

Pre-Service Teachers' Attitude towards Teaching Environmental Education (EE) during Practicum in Malaysian Primary Schools

Habibah Lateh, Punitha Muniandy

School of Distance Eductaion, Universiti Sains Malaysia, Penang, Malaysia.
Email: nitharan@yahoo.com

Received September 9th, 2012; revised October 10th, 2012; accepted November 11th, 2012

ABSTRACT

Environmental Education (EE) has been introduced into the Malaysian Curriculum since 1992. Related to that, EE was found to be an important subject that must be known by the teachers, prior to teach EE indirectly in the classroom. Problems occurred while implementing EE in schools, such as: less knowledge about EE, an extra burden among teachers to teach. At Teachers Training Institute (TTI), EE is a compulsory subject due to complete their training and this study carried out to identify the attitude of teaching EE among pre-service teachers'. The reliability of the items showed 0.830 cronbach's alpha. One hundred and twenty five respondents among pre-service teachers were analyzed and the result shows pre-service teachers have positive attitude towards teaching EE in classroom. Analysis of data shows that there are significant differences between male and female pre-service teachers in attitude of teaching, with $t = 0.036$ ($p < 0.05$).

Keywords: Curriculum; Education; Environmental Education; National Policy; Pre-Service Teacher; Teacher Training Institute; Practicum

1. Introduction

Environmental Education (EE) has been introduced in Malaysian schools since 1980s [1]. Research has been done in this area by Ibrahim Sakimin [2]; Nor Akhmal Ismail [3]; Aziz Shamsudin [4]; Noor Azmi Osman [5]; Sumiani Yusoff [6]; Ng Tiak Sui [7]; Chuah [8] and Gan Siowck Lee [9]. Most studies about EE were carried out in schools by looking at the teachers and pupil's knowledge and awareness. However, this research was carried out to study the attitude of teaching EE in classrooms during practicum among trainee teachers in Teachers Training Institute (TTI). It is important to seek a clear understanding on how the trainee teachers will educate pupils in future. As such, the present study was set focus on the trainee teachers especially during the period they were sent out for the practicum.

2. Methodology

Almost one hundred twenty five trainee teachers were selected from TTI at Northern Region of Malaysia namely Campus Sultan Abdul Halim, Campus Tuanku Bainun and Campus Pulau Pinang. The respondents are from the Post-Graduate Teachers Training Course, intake

of January 2010. A set of questionnaire was distributed among the respondents who had just finished their EE class for 15 hours on the first semester and they are just finished their practicum. Belief in teaching EE and teachers commitment to teach EE was most important aspect [10]. The feelings towards teaching EE were measured using an Osgood Semantic Differential Technique [11]. According to Bao [12], an attitude is considered as a tricomponent model which includes affection, cognition and behavior. This component will define attitude as an enduring mental organization of several beliefs that influences a person's choice of personal action.

The research on this section will see how much support, aspiration and anxiety of trainee teachers felt in teaching EE. Based on the classification from Haury [13], "support" indicates one's feeling regarding their relative importance of the value of, and time expanded in EE teaching; "aspiration" indicates one's intention and desire toward teaching and "anxiety" indicates one's comfort or distress toward teaching EE. The feelings are rated using a series scale posed between bipolar adjectives. The descriptive pairs of questions selected from an original pool of 24 item to measure one's feeling of involving EE within teaching were: Valuable/Worthless, Appropriate/

Inappropriate, Important/Unimportant, Lifelong/Temporary, Necessary/Unnecessary, Effortless/Difficult, Favourable/Unfavourable, Willing/Unwilling, Curious/Uncurious and a waste of time/Not a waste of time. Responses are scored from 1 (negative) to 5 (positive). Total score will range from 10 to 50 based on 10 descriptive pairs for the teaching of EE. The higher score indicates the positive attitude while the lower score leans towards negative attitude. The item has been adapted from Haury, EATTS (Expressed Attitudes Towards Teaching Science) and adopted according to the culture and teaching environment of Malaysia by referring the experts in EE field and coming up with EATTEE (Expressed Attitudes Towards Teaching Environmental Education). The reliability of the items showed 0.830 cronbach's alpha which indicates a high reliability to carry out the research.

3. Literature Review

Fishbein and Ajzen [14] developed a theoretical framework for the evaluation of environmentally responsible behavior. In their theory of reasoned action, they distinguished four basic concepts: beliefs, attitudes, intentions, and behavior. They postulated a specific pattern of effect relations among these four components. In their view, actual behavior is, first, a function of behavioral intentions and second, one of attitudes that in turn is affected by knowledge. A critical assumption in their theory is that knowledge and attitudes influence actual behavior only through behavioral intention [15,16]. Attitude comes under an affective component which involves positive and negative feelings or emotions which directly connect to human, object or issues [17]. Shuman, answered the question about teachers' commitment and attitudes in teaching and Bao, attitude influencing teachers' behavior and also influencing pupils' behavior towards EE. Attitude and teachers commitment will be an important portion for teachers to teach EE in classrooms without any reason [6]. According to Jaus [18] positive attitude of teachers will lead to committed teaching in classrooms. Research by Mohamad Zohir, shows that Malaysian teachers in secondary schools were less knowledgeable on the EE concept while teaching and learning in classrooms [19]. Thus the main focus of the present research was.

4. Findings

The respondent of the present study comprises of one hundred and twenty five who have been grouped into forty two male respondents and the rest was eighty three female respondents. So 66.4% of female teacher are respondents in this study and the balance of 33.6% are among male teachers. **Table 1** below shows the respondents according to ethnic **Table 1**, Malay respondents are

in a biggest percentage which includes (68%), followed by Chinese (22.4%), Indians are 11% and others contributed 0.8%.

Ten items have been constructed by using the semantic differential, explored pre-service teacher's feelings about teaching EE in practicum. The ten items in the semantic differential required pre-service teachers to give impressions on their feeling towards teaching EE. **Figure 1** shows the pre-service teacher's response to the items in the semantic differential. The weighted means in all items show that pre-service teachers impressions of the teaching EE while in practicum are between the average and slightly more than the average scales. These indicate that pre-service teachers felt that teaching EE in classroom is valuable and appropriate to be taught. At the same time, felt that integrating EE in subjects was important and a lifelong studies too. Most pre-service teachers found that teaching EE was necessary, effortless and favourable. They are willing and curious to teach EE in classrooms. Weighted mean for all the item shown in **Figure 1** for attitude was above the average mean. The mean stated which is in between 4.4 to 4.79. This self explains that pre-service teachers have a positive attitude towards teaching EE in classrooms while doing practicum. The perceptions among male and female students differ very slightly.

Table1. Respondents according to ethnicity.

	Race				Total
	Malays	Chinese	Indian	Others	
Respondents	85 (68%)	28 (22.4%)	11 (8.8%)	1 (0.8%)	125 (100%)

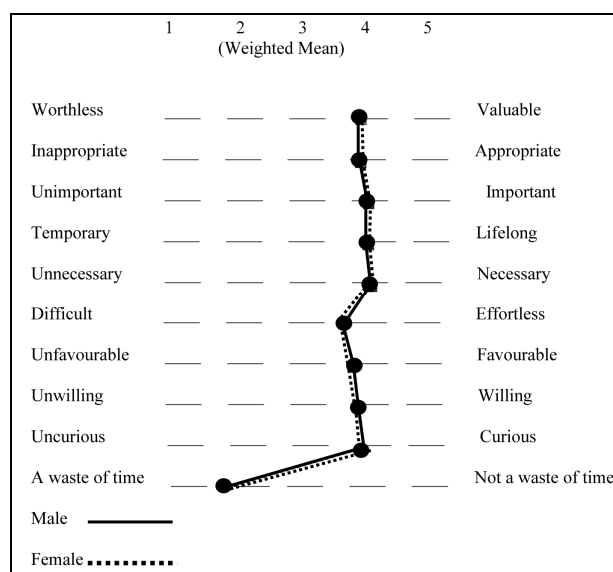


Figure 1. Pre-service teachers' attitude towards teaching environmental education.

Table 2. T-test: Differences on teaching EE attitude among male and female pre-service teachers*.

		Sex	N	Mean	Std. Deviation	Std. Error Mean				
Teaching Attitude		Male	42	4.4095	0.51505	0.07947				
		Female	83	4.3819	0.37127	0.04075				
Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Teaching Attitude	Equal	1.251	0.265	0.036	123	0.971	0.00290	0.08075	-0.15694	0.16273
	Unequal			0.035	77.802	0.972	0.00290*	0.08252	-0.16139	0.16718

*p < 0.05 (*The mean difference is significant at the 0.05 level).

The test of differences can be used to explain the significant differences between independent groups as mentioned by Pallant. In this study independent sample t-test had been used. The Independent Sample t-test allows us to test whether the two sample means are significantly different from each other [20]. Analysis has been done by using t-test to show the significant differences between two groups on attitude of teaching EE. The test will compare the mean score between male and female pre-service teachers' attitude. The Null hypothesis was: there are no significant differences on pre-service teachers' attitude toward teaching EE among male and female. The research hypothesis was there are significant differences on pre-service teacher's attitude towards teaching EE among male and female.

Analysis of data shows that there are significant differences between male and female pre-service teachers' attitude of teaching, with $t = 0.036$ ($p < 0.05$). In conclusion, the research hypothesis has been accepted and the null hypothesis was rejected. Differences of mean value for teaching EE between male and female are too small, 0.003. Mean for male pre-service teacher was 4.359 and mean for female pre-service teacher was 4.356. Standard deviation for male pre-service teacher was 0.445 and for female was 0.416. Results shown in **Table 2**.

5. Discussion

The analysis showed that, pre-service teachers have a positive attitude towards teaching EE in classrooms during practicum. The mean value was very high in between 4 to 4.79. The results shows, there is a significant relationship between attitude and gender among pre- service teachers at Teacher Training Institute. Findings show that, pre-service teachers have a positive attitude toward teaching EE in classrooms during their practicum where the mean value was highly scored (4 to 4.79). Results show there is significant difference

between attitude and gender among pre-service teachers [21]. Research on one hundred fifteen pre-service teachers' knowledge, attitude and practices in University had a positive towards environment and relates to other researcher by Taylor, Doff, Jenkins and Kennelly research on pre- service teachers in primary schools. In Malaysia context, research on EE at Teacher Training Institute was in a early stage if compared with other studies done in schools by Ibrahim Sakimin, 2007; Nor Akhmal Ismail, 2004; Aziz Shamsudin, 2003; Noor Azmi Osman, 2003; Sumiani Yusoff, 2003; Ng Tiak Sui, 1997; Chuah, 1989 and Gan Siowck Lee, 1987. Results show that research on EE still at early stage of awareness, and their practices were too low [4]. Noor Azmi Osman, reports that level of EE knowledge was in a average [5]. This supported by Mohamad Zohir and Nordin, where there were teachers that don't know about concept of Environmental Education [19].

6. Conclusion

Research on attitude of teaching EE among pre-service teachers in classrooms during practicum will give us an overall idea of how far pre-service teachers at Teacher Training Institute was trained to integrate EE across curriculum in their real teaching once they posted to school. Hence we can improve and find a way to boost a positive attitude towards teaching EE without any reasons. By hoping teachers will do their responsibility as an educate pupils' towards sustainable education by practising teaching EE across curriculum in their teaching-learning process.

REFERENCES

- [1] Q. S. Cheng, "A Survey of the Perceptions and Knowledge of Teachers Trainees towards the Environment," Environmental Issues and Environmental Education, Un-

- published Master Thesis, University of Malaya, Kuala Lumpur, 1988.
- [2] I. Sakimin, "Kertas Kerja Seminar Kebangsaan. Pendidikan Alam Sekitar Merentas Kurikulum: Ke Arah Pembangunan Lestari," Hotel De Palma, Ampang, 2007.
- [3] A. I. Nor, "Kesedaran Pelajar Tentang Pendidikan Alam Sekitar Dalam Kurikulum Geografi," Tesis Ijazah Sarjana Pendidikan, Universiti Malaya, Kuala Lumpur, 2004
- [4] A. A. Shamsuddin, "Conceptual Environmental Understanding among form 4 Geography Students," Unpublished Master of Education Project Paper, Faculty of Education, University of Malaya, Kuala Lumpur, 2003.
- [5] N. A. Osman, "Knowledge Level of the Teachers Regarding the Surrounding Environmental Issues at One of the School in Perak State," Unpublished Master of Education Project Paper, Faculty of Education, University of Malaya, Kuala Lumpur, 2003.
- [6] S. Yusoff, "The Need for Emphasis on Environmental Education for National Development in Malaysia," *Masalah Pendidikan*, Vol. 26, 2003, pp. 75-82.
- [7] T. S. Ng, "Satu Kajian Tentang Pengetahuan, Kesedaran Dan Persepsi Pelajar Serta Guru-Guru Geografi Mengenai Isu—Isu Dan Pendidikan Alam Sekitar," Tesis Sarjana Pendidikan, Universiti Sains Malaysia, Penang, 1997.
- [8] T. I. Chuah, "Attitudes towards Environmental Issues in the Context of the Moral Development of Standard Six Pupils," Kajian Ilmiah Sarjana Pendidikan, University of Malaya, Kuala Lumpur, 1989.
- [9] G. S. Lee, "Environmental Education in Malaysia: Curriculum Guidelines for Preservice Science Teacher Education Programs," Unpublished Ph.D. Dissertation, Faculty of Education, University of Malaya, Kuala Lumpur, 1987.
- [10] D. K. Shuman, "Factors that Influence Commitment to Teaching Environmental Education: Development and Test of a Causal Model," Unpublished Doctoral Dissertation, University of Idaho, Idaho, 1995.
- [11] C. E. Osgood, G. J. Succi and P. H. Tannenbaum, "The Measurement of Meaning," University of Illinois Press, Urbana, 1957.
- [12] B. L. Chang, "The Relationship between Locus of Control, Attitude toward, and Perception of Environmental Education among Preservice Teachers in a Taiwan Teachers College," Ph.D. Dissertation, The Ohio State University, Columbus, 1998.
- [13] D. L. Haury, "The Contribution of Science Locus of Control Orientations to Expressions of Attitude toward Science Teaching," *Journal of Research in Science Teaching*, Vol. 26, No. 6, 1989, pp. 503-517. [doi:10.1002/tea.3660260603](https://doi.org/10.1002/tea.3660260603)
- [14] M. Fishbein and I. Ajzen, "Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research," Addison-Wesley, Reading, 1975.
- [15] I. Ajzen and M. Fishbein, "Understanding Attitudes and Predicting Social Behavior," Prentice Hall, Englewood-Cliffs, 1980.
- [16] H. Hungerford and T. Volk, "Changing Learner Behavior through Environmental Education," *The Journal of Environmental Education*, Vol. 21, No. 3, 1990, pp. 8-21.
- [17] N. Newhouse, "Implications of Attitudes and Behavior Research for Environmental Conservation," *Journal of Environmental Education*, Vol. 22, No. 1, 1990, pp. 26-32. [doi:10.1080/00958964.1990.9943043](https://doi.org/10.1080/00958964.1990.9943043)
- [18] H. Jaus, "The Effect of Environmental Education Instruction on Teachers' Attitudes toward Teaching Environmental Education," *Science Education*, Vol. 62, No. 1, 1978, pp. 79-84. [doi:10.1002/sce.3730620112](https://doi.org/10.1002/sce.3730620112)
- [19] M. Z. Ahmad and N. A. Razak, "Pendidikan Alam Sekitar di Sekolah: Komitmen Guru," *Pendidikan Lestari*, Vol. 7, No. 2, 2007, pp. 74-81.
- [20] J. Pallant, "A Step-by-Step Guide to Data Analysis Using SPSS Version 15," 3rd Edition, Open University Press, Maidenhead, 2007.
- [21] N. Esa, "Environmental Knowledge, Attitude and Practices of Student Teachers," *International Research in Geographical and Environmental Education*, Vol. 19, No. 1, 2010, pp. 39-50. [doi:10.1080/10382040903545534](https://doi.org/10.1080/10382040903545534)