gülbahar (2009) examined the studies published in the field of educational technologies between the years of 2003 and 2007; Apaydın (2009) examined the studies made in the field of physics education in Turkey between the years of 2000 and 2008; Canbulat, Avcı and Sipahi (2016) examined the post-graduate studies made in the field of social studies education in the USA and Canada. Moreover, there are similar studies made in the recent past in Turkey in the field of geography education. For example, Geçit (2010) examined the studies carried out between the years of 2000 and 2009 and Geçit and Şeyihoğlu (2011) examined the studies made in the field of computer-assisted geography instruction in Turkey between the years of 2000-2010. Moreover, wih the aim of revealing the current situation of geography education and the trends in the field, İncekara (2009) evaluated the studies made in the field of geography education and published in the Journal of Eastern Geography between the years of 1995 and 2008 and in the Journal of Marmara Geography between the years of 1996 and 2008. Futhermore, Kaya (2013) examined the post-graduate theses having been prepared in Turkey until 2012 and Çifçi (2017) evaluated the post-gradute studies made between the years of 2006 and 2017. However, there are a limited number of published articles revealing the trends in the field of geography education nearly in the past ten years in Turkey. For this reason, the articles published in the field of geography education in Turkey in the past ten years were examined from different perspectives, the main trends in this field were evaluated, and the current situation aimed to be revealed. In the direction of this purpose, the study tried to find answers to the following sub-questions:

- In what journals were the articles on geography education published and how did these journals distribute according to years?
- In what areas were the studies made in the field of geography education and how did they distribute according to their subjects?
- What research methods and designs did the studies made in the field of geography education use?
- What kinds of sampling methods did the studies made in the field of geography education use?
- What data collection tools and data analysis techniques did the studies in the field of geography education use?

Method

Research Design

This study used the document analysis method, one of the qualitative research approaches. The document analysis method covers the collection, examination, analysis and interpretation of written and visual materials including information about a phenomenon or phenomena under investigation. In this type of study, documents are the source of information requied to be used effectively (Yıldırım and Şimşek, 2011; Sönmez and Alacapınar, 2011). In this study, in the examination of the documents, the stages of reaching the documents, checking the originality of the documents, understanding the documents, analyzing the data and using the data were followed

(Yıldırım and Şimşek, 2011). In case of a study of this kind, the comprehensive content analysis is applied to documents and then they are analyzed in the direction of determined principles and categories (Merriam, 1998; Bowen, 2009; Yıldırım ve Şimşek, 2011).

Scope of Research

The scope of this study covers the articles published in the field of geography education in 31 journals indexed by the SSCI, ESCI and ULAKBIM social sciences databases in Turkey. The present study employed the purposeful sampling method used in the selection of individuals, incidents, situations or objects having certain characteristics (Büyüköztürk et al., 2011). With this sampling method, a total of 224 articles published in the field of geography education in Turkey in the past ten years (2008-2018) reached in 31 journals were selected in accordance with the purpose of the study and were put into evaluation.

Data Collection Tool

The study used the Geography Education Article Classification Form (GEACF) as a data collection tool. The researcher revised this form by benefiting from the article classification form developed by Sözbilir and Kutu (2008) in the direction of expert opinions and in accordance with the purpose of the study. For the reliability of the data, the formula of [Agreement / (Agreement + Disagreement) x 100] suggested by Miles & Huberman (1994) was based and the percentage of agreement was found as 90%.

Data Analysis

The sets of data obtained from the study were analyzed with the method of content analysis. It is necessary to gather the data obtained from the content analysis under certain concepts and themes and then arrange and interpret them in a way that readers can understand (Yıldırım and Şimşek, 2011). The reached sets of data were interpreted by presenting as percentages (%) and frequencies (*f*) in the tables.

Findings

This section of the study shared the results obtained from the examination of the studies made in the field of geography education in the past ten years in Turkey. The findings were interpreted in order and in tables in company with the questions formed in accordance with the purpose of the study. In Table 1, the total numbers of the articles published in the field of geography education were given according to years.

Table 1
The Total Numbers of the Articles Published In the Field Of Geography Education in Turkey According To Years

Year	(f)	(%)
2008	18	8.03
2009	19	8.48
2010	33	14.73
2011	32	14.28

2012	28	12.5
2013	28	12.5
2014	17	7.58
2015	16	7.14
2016	20	8.92
2017	13	5.80
Total	**224**	**100**

In Table 1, when the distribution of the articles published in the field of geography education is examined according to years, it is observed that the number of articles reach a peak in 2010 (n=33) and 2011 (n=32), but there is a serious decrease in the number of the published articles after 2011. In fact, of the given years, 2017 is the year during which the least number of articles were published (n=13) and it is followed, in order, by 2015 (n=16) and 2014 (n=17). From Table 1, it is understood that the total number of articles published in the field of geography education in the past ten years is (n=224). In Table 2, the total number of articles published in the field of geography education in the journals scanned by SSCI in Turkey is given.

Table 2

The Total Number of Articles Published In the Field Of Geography Education in the Journals Scanned By SSCI in Turkey

Name of Journal	**Year**	**(f)**	**(%)**
Educational Sciences: Theory and Practice	2009	2	11.76
Educational Sciences: Theory and Practice	2010	4	23.52
Educational Sciences: Theory and Practice	2011	3	17.64
Educational Sciences: Theory and Practice	2012	1	5.88
Educational Sciences: Theory and Practice	2013	2	11.76
Educational Sciences: Theory and Practice	2014	1	5.88
Educational Sciences: Theory and Practice	2015	1	5.88
Education and Science	2013	1	5.88
Education and Science	2015	1	5.88
Education and Science	2016	1	5.88
Total	-	**17**	**100**

When Table 2 is examined, it is seen that the total number of articles published in the field of geography education in the journals indexed by SSCI in Turkey in the last two years was (n=17). Moreover, in the related databases, there were no scanned articles in the years of 2008 and 2017. In Table 2, the articles were published in highest number in the journal of *Educational Sciences: Theory and Practice (KUYEB),* one of the SSCI journals, in 2010 (n=4). This was followed by the years of 2011 and 2013 in the same journal with a total of (n=3) articles. While only 2 articles (n=2) were published in the years of 2009 and 2015, this number was only one (n=1) in the years of 2012, 2014 and 2016. In Table 3, some journals where the articles were published in the highest number and the number of articles published in the field of geography education in Turkey were given.

Table 3
Some Journals Where the Articles Were Published In the Field of Geography Education in Highest Number in Turkey and the Number of Articles

Name of Journal	(f)	(%)
Marmara Geographical Review	84	37.5
Eastern Geographical Review	33	14.73
Educational Sciences: Theory and Practice	14	6.25
Journal of National Education	13	5.80
Kastamonu Education Journal	9	4.01
Review of International Geographical Education Online	7	3.12
Kırşehir Education Faculty Journal	7	3.12
Turkish Studies	7	3.12
Ataturk University Social Sciences Institute Journal	7	3.12
Other Journals	43	19.19
Total	**224**	**100**

When Table 3 is examined, it is seen that while a total of 224 articles were published in the last ten years, the journal which included the highest number of articles in the field of geography education was the *Marmara Geographical Review* with (n=84) articles. When we compare the number of articles published in this journal with those of articles published in the other journals in percentage, this percentage is 37.5. This journal is followed by the *Eastern Geographical Review* with a percentage of 14.73 and a total of 33 articles (n=33) and these journals are followed by the *Journal of Educational Sciences: Theory and Practice (n=14),* the *Journal of National Education (n=13),* the *Kastamonu Education Journal (n=9), Review of International Geographical Education Online (n=7),* the *Kırşehir Education Faculty Journal (n=7), the Journal of Turkish Studies (n=7)* and finally the *Atatürk University Social Sciences Institute Journal (n=7).* It is observed that the total number of articles published in the journals (n=9) included in Table 3 was (n=181) with a percentage of nearly 80%. The number of articles published in the other 23 journals was (n=43). Table 4 includes the distribution of the articles published in the field of geography education in Turkey according to their subjects.

Table 4
Distribution of the Published Articles According To Their Subjects

Article Subjects	(f)	(%)
Geographic Information Systems (GIS)	9	4.01
Geographical Skills	6	2.67
Environmental Education	9	4.01
Values Education	2	0.89
Coursebook Evaluation	14	6.25
Literature Review /Theoretical	15	6.69
Metaphor	11	4.91
Teaching Program	12	5.35

Learning / Teaching	64	28.57
Teacher Training	82	36.60
Total	**224**	**100**

When Table 4 is examined, it is observed that (36.60%) of the articles published in the past ten years in Turkey studied the subject of *"teacher training"*. This is followed by the subject area of *"learning / teaching"* with a percentage of 28.57. When we compare the percentages of the articles published in these two subject areas with the other subject areas, we observe that this percentage reaches a high level of about 65%. While the total number of articles published in the field of *"teacher training"* in the past ten years is (n=82), this number is (n=64) in the field of *"learning / teacher"*. According to Table 4, it is observed that the least number of articles were published in the subject area of *"values education"* with (n=2) articles and a percentage of 0.89 in the past ten years in Turkey. This is followed by the subject areas of *"geographical skills"* with (n=6) articles *(2.67%)*, *"Geographic Information Systems (GIS)"* with (n=9) articles (4.01%) and *"environmental education"* with (n= 9) articles (4.01%). In Table 5, the distribution of the methods / designs used in the articles published in Turkey is provided.

Table 5
Distribution of the Published Articles According To Their Methods and Designs

Method / Design	**(f)**	**(%)**
Quantitative	119	53.12
Qualitative	93	41.51
Mixed	12	5.35
Total	**224**	**100**

When Table 5 is examined, it is observed that while 119 (53.12%) of the articles published in the field of geography education in Turkey used quantitative methods, 93 (41.51%) of these articles used qualitative methods. However, 12 (5.35%) of the published articles used the mixed method, in which both quantitative and qualitative methods are used together. In Table 6, the distribution of the sampling types used in the articles published in Turkey is given.

Table 6
Distribution of the Published Articles According To Their Sampling Methods

Sampling Method	**(f)**	**(%)**
Purposeful Sampling	16	7.14
Convenience Sampling	9	4.01
Maximum Variety	6	2.67
Random	28	12.5
Stratified	4	1.78
Not Specified	161	71.87
Total	**224**	**100**

When Table 6 is examined, it is observed that the sampling method was not specified clearly in a great majority of the articles (n=161) (71.87%) published in the field of geography education in Turkey. However, of the specified sampling methods, the most frequently used one is the *"random"* sampling method (n=28) with a percentage of (12.5). This is followed by the *"purposeful sampling"* method with (n=16) articles and a percentage of (7.14). According to Table 6, the least frequently used sampling methods used in the articles were, in order, the *"stratified sampling"* method with (n=4) articles and a percentage of 1.78, then the *"maximum variety"* method with (n=6) articles and a percentage of (2.67) and finally the *"convenience sampling"* method with (n=9) articles and a percentage of (4.01). In Table 7, the distribution of the data collection tools used in the articles published in Turkey is provided.

Table 7
Distribution of the Published Articles According to Their Data Collection Tools

Data Collection Tool	**(f)**	**(%)**
Questionnaire / Scale	112	50.0
Document	27	12.05
Achievement Test	15	6.69
Interview	54	24.10
Not Specified	16	7.14
Total	**224**	**100**

When Table 7 is examined, it is observed that *"questionnaires or scales"* were used as a data collection tool in (50.0%) of the articles taken into evaluation (n=112). This is followed by the *"interview technique"* with a percentage of 24.10 (n=54) and the *"document technique"* with a percentage of 12.05 (n=27). It was determined that the least frequently used data collection tool in the evaluated articles was the *"achievement tests"* with (n=15) articles and a percentage of 6.69. However, in (n=16) articles taken into evaluation (7.14%), the kinds of the data collection tools were not specified clearly. In Table 8, the distribution of the data analysis techniques used in the articles published in Turkey is provided.

Table 8
Distribution of the Articles According to Their Data Analysis Techniques

Data Analysis Technique	**(f)**	**(%)**
Anova	17	7.58
Frequency / Percentage	61	27.23
Content Analysis	47	20.98
T-Test	47	20.98
Mean / Standard Deviation	18	8.03
Not Specified	28	12.5
Other	6	2.67
Total	**224**	**100**

When Table 8 is examined, it is observed that the most frequently used data analysis technique in the articles taken into evaluation is *"frequency and percentage"* with (n=61) articles and a percentage of 27.23. This is followed in order of frequency by the *"content analysis"* method with (n=47) articles and the "*t-test"* method with (n=47) articles; however, in (n=28) articles, the kinds of the data analysis methods were not clearly specified. According to Table 8, the data analysis methods used least frequently in the articles were *"Anova"* with (n=17) articles and a percentage of 7.58 and *"mean and standard deviation"* with (n=18) articles and a percentage of 8.03.

Conclusion and Discussion

In this study aiming to examine the main trends of the articles published in the field of geography education in the past ten years in Turkey, 224 articles reached in 31 journals were examined and the obtained data was analyzed via the content analysis method and then interpreted.

It was observed that the number of articles were published in the journals scanned in the mentioned years was the highest in 2010 (n=33) and the lowest in 2017 (n=13). Similarly to this result, in a study examining the trends of the post-graduate studies in the field of geography education in Turkey, Çifçi (2017) found that the number of the studies in this field was the highest in 2010, but there was a dramatic decrease in the number of post-graduate studies in the following years. Again, in a similar study, Kaya (2013) discovered that there was an increase in the number of post-graduate studies in the field of geography between the years of 2008 and 2011. Moreover, Kahyaoğlu (2016) observed in the study examining the publications made on environmental education that there was a significant increase in the number of articles in 2008 and the following years in Turkey. Moreover, Arslan and Paliç (2012) determined in a different study examining the trends in physics education that the number of publications in this field was the highest in 2003 (n=18). Table 1 indicates a significant decrease in the number of studies made in the field of geography education in the recent years. There might be many reasons for this. One of the reasons might be the significant increase in the number of universities opened in Turkey especially in the last ten years. For, the workloads of the newly opened universities and departments and the heavy course loads of academicians might be a reason for the decrease observed in the number of academic studies made in the field of geography education in recent years.

In this study, it is observed that the journals where most of the articles were published in the field of geography education in Turkey were the Marmara Geographical Review (n=84) and the Eastern Geographical Review (n=33). The Journals of Educational Sciences: Theory and Practice (n=14), National Education (n=13), Kastamonu Education (n=9) and Turkish Studies (n=7) followed these journals. Aktaş and Yurt (2015) found in their study examining the studies in the field of Turkish education that the journal publishing the highest number of articles in this field was the Journal of Turkish Studies (n=220) and it was followed by the Journal of National Education with (n=85) articles. Arslan and Paliç (2012) determined in their study that

the articles published in the field of physics education were the highest in the Hacettepe University Education Faculty Journal and the Gazi University Education Faculty Journal. Moreover, Varışoğlu, Şahin and Göktaş (2013) found in their study examining the trends in the field of Turkish education in Turkey that, of the 44 journals which they examined, the Journal of National Education published the highest number of articles (n=80).

When the distribution of the articles published in the field of geography education in Turkey was examined according to their subjects areas, it was observed that the subject areas of teacher training (n=82) and learning / teaching (n=64) were the mostly-preferred ones. However, it was determined that the number of published articles was low in such subject areas as values education (n=2), geographical skills (n=6), GIS (n=9) and environmental education (n=9). Bednarz (2000) examined the studies made in the field of geography education between the years of 1988 and 1997 and found in this examination that most of the studies examined teaching methods and strategies. Geçit (2010) determined in a study entitled 'The Main Trends in the Studies on Geography Education' that a great majority (27.1%) of the subject contents of the studies made in this field between the years of 2000 and 2009 were composed of learning activities and these subject areas were followed by the subject areas of measurement and evaluation and program development. İncekara (2009) analyzed the international studies on geography education and the current situation in Turkey and found that the international studies on geography education generally focused on the subject areas of theory in geography education and teaching, teaching methods and research subjects and the situation was similar in Turkey. However, İncekara emphasized that the situation was different in such subject areas as GIS in geography education and teaching, geographical skills, use of new technologies, sustainable development and environmental education. Kaya (2013) stated that there were 26 different subjects in the post-graduate studies in geography education under investigation, but of these subject areas, those of the teaching approaches, methods, techniques and strategies (32%) were more frequently investigated. Similarly, Çifçi (2017) determined that the master's and doctoral dissertations mostly preferred the subject areas of approaches, strategies, methods, techniques and practices. Şahin, Yıldız and Duman (2011) determined in a similar study in the field of social studies education that the post-graduate subjects generally concentrated on the areas of education programs and teaching methods.

In the study, when the methods used in studies in the field of geography education are examined, it is noted that generaly the quantitative (n=119) and the qualitative (n=93) methods were used, but the mixed methods (n=12) were used at a more limited level. According to the results of a study made by Çiltaş, Güler and Sözbilir (2012), while the researchers generally preferred the quantitative (59.6%) and the qualitative (35.1%) methods, they used the mixed method at a low frequency (5.3%) in the studies made in the field of mathematics education between the years of 1987 and 2009. Moreover, in their study, Ozan and Köse (2014) examined some studies made in the field of education programs and teaching between the years of 2007 and 2011 and determined that the studies generally used the quantitative (81.5%) methods and a few

of them used the qualitative methods (11.8%) and the mixed method (6.8%). Again, Geçit and Şeyihoğlu (2010) found that the qualitative (n=23) and quantitative (n=14) methods were more frequently used in the studies made in the field of computer-assited geography education, but the mixed method (n=2) was less preferred. Similarly, Küçükoğlu and Ozan (2013) determined that the researchers preferred the quantitative methods much more frequently than the mixed method in the field of primary education.

Another important finding of this study is the sampling types used in the articles published in the field of geography education. When the results were evaluated, it was observed that the type of sampling was not specified clearly in most of the articles (71.87%). This result shows similarity to that of the study by Geçit ve Şeyihoğlu (2010). In fact, it is observed in their study that there was not enough information in relation to the population and sample selection in (n=31) of (n=39) studies made in the field of computer-assisted geography education between the years of 2001-2010. However, in this study, it was observed that the most frequently used sampling methods were, in order, the random sampling method (n=28), the purposeful sampling method (n=16) and the convenience sampling method (n=9). In a study by Göktaş et al., (2012), it was found that generally the purposeful (n=133), convenience (n=129) and random (n=88) sampling methods were preferred. In a similar study, Şahin, Kana and Varışoğlu (2013) found that the sampling methods used in the post-graduate studies made in the field of Turkish education were generally the convenience (n=225), random (n=120) and purposeful (n=104) sampling methods.

Moreover, in the study, the trends of the articles were also examined according to their data collection tools. As a result of this examination, it was observed that generally questionnaires and scales (50.0%) were used in the publications made in the field of geography education in the past ten years and they were followed by the interview technique (24.10%), the document analysis technique (12.05%) and achievement tests (6.69%). Çifçi (2017) determined that questionnaires and scales (36%) were generally used in the post-graduate studies made on geography education and they were followed by the document analysis technique (82.1%) and achievement tests (17%). Likewise, Kahyaoğlu (2016) determined that the data collection tools used in the studies on environmental education were generally composed of such tools as questonnaires (29.2%), interest, attitude and aptitude tests (26.9%), achievement tests (13.7%), interview (13.7%), document analysis (9.6%) and observation (1.8%). However, Şahin, Kana and Varışoğlu (2013) found out that the document analysis (n=225) and questionnaire (n=86) techniques were more frequently preferred by the researchers.

When the distribution of the publications investigated in the study was examined according to their data analysis techniques, it was observed that different analysis techniques were used in the studies and the most preferred techniques were those of frequency and percentage (27.23%), T-test (20.98%) and the content analysis (20.98%). Çiltaş, Güler and Sözbilir (2012) determined in their study that the researchers generally used the techniques of frequency and percentage (36.2%) as a data analysis method.

Similarly, Çifçi (2017) found that the rate of using frequency and percentage in the analysis of the quantitative data was above (80%) in the post-graduate studies and it was followed by the techniques of mean and standard deviation. However, for the qualitative type of daya, generally descriptive and content analyses were used. Moreover, Ozan and Köse (2014) found in their study that mean / standard deviation and frequency / percentage techniques were generally preferred in the quantitative data analysis, but in the qualitative data analysis, the content analysis technique was generally preferred. Similarly, Geçit (2010) stated that frequency / percentage and content analysis were frequently used as the data collection tools in studies on geography education.

Suggestions

In conclusion, in the light of the findings reached in the study, the following suggestions are made:

- There has been a pronounced decrease in the number of publications in the field of geography education in recent years especially in 2013 and the following years. Although further studies might investigate the reasons of this situation, this kind of studies can be increased in number so as to contribute to the field,
- The number of academic studies made in the field of geography education and published in the SSCI and field indexed journals can be increased,
- Since a great majority of articles are published in certain journals in Turkey, it is recommended to increase the number of publications on geography education in different journals in the name of increasing variety and publication quality,
- By closely following the latest developments in the field of geography education, studies on innovations in this field can be increased in number,
- Since there is a limited number of studies made in the subject areas of new technologies, geographic information systems, geographical skills, environmental education and values education in the field of geography education, more academic studies are needed in these areas,
- It is observed that generaly quantitative methods are used in the studies made in the field of geography education, but in addition to quantitative methods, both qualitative methods providing the opportunity of making in-dept analysis and mixed methods should be used,
- Studies should provide more information about sampling methods which they use in the field of geography education,
- It is suggested that the variety of data collection and analysis methods in the field of geography education should be increased.

References

Aktaş, E. & Yurt, S. U. (2015). A content analysis for article abstracts in Turkish education area. *Turkish Studies*, *10* (7), 73-96.

Alam, S. (2010). Recent trends in school geography in İndia, *Journal of Geography*, *109* (6), 243-250.

Alper, A. & Gülbahar, Y. (2009). Trends and ıssues in educational technologies: a review of recent research in tojet. *The Turkish Online Journal of Educational Technology, 8* (2), 124-135.

Apaydın, S. (2009). Between the years 2000-2008 physics education research in Turkey. *I. Turkey International Congress of Educational Research*, Çanakkale Onsekiz Mart University: Antalya, 574-584.

Arı, Y. (2010). Why geography needs to be defined and teaching multidimensional? In R. Özey & A. Demirci (Eds.), *Methods and Approaches in Teaching Geography*. (pp. 1-22). İstanbul: Aktif Yayınevi.

Arslan, A.S. & Paliç, G. (2012). Studies in physıcs education ın Turkey for the period 1990-2011. *Bayburt University Journal of Education Faculty*, *7* (1), 115-128.

Bednarz, S. (2000). Geography education research in the journal of geography 1988-1997. *International Research in Geographical and Environmental Education, 9* (2), 128-140.

Bowen, G.A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9* (2), 27-40.

Butt, G. (2008). Is the future secure for geography education? *Geography*, *93*(3), 158-165.

Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş. & Demirel, F. (2010). *Scientific Research Methods.* Ankara: Pegem Akademi.

Canbulat, T., Avcı, G. & Sipahi, S. (2016). The evaluation of the theses in the field of social studies in the U.S.A and Canada. *Ahi Evran University Kırşehir Journal of Education Faculty, 17* (2), 351-370.

Çalık, M. & Sözbilir, M. (2014). Parameters of content analysis. *Education and Science, 39* (174), 33-38.

Çifçi, T. (2017). The trends of postgraduate theses (2006-2017) on geography education in Turkey. *Journal of History Culture and Art Research, 6* (4), 864-887.

Çiltas, A., Guler, G., & Sozbilir, M. (2012). Mathematics education research in Turkey: A content analysis study. *Educational Sciences: Theory & Practice*, *12* (1), 565-580.

Doğanay, H. (1989). Geography and geography teaching in high schools. *Journal of Geography Research, 1* (1), 7-25.

Doğanay, H. (2011). In terms of its meaning, definition, subject and philosophy some opinions on science of geography. *Eastern Geographical Review, 16* (25), 1-44.

Ergun, M. & Çelik, E. (2011). New trends in science education in Turkey: 2008 example. *E-Journal of New World Sciences Academy, 6* (1), 508-514.

Esteves, M. (2012). Geography education in Portugal: recent trends in research. *Procedia - Social and Behavioral Sciences, 47,* 1692-1695.

Geçit, Y. (2010). Primary tendencies in research on geography education. *Educational Sciences: Theory & Practice*, *10* (2), 923-987.

Geçit, Y. & Şeyihoğlu, A. (2011). Examination of the studies, which were made on issues of computeraided geography teaching in Turkey. *Marmara Geographical Review*, *23,* 327-351.

Göktaş, Y., Küçük, S., Aydemir, M., Telli, E., Arpacık, Ö., Yıldırım, G. & Reisoğlu, İ. (2012). Educational technology research trends in Turkey: a content analysis of the 2000-2009 decade, *Educational Sciences: Theory & Practice, 12,* 443-460.

Hanson, S. (2004). Who are "we"? An important question for geography's future. *Annals of the Association of American Geographers, 94* (4), 715-722.

İncekara, S. (2007). International trends in secondary geographic education: the case of Turkey. *Marmara Geographical Review, 16,* 109-130.

İncekara, S. (2009). The international research in geography education and the examples from Turkey: present situation and future directions. *Eastern Geographical Review, 14* (21), 123-136.

Kahyaoğlu, M. (2016). A study on environmental education research in Turkey: a content analysis study. *Marmara Geographical Review, 3* (4), 50-60.

Karadağ, E. (2009). A thematic analysis on doctoral dissertations made ın the area of education sciences. *Ahi Evran University Kırşehir Journal of Education Faculty*, *10* (3), 75-87.

Kaya, M. F. (2013). Tendencies in geography education: a meta-analysis study on graduate theses up to 2012. *Marmara Geographical Review, 27,* 282-313.

Küçükoğlu, A. & Ozan, C. (2013). Content analysıs about master theses and dıssertatıons ın classroom teacher educatıon. *International Journal of Eurasia Social Sciences*, *4* (12), 27-47.

Lache, N. M. (2011). Geography education: outcomes, trends and challenges about geography didactics. *Problems of Education in the 21. Century, 27,* 75-82.

Lacoste, Y. (2004). *Geography is for fighting*. (A. Ertan, Trans.) Ankara: Doruk Yayınevi. (Original work published 1976).

Lidstone, J. & Williams, M. (Eds.) (2006). *Researching change and changing research in geographical education. Geographical education in a changing world: past experience, current trends, and future challenges*. The Netherlands: Springer.

Merriam, S. B. (1998). *Qualitative research and case study applications in education.* San Francisco: Jossey-Bass Publishers.

Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: an expanded source book (2nd Ed.).* Thousand Oaks: Sage Publications.

Ozan, C. & Köse, E. (2014). Research trends in curriculum and instruction. *Sakarya University Journal of Education, 4* (1), 116-136.

Öztürk, M. (2007). Geography: development, content and education. In S. Karabağ & S. Şahin (Eds.), *Geography Education in Theory and Practice.* (pp. 3-51). Ankara: Gazi Kitapevi.

Rohli, R.V. & Binford, P.E. (2016). Recent trends in geography education in Louisiana, *Journal of Geography, 115* (5), 224-230.

Sönmez, V. & Alacapınar, F.G. (2011). *Sampled scientific research methods*. Ankara: Anı Yayıncılık.

Sözbilir, M. & Kutu, H. (2008). Development and current status of science education research in Turkey. *Essays in Education Special Issue,* 1-22.

Stoltman, J.P. (2012). Perspective on geographical education in the 21st century. *Journal of Research and Didactics in Geography*, *0* (1), 17-24.

Şahin, E. Y., Kana, F. & Varışoğlu, B. (2013). The research trends of postgraduate dissertations in Turkish education departments. *International Journal of Human Sciences*, *10* (2), 356-378.

Şahin, M., Yıldız, D.G. & Duman, R. (2011). An evaluation of the theses on social studies education in Turkey. *Journal of Social Studies Education Research*, *2* (2), 96-122.

Topsakal, U., Çalık, M. & Çavuş, R. (2012). What trends do Turkish biology education studies indicate? *International Journal of Environmental and Science Education*, *7* (4), 639-649.

Varışoğlu, B., Şahin, A. & Göktaş, Y. (2013). Trends in Turkish education studies. *Educational Sciences: Theory & Practice*, *13* (3), 1767-1781.

Wassink, F.K. & Sadi, Ö. (2016). Science education trends in Turkey: a content analysis from 2005 to 2014. *Elementary Education Online*, *15* (2), 594-614.

Yıldırım, A. & Şimşek, H. (2011). *Qualitative research methods in the social sciences*. Ankara: Seçkin Yayınevi.

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