

Evaluating the importance of Environmental Education Practice in The Libyan Schools in Al-Bayda City, Libya

O.G. Abdelsalam^{1,3} and A. Omran^{2,4}

¹Department of Geography, Academy of Graduate Studies Eastern Province, Benghazi – Libya

²Faculty of Engineering, Bright Star University, El-Breqa, Libya

³abdelsalam.omran@aob.edu.ly;

Abstract. This paper presents a study that evaluated the importance of environmental education practice in schools in the city of Al-Bayda. In general, many countries across the world face various problems in implementing environmental education in their schools. A structured questionnaire was designed to serve as the instrument for the collection of data which was administered on 150 randomly selected in the city of Al-Bayda. Out of the 150 questionnaires sent out, only 97 were retrieved representing a response rate of 65%. The collected data were analysed using SPSS 22.0 involving descriptive and inferential statistics. Based on the findings, it was found that the majority of the participants (91.8%) agreed on integrating environmental education into school's curriculum. It was also found that a clear majority (88.7%) of the students claimed that they clearly understand what environment means to them. The study did provide few recommendations, one of them is that environmental education teachers need to have the necessary and relevant environmentally related content knowledge and skills.

Keywords: Practices, environment, education, practices, behaviors, Schools, students

1. Introduction

Environmental education refers to organized efforts to teach how natural environments function, and particularly, how human beings can manage behavior and ecosystems to live sustainably. Environmental education is an important component of a child's education to help him or her develop adequate environmental knowledge and adopt positive attitudes and behaviors [1][2]. The importance of environmental education is aimed at helping individuals develop knowledge and awareness of the environment to develop positive attitudes towards the environment and skills to take responsible action [3][4]. It is generally known that educating children to understand the environment and its associated problems not only contributes to creating socially responsible individuals but can also help them in their overall educational experience. A study conducted by Beigel (1996), in the 1990s, elementary schools focused their teaching of Environmental education utilizing outdoor education and nature study [5]. However, the reality of environmental education in elementary schools today is a recognition that, in order to be successful, environmental education must be a framework from which students and educators can become collaborative learners within and outside of the classroom environment. Fazio & Karrow conducted a study to explore environmental education practices within elementary and secondary schools using complementary mixed-methods (survey and focus groups). They revealed that while typical normative teaching and cultural constraints of schools are still evident (e.g. curriculum standards,

school-level organization), there are identifiable practices involving administrators and teachers negotiating these challenges due to their personal commitment to schools and the environment [6]. Hassan and Ismail conducted a study in Malaysia to determine the relationship between the infusion of environmental education (EE) in chemistry teaching and awareness and students' attitudes toward environment. Their study revealed knowledge, attitudes and practice of EE infusion among chemistry teachers were high (above 4.0) [7]. The obstacles in infusing EE faced by teachers were moderate. Students' awareness and attitudes toward environment were high. They had also recommended that the EE is subject that must use more topics on environment or establish it as a separate subject in the existing national education curriculum. In general, many countries across the world faced various problems in implementing EE in their schools and Libya is no exception of that. Some countries are affected by their Ministry of Education initiatives, others by outside influential factors relative to the environmental issues they specifically face, and while others by the skills and knowledge of educators in creating EE based curricula. The United Nations Educational, Scientific and Cultural Organisation (UNESCO), (2014) emphasises the role of EE in safeguarding future global developments of societal quality of life, through the protection of the environment, eradication of poverty, minimization of inequalities and insurance of sustainable development [8]. This current study intends to determine the importance of EE practices in schools as an attempt to enhance the knowledge as well as the attitudes and behaviors of school-children in the Al-Bayda city, Libya toward safeguarding future global developments of societal quality of life and also protecting the environment.

1.1. Literature Reviews

Alnoah did conduct a study on the importance of the concepts of environmental education for the sixth-grade students in Riyadh and the extent of dealing with them from the point of view of their teachers [9]. His study showed that there is a statistically significant difference between the responses of respondents, educational supervision in the concepts of environmental education of importance on both sides (emotional, and skill) but it did not show the same differences statistically significant in the concepts of environmental education of importance in the cognitive side, as well as in the variables of scientific qualification and experience in primary education. His study has come out with several important recommendations. One of these recommendations is taking care of the concepts of environmental education of interest to students of the sixth grade, both at the school level and at the curriculum level prescribed for them. In addition to that, there is a need to increase awareness of the sixth-grade students concerning environmental concepts. In Iraq, Kader conducted a study on environmental education, awareness and the impact of tax in reducing environmental pollution [10]. A questionnaire was distributed to the students in the Kurdistan Regional University in Erbil, Sulaymaniyah and Dohuk. His study found that the lack of environmental awareness among the highest social class, which is the university, the lack of sufficient attempt to introduce environmental culture to the curriculum, the weakness of the role of the family, school and university to do their duty in environmental awareness. The study recommended that there is a need to integrate and pay attention to environmental education in the educational curricula in all stages of education.

In Algeria, Gharbi carried out a study on environmental education in primary schools from the point of view of the teachers at schools in Constantine city [11]. As a result of the environmental problems and the need to protect the environment, the societies rushed to find solutions to these dangers, but according to researchers and specialists in this field stated that these efforts will not be achieved unless they are supported by environmental education, due to the fact that environmental education is playing a significant role in protecting the environment, especially at schools in their early years of education. In fact, Algeria was one of the first countries to take an interest in environmental issues and to include them in all stages of public education after educational reforms, through environmental school projects. However, the results of the study revealed that these projects took a theoretical rather than a practical form although Algeria has suffered and continues to suffer from environmental problems due to irrational behavior. Similarly, its school programs - the subjects - did not take into account the environmental situation in them were just superficial topics did not deepen, focusing on the problem of

pollution alone, knowing that Algeria is experiencing environmental crises such as desertification, floods, urban congestion, poverty and others. It was best to deal with subjects from the reality of the living environment so that students can easily respond to these issues and find solutions to them. It was also found that the teachers were not formed with the field of environmental education and this absence of their preparation and formation has an impact on the application of environmental education, further that have no idea about the objectives and strategies of environmental education. The results showed that the students do not conduct any field study or field visits to study the environment, and that they do not carry out cleaning campaigns inside and outside the school. Gharbi study concluded that environmental education plays a key role in preventing environmental problems and solving them, as it contributes to spreading environmental awareness and protecting the environment as well as clarifies the human relationship to the environment [11]. Mohammed et al. generated a study on environmental education by focusing on the Libyan educational curricula as a model of their study [12]. They analysed environmental education in the Libyan educational curricula from the basic education through secondary education with specializations and ending with university education. The curriculum was based on the study of pre-university courses and decisions of the University of Sabha. A table was prepared showing the objectives and purposes of environmental education, in the light of which the status of environmental education in the Libyan educational curricula was analyzed. The study revealed the existence of doses of concepts of environmental education in different educational stages. To promote the concepts and objectives of environmental education, their study presented proposals on increasing and diversifying field training doses, using various media to raise awareness of concepts and the tendency towards specialization in universities and institutes, each according to geographical location and environmental problems surrounding it. Al-Farra investigated the role of school' administrations in developing the awareness of secondary school students in environmental education in the schools of Gaza governorates and ways of improving it [13]. One of the most important results of the study was that the degree of practice of the school administration and its role in the development of the awareness of secondary school students in environmental education in the schools of Gaza governorates from the point of view of the science teachers was very much. The study provided some recommendations, like (i) providing secondary schools with the necessary material and technical support for the implementation of educational activities in the field of the environment, (ii) increasing cooperation with institutions interested in the environment and (iii) attracting experts to give lectures and seminars aimed at raising awareness among members of the school community.

This study aims to achieve the following things:(i) to identify the extent to which students in different educational levels are familiar with the subject of environmental education; ii) to examine the environmental awareness of students in the general education stages; and (iii) to propose some recommendations for actions that may contribute to the inclusion of environmental education in curricula and curricula in the general education stages.

1.2. Study Area

Al Bayda is one of the biggest cities which is located in the north eastern part of Libya (See Figure 1) and therefore in many ways connected to the neighboring city of Shahat from east. It is bounded to Masa city from the west and Away from the costal line from the north about 22 km. Its mountain area located at an altitude of 626 meters above sea level. The Al-Bayda city has a total area of (14.5 km²), [14].

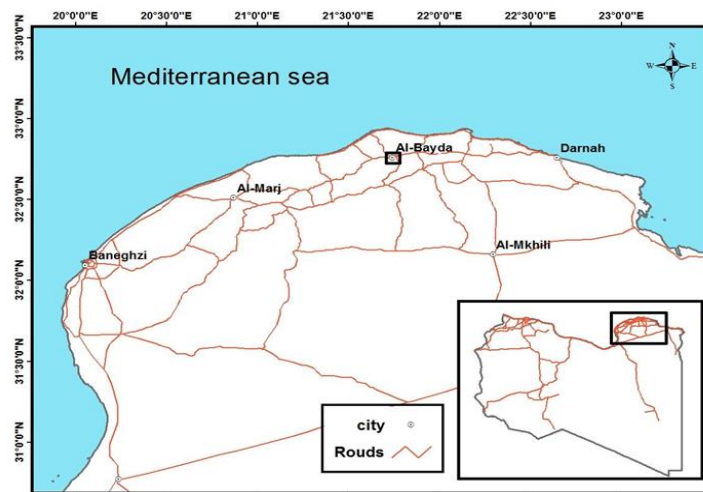


Figure 1. The study area indicated on the Map of Libya by a black square

1.3. Levels and dimensions of education

That the role of education is based on three choices or levels have dimensions:

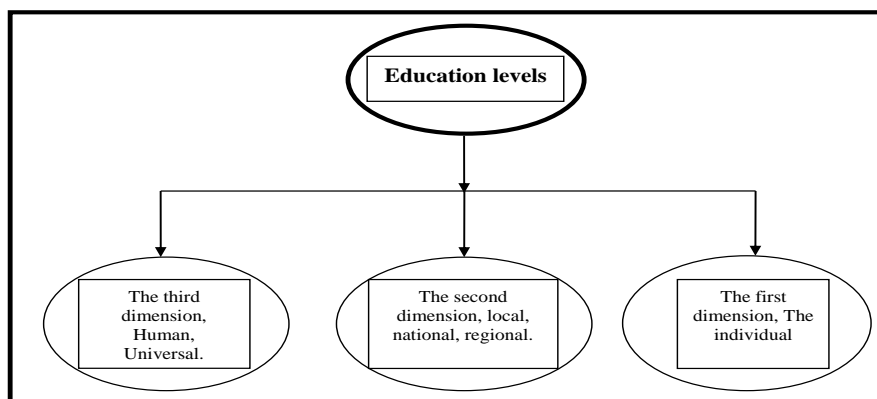


Figure 2. Levels and dimensions of environmental education

- 1) The first dimension (the individual): It emphasizes the help of the individual to grow soundly, mentally, mentally, spiritually, morally and socially to become a citizen responsible for himself and his community.
- 2) Second dimension (local, national, regional): Emphasizes the commitment to the unification and development of society through the control of natural resources and the use of modern technology and assimilation.
- 3) Third dimension (human or global): Emphasizes the commitment to understanding and international cooperation and to participate in the scientific development of civilization in the fields of science, arts and literature.

That education is a human activity started by the care of the individual from childhood and help him to follow (his environment) through acquiring the knowledge and skills and trends appropriate and desirable [15][16].

That education is a process of development of attitudes, concepts and abilities of individuals in a particular direction to achieve the goals set by society to achieve by education is a management depends on society and its institutions to achieve its goals and thus the well-being of the individual and society to create good citizenship.

This is related to environmental education through the preparation of human social life and good citizenship through the association of living and non-living, because we want a clean environment, valid and beautiful free of environmental pollution and waste and depletion of resources and environmental protection is through awareness and ethics and values and trends in the individual and community and society, It can only be achieved through environmental education and environmental awareness [17].

1.4. Elements of environmental education

- 1) Experimental: Any observation, measurement, recording, interpretation and discussion of environmental phenomena objectively.
- 2) Understanding: Increasing awareness of how ecosystems work.
- 3) Management: Know how to work in groups to get things done, how resources are valued and mobilized, and how to implement them.
- 4) Ethics: The ability to make informed ethical choices about social development in their interaction with the environment, how to make a choice that is consistent with one's goals and values, while respecting the goals and values of others.
- 5) Esthetics: Estimate the environment for its own and use the environment for recreation, beauty, art and inspiration and achieve one's maximum goals.
- 6) Commitment: To develop a sense of personal concern and responsibility for the welfare of the human community and the environment together, and to prepare to participate in the process of solving problems from beginning to end.
- 7) Inclusiveness: Students' awareness of the intertwined nature and the need to identify them in their mutual issues in a comprehensive manner.

1.5. Environmental Education Programs

The recommendations of specialized conferences in the field of environmental education have confirmed that it is continuous for life and this requires that there be programs dedicated to achieving the objectives of environmental education. These programs are divided into two sections:

1.5.1. Official Environmental Education Programs. It is also called formal environmental education through public education institutions such as kindergartens, schools, and higher education institutions represented by community colleges and universities.

1.5.2. Informal Environmental Education Programs.

It is also called informal environmental education through many community institutions such as family, media, places of worship, clubs, environmental associations, informal bodies and organizations [16][18][19][20][21].

2. Methods

The research instruments were fully tested by 150 randomly selected students from different schools both public and private. Out of 150 questionnaires sent out to the students at School, only 97 questionnaires were returned and analyzed, yielding a response rate of 65%. Random convenient sampling was distributed to the students at both public and private schools in the city of Al-Bayda. In this study, the targeted population was the students from grades (4th, 5th, 6th, 7th, 8th & 9th). Open-ended questions were used in the questionnaire. The collected data were analysed using SPSS 22.0 involving descriptive and inferential statistics.

3. Result and Discussion

3.1. Respondents Background

As shown Table (1), the number of responses from females (53.6%) was higher than males (46.4%). It was noted that the majority of the total sample (83.5%) were Libyan. The analysis showed that 53.6%

of the respondents came from private schools. Concerning the age of the participants, it was seen that most of the respondents (99%) are aged between 10-15 years old. From the analysis, it was found out that the highest of respondents (29.9%) of those sampled had enrolled in the fourth grade while only 23.7% of them was from fifth grade.

Table 1. The demographic composition of the sample population

Items	F	%
Nationality		
Libyan	81	83.5%
Others	16	16.5%
Gender		
Male	45	46.4%
Female	52	53.6%
Type of school		
Public schools	45	46.4%
Private schools	52	53.6%
Age categories		
Below 10 years	-	-
10-15 Years	96	99%
16-20 Years	1	1%
Enrolled grade		
Fourth grade	29	29.9%
Fifth grade	23	23.7%
Sixth grade	10	10.3%
Seventh grade	10	10.3%
Eighth grade	13	13.4%
Ninth grade	12	12.4%

3.2. Students' Awareness on Environmental Education

The respondents were asked about their knowledge if they have heard about environmental education curriculum or related subjects. As results, it was found that 67.7% of them did indicate they have not heard about it (see Figure 3).

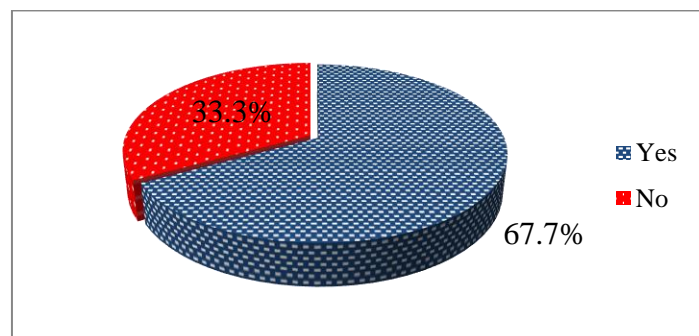


Figure 3. Knowledge about environmental education curriculum

3.3. General knowledge on Some available facilities at Schools

The respondents have been asked about their knowledge on whether their schools do have a library or not. The analysis did indicate that 74.2% of them responded with “yes” that their schools have a library. When the students asked about their role in cleaning the class regularly, the majority (97%) of them had positively mentioned that they did. The respondents were also asked on how frequent do they conduct environmental education campaigns per week to keep their schools clean. However, the analysis did show that 38.1% of them the campaign to be conducted more than three times per week while nearly twenty-five percent (24.7%) had indicated to conduct it two times per week (See Table 2).

Table 2. The frequency of conducting campaigns per week at Schools

Option	Frequency	%
One time	15	22.7%
Two times	24	24.7%
Three times	14	14.4%
More than three times	37	38.1%
Total	97	100

3.4. Relationship between Demographic factors and the weekly period of conducting campaigns at School

As shown in Table (3), one-way ANOVA and Chi-square tests were applied to identify the relationship between respondent’s demographic and the conducted weekly campaign by the school on environmental activities and awareness. The results were shown that race, gender, type of school and grade of the study have a significant relationship ($p < 0.001$) with the weekly period of conducting campaigns at school.

Table 3. Relationship between Demographic factors and the weekly period of conducting campaigns at School

	F	P-value
Race	15.179	0.004**
Gender	20.630	0.000***
Type of school	34.799	0.000***
Age	0.395	0.812
Grade	14.236	0.000***

3.5. Sources on the Importance of Environmental Education Practices

Form the obtained results indicated that the majority of the students are aware of the environmental activities within schools where most of them knew it through advertisements in the television (70.1%). Radio advertising (16.5%) ranked the second source followed by newspapers (8.2%). Other sources can be seen in Table (4). In reality, integrated use of all media can increase public participation [21][16][20][22][19], whereas traditional methods of promotion (including media campaigns, leaflet drops, newsletters, newspaper adverts, etc.) can only achieve a limited level of success in shifting public perception, behaviour and attitude [23][16].

Table 4. Sources of obtaining information on EE Practices

Sources	F	%
Newspapers	8	8.2%
Television	68	70.1%
Radio	16	16.5%
Magazines and Periodicals	4	4.1%
Bulletin boards and school	6	6.2%
Others	6	6.2%

3.6. Respondents’ opinions about some environmental practices at Schools

This part presents the results of the students’ awareness on some issues related to the environment within the schools. The respondents were questioned on their opinions if they would like to integrate environmental education into the curriculum? The results indicate that 91.8% participants had shown their agreements for integrating such subject in their schools’ curriculum. Many schools are not yet, adopted or integrate EE in their curricula. This fact is supporting the finding by Lane et al. who found that 30% of elementary and secondary educators did not teach about the environment, even though Wisconsin requires environmental education at all grade levels [24]. In their study, Hassan and Ismail had also recommended increasingly students’ awareness, and attitudes on environment can be possible through using more topics on the environment or establishing a separate subject in the existing national

education curriculum [25].The students were asked if they know about the risks or causes of not practising environmental practices at schools. Based on the analysis, it was found that 93.8% of them have been aware of it. Concerning the question on whether the students are keen in keeping their indoor environment clear or not, 97.9% of them did indicate that they are keeping it clean and the remaining respondents (2.1%) indicated that they did not.A clear majority (88.7%) of the students claimed that they clearly understand what environment in general means to them (Figure 4). Most understood it as hygiene (43.3%) while other indicate that their understanding to it as is all the things that surround a human being (36.1%) and only 9.3% indicated that it is about environmental pollution (See Figure 5).

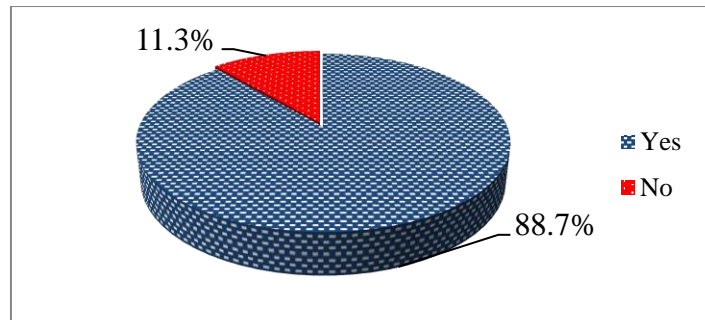


Figure 4. Presents the understanding level of the participants on environmental

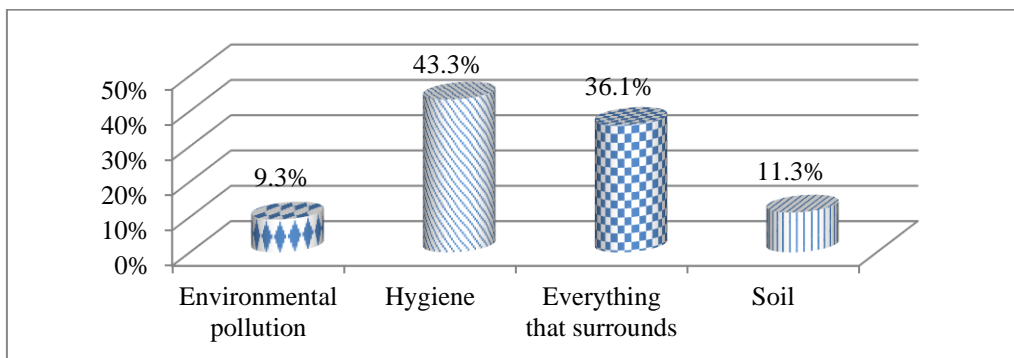


Figure 5. Shows on What environment means by the participants

Respondents in the present study were asked to indicate their knowledge on what the pollution means to them. The analysis has shown that 91.8% of the participants are clearly understood what the pollution means to them. However, only 8.2% said that they did not know it.

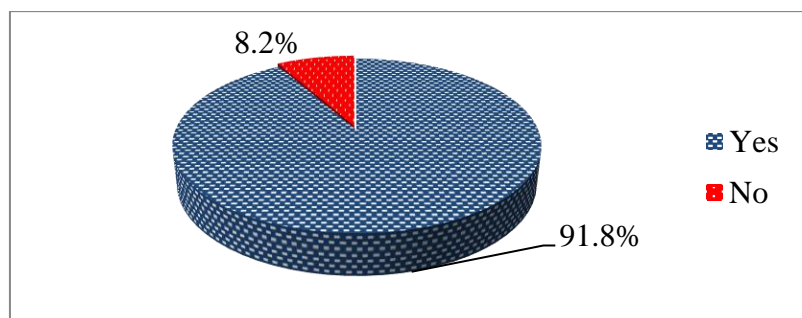


Figure 6. Respondents' Knowledge on What Pollution means to the participants

4. Conclusion

The survey generated number of valuable findings, and it can be concluded that, even though students from all the different grades (4th,5th,6th, 7th, 8th& 9th) were generally aware of environmental education activities, this awareness appears not to necessarily translate into real practising. This could indicate that there were other factors that hinder students' participation in environmental activities at school, such as absence of 'visible' environmental facilities, lack of motivation or incentives to do so. Therefore, there is an important need to educate students at all the stages on the possible benefits of having environmental activities within schools and create practical knowledge and experience in organizing a successful environmental campaign either weekly or monthly. This study was successful in identifying students' knowledge and willingness in these important issues. It is specifically identified what the schools should do and provide to have a successful environmental education activities within schools. This study has come out with several recommendations, one of these recommendations is that schools must fully integrate environmental education into other required subjects. It is also recommended that environmental education teachers need to have the necessary and relevant environmentally related content knowledge and skills. As final remarks, it could be concluded that Integrating environmental education into the primary school curriculum could make learning more meaningful to learners because most have to go back into society after finishing primary education. This will definitely help students to cope with life situations based on the knowledge which obtained from that integration.

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