**The Study on the knowledge, Attitude and Behavior Intention about Climate Change, Global Warming, Energy Conservation and Carbon Emission Reduction of the Professional Environmental Educators in Taiwan**

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**Abstract**

 The purpose of this study was to understand the performance and the difference of the knowledge, attitude, and behavior intention about climate change, global warming, energy conservation and carbon emission reduction of the environmental educators, who had been certified by the Environmental Protection Administration in Taiwan since June 5, 2011 the Environmental Education Act was come into force.

Therefore, the research results and findings of this study will propose some useful suggestions and the programs of the environmental education, curriculum developing, teaching materials, professional training and the educational strategy about the climate change, global warming, energy conservation and carbon emission reduction to the Environmental Protection Administration, Executive Yuan and the Ministry of Education in Taiwan, and the other agencies related in future.

**Research Method**

 The questionnaire investigation method was utilized in this study. In this research, a questionnaire was designed as the research tool, and a random sampling was used to collect 401 cases for study. Through the total 12,030 environmental educators based on the principle of selecting one case from each 30 environmental educators. Moreover, the SPSS statistics 23 software was used to conduct descriptive statistics, independent-sample t test, one-way ANOVA, Psarson’s Product-moment correlations.

**Results**

The main research findings were as follows :

* 1. The study showed the knowledge aspect of climate change,global warming, and energy conservation and carbon emission reduction, and the attitude aspect of that were significantly correlated with the behavior intention aspect. The subject’s attitude can significantly predict their behavior intention of the energy conservation and carbon emission reduction.
	2. Since the subjects had been certified as the professional environmental educators by Taiwan EPA,so in all, their knowledge of the climate change, global warming, and energy conservation and carbon emission reduction had very good performance. Furthermore, their attitude and behavior intention were also trend to positive.
	3. Though there were difference between sex, education, vocation, religion, living in city and township, eating habits, the types of environmental educator authenticated, the frequence of teaching and interpreting environmental education, the knowledge aspect of the climate change, global warming, energy conservation and carbon emission reduction were not different. However, the environmental educators’ ages over 61 years old, environmental education working years were 10-19 years, the number of attending environmental education workshops were more than 7 times, their knowledge aspect of that were the most achievement.
	4. On the attitude aspect, the environmental eductors’ ages were over 61 years old, the vocation were educators, the religion belief were Christian and Catholicism , the eating habits were vegetarian, the types of environmental educator authenticated were recommended, the frequence of the teaching and interpreting environmental education were more than 7 times, the frequence of attending symposium about environmental education were more than 7 times, their attitude aspect were the most positive.
	5. Besides, on the behavior intention aspect, the environmental educators’ ages were over 61 years old, the education were senior high school and below, the vocation were retired, the eating habits were vegetarian, the types of environmental educator authenticated were recommended, the frequence of the teaching and interpreting environmental education were more than 7 times, the frequence of attending syuggestion more positive,thus the environmental educators had also more stronger behavior intention on the energy conservation and carbon emission reduction.

 **Suggestion**

* 1. Environmental education stratege
		1. Adding the content of the climate change, global warming, energy conservation and the carbon emission reduction into the curriculum of the elementary school, junior high school, senior high school, and college level.
		2. Strengthen the frequency of holding the workshop, symposium,forum about the climate change, global warming, energy conservation and carbon emission reduction and encouraging the environmental educators to participate.
	2. Environmental education act and regulation
		1. Set the professional title of the environmental educators such as the nursing specialist, pharmacist, nutritionist,…etc.
		2. Revise the environmental education act and the other related rules and regulations, adding the awarding mchanissm for the environmental educators. Bessides, considering to provide the chance and jobs about the lectural and explanation.
	3. Environmental education program .
		1. Set the short, middle, and long term environmental education programs to promote and improve the knowledge about the climate change, global warming,and the carbon emission reduction.,enrich environmental education equipment (soft ware and hard ware),and strengthen the teaching quality, and eduction materials,in the environmental education training institute.
		2. Asking the local government to set the environmental education program annually and carry out completely.
	4. Environmental research .
		1. Enlarge the research subject, carry out the environmental education questionnaire comparative study for all the environmental educators who were certified.
		2. Carry out the comparative study between the environmental educators who have attended the new materials training which including the climate change, global warming, and energy conservation and carbon emission reduction and no attending training.
		3. Study the difference of practical behavior about energy conservation and carbon emission reduction among the environmental educators who are in different working fields.