Arnold BERNACIAK • Mohammad Z. YAMIN • Racha RUSTOM • Anna BERNACIAK • Martyna JANICKA

ENVIRONMENTAL AWARENESS OF POLISH AND ARAB STUDENTS: CROSS-CULTURAL COMPARATIVE STUDY

Arnold **Bernaciak** (ORCID: 0000-0003-1099-286X) – *WSB University in Poznan, Poland*
Mohammad Z. **Yamin** (ORCID: 0000-0003-1141-5036) – *Baylor University, United States*
Racha **Rustom** (ORCID: 0000-0002-1028-8605) – *ABAAD Resource Center for Gender Equality, Lebanon*
Anna **Bernaciak** (ORCID: 0000-0001-8603-1323) – *Poznan University of Economics and Business, Poland*
Martyna **Janicka** – *Adam Mickiewicz University, Poznan, Poland*

Correspondence address:
Powstańców Wielkopolskich Street 5, 61-895 Poznań, Poland
e-mail: arnold.bernaciak@wsb.poznan.pl

ABSTRACT: The article aims to define the differences and similarities between students of Polish and Arab nationality related to environmental awareness. The study has been carried out as a diagnostic survey using the proprietary questionnaire form. The survey included 418 Polish students representing 44 universities and 110 Arab students from 7 countries and 40 universities. Both groups have been shown to have their own distinct characteristics, although some similarities can also be found. The greatest differences are revealed in the scope of subjective assessment of the state of the environment, types of pro-environmental actions taken by them and readiness to make sacrifices to the environment. The similarities are noticeable in declared knowledge about the environment, the sources of information on the environment and its quality and opinions on the most important environmental threats. The most important reasons for the observed variability are differences between environmental conditions in Poland and on the Arabian Peninsula, differences in the scope of environmental hazards and problems, as well as various cultural conditions (especially religious ones) and related values.

KEYWORDS: environmental awareness, Polish students, Arab students

Introduction

The definition of culture proposed by Hofstede, Hofstede and Minkov (2010) states that culture is a collective programming of the mind that distinguishes the member of one group or category of people from others. Separate cultures are created by national, ethnic, linguistic, and religious groups, to name a few. Individual groups create their own ways of thinking, customs and institutions that influence the perception of the world and attitudes of members of a given community (Benedict, 1934, 2020). Üstün and Celep (2007) point out that value and value system are what connects culture and ecological awareness. They emphasise that the concept of value is crucial both for culture and for caring for the environment. Value is one of the components of culture and shows "what seems important in life". The role of the concept of value in the definition of culture can be taken as an indication of the relationship between culture and ecological awareness.

When defining ecological awareness, Piontek et al. (1997) indicate that it includes a certain type of attitude assessed in terms of man's relationship to the surrounding natural environment. When talking about the "type of attitudes", it is assumed that there are differentiations in this respect, allowing for the distinction of various types. Culture is the differentiating factor. Kasprzak (2000) points to the link between ecological awareness and culture. He emphasises that the study of ecological awareness is always the study of a specific human community. He points out that the level or quality of human consciousness on any topic depends on the culture, the level of culture of a given society, as well as separate organisations. Therefore, the level of ecological awareness is not the same in all places and all human environments.

Kollmuss and Agyeman (2010) carry out detailed analyses of the factors influencing the shaping of pro-ecological behaviour. They aim to explain the gap between the possession of environmental knowledge and awareness and displaying pro-environmental behaviour, influenced, among others, by social and cultural conditions, as discussed by the authors.

The research problem undertaken in the study comes down to the question of whether the differences between the Polish and Arab cultures are also revealed in the field of ecological awareness. The purpose of the article is the identification these differences and try to explain their causes. Franzen and Meyer (2009) provide an important argument for undertaking research in this area. They note that there are many cross-national environmental agreements that call for radical changes, and it is essential for any such new policies to succeed. To be successful in this field, mutual intercultural understanding is necessary – it is important to understand attitudes, behaviours,

DOI: 10.34659/eis.2022.82.3.499

and their determinants. Kokkinen (2013) emphasises that to understand better the world we live in, we wish to understand cross-national differences in environmental awareness.

An overview of the literature

Ecological awareness is the subject of the growing interest of researchers from many scientific disciplines. Although most of the research was conducted about individual countries or social groups, many comparative studies were also carried out (e.g. Pisano & Lubell, 2017; Rydzewski, 2016; Harju-Autti & Kokkinen, 2014; Franzen & Vogl, 2013; Kokkinen, 2013; Ozil et al., 2008; Marquart-Pyatt, 2007). Students have been the subject of numerous studies (e.g. Boca & Sarach, 2019; Cherdymova et al., 2018; Xiong et al., 2013). Many studies analysing environmental aspects have been carried out both in Poland (e.g. Ministerstwo, 2021; Kłos, 2015, 2014; Gliński, 1988) and in Arab countries (e.g. Friman et al., 2018; Nasser et al., 2020). The conducted research characterises the studied societies in a given, specific moment in time. They show ecological awareness adequate to the environmental resources possessed, the environmental values present in a given area and, above all, to the existing environmental problems. In terms of dynamics, they indicate growing ecological knowledge and changes in social attitudes towards developing problems in human-environment relations.

The issue of the differences between Arab and Western cultures has been the subject of many studies and analyses. Research has been undertaken primarily from a political, economic, social and security perspective (Manshur, 2019; Wiest & Eltantawy, 2015; Hollingworth, 2015). Most often, comparative studies have considered the United States, which symbolises Western culture – less often than other Western countries (Benaida & Arif, 2013; Barry & Bouvier, 2011). So far, no comparative research has been undertaken in the field of environmental awareness of students representing Arab culture and Polish students representing European culture. Research in this area seems to be interesting due to the large diversity of ecological problems and cultural diversity mainly determined by religious factors (e.g. Inkpen & Baily, 2020; Skribekk et al., 2020; Zemo & Nigus, 2020; Sachdeva, 2016) or by relating these behaviours to moral judgments (Markowitz & Shariff, 2012).

Research methods

The subject of the research was environmental awareness. Its object included students of first and second cycle courses of study and long cycle Master's degree students representing majors established in all fields of science: humanities, social sciences, life science, medical sciences and technical

DOI: 10.34659/eis.2022.82.3.499

sciences. Two research samples were determined. The first included 418 Polish students representing 44 Polish universities. The second research sample included 110 Arab nationality students coming from 7 countries: Algeria, Jordan, Lebanon, Palestine, Bahrain, Iraq and Egypt. The respondents represented 40 universities. The comparatively smaller number of Arab students in the sample resulted from the limited organisational possibilities of conducting the research. The gender structure in both samples was similar. Women constituted 72.2% and men 27.8% of the Polish sample, while the Arab sample included 70.9% of women and 29.1% of men, respectively (Table 1).

Larger differences concerned the number of participants that studied majors related to certain fields of science. In particular, this regarded the participation of people involved in social science, humanities and life science in the structure of the sample. Those differences might have affected the study's final results and the possibility of drawing unambiguous conclusions. Unfortunately, the insufficient number of participants in the particular groups did not allow for the statistical analysis to be conducted that would determine the impact of specific characteristics on the final results. Comparisons of the whole sample could only be performed. This was the factor that made the conducted research have a pilot character.

Table 1. The structure of the sample groups

Feature	Number of respondents			
	Poles		Arabs	
	No.	%	No.	%
Gender				
Male	116	27.8	78	29.1
Female	302	72.2	32	70.9
Field of science				
Humanities (including arts)	50	12.0	28	25.5
Technical sciences (including agricultural sciences)	52	12.4	17	15.5
Medical sciences	72	17.2	25	22.7
Life sciences	37	8.9	19	17.3
Social sciences	207	49.5	21	19.1
Total	418	100	110	100

Source: authors' work.

DOI: 10.34659/eis.2022.82.3.499

The primary research material consisted of questionnaires completed by the respondents. An original questionnaire form was used, examining both the knowledge and attitudes of representatives of target groups. Questions asked concerned: 1) assessment of own knowledge in the field of ecology and environmental protection, 2) assessment of the state of the natural environment, 3) the most significant contemporary threats to the environment, 4) sources of knowledge in the field of ecology and environmental protection, 5) taking action to protect the environment, 6) motivation to take action, 7) type of action taken 8) assessment of the actual impact of action taken on the state of the environment, 9) reasons for not taking action to protect the environment 10) readiness to lower the level of quality of life for environmental reasons and 11) readiness to limit tourist trips.

The research was performed with the use of the CAWI method. The diagnostic survey was conducted from March to December 2021. The analyses were partially based on the results of previous research concerning Polish students aimed at determining the impact of their field of study on environmental awareness (Bernaciak, Bernaciak, & Janicka, 2021).

Results of the research

Polish and Arab students assess their knowledge of ecology and the state of the environment similarly and relatively well. More than 50% of respondents of both groups describe it as good or very good (Figure 1).

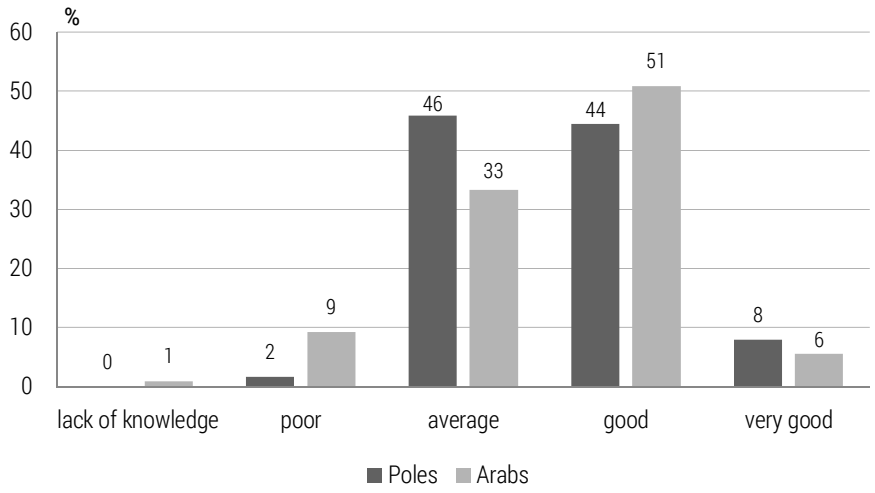

Figure 1. Knowledge of ecology and the state of the environment

Source: authors' work.

DOI: 10.34659/eis.2022.82.3.499

Large differences are revealed in the assessment of the state of the environment. Polish students are much more pessimistic than Arab students. More than 70% of them assess that state as bad or bad, and only 2% describe it as good or very good. These opinions are completely different in the case of Arab students. Only 33% of them asses the current state of the environment as bad or very bad, while more than 42% describe it as good and very good (Figure 2).

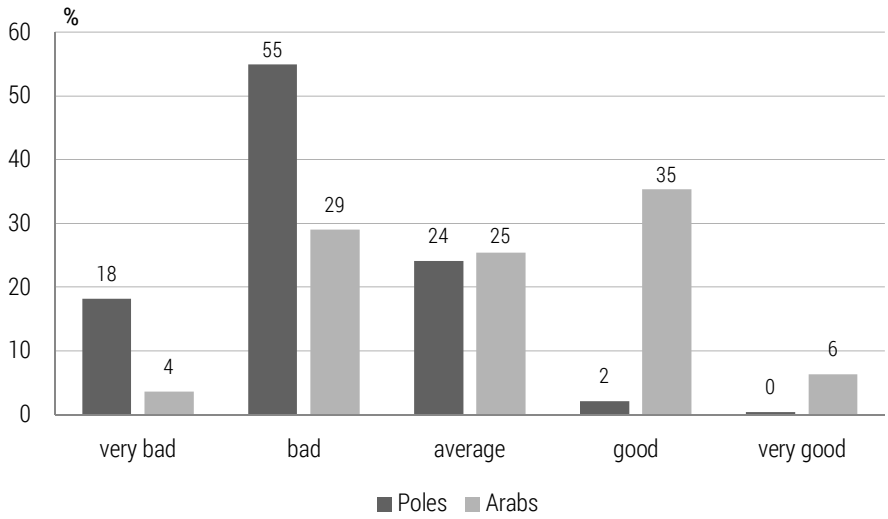

Figure 2. Assessment of the current state of the environment

Source: authors' work.

Despite the discrepancies in the assessment of the state of the environment, students of both cultures identify the most important threats to the environment very similarly. Among the five most serious ones, they indicate water and air pollution, poor waste management, deforestation, and consumer lifestyle. Poles add loss of natural habitats to the above list, and Arabs add a low level of environmental education (Table 2).

Social media are the most important source of knowledge about ecology and the state of the environment for both groups of students. Arab students pay more attention to scientific journals while Poles rather learn from Internet articles and podcasts. Both for Arabs and Poles, formal education is a less important source of knowledge in the subject area (Table 3).

DOI: 10.34659/eis.2022.82.3.499

Table 2. The most significant threats to the environment in the students' opinion (% of indications)

No.	Poles	%	Arabs	%
1	Water and air pollution	85	Water and air pollution	55
2	Poor waste management	69	Poor waste management	43
3	Deforestation	64	Low level of environmental education Deforestation	37
4	Consumer lifestyles	62		
5	Loss of natural habitats	50	Consumer lifestyle	34

Source: authors' work.

Table 3. Sources of knowledge about ecology and the state of the environment (% of responses)

No.	Poles	%	Arabs	%
1	Social media	75	Social media	73
2	Internet articles/podcasts	72	Scientific journals	32
3	Educational films TV programmes	45	Internet articles/podcasts	29
4			TV programmes	28
5	Formal education	40	Formal education	27

Source: authors' work.

More Polish (87%) than Arab (62%) students declare taking pro-environmental actions. The following three reasons for taking environmental actions have been most important for both groups: concern for own health, concern for natural resources and personal values. Such arguments as consequences of the undertaken actions for the next generations, concern for water resources and financial benefits (saving money) (Figure 3) are less important.

Significant differences are revealed in the types of declared pro-environmental activities. While 77% of Polish students take reusable bags, in the case of Arab students, it is only 11%. Similar disproportions apply to waste segregation and taking care of greenery. In the first case, the actions are undertaken by 76% of Polish students and 14% of Arabs in the second – 68% and 23%. Polish students most frequently undertake the activities discussed above. The activities most frequently undertaken by Arab students include saving water, saving energy and using public transport instead of a private ones.

DOI: 10.34659/eis.2022.82.3.499

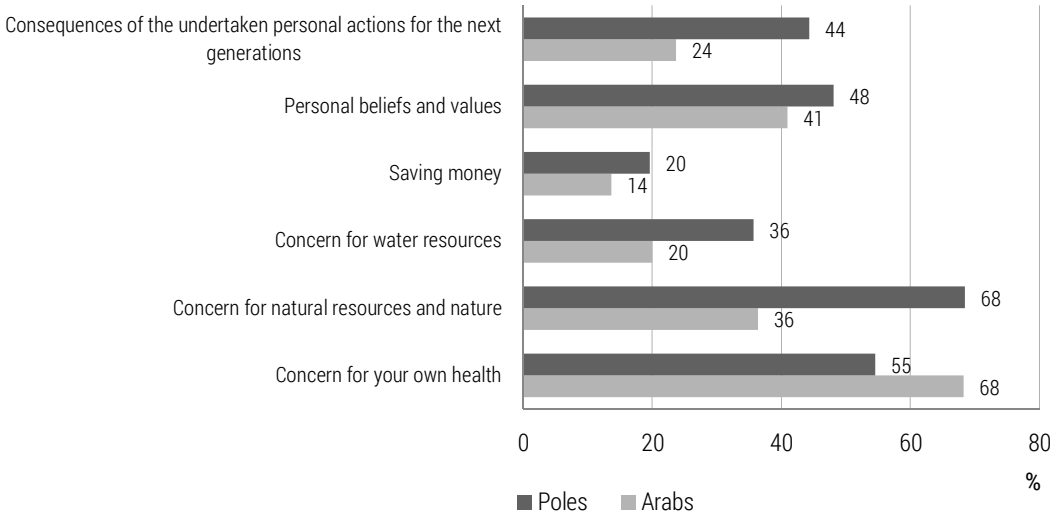

Figure 3. Motivations for sustainable decisions

Source: authors' work.

Students who do not take up pro-ecological activities indicate the reasons for such behaviour. The most important reasons are common to both groups. They include difficulties in changing habits, little knowledge of the state of the environment and ways of protecting it and the lack of initiative and motivation on the part of the authorities. A fast and convenient lifestyle is the only but important difference indicated by Polish students as the most important reason for not taking up pro-ecological activities. Arab students do not consider this reason to be particularly important (Table 4).

Table 4. Reasons for not taking up pro-ecological activities (% of indications)

No.	Poles	%	Arabs	%
1	Fast and convenient lifestyle	72	Difficulties in changing habits	55
2	Little knowledge of the state of the environment and ways of protecting it	66	Little knowledge of the state of the environment and ways of protecting it	54
3	Difficulties in changing habits	65	Lack of initiative and motivation on the part of the authorities	51
4	Belief that individual action is not effective	61	Belief that individual action is not effective	37
5	Lack of initiative and motivation on the part of the authorities	43	Inability to take action	24

Source: authors' work.

DOI: 10.34659/eis.2022.82.3.499

Significant differences can be noticed in the declared attitudes of students of both groups. A much larger percentage of Arab students, when compared to Polish students, declare their readiness to lower their quality of life and to limit their holiday trips due to environmental protection. 90% of Arabs are ready to reduce their quality of life for this reason, while in the case of Poles, it is only 67%. An even greater disproportion appears in the case of declarations of limiting holiday travels. Readiness to limit this scope is declared by as many as 85% of Arabs and only 33% of Poles (Figure 4).

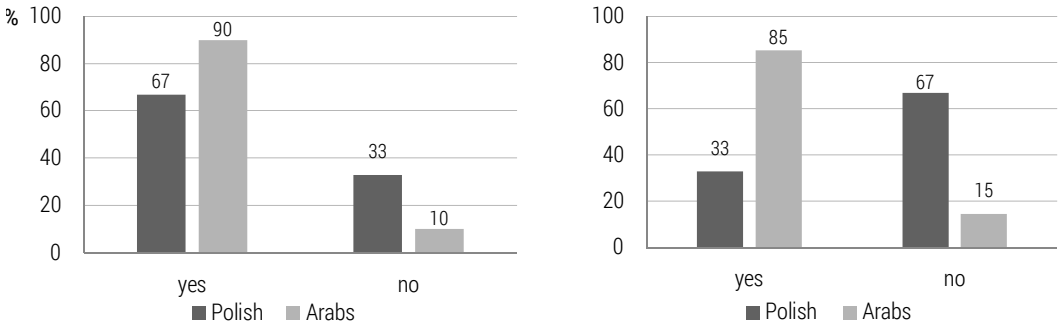

Figure 4. Readiness to lower the quality of life (on the left) and to limit holiday trips (on the right) for the benefit of environmental protection

Source: authors' work.

Conclusions

The conducted research points out to the supra-cultural significance of contemporary environmental problems. Both Polish and Arab students notice the challenges facing societies in this regard. The respondents qualify the most significant environmental threats in a similar way and recommend taking similar precautions. The differences become apparent mainly in the appraisal of the environment's current condition and in the declared readiness to offer sacrifices for its benefit. When assessing the condition of the environment, the respondents referred to their immediate vicinity, hence the dissimilarities in the appraisal of the environmental situation that may derive from the fundamental differences between the ecosystems in Poland and in Arab countries. The differences in the readiness of the respondents to sacrifice themselves for the environment may be ascribed to cultural factors, since behind the expressed declarations, there are specific values and their systems, as pointed out by Üstün and Celep (2007), that link culture and environmental awareness. The identified differences in the readiness of the respondents to sacrifice themselves for the benefit of the environment may

DOI: 10.34659/eis.2022.82.3.499

confirm the results of all the previous research indicating the connection between ecological awareness and culture.

Both Arab and Polish students well assess their knowledge of ecology and the state of the environment. This proves a good understanding of most university students on common environmental problems in their countries. According to a study conducted at Holon Institute of Technology, most students in Arabic-speaking countries get educated on environmental matters at their elementary school level (Friman, 2018). In addition, many universities offer few environmental elective courses for students majoring in non-environmental disciplines. On the other hand, in Poland, education has improved since the educational reform in 1999 (Grodzińska-Jurczak, 2004). Environmental education has been implemented in most school grades and university programs, which in turn justifies the strong knowledge that Polish students presented in the survey.

However, the current formal education needs further development as the results were not ideally reflected throughout the rest of the survey. This could be because these courses were found to be the least important source of information. Both Polish and Arab students rely on other sources to enrich their knowledge, mainly social media, which are of main interest to students at this age. However, it is advised that Polish students should give more focus on reviewing scientific articles rather than Internet articles and educational films, as it is the main source in acquiring reliable studies from professional scientists in the field.

Nevertheless, despite the above-mentioned good results, more than 42% of Arab students assessed the status of the environment as good or very good. This urges the need to improve the current implemented environmental education system among Arab students at either the university level or in their elementary schools. Therefore, it is recommended that more educational courses, seminars, and activities should be conducted among Arab students to increase their deep understanding, corporate responsibility, and knowledge. In short, environmental educational systems should be re-assessed and reformed. This was also proven through the survey of Arab students, as shown in Table 1.

Nevertheless, it is quite clear that environmental education among Polish students is stronger and better conveyed, as reflected in their assessment of the current state of the environment assessed as poor by more than 70% of students. The survey gave a clear perception on the importance of digital media in this matter. It seems that students at this age prefer to get their knowledge through an entertainment medium. Broadcasters, radio presenters, TV program directors, filmmakers, and social media channels have a big responsibility in educating the public, mainly students. Governments are

DOI: 10.34659/eis.2022.82.3.499

responsible for providing more well-made environmental programs through the different types of media targeting students.

It is a common thought among students that water and air pollution problems are the main environmental threat, followed by poor waste management implemented by governments. Sustainable waste management strategies in Poland are developing through waste segregation at the source, fostering recycling, and reduction of landfills. Still, the system remains unsatisfactory (Przydatek, 2020).

Both Polish and Arab students agree on the importance of consumer lifestyle in maintaining a healthy environment. 68% of Arab students classified their concern for health as the first reason motivating them for taking sustainable decisions; this contradicts recent studies, which proved that smoking cigarettes to be very high among university students was harmful to human health (Nasser, 2020). However, in Lebanon, the current failure of the waste management sector and the waste crisis has led to the spread of various diseases among the Lebanese population. This, in turn, justifies health as the primary concern among Arab students. Polish students, however, focused more on the conservation of natural resources, which is a result of the better environmental education discussed earlier. Another reason could be the fact that Poland lies in a diverse environment, including mixed forest zone, mountains, sea (the Baltic Sea), lakes, and ponds. Polish students tend to appreciate nature and therefore reflect their main reason toward environmental protection. However, the convenient lifestyle, difficulties in changing current habits, and lack of knowledge constitute the main reason preventing Arab and Polish students from taking further action. This results in an irresponsible lifestyle that should be changed, starting from education reform to parental raising and government responsibility, which was explained to be weak through the survey.

Fortunately, most students are willing to lower their quality of life to preserve the environment if the supporting factors are initiated, including government and educational support. Unlike Arab students who travel using their own cars due to the poor public transportation system found in most Arabic countries, limiting holiday trips is not a solution for Polish students as most students claim their dependency on public transportation for travelling on holiday to neighbouring countries within the EU.

To sum up, the paper focuses on assessing university students' environmental awareness among Arabic and Polish cultures. Students are aware of the environmental problems faced and are willing to provide initiatives to preserve the environment. However, the paper concludes that an increase in education, campaigns, workshops, authorities' support and a proper social media awareness is required to fulfil this will. Authorities in liaising with universities and media are to work on addressing students through their most

DOI: 10.34659/eis.2022.82.3.499

attractive educational medium, including social media, films, TV programs, and the like.

The interpretative possibilities concerning the results of the research are limited because of the differences in the number and the structure of the research samples. To assure the reliability of the achieved results, the continuation of the research would be required. Moreover, the extension and broadening of the study, the identification of culture-related factors, including the religious ones, that result in the differentiation of the environmental awareness, and conducting the comparative study covering students of cultures other than those already analysed, would render the research work more interesting.

The contribution of the authors

Arnold Bernaciak: conception – 60%, literature review – 60%, acquisition of data – 5%, analysis and interpretation of data – 30%.

Mohammad Z. Yamin: conception – 30%, literature review – 10%, acquisition of data – 20%, analysis and interpretation of data – 30%.

Racha Rustom: acquisition of data – 20%, analysis and interpretation of data – 20%.

Anna Bernaciak: conception – 20%, literature review – 30%, acquisition of data – 5%, analysis and interpretation of data – 10%.

Martyna Janicka: acquisition of data – 50%, analysis and interpretation of data – 10%.

References

Barry, W., & Bouvier, G. (2011). Cross-cultural communication: Arab and Welsh students' use of Facebook. Journal of Arab & Muslim Media Research, 4(2-3), 165-184.

Benaida, M., & Arif, M. (2013). Differences Between Arab World Culture and British Culture Based on Hofstede Dimensions and Their Impact on Web Design. *Proceedings of the 11th International Post Graduate Research Conference (IPGRC).* https://www.researchgate.net/publication/334615368_Differences_Between_Arab_World_Culture_and_British_Culture_Based_on_Hofstede_Dimensions_and_Their_Impact_on_Web_Design

Benedict, R. (1934, 2020). *Patterns of Culture.* London: Routledge.

Bernaciak, A., Bernaciak, A., & Janicka, M. (2021). The Field of Study as a Factor Differentiating Students Level of Environmental Awareness. Economy and Environment, 77(2), 144-161. https://doi.org/10.34659/2021/2/17

Boca, G. D., & Saraçlı, S. (2019). Environmental education and student's perception, for sustainability. Sustainability, 11(6). https://doi.org/10.3390/su11061553

Cherdymova, E. I., Afanasjeva, S. A., Parkhomenko, A. G., Ponyavina, M. B., Yulova, E. S., Nesmeianova, I. A., & Skutelnik, O. A. (2018). Student ecological consciousness as determining component of the ecological-oriented activity. Eurasian Journal of BioSciences, 12(2), 167-174.

DOI: 10.34659/eis.2022.82.3.499

Franzen, A., & Vogl, D. (2013). Two decades of measuring environmental attitudes: A comparative analysis of 33 countries. Global Environmental Change, 23(5), 1001-1008. http://dx.doi.org/10.1016/j.gloenvcha.2013.03.009

Franzen, A., & Meyer, R. (2009). Environmental attitudes in cross-national perspective: A multilevel analysis of the ISSP 1993 and 2000. European Sociological Review, 26(2), 219-234. https://doi.org/10.1093/esr/jcp018

Friman, H., Sitbon, Y., Banner, I., Shauli, T., & Einav, Y. (2018). Environmental and Sustainability Studies for Pupils in Elementary Arabic School. International Journal of Innovation, Management and Technology, 9(6), 266-270. https://doi.org/10.18178/ijimt.2018.9.6.823

Gliński, P. (1988). Świadomość ekologiczna społeczeństwa polskiego – dotychczasowe wyniki badań. Kultura i społeczeństwo, 32(3), 189-190.

Grodzińska-Jurczak, M. (2004). Environmental Education in Poland – Its Present Status. International Research in Geographical and Environmental Education, 13(3), 251-257.

Harju-Autti, P., & Kokkinen, E. (2014). A Novel Environmental Awareness Index Measured Cross-Nationally For Fifty Seven Countries. Universal Journal of Environmental Research & Technology, 4(4), 178-198.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organisations: Software of the Mind*. New York: McGraw Hill.

Hollingworth, C. (2015). *The Arabs and the West*. New York: Routledge.

Inkpen, R., & Baily, B. (2020). Environmental beliefs and their role in environmental behaviours of undergraduate students. Journal of Environmental Studies and Sciences, 10, 57-67. https://doi.org/10.1007/s13412-019-00570-z

Kasprzak, S. (2000). Świadomość ekologiczna jako próg rozeznania zagrożeń środowiska naturalnego. Rocznik Nauk Prawnych, 10(1), 83-106.

Kłos, L. (2015). Świadomość ekologiczna Polaków–przegląd badań. Studia i Prace WNEiZ US, (42/2), 35-44. https://doi.10.18276/sip.2015.42/2-03

Kłos, L. (2014). Wiedza i świadomość ekologiczna studentów. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, 330, 182-191.

Kokkinen, E. (2013). *Measuring environmental awareness in the world* [Master's Thesis]. University of Oulu.

Kollmuss, A., & Agyeman, J. (2010). Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behavior. Environmental Education Research, 8(3), 239-260.

Manshur, F. M. (2019). The Connection between Arabic and Western Cultures in the Rise of Populism. Humaniora, 31(3), 263-273.

Markowitz, E. M., & Shariff, A. F. (2012). Climate change and moral judgement. Nature Climate Change, 2(4), 243-247.

Marquart-Pyatt, S. T. (2007). Concern for the environment among general public: A cross-national study. Society & Natural Resources, 20(10), 883-898. https://dx.doi.org/10.1080/08941920701460341

Ministerstwo Środowiska i Klimatu. (2021, March 26) *Badania świadomości ekologicznej*. https://www.gov.pl/web/klimat/badania-swiadomosci-ekologicznej

Nasser, A., Geng, Y., & Al-Wesabi, S. A. (2020). The Prevalence of Smoking (Cigarette and Waterpipe) among University Students in Some Arab Countries: A Systematic Review. Asian Pacific journal of cancer prevention, 21(3), 583-591. https://doi.org/ 10.31557/APJCP.2020.21.3.583

Ozil, E., Ugursal, V. I., Akbulut, U., & Ozpinar, A. (2008). Renewable energy and environmental awareness and opinions: A survey of university students in Canada, Romania, and Turkey. International Journal of Green Energy, 5(3), 174-188. https://doi.org/10.1080/15435070802107025.

Piontek, B., Piontek, F., & Piontek, W. (1997). *Ekorozwój i narzędzia jego realizacji*. Białystok: Wydawnictwo Ekonomia i Środowisko.

Pisano, I., & Lubell, M. (2017). Environmental behaviour in cross-national perspective: A multilevel analysis of 30 countries. Environment and Behavior, 49(1), 31-58. https://doi.org/10.1177%2F0013916515600494

Przydatek, G. (2020). Assessment of changes in the municipal waste accumulation in Poland. Environmental Science and Pollution Research, 27, 25766-25773. https://doi.org/10.1007/s11356-020-08943-6

Rydzewski, P. (2016). Changes in Environmental Attitudes in Selected Countries of Central and Eastern Europe. Problemy Ekorozwoju, 11(1).

Sachdeva, S. (2016). *Religious identity, beliefs, and views about climate change.* Climate Science: Oxford Research Encyclopedias. https://doi.org/10.1093/acrefore/9780190228620.013.335

Skribekk, V., de Sherbinin, A., & Adamo, S. (2020, October 15). *How Religion Influences Our Relationship with the Environment.* Columbia Climate School. https://news.climate.columbia.edu/2020/10/15/religion-influences-relationship-environment/

Üstün, B., & Celep, B. (2007). The Connection Between Environmental Awareness and Socio-economic And Cultural Structure. Transactions on Ecology and the Environment, 102, 623-631.

Wiest, J. B., & Eltantawy, N. (2015). Mediatisation in the Arab World: A Cross-Cultural Comparison of New Media Use. Online Journal of Communication and Media Technologies, 5(2), 120-142. https://doi.org/10.29333/ojcmt/2509

Xiong, H., Fu, D., Duan, C., Chang'E, L., Yang, X., & Wang, R. (2013). Current status of green curriculum in higher education of Mainland China. Journal of Cleaner Production, 61, 100-105. https://doi.org/10.1016/j.jclepro.2013.06.033

Zemo, K. H., & Nigus, H. Y. (2020). Does religion promote pro-environmental behaviour? A cross-country investigation. Journal of Environmental Economics and Policy, 10(1), 1-24. https://doi.org/10.1080/21606544.2020.1796820

DOI: 10.34659/eis.2022.82.3.499