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Research paper

Environmental Awareness Level Among University Students in Malaysia: A Review

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Abstract

Environmental awareness is one concept to understand the fragility of our environment and importance of its protection. Environmental awareness program among university students have greatly improved over the years. However, environmental issues always arise as a disaster in the world. Therefore, the main objective of this study is to review the level of environmental awareness issue among universities students in Malaysia. The result showed the level of environmental awareness among university students had high level of knowledge but the level of practices was moderate. They are not applicants and practice this awareness in their life. Therefore, more effective initiatives need to be due by the authorities and the government to preserve our environment. The level of knowledge and practice of the environment care has greatly contributed to the environmental sustainability in Malaysia.

Keywords: *Environmental Awareness; University Students; Knowledge; Authorities; Malaysia.*

1. Introduction

The achievement of Malaysia's socioeconomic development has been at a great level and this achievement has been recognized by the international community. This achievement as a result of the government's commitment and efforts to implement development projects including the construction of new towns, infrastructure and public facilities such as dams, airports, ports, roads, hospitals, schools, residential, power stations, bridges and so on. The growing of physical development in industrial, agricultural, tourism, and construction sector in Malaysia have resulted in the changing landscape of the environment [1]. This change leads to the irresponsible society towards the environment that will affect the quality of life. The level of environment awareness in the aspect of knowledge and practice to conserve and preserve the environment [2-4]. From the previous research, the level of awareness of environmental care among Malaysian society is still at a low level compared to the developing countries such as Japan, Denmark and Germany [5]. Malaysian associations are more sensitive to environmental issues, especially those close to them but their awareness to engage in this problem is too small [6]. To achieve a balanced need between environmental elements and demands held by people living together, cooperation between societies is needed to achieve the goal. The opinion is needed to implement sustainable development as it involves not only the government institutions but also require support from professional groups, public sectors, environmental organizations and all individual in the society [7]. Consequently, environmental issues are still a current issue even though it has long been debated as a result of the attitudes of the people who are concerned about the problem. Therefore, the need to build new elements should continue to lead a change in practice in order to make the environment a healthy place to live in.

There are a few agencies of Non-Governmental Organization (NGO) such as the World Wide Fund for Nature (WWF) and the Malaysian Nature Society (MNS) that have implemented a few steps to improve the environmental awareness in communities. There are many environmental awareness programs, especially through media social but these program not very well received by communities [8-10]. Besides, the concern about environmental issues and their impact on general awareness is one of the most noticeable phenomenon in Malaysia especially among urban communities. The increasing of economic activities in developing countries results in more energy and consumption demand which generally leads to environmental degradation such as erosion, sedimentation, water quality deterioration, solid waste management and flood phenomenon [11-13]. However, several studies indicated that many developing countries already equipped with environmental policies and management to improve the environmental quality [14].

2. Methodology

This paper is based on a few articles which covered the knowledge and practice of environmental issues among university students in Malaysia. Table 1 showed the characteristics factors of environment awareness among communities, which covered the knowledge and practice aspects of society. Preliminary research was conducted by the journals search, books, articles and related press releases of environmental awareness in Malaysia. The envi-

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ronmental preservation and conservation actions taken by the government including law enforcement, reducing solid waste and improving public knowledge about the environmental issues.

Table 1: The characteristics factors of environment awareness among communities [15]

Knowledge	Practice
Solid waste disposal	Actions involving law
Toxic waste disposal	Reduce waste
Excessive exploitation of natural resources	Being a responsible user
Contamination of fresh water	Improve knowledge to protect the environment
Marine pollution	Preservation of natural resources
Global warming	
Logging	
Extinction of species of flora and fauna	
Air pollution	

3. Results and Discussion

3.1. Environmental Awareness in Malaysia

Knowledge and practice of environmental awareness among university students in Malaysia have greatly improved over the years resulting in more favorable social environment. Environmental education is also the basic things among society and ethical of society [16-18]. There are positive relationship between the level of education and the level of awareness, knowledge and practice. Some of countries in the world experienced the difficulties economic framework for environmental protection and the lack of participation among general public in pro environmental behaviors among the communities. Although environmental awareness problems in critical level, it is widely known because of the growing awareness of all levels of society, including governments, general public and the scientific community [19, 20, 10].

Basically, the knowledge and the practice of environmental management are important to improve the ability among communities about the environmental issues and to achieve the environmental awareness and ethics, values and attitudes, skills and behaviors. The effectiveness of environmental education and development must be conducted from early age especially to students. Besides that, the implementation of environmental education is expected to provide knowledge in order to create the community about environmentally responsible society. It will increase the awareness and concern (attitude) in the future towards the environment [21-23]. According to [24], involvement in recycling activities in Malaysia is still too low at about 5% compared to recycling rates in neighboring countries such as Singapore (56%), Philippines (12 %) and some countries such as German (48%), the United States (33%) and Switzerland (52%). This shows that Malaysians are not interested in recycling activities (Table 2).

Table 2: Percentage of country involvement in recycling activities [24]

Country	Percentage, %
Singapore	56 %
Switzerland	52 %
German	48 %
United States of America	33 %
Philippines	12 %
Malaysia	5 %

3.2. The Level of Knowledge and Practice University Students

Findings by [25] are also found in Malaysia, examples of studies by [6] on the level of environmental awareness among university students. They found environmental awareness among students of *Universiti Kebangsaan Malaysia* (UKM) was at a high level but the willingness of students to get involved in overcoming the environmental problem was too much. In [26] found the same outcome through its study where the knowledge and attitude of students was at a high level but the practice of the environment was at moderate level. The findings are in line with [27] opinion that students have good awareness of environmental issues but this awareness is no longer being changed to a practical one. It is also supported by [28] which states that awareness of environmental issues and awareness that the environment needs to be preserved has increased in society, but the level of individual involvement in environmental preservation activities is still at a low level.

Research findings show that there is a need to know the level of awareness of the environment in aspect knowledge and practices among students of university. This suggests that in order to improve the practice of knowledge and practice in maintaining the environment, the communities needs to build awareness and develop positive attitudes towards the environment. It is also recommended that early environmental education be applied in all ages to ensure consistency in environmental practices among the community. At the university level, the students should also be emphasized in the teaching and learning method in Environmental Education focusing on methods in the field of work such as conducting experiments, and practical research in the field of solving environmental issues. This is because students will be exposed to direct experience with the environment and nature through "hands-on" activities. With that environment, it directly improves knowledge and awareness that leads to the good of environmental practices [15].

Additionally, at the university level should also play a proactive role in improving student behavior to safeguard and preserve the environment. Activities that require more serious attention are such as bringing environmental awareness campaigns and other programs including weekly "*Gotong-royong"* at universities, accompanied by staff and students, especially by residential colleges. Furthermore, government agencies, non-governmental organizations and the mass media also play an important role in improving student practice towards the environment [22, 29, 30]. Students must also change their way of life with more priorities in the environment and actively participate in the natural world. Through this association, they can actively participate more actively in resolving environmental issues collectively. This next, will indirectly be overcome problems in resolving environmental issues individually.

That is what should be done by a group of students. This is because they are agents of change to make sure that the environment is preserved. Among the reasons why the society has low environmental awareness includes lack of understanding and education on environmental issues, lack of knowledge and information on the environment is still unaware that environmental problems existed due to their own actions [31-33]. The results showed that respondents felt that individual actions could not tarnish and threaten the quality of the environment compared to large scale actions. The current environmental situation and problems demand improvement efforts to understand and develop policies, theories, studies, curriculum, Personal Development Plan (PDP) processes as well as evaluations and assessments in a more holistic plan [34].

A lot of displays have been broadcast by the mass media regarding environmental issues which are the impact of human hands. Among the important topics being discussed are pollution issues from all areas, including landslides, extreme forest exploration, toxic waste disposal, ozone depletion and no exception to environmental management. This situation has resulted in a serious deterioration in environmental quality and directly affects the quality of human life. Although various initiatives have been undertaken such as the involvement of government agencies, non-governmental organizations (NGOs) and the private sector in the implementation of PAS programs and training but environmental awareness among Malaysians is still in low standard [35-37]. The government also needs to intensify another campaign to educate the general public regarding the importance of consumerism practice green through various channels like letters newspapers, television, radio and exhibitions. Campaigns so it should be intensified

throughout the country so that consumers are aware of the behavior purchasing practices and consumerism practices they will have a big impact on environment. In addition to the recycling campaign have been organized, the government can be organizing other campaigns focus on reduce and reuse as well as knowledge of friendly product.

However, based on result in Table 3, the level of practices towards environment was moderate. The aspects studied in knowledge constructs were at high level but each aspect indicated different level in the construct of practices. Aspect that was at a low level was an "action involving law". On the other hand, the construct in the aspect of practices that was at the level of the medium was on "reduce waste", "being a responsible users" and "improve the knowledge to protect the environment". Only one construct had indicated to be at a high level which was "preservation of 1natural resources". According previous study, UKM students have a high level of knowledge but the level of environmental practice is low. This research is similar to the opinion by [27] that the student has good awareness of the environmental issues but in practice does not change.

This opinion is also supported by [28] who stated that "the awareness towards environmental issues and awareness about the need to maintain the environment had increased among the society, but the level of individual involvement in the activities of environmental protection still at low level". Based on Table 4 showed the result that UKM students have a significant relationship between knowledge (r = 0.328, p = 0.008), awareness (r = 0.362, p = 0.000) and attitudes(r = 0.345, p = 0.05) to the practices of the environment. However, the relationship among relations variables was low [4].

Table 3: Level of knowledge and practices towards environment [29]

No.	Construct	Item	Standard Deviation	Mean	Percentage (%)	Mean Interpretation
1.	Knowledge	Solid waste disposal	0.760	3.677	73.54	High
		Toxic waste disposal	0.729	3.909	73.54	High
		Excessive exploitation of natural resources	0.887	3.936	78.18	High
		Contamination of fresh water	0.645	3.944	78.72	High
		Marine pollution	0.642	3.949	78.98	High
		Global warming	0.698	4.005	80.10	High
		Logging	0.762	4.072	81.44	High
		Extinction of species of flora and fauna	0.848	4.077	81.54	High
		Air pollution	0.743	4.131	82.62	High
		Total mean	0.526	3.986	79.72	High
2.	Practice	Actions involving law	1.080	2.364	47.28	Low
		Reduce waste	0.876	2.978	59.56	Moderate
		Being a responsible user	0.759	3.049	60.98	Moderate
		Improve knowledge to protect the environment	0.940	3.224	64.48	Moderate
		Preservation of natural resources	1.296	3.661	73.22	High
		Total mean	0.697	3.000	60.00	Moderate

Table 4: Relationship between knowledge, awareness, attitudes and practices

Relations Variables	Practices	Level of Significant
Knowledge	r = 0.328**	0.008
Awareness	r = 0.362**	0.000
Attitudes	r = 0.345**	0.005

Level of significant ($p < 0.05$)

Based on result other study, in Table 5-8 from research [10], the result of Table 5 was significant differences responding the environmental awareness score among the level of educational groups (df = 2, P = 0.001), this is indicated that PhD respondent have more awareness towards environment that two other group. The mean for overall environmental awareness subject among PhD groups was more than Bachelor and Master Group. The explanation is possible that the students, who are studying in high level (PhD) due to their levels of education, age and chance to learn greater.

There was no statistically significant difference in attitude score for the three educational groups (F (2,518) = 1.393, P = 0.249), this is indicated that 3 educational groups respondents have similar attitude about environment (Table 6). Table 7 showed the result that there was a significant difference at the $p < 0.05$ level (F (2.491) = 7.158, p = 0.001). There was a statistically difference at the $p < 0.05$ level in environment attitude scores for the three age level [F (2,513) = 3.158, p = 0.043] (Table 8).

The results also show that there is no significant difference between groups with regard to attitude issues. Students have a high attitude among the educational levels possible from the mass media and perhaps the NGO function in which they are very active in this issue [10].

Table 5: Statistical test of respondents between educational level groups Level of significant ($p < 0.05$)

Level of Study	N	Mean Rank	df	Significant
Environmental awareness				
Bs	121	215.80	2	0.001
Ms	156	240.10	-	-
PhD	222	275.60	-	-
Total	499	-	-	-

Table 6: Result of statistical test of respondents between educational level groups

Group	Sum of Square	df	Mean Square	F	Sig.
Total attitude score					
Between groups	44.531	2	22.266	1.393	0.249
Within groups	8279.357	518	15.983	-	
Total	8323.889	520	-	-	

Level of significant ($p < 0.05$)

Table 7: Result of statistical test of respondents between age groups

Group	Sum of Square	df	Mean Square	F	Sig.
Total attitude score					
Between groups	99.380	2	49.690	7.158	0.001
Within groups	3408.233	491	6.941	-	
Total	3507.613	493	-	-	

Level of significant ($p < 0.05$)

Table 8: Result of statistical test of respondents between age groups [10]

Group	Sum of Square	df	Mean Square	F	Sig.
Total attitude score					
Between groups	100.191	2	50.095	3.158	0.043
Within groups	8137.484	513	15.863	-	
Total	8238.039	515	-	-	

Level of significant ($p < 0.05$)

4. Conclusion

This study found that the level of environmental awareness among university students had high level of knowledge but the level of practices was moderate. This findings show that the university is encouraged to work with private bodies and NGO's in planning based of various activities and experiences to instill higher student attitudes and commitments to care of environmental. In fact, education through practice has more positive impact compared with knowledge based education. The importance of maintaining the environment should be in individuals to equally contribute to the preservation and conservation of the environment. It should also be an important value that should be emphasized to produce quality human capital. Hence all, societies are advised to be responsible for preserving and conserving the environment to ensure a comfortable life in the future.

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