



siti nurhidayati <sitinurhidayati@undikma.ac.id>

[ICETECH 2022] Submission Acknowledgement

1 pesan

Agita Risma Nurhikmawati, S.Hum., MA <icetech-smtp@unipma.ac.id>
Kepada: Siti Nurhidayati <sitinurhidayati@undikma.ac.id>

12 Agustus 2022 03.41

Siti Nurhidayati:

Thank you for your submission, "REVEALING STUDENTS' ENVIRONMENT CARE ATTITUDES VIEWED BY DIFFERENT GENDER AND DEPARTMENTS" to The 3rd International Conference on Education and Technology 2022. With the online conference management system that we are using, you will be able to track its progress through the editorial process by logging in to the conference web site:

Submission URL:

<http://icetech.unipma.ac.id/index.php/icetech2022/icetech2022/author/submission/188>

Username: nurhidayatisiti

If you have any questions, please contact me. Thank you for considering this conference as a venue for your work.

Agita Risma Nurhikmawati, S.Hum., MA
The 3rd International Conference on Education and Technology 2022

3rd International Conference on Education and Technology 2022 International
Conference on Education and Technology 2022

<http://icetech.unipma.ac.id/index.php/icetech2022/icetech2022/index>



siti nurhidayati <sitinurhidayati@undikma.ac.id>

[ICETECH 2022] Editorial Decision on Paper

1 pesan

Dr. Rizal Ula Ananta Fauzi <icetech-smtp@unipma.ac.id>

21 September 2022 22.50

Kepada: Siti Nurhidayati <sitinurhidayati@undikma.ac.id>

Siti Nurhidayati:

Congratulations on the acceptance of your full paper "REVEALING STUDENTS' ENVIRONMENT CARE ATTITUDES VIEWED BY DIFFERENT GENDER AND DEPARTMENTS" to be presented at The 3rd International Conference on Education and Technology 2022 and published at Atlantis Press Conference Proceeding. Please find the enclosed reviewed manuscript and please revise your manuscript according to the reviewers' comments.

Thank you and looking forward to your participation in this event.

Dr. Rizal Ula Ananta Fauzi
Universitas PGRI madiun
Phone +6282139474255
rizalula@unipma.ac.id

Reviewer A:

1. Thematic Relevance for the "Call for Papers":
4- Definitely relevant
2. Quality of Content:
4- Good work, significant
3. Experiments Result and Preparation:
4- Good preparation and significant result
4. Quality of presentation:
4- Well written
5. Conclusion and Future Work:
4- Significant
6. Significance for theory or practice:
4- Significant
7. References:
3- Some references not relate with the paper and the cited well on the paper.
8. Originality and level of innovativeness:
3- One step forward
9. Overall recommendation:
4- Probably accept (good quality)
10. General Comment from the paper:
Please click the folowing link for author guidelines

<https://www.springer.com/gp/authors-editors/conference-proceedings/conference-proceedings-guidelines>

3rd International Conference on Education and Technology 2022 International
Conference on Education and Technology 2022

<http://icetech.unipma.ac.id/index.php/Icetech2022/Icetech2022/index>



188-Siti Nurhidayati.pdf

386K



siti nurhidayati <sitinurhidayati@undikma.ac.id>

(tanpa subjek)

1 pesan

ICETECH UNIPMA 2021 <icetech@unipma.ac.id>

25 Oktober 2022 02.55

Kepada: darmadi.mathedu@unipma.ac.id, kristiyanto94@gmail.com, Dahliapw05@gmail.com, sitinurhidayati@undikma.ac.id, adesuherman@institutpendidikan.ac.id, nawawi@ikipgriptk.ac.id, surianibasep@gmail.com, irnin.agustina@gmail.com, yunitapuspitasari20@gmail.com, yudihartono@unipma.ac.id, muhsyanur.academic@gmail.com, sukardi@unram.ac.id, akhmadsukri@undikma.ac.id

Assalamualaikum

Selamat sore bapak/ibu

kami dari panitia International conference unipma(Icetech) memohon kepada bapak ibu author untuk mengirim artikel ulang yang sudah direvisi paling lambat tanggal 26 Oktober 2022, dikarenakan deadline yang diberikan oleh Atlantis Press. semoga bapak / ibu bisa menyelesaikan tepat waktu jika melewati batas waktu itu maka akan kami anggap bahwa artikel ditarik dan tidak diterbitkan . kepada bapak/ ibu atas kerjasamanya, kami mengucapkan terima kasih
walaikum salam

LETTER ACCEPTANCE

Dear Siti Nurhidayati, et.al

Paper Number : 188
Date Accepted : September 19, 2022
Paper Title : **Revealing Students' Environment Care Attitudes Viewed by Different Gender and Departments**

Congratulations!

We are pleased to inform you that your article has been accepted and recommended for publication in the Atlantis Press Proceeding.

Please do the payment as your invoice obtained from the system to our Official Bank

Account Name : Universitas PGRI Madiun
Bank : Bank Negara Indonesia (BNI)
Account Number : 7655676541
SWIFT Code : BNINIDJXXX

The payment for presentation is Rp. 400.000,-

The payment publication of the article is Rp. 1.900.000,-

The total payment is **Rp. 2.300.000,-**

Then, upload the paper revision, to the link below before 22 October 2022:
<http://icetech.unipma.ac.id/index.php/Icetech2022/Icetech2022/login>.

In addition, as the paper quality requirements, please ensure your full paper(s) has/have fulfilled several things as follows:

1. Ensure that the references used have hyperlinks on the web, and please use the references which have DOI (digital object identifier), so it is advised very much to use journals as references for at least 8 journals.
2. Ensure the manuscript's results of plagiarism are less than 20%
3. Ensure the discussion on **Results and Discussion** must refer to recent research obtained from several current journals, especially for the last seven years.
4. Ensure your writing is readable in English. Please proofread your article before submitting it to us. In addition, this requirement is very urgent in indexing acceptance.
5. Write your full paper appropriate to the Atlantis Press template obtained on our official webpage.

Your Sincerely

Chairman of 3rd

ICETECH 2022



Dr. Tantri Mayasari, M.Pd.



Revealing Students' Environment Care Attitudes Viewed by Different Gender and Departments

Siti Nurhidayati¹✉, Endang Susantini², Safnowandi¹, Fida Rachmadiarti², Khaeruman³, and Akhmad Sukri¹

¹ Department of Biology Education, Universitas Pendidikan Mandalika, Mataram, Indonesia
sitinurhidayati@undikma.ac.id

² Department of Biology Education, Universitas Negeri Surabaya, Surabaya, Indonesia

³ Department of Chemistry Education, Universitas Pendidikan Mandalika, Mataram, Indonesia

Abstract. An attitude of caring for the environment is needed to preserve the environment. This study aims to reveal students' environmental care attitudes of different genders and departments. This research is descriptive involving 594 students from 52 schools in West Nusa Tenggara Province, Indonesia. The instrument uses an environmental care attitude questionnaire using a Likert scale of 1 to 4. This study measures five aspects of caring for the environment, aspects A1 = knowing the importance of the potential of the surrounding environment, A2 = maintaining cleanliness and beauty of the environment, A3 = realizing the benefits of protecting the environment, A4 = paying attention to environmental balance, and A5 = environmental improvement efforts. Data were analyzed using descriptive statistics and continued with one-way ANOVA analysis. The results showed that; (1) of the five aspects of environmental care, female students have a better environmental care attitude than boys ($p < .05$), (2) students in the science department have a better environmental care attitude than male students in five aspects of environmental care were observed ($p < .05$), and (3) female students in the science department had the highest mean value for environmental care, followed by male students in the science department, female students in the social department, and lastly male students in the social department.

Keywords: Gender · department · environmental care attitude

1 Introduction

Attitude combines emotional, perceptual, and cognitive processes related to environmental aspects [1]. Caring for the environment is part of the psychology expressed through expressions of liking or disliking the environment [2]. Environmental attitudes and behaviors are the roots of a sustainable future [3]. Environmental attitudes represent people's beliefs about the interconnection between humans and the environment; thus, having a positive environmental attitude enables people to identify the negative consequences of behavior on the environment [4]. Environmental care is one of the essential factors in environmental conservation [5]. Attitudes towards the environment significantly positively affect environmental, behavioral intentions, and pro-environmental behavior [6, 7].

© The Author(s) 2023

J. Handhika et al. (Eds.): ICETECH 2022, ASSEHR 745, pp. 132–140, 2023.

https://doi.org/10.2991/978-2-38476-056-5_15

Most environmental problems are caused by human behavior; thus, it is crucial to understand the environmental attitudes that underlie individual behavior towards the environment [8]. Environmental care attitudes can be influenced by several factors such as environmental knowledge [9], personality [10], and demographic factors [11]. Previous studies have revealed the influence of demographic factors such as gender and majors on students' environmental care attitudes. The results of research by Gökmen [12] and Alp et al. [13] show that gender affects attitudes towards the environment, but this result contradicts the findings of Tuncer et al. [14]. Likewise, research examining departments' influence on environmental care attitudes shows that these results are mutually supportive and contradictory to one another [9]. The difference in the results of this study may be caused by the socio-cultural background of each country [9].

In Indonesia, environmental damage continues to occur while environmental awareness and behavior are still very low [15]. Not much literature examines the effects of demographics such as gender and majors on environmental care attitudes, especially in Indonesia. One of the studies that examined the role of gender on environmental care attitudes was conducted by Suhardin [16] who found that female students had a more significant concern for the environment than boys. The results of this study need to be strengthened by further research. Research that reveals the attitude of caring for the student's environment and the factors that influence it needs to be done. This study aims to reveal students' environmental care attitudes of different genders and department.

2 Method

This research is descriptive [17]. This research describes the environmental care attitude of students of different genders and departments. The study population was 594 high school students consisting of 239 male students and 355 female students with two different departments, namely the science department, with as many as 299 students, and the social department, with as many as 295 students. Students came from 52 randomly selected schools from three regions, namely the islands of Lombok, Sumbawa, and Bima, West Nusa Tenggara.

The research instrument used a student environmental care attitude questionnaire consisting of 23 statements with five indicators or aspects. The questionnaire consists of four answer choices, namely 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = strongly disagree. The questionnaire has met the criteria of good validity and reliability [18]. There are five indicators or aspects of environmental care that are measured in this study, namely aspects A1 = knowing the importance of the potential of the surrounding environment, A2 = maintaining cleanliness and beauty of the environment, A3 = realizing the benefits of protecting the environment, A4 = paying attention to environmental balance, and A5 = environmental improvement efforts. The data in the form of scores are then transformed into percentages [19] and then analyzed descriptively [20] to find N, the average value, and the total. Finally, the data were analyzed using one-way ANOVA [21] to determine the differences in students' environmental care attitudes in different genders and departments. The whole process of data analysis was assisted using SPSS for windows software [22].

3 Result and Discussion

3.1 The Student's Environment Care Attitude of Different Genders

The profiles of five aspects of students' environmental care attitudes of different genders are shown in Table 1.

Table 1 shows that female students have a better environmental care attitude than male students for all aspects of environmental care ($p < .05$), namely in aspects A1 (knowing the importance of the potential of the surrounding environment), A2 (maintaining cleanliness and beauty of the environment), A3 (realizing the benefits of protecting the

Table 1. The results of measuring five aspects of students' environmental care attitudes

Aspects	Gender	N	Mean	ANOVA					
					Sum of Squares	df	Mean Square	F	Sig.
A1	Male	239	84.7699	Between Groups	2555.914	1	2555.914	40.207	.000
	Female	355	89.0000	Within Groups	37632.343	592	63.568		
	Total	594	87.2980	Total	40188.258	593			
A2	Male	239	85.7741	Between Groups	2902.262	1	2902.262	36.793	.000
	Female	355	90.2817	Within Groups	46697.380	592	78.881		
	Total	594	88.4680	Total	49599.642	593			
A3	Male	239	86.7155	Between Groups	3574.959	1	3574.959	41.827	.000
	Female	355	91.7183	Within Groups	50598.484	592	85.470		
	Total	594	89.7054	Total	54173.443	593			
A4	Male	239	77.7981	Between Groups	4147.401	1	4147.401	38.443	.000
	Female	355	83.1866	Within Groups	63867.646	592	107.885		
	Total	594	81.0185	Total	68015.046	593			
A5	Male	239	81.2762	Between Groups	4429.776	1	4429.776	54.236	.000
	Female	355	86.8451	Within Groups	48352.253	592	81.676		
	Total	594	84.6044	Total	52782.029	593			

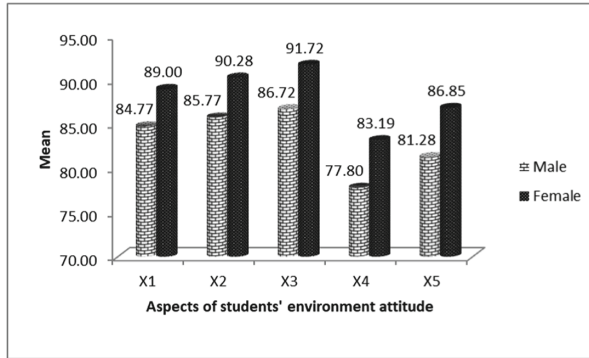


Fig. 1. Comparison of female and male students' environmental care attitudes on five aspects

environment), A4 (paying attention to environmental balance), and A5 (environmental improvement efforts). These results strengthen the findings of Sukri et al. [9], which revealed that women have higher environmental knowledge than men. Table 1 and Fig. 1 also indicate that female students' environmental care attitudes in two aspects, A2 and A3, show the highest scores compared to the other aspects, with scores of 90.28 and 91.72, respectively. Aspects A2 and A3 relate to maintaining the cleanliness and beauty of the environment. These results indicate that female student are more concerned about cleanliness than boys. According to Sarkawi et al. [23]; this is probably due to the concept of cleanliness as a woman's responsibility which is instilled since childhood, which causes women to like cleanliness compared to men. This can also be seen in the A4 aspect (paying attention to the balance of the environment) with the gap in grades between male and female students, which is quite far. The results of this study are also reinforced by the findings of Dhenge [24], who revealed that women have a better attitude toward environmental protection than men.

3.2 The Student's Environment Care Attitude of Different Department

The results of ANOVA differences in students' environmental care attitudes in five aspects of observation are shown in Table 2.

The results in Table 2 show differences in students' environmental care attitudes for the five aspects of environmental care attitudes in the science and social department. These results reveal that students in the science department have a better environmental care attitude than students in the social department. This result is also reinforced by Fig. 2, which shows that the average value of environmental care attitudes of students majoring in science in four aspects, namely A1, A2, A3, and A5, is very high compared to other aspects namely the A4 aspect. The results of this study are also supported by Sukri et al. [9], who found that students in the science major have higher knowledge than the social department.

The high environmental care attitude of students in the science department may be caused by several things, namely (1) students in the science department have an initial understanding of the importance of protecting the environment through the insights provided by the teacher at the school. Simbolon [25] reinforces this assumption, revealing

Table 2. ANOVA differences in students’ environmental care attitudes

Aspect	Department	N	Mean	Anova					
					Sum of Squares	df	Mean Square	F	Sig.
X1	Science	299	93.2441	Between Groups	21286.775	1	21286.775	666.708	.000
	Social	295	81.2712	Within Groups	18901.482	592	31.928		
	Total	594	87.2980	Total	40188.258	593			
X2	Science	299	95.2341	Between Groups	27562.111	1	27562.111	740.408	.000
	Social	295	81.6102	Within Groups	22037.532	592	37.226		
	Total	594	88.4680	Total	49599.642	593			
X3	Science	299	97.3077	Between Groups	34795.750	1	34795.750	1063.031	.000
	Social	295	82.0000	Within Groups	19377.692	592	32.733		
	Total	594	89.7054	Total	54173.443	593			
X4	Science	299	85.0962	Between Groups	10010.422	1	10010.422	102.167	.000
	Social	295	76.8856	Within Groups	58004.624	592	97.981		
	Total	594	81.0185	Total	68015.046	593			
X5	Science	299	90.3846	Between Groups	20115.327	1	20115.327	364.539	.000
	Social	295	78.7458	Within Groups	32666.701	592	55.180		
	Total	594	84.6044	Total	52782.029	593			

that the school environment affects students’ environmental care attitudes. In addition, Yusup [26] and Melaville et al. [27] state that education plays an essential role in increasing students’ environmental knowledge, and (2) students in the science department are familiar with activities that are in direct contact with the environment [28]. According to Erdogan et al. [29], students who have activities directly related to the environment have better environmental knowledge than those who do not.

A descriptive analysis was carried out to find out students’ environmental care attitudes seen from the interaction between gender and department, which is shown in Fig. 3. Figure 3 reveals a trend in students’ environmental care attitudes in different genders and majors. The results showed that female students in the science department had the highest average environmental care attitude value, 93.78. Furthermore, male students in

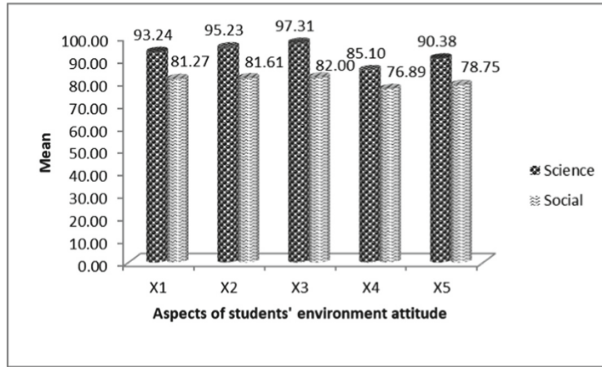


Fig. 2. Comparison of students' environmental care attitudes in a different department

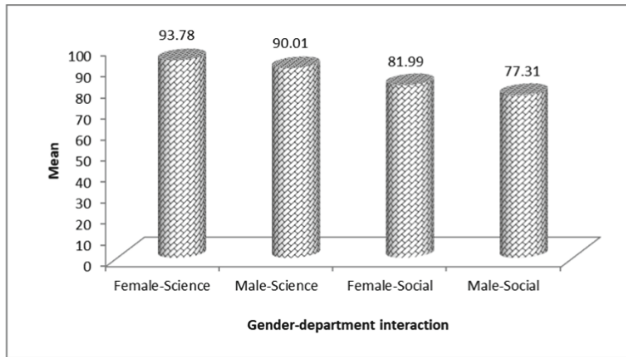


Fig. 3. The average value of students' environmental care attitudes in different genders and department

the science department took the second position with a score of 90.01, the third position was female students in the social department with a score of 81.99, and finally, male students in the social department with a score of 77.31. These results further reinforce that there are differences in environmental literacy [30], environmental care attitudes [31], and environmental behavior [7, 32] between female and male students. In addition, this research is evidence that majors influence students' environmental care attitudes [9].

4 Conclusion

The results showed that female students had a better environmental care attitude than males in terms of five aspects of environmental care attitude ($p < .05$). In addition, female students in the science department had a better environmental care attitude than male students based on five aspects of environmental care ($p < .05$). Female students in the science department had the highest average value of environmental care attitudes, followed by male students in the science department, female students in the social department and finally the male students in the social department. The results of this study have

implications for the importance of instilling an attitude of caring for the environment in schools, both in the science department and the social department.

Acknowledgment. The researcher expresses his gratitude to Kemendikbudristek for funding research through the PKPT scheme in 2022.

References

1. E. Eilam and T. Trop, "Environmental attitudes and environmental behavior-which is the horse and which is the cart?," *Sustainability*, vol. 4, no. 9, 2012.
2. T. L. Milfont and J. Duckitt, "The environmental attitudes inventory: A valid and reliable measure to assess the structure of environmental attitudes," *J. Environ. Psychol.*, vol. 30, no. 1, pp. 80–94, 2010.
3. S. Otto, G. W. Evans, M. J. Moon, and F. G. Kaiser, "The development of children's environmental attitude and behavior," *Glob. Environ. Chang.*, vol. 58, no. 101947, pp. 1–6, 2019.
4. P. Janmaimool and S. Khajohnmanee, "Roles of environmental system knowledge in promoting university students' environmental attitudes and pro-environmental behaviors," *Sustain.*, vol. 11, no. 16, 2019.
5. M. Faccioli, M. Czajkowski, K. Glenk, and J. Martin-Ortega, "Environmental attitudes and place identity as determinants of preferences for ecosystem services," *Ecol. Econ.*, vol. 174, 2020.
6. P. Liu, M. Teng, and C. Han, "How does environmental knowledge translate into pro-environmental behaviors?: The mediating role of environmental attitudes and behavioral intentions," *Sci. Total Environ.*, vol. 728, 2020.
7. L. V. Casaló and J. J. Escario, "Heterogeneity in the association between environmental attitudes and pro-environmental behavior: A multilevel regression approach," *J. Clean. Prod.*, vol. 175, 2018.
8. R. B. Domingues and G. Gonçalves, "Assessing environmental attitudes in Portugal using a new short version of the Environmental Attitudes Inventory," *Curr. Psychol.*, vol. 39, no. 2, 2020.
9. A. Sukri, M. A. Rizka, H. G. Sakti, M. Lukitasari, and E. Purwanti, "The Effect of Demographic Factors on Environmental Knowledge of University Students in Indonesia," *Int. J. Eval. Res. Educ.*, vol. 11, no. 4, 2022.
10. M. Pavalache-Ilie and A. M. Cazan, "Personality correlates of pro-environmental attitudes," *Int. J. Environ. Health Res.*, vol. 28, no. 1, 2018.
11. E. Silalahi, S. Syarifuddin, and M. Sudibyo, "Faktor-faktor yang Mempengaruhi Terhadap Pengetahuan Tentang Lingkungan pada Siswa Tingkat SMP/MTS N dan SMA/MAN Adiwiyata di Kota Labuhanbatu," *J. Pendidik. Biol.*, vol. 5, no. 3, pp. 146–153, 2016.
12. A. Gökmen, "The effect of gender on environmental attitude: A meta-analysis study," *J. Pedagog. Res.*, vol. 5, no. 1, pp. 243–257, 2021.
13. E. Alp, H. Ertepinar, C. Tekkaya, and A. Yilmaz, "A statistical analysis of children's environmental knowledge and attitudes in Turkey," *Int. Res. Geogr. Environ. Educ.*, vol. 15, no. 3, 2006.
14. G. Tuncer, C. Tekkaya, S. Sungur, and H. Ertepinar, "The Effects of Region and Gender on Students' Attitudes towards Environment Cinsiyet ve Kırsal – Kentsel Kesim Farklılıkların Öğrencilerinin Çevreye Yönelik Tutumlarına Etkisi," *Educ. Sci.*, vol. 30, no. 136, pp. 77–83, 2005.

15. L. Parker, "Environmentalism and education for sustainability in Indonesia," *Indones. Malay World*, vol. 46, no. 136, pp. 235–240, 2018.
16. S. Suhardin, "Pengaruh Perbedaan Jenis Kelamin Dan Pengetahuan Tentang Konsep Dasar Ekologi Terhadap Kepedulian Lingkungan," *EDUKASI J. Penelit. Pendidik. Agama dan Keagamaan*, vol. 14, no. 1, pp. 117–132, 2016.
17. S. Sahin and J. Mete, "A Brief Study on Descriptive Research:," *Int. J. Res. Anal. Humanit.*, vol. 1, no. 1, 2021.
18. S. Nurhidayati, E. Susantini, S. Safnowandi, F. Rachmadiarti, and K. Khaeruman, "The Uncovering Environmental Knowledge of Senior High School Students about the Local Potential Area Based on Reviewed from Gender and Grade," in *Proceedings of the 2nd International Conference on Education and Technology (ICETECH 2021)*, 2022, vol. 630, pp. 215–220.
19. A. Sukri, M. A. Rizka, H. G. Sakti, B. M. Harisanti, and A. Muti'Ah, "The effect of local primacy-based comic media on students' conservation attitudes," in *Journal of Physics: Conference Series*, 2020, vol. 1521, no. 4, pp. 1–5.
20. P. Mishra, C. M. Pandey, U. Singh, A. Gupta, C. Sahu, and A. Keshri, "Descriptive statistics and normality tests for statistical data," *Ann. Card. Anaesth.*, vol. 22, no. 1, 2019.
21. E. Ostertagová and O. Ostertag, "Methodology and Application of Oneway ANOVA," *Am. J. Mech. Eng.*, vol. 1, no. 7, 2013.
22. P. Greasley, *Quantitative Data Analysis using SPSS: An Introduction for Health & Social Science*. 2008.
23. D. Sarkawi, A. Priadi, and A. Oktaviani, "Environmental Knowledge and Environmental Friendly Behavior Based on Gender and Education Level.," *Int. J. Adv. Res.*, vol. 5, no. 6, pp. 2106–2113, 2017.
24. S. A. Dhenge, S. N. Ghadge, M. C. Ahire, S. D. Gorantiwar, and M. G. Shinde, "Gender attitude towards environmental protection: a comparative survey during COVID-19 lockdown situation," *Environ. Dev. Sustain.*, 2022
25. B. Simbolon, "Investigating the students' attitude on environmental care at universitas Kristen Indonesia," *J. Adv. Res. Dyn. Control Syst.*, vol. 12, no. 2, 2020.
26. F. Yusup, "Factors Influencing Senior High School Students' Environmental Knowledge," *J. Phys. Conf. Ser.*, vol. 1233, no. 1, 2019.
27. M. J. Melaville, A., Berg, A. C., & Blank, "Community-Based Learning: Engaging Students for Success and Citizenship," pp. 285–294, 2012.
28. F. A. Faize and M. Akhtar, "Addressing environmental knowledge and environmental attitude in undergraduate students through scientific argumentation," *J. Clean. Prod.*, vol. 252, 2020.
29. M. Erdogan, S. Akbunar, U. O. Asik, H. Kaplan, and C. G. Kayir, "The effects of demographic variables on students' responsible environmental behaviors," *Procedia - Soc. Behav. Sci.*, vol. 46, no. 2, pp. 3244–3248, 2012.
30. M. Muslih, "Gender and Environmental Literacy on Islamic-based High School Students Under Spiritual Values," *MUWAZAH J. Kaji. Gend.*, vol. 13, no. 1, 2021.
31. S. Şahin, H., Kılıç, İ., & Erkal, "An analysis of the environmental knowledge and attitudes of university students," *Int. J. Interdiscip. Environ. Stud.*, vol. 7, no. 1, pp. 1–10, 2012.
32. M. Sakellari and C. Skanavis, "Environmental Behavior and Gender: An Emerging Area of Concern for Environmental Education Research," *Appl. Environ. Educ. Commun.*, vol. 12, no. 2, 2013.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

