

An Analysis of Thematic and Methodological Trends of Environmental Education Theses in Turkey*

Z. Melis Demir¹

Eskişehir Osmangazi University
Eskişehir, Türkiye

Abstract

In this study, it was aimed to determine the thematic orientations of postgraduate theses in the field of environmental education in Türkiye between 2012-2020. This research, which aims to descriptively analyze the master's and doctoral theses in the field of environmental education, was designed as qualitative research. Within the scope of the research, a total of 351 postgraduate theses, 305 master's theses and 46 doctoral theses, were accessed on the database of the National Thesis Centre of the Council of Higher Education. These theses were analyzed according to the scientific methods and themes they used, as well as their distribution according to years, main disciplines / branches of science, university and sample. As a result of the analyses, it was determined that the highest number of postgraduate theses were published in 2019, the highest number was at Gazi University, followed by Kastamonu University. As a result of the thematic analysis of the theses, a total of 42 themes were determined and "Environmental Education and Problems, Environmental Attitude, Environmental Knowledge, Environmental Behavior and Environmental Awareness" were determined as the themes with the highest frequency. In addition, it was determined that the most commonly used method was the survey model, the majority of the studies were carried out in the Department of Primary Education, the most in the Department of Science Education, and the most studied sample group was secondary school students and prospective teachers. According to these results, it can be suggested that in future studies, qualitative studies and mixed method studies should be carried out on more specific issues and their sub-dimensions such as water pollution, air pollution, human-nature interaction, which are the main problematics of environmental education, especially in Türkiye.


Keywords: Theme, Methodology, Environmental Education, Postgraduate Theses, Türkiye

To cite this article:

Demir, M. Z. (2021). An analysis of thematic and methodological trends of environmental education theses in Türkiye. *Innovative Educational Research (INNER)*, 3(1), 21-34.

Article Type	Received	Accepted	Published Online
Research Article	03.30.2021	04.28.2021	05.31.2021

* A portion of this research was presented at 23rd National Educational Sciences Congress, University of Kocaeli, 4-6 September 2014, Kocaeli, Turkey.

 Res. Assist., Eskişehir Osmangazi University, Faculty of Education, Eskişehir, Türkiye. mdemir@ogu.edu.tr

The world population continues to increase, human beings continue to produce and consume as they produce. The constant pressure on societies to "develop" and "produce" brings along "consumption frenzy". As a result of this process, "more consumption" also means "more waste". At the end of the process, this situation is formulated as "Each increase in gross national product leads to an increase in gross national pollution". Therefore, mankind needs to move from the endeavor to "use" nature in the most intensive way possible to the endeavor to think about "how-to live-in harmony with nature". The establishment of this idea on solid foundations is only possible by understanding and making sense of the interaction between man and nature correctly. To establish the balance between man and nature in the best, strongest and most accurate way, it is necessary to address this issue as a problem of education. As a matter of fact, Japan is one of the countries that realized this situation, albeit late:

"Because today, the main source of natural and human problems arising from human-space interaction is the inadequate and poorly recognized practices of human beings in relation to space. So much so that after the 2011 Great East Japan Earthquake in Japan, the Japanese emphasized that the main reason for this was the inadequacy of Japanese people's knowledge of space. Because they realized that one of the mistakes they had made in the past 30 years about human-space interaction was to make the high school geography course an elective course by removing it from being compulsory, and in order to prevent the future Japanese generation from making the same mistake and to establish human-space interaction and relations on more accurate information and foundations, they made the high school geography course a compulsory course again to be implemented as of 2022" (Artvinli, Değirmenci, 2021, p. 7).

As it can be understood from this point, human beings are faced with the responsibility to produce as much as they need, to exhibit the least possible "waste" production behavior while consuming what they produce, and to deliver the natural resources needed by the next generations to them. In this sense, a local perspective is needed in order to provide consistent responses to social and environmental problems in the context of social, economic and ecological crisis. The expression "think globally, act locally" has been used in different fields, including environmentalism, since the 20th and 21st centuries (Moreno-Fernández, 2017). Rapid population growth, unconscious consumption of resources, rapid consumption of natural resources due to reasons such as industrialization cause significant environmental problems. It was only in the 1960s that it was realized that the main problems behind environmental problems were human beings themselves. It is the responsibility of human beings to protect the delicate balance between the environment and human beings (Öztürk, 2013). There are two important reasons for environmental pollution. These are the rapid increase in the world population and the increase in per capita consumption. At this point, in order to combat these problems, population growth and excessive consumption should be controlled, resources should be used better, and efforts should be made to find alternative resources (Sülün & Sülün, 2009). It can be said that environmental education is one of the most powerful methods to consume resources consciously and to leave a healthy world to future generations. Rachel Carson's "Silent Spring", Paul Erlich's "Population Bomb" and "Ecocatastrophe", Edward Goldsmith's "Blueprint for Survival" and Barry Commoner's "Closing Circle", and the worldwide interest aroused by the impact created by the conference

reports on the environment starting with the Stockholm Conference have enabled environmental problems to be brought to the agenda more and current problems to be discussed more. Under the leadership of the United Nations, countries around the world have started to look for solutions to environmental problems. In this context, the idea that a widespread educational endeavor is needed as a potential solution mechanism of the problems has been put forward (Kaya, Çobanoğlu & Artvinli, 2011). There are studies that reveal that environmental education is a powerful tool to create green behavior among citizens (Varela-Candamio, Novo-Corti & García-Alvarez, 2017). To minimize environmental problems and raise environmentally sensitive individuals, environmental education should be provided to individuals. Environmental education can be explained as the acquisition of knowledge, skills, and behaviors that individuals can live in harmony with their environment, raising responsible people in every subject from water consumption to waste production, energy consumption to natural resource use, and active participation in the solution of problems (Demirkaya, 2006). The importance of environmental education makes it important to examine the studies conducted in this field. In addition, descriptive studies are carried out in this sense from time to time in different fields (Çifçi, 2017, Candaş, Karataş, 2017).

In this context, it is important to reveal the current situation by analyzing the theses in the field of environmental education. In this study, it is aimed to determine the thematic orientations of the postgraduate theses in the field of environmental education in Türkiye between 2012-2020. The sub-problems determined depending on the purpose of the research are as follows:

- How is the distribution of theses on environmental education according to the universities where they were conducted?
- What is the distribution of the main disciplines / branches of science in which the theses on environmental education are published?
- What is the distribution of theses on environmental education according to the methods used?
- What is the distribution of theses on environmental education according to their samples?
- How is the distribution of theses on environmental education according to thematic areas?

Method

Research Design

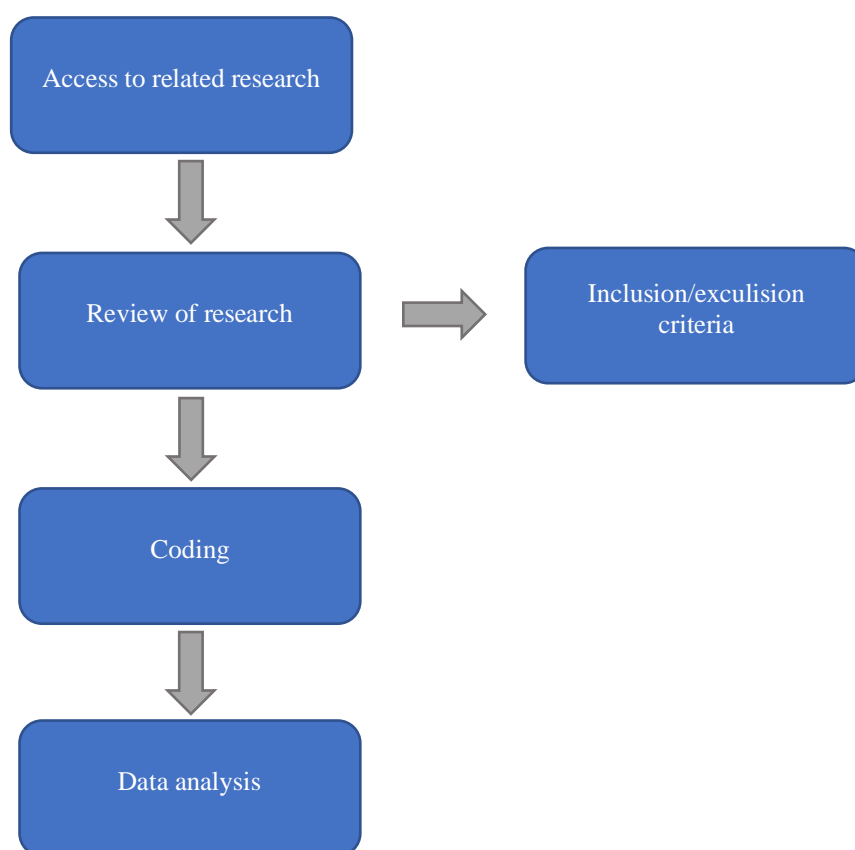
This research is a descriptive study used to reveal and define the existing situation. For this reason, this research was designed as qualitative research to analyze master's and doctoral theses in the field of environmental education. Creswell (1998) defines qualitative research as the process of making sense of social life and human problems by questioning them with unique methods. According to Loeb, Dynarski, McFarland, Morris, Reardon, and Reber (2017), the descriptive analysis approach describes the iterative nature of a process that begins with the identification of a socially meaningful phenomenon and reveals salient features using appropriate data visualization methods to transform raw data into useful reported findings for all types of audiences.

The purpose of descriptive analysis is to identify the key features of the raw data and put them into a form that readers can understand and, if they wish, use. To this end, the aggregated data are categorized, and the findings are interpreted. Descriptive analyses are techniques that involve organizing and summarizing the data and finding values such as frequency, percentage, mean, standard deviation to represent the whole data, and are applied to reveal the existing situation (Yıldırım & Şimşek, 2015; Erdem, 2011).

Descriptive studies are studies that do not wonder about the relationship or difference, they are studies aimed at determining what is what. Since descriptive studies are studies that try to explain what is as it is and do not try to find a difference or relationship, they also do not have their own specific mechanisms. The statistical and methodological analyses of theses and articles are also called descriptive studies (Erkuş, 2009; Karasar, 2010).

Figure 1

Steps of Process



As seen in Figure 1, firstly, access to the theses to be analyzed within the scope of the research was provided. The theses accessed were included or excluded according to the criteria of "suitability to the subject, access to sufficient information". 351 theses were included in the research.

Data Sources

Within the scope of the research topic, Master's and Doctoral Theses were analyzed. The theses were accessed from the database of the National Thesis Centre of the Council of

Higher Education. The keyword "environment" was used in the search engine, and a total of 351 theses made between 2012-2020 and sorted as education and training as the subject were examined within the scope of the research. The last access date to the theses is 19.02.2021.

Table 1

Distribution of Theses According to Years of Publication

Year	Master Theses		Doctoral Theses		Total	
	f	%	f	%	f	%
2012	27	8	6	13	33	11
2013	28	8	9	17	37	12
2014	23	7	3	7	26	6
2015	20	6	9	17	29	7
2016	34	12	5	12	39	13
2017	19	6	2	5	21	5
2018	14	3	3	7	17	4
2019	111	42	5	12	116	31
2020	29	8	4	10	33	11
Total	305	100	46	100	351	100

As seen in Table 1, a total of 351 theses, 305 master's theses and 46 doctoral theses, were examined within the scope of the research. Looking at the distribution by years, it is seen that the most theses were produced in 2019 with 116 theses.

Findings

In this part, the findings obtained because of the analyses are presented in tables. The findings related to the theses analyzed are presented in terms of "University of Publication, Department, Disciplines, Sample Group, Method and Themes".

Table 2

Universities and Number of Theses

Universities	f	%	Universities	f	%
Abant İzzet Baysal University	8	1	İstanbul University	1	1
Adıyaman University	4	1	İstanbul Aydın University	1	1
Adnan Menderes University	7	1	İstanbul Şehir University	1	1
Afyon Kocatepe University	4	1	Kahramanmaraş Sütçü İmam University	3	1

Ahi Evran University	6	1	Karadeniz Teknik University	5	1
Ağrı University	1	1	Kastamonu University	16	2
Akdeniz University	11	1	Kocaeli University	4	1
Aksaray University	11	1	Marmara University	11	1
Alanya Alaeddin Keykubat University	1	1	Manisa Celal Bayar University	1	1
Amasya University	1	1	Mehmet Akif Ersoy University	8	1
Ankara University	6	1	Mersin University	6	1
Atatürk University	4	1	Muğla Sıtkı Koçman University	8	1
Bahçeşehir University	1	1	Necmettin Erbakan University	14	2
Balıkesir University	7	1	Niğde Ömer Halisdemir University	9	1
Bayburt University	2	1	On Dokuz Mayıs University	4	1
Bilkent University	5	1	Ordu University	1	1
Boğaziçi University	4	1	Middle East Technical University	14	2
Çanakkale 18 Mart University	9	1	Pamukkale University	8	1
Çukurova University	4	1	Recep Tayyip Erdoğan University	1	1
Dokuz Eylül University	7	1	Sakarya University	3	1
Dumlupınar University	5	1	Siirt University	1	1
Düzce University	1	1	Sinop University	1	1
Erciyes University i	3	1	Sivas University	1	1
Erzincan Binali Yıldırım University	3	1	Süleyman Demirel University	1	1
Eskişehir Osmangazi University	3	1	Trakya University	2	1
Fırat University	9	1	Uludağ University	6	1
Gazi University	59	37	Uşak University	2	1
Gaziantep University	1	1	Yeditepe University	2	1
Gaziosmanpaşa University	6	1	Yıldız Teknik University	3	1
Hacettepe University	10	1	Yüzüncü Yıl University	4	1

İnönü University	6	1	Total	351	100
------------------	---	---	-------	-----	-----

Table 2 shows the distribution of theses on Environmental Education according to universities. In the table, Gazi University ranks first with 59 theses. Kastamonu University ranks second with 16 theses, while Middle East Technical University and Necmettin Erbakan University rank third with 14 theses each.

Table 3

Departments of Theses

Departments	f	%	Departments	f	%
Department of Disaster Education and Management	2	0.56	Department of Public Administration	1	0.28
Department of Family and Consumer Sciences	2	0.56	Department of Chemistry Teacher Education	2	0.56
Physical Education and Sport	1	0.28	Department of Mathematics and Science Education	62	17.66
Department of Biology Education	2	0.56	Department of Architecture	1	0.28
Department of Environmental Sciences	2	0.56	Department of Preschool Education	4	1.14
Department of Environmental Education	3	0.84	Department of Secondary Science and Mathematics Education	25	7.12
Department of Child Development and Education	3	0.84	Department of Secondary Social Studies Education	2	0.56
Interdisciplinary Environmental Health	1	0.28	Landscape Architecture Department	1	0.28
Department of Educational Sciences	17	4.84	Department of Classroom Teaching	2	0.56
Department of Curriculum and Instruction	6	1,68	Department of Social Environmental Sciences	1	0.28
Department of Educational Administration and Supervision	1	0.28	Department of Social Sciences	1	0.28
Science Education Department	10	2.80	Department of Basic Education	15	4.27
Department of Fine Arts Education	3	0.84	Department of Turkish and Social Sciences Education	15	4.27
Department of Primary Education	152	42	Department of Lifelong Learning and Adult Education	3	0.84

Department of Primary Education	1	0.28	Unspecified Department	6	1.68
Department of Elementary Science and Mathematics Education	3	0.84	Total	351	100
Department of Business Administration	1	0.28			

Table 3 shows the distribution of theses on Environmental Education according to the departments. Accordingly, the Department of Primary Education ranks first with 152 theses, the Department of Mathematics and Science Education ranks second with 62 theses, and the Department of Secondary Science and Mathematics Education ranks third with 25 theses.

Table 4

Disciplines of Theses

Disciplines	f	%	Disciplines	f	%
Disaster Education and Management	1	0.28	Department of Primary Education	6	1.71
Building Information Programme	1	0.28	Department of Business Management	1	0.28
Department of Biology Education	20	5.70	Department of Chemistry Teaching	5	1.42
Department of Geography Education	2	0.56	Department of Mathematics and Science Education	1	0.28
Environmental Sciences and Engineering	2	0.56	Department of Preschool Education	15	4.27
Environmental Education Programme Science Branch	2	0.56	Department of Art Education	2	0.56
Department of Curriculum and Instruction	13	3.70	Department of Classroom Teaching	19	5.41
Department of Educational Administration and Supervision	1	0.28	Department of Social Studies Education	28	7.98
Science Education Department	108	30.77	Unspecified Department of Science	122	34.76
Department of Finance	1	0.28	Total	351	100
Department of Physics Teacher Education	1	0.28			

Table 4 shows the distribution of theses on Environmental Education according to disciplines. Accordingly, Science Education Department ranks first with 108 theses, Social Studies Education Department ranks second with 28 theses and Biology Education Department ranks third with 20 theses.

Table 5*Methods Used in Theses*

Methods Used	f	%	Methods Used	f	%
Descriptive Study	8	2,28	Quantitative	17	4,84
Experimental Study	54	15,38	Qualitative	12	3,42
Document analysis Study	4	1,14	Phenomenology	10	2,80
Case Study	19	5,41	Survey model	119	34,02
Action research	9	2,56	Structural Equation Modelling	1	0,28
Content analysis	2	0,56	Quasi-Experimental	15	4,27
Karma	57	16,24	Horizontal and descriptive approach	1	0,28
Comparative research method	1	0,28	Methodological knowledge not specified	17	4,84
Correlational research	3	0,84	Total	351	100
Causal comparison	2	0,56			

The findings related to the methods of the theses analyzed within the scope of the research are presented in Table 5. The table was created by taking the method information as mentioned in the method sections of the theses. It was determined that the most used method in the theses was the survey model. Mixed method, experimental and quasi-experimental methods were found to be the most used methods after the survey model.

Table 6*Study Groups/Samples of Theses*

No	Study Groups/Samples	Target group	Frequency	%
1	Pre-University Students	Preschool Students	19	4.77
		Primary School Students	20	5.02
		Secondary School Students	127	36.18
		Primary School Students	8	2.01
		Secondary Education Students	29	7.29
2	Teacher Candidates	Physical education	1	0.25
		Biology Teacher Candidates	5	1.25
		CEIT Teacher Candidates	2	0.50
		DIKAB Teacher Candidates	2	0.50
		Science Teacher Candidates	64	
		Physics Teacher Candidates	2	0.50
		Visual Arts Teacher Candidates	1	0.25
		English Teacher Candidates	3	0.75
		Chemistry Teacher Candidates	3	0.75
		Prospective Mathematics Teachers	6	1.50
		Preschool Teacher Candidates	10	2.50

	RPD Teacher Candidates	2	0.50
	Classroom Teacher Candidates	21	5.27
	Social Studies Teacher Candidates	18	4.52
	Turkish Teacher Candidates	5	1.25
3	Adults	9	2.25
4	School Administrators	1	0.25
5	Experts	5	1.25
6	Civil society organizations	1	0.25
7	Gifted Students	3	0.75
8	Undergraduate Students (Non-Faculty of Education)	7	1.75
9	Teachers	33	8.29
10	Visually Impaired Students	1	0.25
	Total	398	100

According to Table 6, it was determined that in the theses examined, secondary school students and pre-service teachers were mostly studied.

Table 7

Themes Studied in Theses

Themes	f	%	Themes	f	%
Outdoor Environmental Education	20	3.23	Environmental Habit	1	0.16
Biodiversity	4	0.65	Belief in the Environment	2	0.32
Environmental Information	45	7.27	Critical Thinking towards the Environment	1	0.16
Environmental Awareness	43	6.95	Belonging to nature	1	0.16
Environmental Education Self-Efficacy Belief	8	1.29	Document Review	3	0.48
Environmental Education and Problems	114	18.42	Ecoscience Thinking	1	0.16
Environmental Ethics	11	1.78	Ecological Footprint	10	1.61
Environmental Identities	12	1.94	Ecosystem	4	0.65
Environmental Protection	5	0.81	Ecocentric/Anthropocentric	3	0.48
Environmental Protection Club	2	0.32	Eco School	2	0.32
Environmental Use	3	0.48	Energy Awareness	1	0.16
Environmental Accounting	1	0.16	Epistemological Belief	4	0.65
Environmental Literacy	27	4.36	Science Technology Society Environment	8	1.29
Vision for the Future of the Environment	1	0.16	Recycling	10	1.61
Environmental Perception	6	0.97	Animal Love	1	0.16
Environmental Skills	5	0.81	Human and Environment	22	3.55

Environmental Behaviour	52	8.40	Global/Climate Change	5	0.81
Environmental Thinking	2	0.32	Spatial Optimism / Pessimism	1	0.16
Environmental Concern/ Anxiety	5	0.81	Nuclear Energy	1	0.16
Environmental Awareness	50	8.07	Socioscientific issues	1	0.16
Environmental Risk Perception	4	0.65	Sustainability	15	2.42
Environmental Attitude	98	15.83	Historic environment	1	0.16
Environmental Perspective	2	0.32	Cleaning	1	0.16
Total				619	100

According to Table 7, it is understood that the themes of Environmental Education and Problems were studied 114 times in the theses analyzed, followed by Environmental Attitude 98 times. Environmental knowledge, environmental awareness, environmental behavior, and environmental literacy are other topics that have been studied a lot.

Conclusion and Discussion

As a result of the analyses of the theses examined within the scope of the research in terms of "University of Publication, Department, Disciplines of Science, Sample Group, Method and Themes", it was determined that the theses were mostly conducted at Gazi University, followed by Middle East Technical University, Necmettin Erbakan University, Hacettepe University and Marmara University, and the theses were published in 45 different universities across Turkey. It was determined that the theses examined within the scope of the research were mostly studied in the Department of Primary Education (112 theses), followed by the Department of Secondary Science and Mathematics Education and the Department of Educational Sciences, and in total 27 different departments were studied. It was determined that most of the theses were conducted in Science, Social Sciences and Biology disciplines and in total 16 different disciplines were studied. It was determined that the most used methods in the theses were Survey, Mixed method, Experimental and Semi-experimental methods. In the analyzed theses, it was determined that most of the studies were conducted with secondary school students and candidates of teacher. On the other hand, environmental education at an early age has a strategic importance, and in some studies, even the awareness level of primary school teacher candidates in this regard does not rise above the average (Artvinli, Aydın, Terzi, 2019). The themes of "Environmental Education and Problems, Environmental Attitude, Environmental Knowledge, Environmental Behavior and Environmental Awareness" are the most used themes in the theses examined. A total of 42 different themes were obtained.

Yavuz (2016) analyzed 69 master's and 18 doctoral theses published between 2011 and 2015 in the field of environmental education and found that quantitative methods were preferred in master's theses, mixed methods were preferred in doctoral theses, and that master's theses mostly worked with secondary school students and doctoral theses mostly worked with university students. In Karadağ's (2009) study, it is seen that the most studied themes in doctoral theses in Turkey are achievement and attitude. In this study, attitude was determined as the second most studied subject.

Yılmaz (2012) found in a study that the majority of master's and doctoral theses published on environmental education between 1992 and 2011 were from Gazi University, METU and Marmara University; the most preferred groups as the sample group were higher education and primary education students; the most preferred research topics were attitude towards the environment, environmental awareness and environmental knowledge; the most preferred research designs were survey model and experimental design; the most preferred techniques used were developing a new method for environmental education and cooperative learning; the most preferred data collection techniques were written data collection and interviews; and the most preferred techniques for data analysis were parametric tests and descriptive statistics. It is seen that the results of Yılmaz (2012) and the results of this research overlap in terms of the university where it was published, the sample group, the subject studied and the method. Kahyaoğlu (2016) analyzed 179 studies published in 34 different journals in the field of environmental education in Türkiye between 2000-2013. As a result of the study, it was determined that quantitative research method was mostly used in the field of environmental education and survey model was used as research design. It was determined that primary school students and undergraduate students of the faculty of education were mostly studied as the sample group, and questionnaires, interest, attitude and ability tests were used as data collection tools. It is seen that the results of Kahyaloğlu (2016) overlap with the results of this study. Candaş and Karataş (2017) analyzed 157 articles published between 1996 and 2016 to determine research trends in the field of environmental education. It was determined that the topics investigated in the articles were generally studies measuring attitudes, interests, opinions, beliefs and self-efficacy. Like Candaş and Karataş (2017), one of the most studied themes in this study was determined as attitude.

Suggestions

As a result of the examination of postgraduate studies on environmental education, the following suggestions were made for future studies:

- According to the results obtained, 305 master's and 46 doctoral theses were produced on environmental education. This situation shows that environmental education is mostly handled at the master's degree stage. In future studies, it is recommended to focus more on environmental education studies at the doctoral stage.
- As a result of the thematic analysis of the theses, a total of 42 themes were determined and "Environmental Education and Problems, Environmental Attitude, Environmental Knowledge, Environmental Behavior and Environmental Awareness" were determined as the themes with the highest frequency. Since these topics are rather theoretical, it is suggested that applied environmental education themes should be included in future studies.
- Again, based on the fact that the most commonly used method is the survey model, it is suggested that practical methods should be preferred and studies that will provide in-depth data should be directed.
- It was determined that the most studied sample groups were secondary school students and candidates of teacher. Based on the fact that environmental education is more effective at early ages, it is recommended that environmental education studies in early childhood education should be included more.

- In future studies, it can be suggested that qualitative studies and mixed method studies should be carried out on more specific issues such as water pollution, air pollution, human-nature interaction and their sub-dimensions, which are the main problematics of environmental education, especially in Türkiye.
- Finally, only one study has been conducted on disabled students, and it is suggested that researchers should study environmental education for disabled students in an interdisciplinary dimension for the future.

References

- Artvinli, A.; Aydın, R., Terzi, İ. (2019). Ekolojik Ayak İzi Farkındalık Düzeyinde Hizmet Öncesi Öğretmen Eğitimi: Sınıf Öğretmeni Adayları Örneği, *Osmangazi Journal of Educational Research*, 6(1), 1-24. <http://ojer.ogu.edu.tr/vol6no1/Number1Spring/OJER-V6-N1-1.pdf>
- Artvinli, E., Değirmenci, Y. (Ed.) (2021), *Uygulama örnekleriyle coğrafya eğitiminde yeni yaklaşımlar-1*. Ankara: Nobel.
- Candaş, Z., Karataş, A. (2017). Türkiye’de 1996 – 2016 Yılları Arasında Çevre Eğitimi Alanında Yapılan Çalışmaların İçerik Analizi. *Fen Bilimleri Öğretimi Dergisi*, 5(2), 143-159.
- Cresswell, J. W. (1998). *Qualitative inquiry and research design: choosing among five traditons*. London: Sage.
- Çifçi, T. (2017). Türkiye’de coğrafya eğitimi alanında yapılan lisansüstü tezlerin (2006-2017) eğilimleri. *Journal of History Culture and Art Research*, 6(4), 864-887. doi: <http://dx.doi.org/10.7596/taksad.v6i4.1060>
- Demirkaya, H. (2006). Çevre eğitiminin Türkiye’deki coğrafya programları içerisindeki yeri ve çevre eğitimine yönelik yeni yaklaşımlar. *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 16(1), 207-222.
- Erdem, D. (2011). Türkiye’de 2005–2006 yılları arasında yayımlanan eğitim bilimleri dergilerindeki makalelerin bazı özellikler açısından incelenmesi: Betimsel bir analiz. *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi*, 2(1), 140-147.
- Erkuş, A (2009). *Davranış bilimleri için bilimsel araştırma süreci*. Ankara: Seçkin
- Kahyaoğlu, M. (2016). Türkiye’de çevre eğitimi üzerine yapılan araştırmalar: Bir içerik analizi çalışması, *Marmara Coğrafya Dergisi*, 34, 50-60.
- Karadağ, E. (2009). Eğitim bilimleri alanında yapılmış doktora tezlerinin tematik açıdan incelemesi. *Ahi Evran Üniversitesi Eğitim Fakültesi*, 10(3), 75-87
- Karasar, N. (2010). *Bilimsel araştırma yöntemi*. Ankara: Nobel
- Kaya, N., Çobanoğlu, M. T. ve Artvinli, E. (2011). *Sürdürülebilir kalkınma için Türkiye’de ve Dünyada çevre eğitimi çalışmaları*. VI. Ulusal Coğrafya Eğitimi Sempozyumu Bildiri Kitabı.

- Loeb, S., Dynarski, S., McFarland, D., Morris, P., Reardon, S., & Reber, S. (2017). *Descriptive Analysis in Education: A Guide for Researchers*. (NCEE 2017-4023). National Center for Education Evaluation and Regional Assistance.
- Moreno-Fernández, O. (2017). Environmentalism and Citizenship in Schools Participating in the Eco-Schools Program: Primary School Students' Conceptions about Social and Environmental Issues. *Croatian Journal of Education*, 9 (2), 637-664.
- Öztürk, E. (2013). *Uluslararası bir çevre eğitimi projesinin fen ve teknoloji öğretmen adaylarının çevre bilincine etkisi*. Yayınlanmamış doktora tezi. Hacettepe Üniversitesi.
- Sülün, Y., Sülün, S. (2009). *İnsan ve çevre*, Ankara: Anı.
- Varela-Candamio, L., Novo-Corti, I. & García-Alvarez, M.T. (2017). The importance of environmental education in the determinants of green behavior: A meta-analysis approach. *Journal of Cleaner Production*, 170 (2018), 1565-1578
- Yavuz, S. (2016). A Content Analysis Related to Theses in Environmental Education: The Case of Turkey (2011-2015). *Journal of Education and Training Studies*, 4 (10), 118-125.
- Yıldırım, A.; Şimşek, H. (2015). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Seçkin.
- Yılmaz, Ş. (2012). *1992-2011 yılları arasında çevre eğitimi ile ilgili yayımlanan yüksek lisans ve doktora tezlerindeki genel yönelimlerin belirlenmesi*. Yayımlanmamış yüksek lisans tezi, Abant İzzet Baysal Üniversitesi.

Author Information

Z. Melis Demir: She completed undergraduate education in Hacettepe University, Science Teaching Department. She completed her master's degree in Eskişehir Osmangazi University Primary School Teacher Education Department, and she continues her doctoral studies in the same field at Anadolu University. She works as a research assistant at Eskişehir Osmangazi University. Main research areas of Demir are environmental education, science education and integration of art with these disciplines.

Conflict of Interest

No conflict of interest.

Funding

No funding was received.

Ethical Standards

Since no human-related studies are conducted, there is no ethics committee permission.