



Raising Environmental Awareness Among Secondary School Students: A Case Study in Erbil

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ABSTRACT

The objective of this study is to evoke environmental awareness among secondary school students using different ecological activities. This study focuses on how environmental awareness might lead the students to the protection of nature, and the main goal of the study is to develop behaviors through activities among students for environmental protection. This study is based on a questionnaire conducted on two groups. The first group includes 2 hundred students who were chosen randomly from both state and private schools. The second group includes 50 students who participated in ecological activities in their schools. It was seen that the students in the second group cared more about environmental issues. Thereby, the study yielded that involving students in ecological activities holds an important place in raising their awareness towards environmental protection. This study offers some useful activities that can be carried out at schools to increase sensitivity of students towards environment and its protection.

1. INTRODUCTION

Due to a rapid increase in human population and industrial activities, environmental problems occur more than ever (water, soil, air, and noise pollutions etc.). However, individuals are not adequately aware of these ecological and environmental issues. Environmental protection and environmental education has developed as a reasonable way to answer the problems and concerns of environment.

The concept of environmental education is still developing and waiting to find a right place in the educational systems. Taking into consideration this situation, the investigators

felt a need to conduct a study to know about the environmental awareness of secondary school teachers and students in relation to environmental subjects. Individuals need to be aware of environmental problems and take necessary actions to reduce this issue through getting actively involved in it. Air pollution, water pollution and earth pollution has serious influence on human health; therefore, individuals should give utmost attention to the environment.

Though widely ignored in this field, questionnaire is an effective way of raising environmental awareness among individuals (Oguz, 2001). In particular among secondary school students in order to encourage them to

take more care about environment, questionnaire yields important results. Questionnaires have been widely used by many researchers, for instance Smith (1987) in a study in New York highlighted how air pollution impacted people's health. In another study by Chan (2000) through questionnaire people's opinions were asked about air pollution. Chau and friends (2002) conducted a study in Hong Kong and used a questionnaire to find out what people think about air pollution.

There is more to environmental awareness raising methods than simply learning about environmental protection or responsibilities. Many of the activities can be realized in educated programs, like environmental project Olympiads, some campaigns, poster competitions, recycling companies, and putting school curriculums or lessons. All of these methods raise environmental awareness among secondary school students. Different environmental education programs increase the capacity of students to environmental awareness (Dinakara, 2000).

2. LETERATURE REVIEW

Many of the most serious environmental problems of today are related to the tremendous increase in the human populations in recent decades. Industrial development, wastes, gaseous wastes, organic wastes, pesticides, littering and other waste products are damaging environment at a fast rate. Today, education of human populations is very important for protection of environment. By environmental education, environmental awareness, sensitivity, and responsibility can be increased in human populations (Bogner& Wiseman, 2004).

Recently, the environmental concerns grew much greater. These concerns have been considered as significant issues that should be given priority by the developed countries, and some developing and underdeveloped nations as well. The major reason for this concern is to take tangible measures for the benefit of humans and environment (Karimi, 2003).

The preservation of natural sources is a global issue and is an issue that should be dealt seriously by all individuals. Protection of the environment today is a need due to many human activities. Air pollution, waste production, clear-cutting of forests, water pollution, extinction of species, global warming, destruction of nature, depletion of ozone layer are some of the important environmental issues which are to be tackled without losing time.

Education plays a big part in the protection of environment. People, in particular young people should be aware of this concern and move accordingly (Karimi, 2003, Wiseman & Bogner, 2003). Young people should explore environmental issues and involved in problem solving to develop a deeper understanding issues regarding environment (Bogner& Wiseman, 2004).

The earth has been polluted rapidly because people do not give enough attention to the environment. The students are encouraged to protect nature through activities organized by companies, advertisements, projects, competitions, and Olympiads among schools. Environmental protection activities educate students in terms of increasing their environmental awareness.

3. MATERIALS AND METHODS

3.1. The participants

This study includes two different groups. The first group was chosen randomly from four different schools; 2 private and 2 state schools in Erbil. The number of the participants is 200 students (100 boys and 100 girls). The second group includes 50 students all of whom participated in an environmental activity such as a campaign, Olympiad or a project earlier.

3.2 Data Collection

Data in this study was collected through a questionnaire which included 15 questions. The questions were about environmental issues thus addressed to environmental awareness of the participants. The data collected from both groups was analyzed through SPSS. Furthermore, to discuss their awareness towards environment the results of the first and second groups were compared.

4. RESULTS AND DISCUSSION

Table 1 shows the attitudes of students towards environment and its protection. % 63 of the students is of the opinion that our environment is not in a good state. Similarly, 51.5 of the students do not describe their future bright and hopeful in terms of literature. Table 1 yields that students do not pay adequate attention to environmental protection although they are not hopeful about the future condition of environment. Only % 49 of the participants state that they are sensitive about environmental issues and % 47 of the learners prefer to buy products that have recycling sign on them and % 45 of the participants are economical about paper products. Only % 40.5 of the participants are careful about not using products like deodorant and other things containing dangerous materials for Ozone. When variables are carefully examined in table

1, we can conclude that the participants are not very careful to protect the environment.

R^2 square is the proportion of variance in the dependent variable (I would describe my future bright and hopeful) which can be explained by the independent variables (Q8, Q9, Q10, Q11, Q12, Q13, Q14). In this study P values are high and R^2 is low. This study explained only 21 % of the variations.

Table 2 examines how people describe their future in terms of ecological and environmental aspects and their attitudes towards environmental issues. Table 2 indicates that only one independent variable significantly related to the dependent variable. Independent variable Q9 ($p = .002$) was found to be significant to the dependent variable. In other words, participants agree on taking part in environmental activities organized by their school or some institutions.

Tables 3, 4 and 5 present the answers of both groups given to 15 questions stated above in the first table. When tables 3,4 and 5 are compared with table1, it is clearly seen that students in the second group who participated in ecological activities care more about environment and its protection.

Figure 1 demonstrates the answers of both groups to questions 8, 10,11,12,13,14 and 15. When responds are investigated it is apparent that students in the second group are more sensitive to environment and its protection. The big difference between answers of both groups in figure 1 shows that active involvement of students in environmental activities enable them to give more attention to the matter.

Table 1: Attitudes of students towards environment and its protection

Variables	Percentage	Mean	Standard Deviation
1. Our environment is in good state		2.180	.923
Strongly Disagree (1)	26.5		
Disagree	36.5		
Neutral	30.5		
Agree	5.5		
Strongly Agree (5)	1.0		
2. Global Warming is the worst environmental problem facing the planet		3.345	1.0871
Strongly Disagree (1)	8.0		
Disagree	11.5		
Neutral	30.5		
Agree	38.0		
Strongly Agree (5)	12.0		
3. Individual people are the worst polluters		3.685	.9801
Strongly Disagree (1)	3.5		
Disagree	7.0		
Neutral	26.5		
Agree	43.5		
Strongly Agree (5)	19.5		
4. Industries are the worst polluters		3.915	.9499
Strongly Disagree (1)	1.5		
Disagree	6.5		
Neutral	21.0		
Agree	41.0		
Strongly Agree (5)	30.0		

5. Seeing the current concern about the environment 2.790 1.3694

I would describe my future bright and hopeful

Strongly Disagree (1)	21.0
Disagree	30.5
Neutral	9.5
Agree	26.5
Strongly Agree (5)	12.5

6. People's health have already been affected 4.295 .7687

By environmental problems

Strongly Disagree (1)	0
Disagree	4.5
Neutral	5.5
Agree	46.0
Strongly Agree (5)	44.0

7. If no environmental measures are taken, 3.610 1.1937

the planet will be worse after 20 years

Strongly Disagree (1)	8.5
Disagree	11.0
Neutral	14.0
Agree	44.0
Strongly Agree (5)	22.5

8. I am very sensitive about environmental issues 3.530 1.0605

And constantly warn others about it

Strongly Disagree (1)	1.5
Disagree	16.0
Neutral	33.5

Agree	26.0
Strongly Agree (5)	23.0

9. I always participate in environmental studies organized by schools or other organizations

Strongly Disagree (1)	14.5
Disagree	38.0
Neutral	21.5
Agree	18.0
Strongly Agree (5)	8.0

10. I prefer to buy the products having label of recycling sign on their packages

Strongly Disagree (1)	6.5
Disagree	16.0
Neutral	30.5
Agree	29.5
Strongly Agree (5)	17.5

11. I am very economical about paper and tissue paper usage

Strongly Disagree (1)	4.5
Disagree	14.0
Neutral	36.5
Agree	28.5
Strongly Agree (5)	16.5

12. I am very careful about not using consumption products like deodorant and other things containing dangerous materials for Ozone

Table 2: Multiple Regressions: Attitudes towards environment protection

Variable	Coefficient (SE)	Standardized Beta	P-Value
Q8	.112	.015	.864
Q9	.101	.267	.002*
Q10	.095	.038	.628
Q11	.095	.113	.064
Q12	.089	.101	.245
Q13	.135	.091	.283
Q14	.096	.160	.059

R²= .219

*Significant at p<.05

Table 3: The comparison of questionnaire results of both groups (questions 1 to 5)

	Q1		Q2		Q3		Q4		Q5	
	First	Second	First	Second	First	Second	First	Second	First	Second
Strongly Disagree	26.5	35.5	8	4	3.5		1.5	4	21	30.5
Disagree	36.5	38	11.5	14	7		6.5	10	30.5	40.5
Neutral	30.5	26.5	30.5	48	26.5	16.5	21	28.5	9.5	15.5
Agree	5.5		38	34	43.5	49.5	41	32.5	26.5	10.5
Strongly Agree	1		12		19.5	34	30	25	12.5	3

Table 4: The comparison of questionnaire results of both groups (questions 5 to 10)

	Q6		Q7		Q8		Q9		Q10	
	First	Second	First	Second	First	Second	First	Second	First	Second
Strongly Disagree			8.5		1.5		14.5		6.5	
Disagree	4.5		11		16		38		16	
Neutral	5.5		14	12	33.5	7.5	21.5	7.5	30.5	9
Agree	46	40	44	40	26	40.5	18	40.5	29.5	42.5
Strongly Agree	44	60	22.5	48	23	52	8	52	17.5	48.5

Table 5: The comparison of questionnaire results of both groups (questions 10 to 15)

	Q11		Q12		Q13		Q14		Q15	
	First	Second	First	Second	First	Second	First	Second	First	Second
Strongly Disagree	4.5		9		1		5		3	
Disagree	14		34	2.5	2.5		18.5	2.5	27.5	
Neutral	36.5	10	16.5	22.5	19.5		32.5	30.5	37.5	6
Agree	28.5	47.5	17.5	38.5	42.5	37.5	18	34.5	22.5	43.5
Strongly Agree	16.5	42.5	23	36.5	34.5	62.5	26	32.5	9.5	50.5

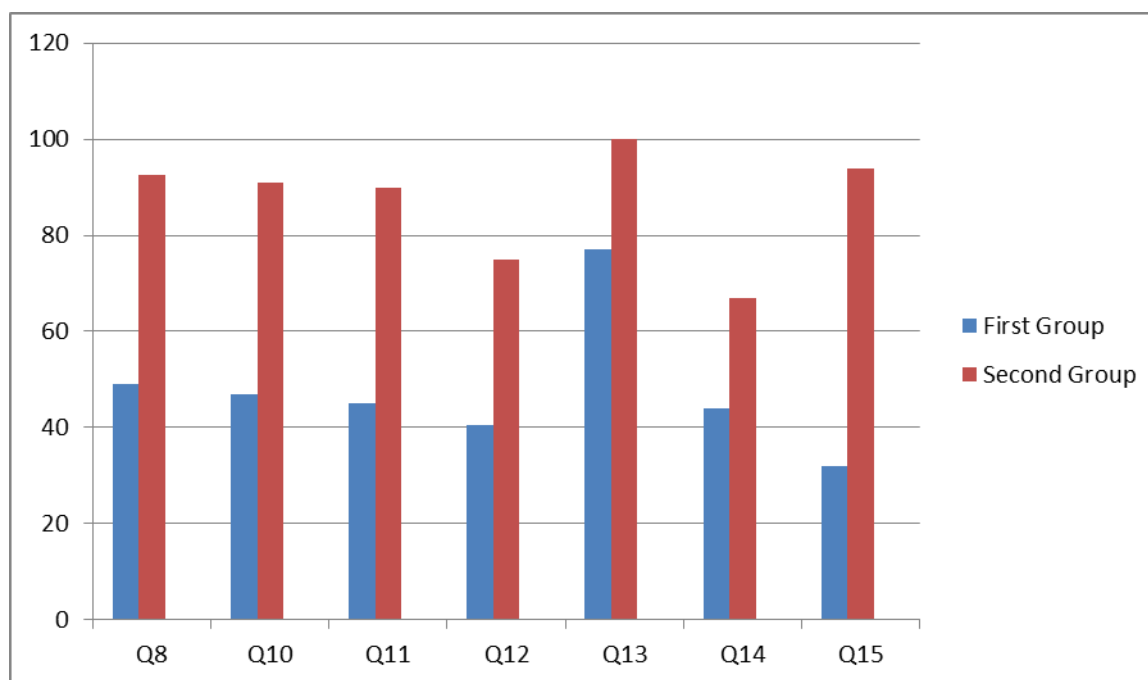


Figure 1: The comparison of groups concerning ecological issues

5. CONCLUSIONS

The aim of this study is to find out how sensitive secondary school students are towards to ecology and environmental problems. Throughout this study it has been concluded that the secondary school students must be involved in environmental problems with different ecological activities; thus they can enhance their understanding of the importance of ecology and natural sources. The questionnaire demonstrated that secondary school students are not adequately aware of environmental issues. Thereby, students should be encouraged to take part in some activities to increase their awareness of ecological issues.

The following activities are useful in that they will help secondary students to become aware of ecological and environmental issues:

1-Ecological Activities:

- a. Project Olympiad
- b. Poster competitions
- c. Integration of environmental education into school curriculums.

2- Some campaigns

- Recycling campaigns
- Spring clean campaigns
- Plastic bottles, cans and paper collecting campaigns.
- Flowering campaign
- Anti – littering campaigns

3- Social Media

Aim of the aforementioned projects:

- Teach environmental awareness to students.

- Promoting a sense of responsibility through environmental education.
- Promoting environmental awareness and motivating students.
- Promoting dialogue among students, teachers, school, and their environment.
- Having prevention of environmental pollutions
- Improving responsible of environmental protection.
- Teaching how to use of natural sources carefully.
- Improving increasing of student organization capacity.
- Teaching how to live in a healthy way
- Teaching to deal with environmental problems
- Etc.

If students are encouraged to participate in these activities constantly, they will understand methods of environmental protections and implement what they learnt from these activities in their own lives. These activities may inspire students to pay attention to ecological matters. It is possible to motivate students to give more attention to environmental issues through useful activities organized by institutions. These activities can be models for students to care more about environment (Hart, 1997). Ecological and environmental activities can impressively raise the environmental awareness of students and young people. Environment protection is an act every individual should care about. Young people can be encouraged to give more attention to environmental issues via activities organized by schools and institutions. Young people should develop more awareness to

ecological and environmental matters to embrace a brighter future. Environmental activities can stimulate young people to learn more about environment and consequently can lead them to be more careful about protection of environment.

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