

Assessment of Environmental Awareness among Higher Primary School Teachers

Maryam Larijani

Department of Education, University of Payam Noor, Rey, Tehran, Iran
E-mail: larijani.research@yahoo.com

KEYWORDS Environmental Awareness. Gender. Age. School Type

ABSTRACT The present study is an attempt to study the environmental awareness of higher primary school teachers of Mysore City in India. A total of 300 teachers (136 male and 164 female) teaching in 6th and 7th standards were randomly selected for the present study. The environmental awareness test was employed to assess the level of environmental awareness (EAW) among teachers. Chi-square test and contingency table analysis were employed to find out the significance of difference between the teachers with respect to their gender, age and school type. Results revealed that on the whole, majority of the teachers had moderate levels of environmental awareness. Female teachers had significantly higher levels of environmental awareness as compared to their male counterparts. Age-wise analysis also revealed that teachers with 31-50 years had higher levels of environmental awareness and lastly, teachers working in private schools found to have significantly higher environmental awareness than teachers working in government schools. Implications of environmental education were also stressed.

INTRODUCTION

Over recent decades, global problems relating to degradation of natural resources and pollution have increased dramatically. Natural resources are depleted by excessive use. Fresh water scarcity on a global scale, deforestation, degradation of coastal and marine areas, soil depletion and loss of biodiversity, are some of the problems that have become a major concern. Air and water pollution have reached such levels that have already resulted in serious health problems, as well as negative impact on the environment, and inevitably influencing prospects for long-term economic growth. (Krishnamacharyulu and Reddy 2005)

According to a recent estimation by Aschwaden (2007), by 2010 the solar flares are expected to be at their maximum intensity. There will be interruption of all the satellite services like mobile, telephone, television, radio, bank transactions, newspapers and credit cards due to solar radiation. There could be 'telecommunication black out' all over the globe, which will have serious impact on several domains of life. In another startling revelation by the UN climate panel (2007), the melting of Himalayan glaciers could have serious consequences as more than 500 million residents, almost half of the Indian population, rely on the Indus, the Ganges and the Brahmaputra river basins for water supply. With Himalayan glaciers melting, its eastern

islands sinking and freak rain flooding deserts, environmentalists opine global warming is already taking its toll on one of most populous Asian nation, India.

In such a scenario, the importance and need for environmental education can hardly be stressed at present. In order to protect and conserve the environment, enabling people to lead quality life, emphasis has been given to environmental education in both formal and non-formal system of education. In formal system of education, teachers can play an important role in educating their students about environment related issues, which is possible only when the teachers themselves have mastery over environmental awareness.

A survey of literature on Environmental Awareness yielded quite inconclusive results. Shahnawaj (1990), in a study on environmental awareness and environmental attitude of secondary and higher secondary teachers and students in Rajasthan, found that female students possessed significantly more awareness than males while quite opposite results are reported by Tripathi (2000) where boys had better awareness than girls. Sabhlok (1995) found that urban teachers differed significantly from rural and tribal teachers on their awareness of environmental problems. No difference was observed between rural teachers and the tribal teachers. On the contrary, Dinakara (2000) reported significant difference between urban and rural

school teachers in environmental awareness. Also, government and private school teachers differed significantly in their environmental awareness. Patel and Patel (1995) found significant impact of environmental awareness programs on the environmental awareness of the teachers.

The present study is aimed at identifying the levels of awareness among 6th and 7th standard teachers of Mysore city in India. It is hypothesized that teachers do differ in their levels of environmental awareness and demographic variables like gender, age and school type will have significant influence on levels of environmental awareness.

METHOD

Sample

The sample for the present study consisted of 300 higher primary school teachers teaching in 6th and 7th standards of Mysore city in India from 7 government schools and 22 private schools. Teachers teaching different subjects like Science, Social Studies, Mathematics and Languages were randomly selected from the pre-selected schools as the sample for the study. Of the 300 teachers studied, 136 were males and remaining 164 were females.

Tools Employed

Environmental Awareness Test (EAW): This test was developed by Yeshodhara and Asha in the year 2005. The purpose of this test is to measure the level of Environmental Awareness among teachers and students. This test is norm referenced test and consists of 36 multiple choice items each, focusing on eight different areas of Environmental Awareness such as Environmental Concepts, Pollution and its Control, Population and Health and Hygiene, Animal World, Biodiversity, Energy, Environmental Concern and Legislation and lastly, Sustainable Development. The split half reliability has been found to be .721 for Kannada version.

Procedure

The researcher personally visited all the selected schools in the year 2008, where teachers were met individually for explaining purpose of the study and were instructed how to respond to

Environmental Awareness Test. Further clarifications were offered on the questions/doubts raised by them and they were requested to cooperate with the investigator for successful completion of the research.

Statistical Analysis

Chi-square test and contingency coefficient tests were employed in the present study. Chi-square test was employed to find out the significance of difference between frequencies of 3 levels of EAW. Contingency coefficient analysis was done for finding out association between levels of Environmental Awareness and gender, age groups and school type. SPSS for Windows (Evaluation Version 14.0) was used for the analysis.

RESULTS

Overall: Of the 300 teachers assessed for Environmental Awareness, it was found that 18% of them had low awareness, 57.7% of the teachers had moderate awareness and only 24.3% of them had high level of environmental awareness. Further chi-test revealed a significant difference among frequencies of different levels of environmental awareness (Chi-square=81.74; $P<.000$), confirming that majority of them had moderate awareness.

Environmental Awareness and Gender: Gender-wise comparison revealed a significant association between gender and levels of awareness. Contingency coefficient value of .235 was found to be significant at .000 level. Further, from the table it is clear that only 15.4% of the male teachers had high awareness as against 31.7 % of the female teachers.

Environmental Awareness and Age Groups: Even age-group comparison revealed a significant association with levels of environmental awareness ($CC=.206$; $P<.039$). From table 1 it is clear that teachers with age groups from 31 to 50 years had higher levels of awareness (27.9% and 24.7% respectively) compared to teachers with age groups of below 30 years (17.8%) and 51-60 years (20.8%).

Environmental Awareness and School Type: A significant association was observed between school type and levels of environmental awareness as the obtained contingency coefficient value of .236 was found to be statistically

Table 1: Frequency and percent values of teachers in different levels of environmental awareness with respect to their gender, age groups, and type of school on and results of statistical tests.

Variables			Environmental awareness			Total	χ^2/CC	P value
			Low	Moderate	High			
Overall			Frequency 54	173	73	300	81.740	.000 (S)
			Percent 18.0%	57.7%	24.3%	100.0%		
Gender	Male	Frequency	19	96	21	136	.235	.000 (S)
		Percent	14.0%	70.6%	15.4%	100.0%		
	Female	Frequency	35	77	52	164		
		Percent	21.3%	47.0%	31.7%	100.0%		
Age groups (in years)	Below 30	Frequency	4	33	8	45	.206	.039 (S)
		Percent	8.9%	73.3%	17.8%	100.0%		
	31-40	Frequency	26	62	34	122		
		Percent	21.3%	50.8%	27.9%	100.0%		
	41-50	Frequency	24	44	21	85		
		Percent	3.5%	51.8%	24.7%	100.0%		
	51-60	Frequency	4	34	10	48		
		Percent	8.3%	70.8%	20.8%	100.0%		
	Govt	Frequency	14	17	2	33		.236 .000 (S)
		Percent	42.4%	51.5%	6.1%	100.0%		
	Private	Frequency	40	156	71	267		
		Percent	15.0%	58.4%	26.6%	100.0%		

Note: χ^2 =Chi-square: CC-Contingency Coefficient: S-Significant

significant ($P < .000$). Further, from frequencies and percentages it is clear that 26.6% of the private school teachers had higher levels of environmental awareness as compared to only 6.1% of the government school teachers. 42.4% of the government school teachers had low levels of awareness as against 15% of the private school teachers.

DISCUSSION

Main findings of the present study are as in the followings:

Majority of the teachers had moderate levels of environmental awareness. Female teachers found to have higher levels of environmental awareness compared to male teachers. Teachers in the age groups of 31 to 50 years had higher levels of awareness as compared to other age groups. Teachers working in private schools had higher levels of environmental awareness as compared to teachers working in government schools.

The overall analysis revealed though majority of the teachers had moderate awareness, only few of them had high levels of Awareness. This calls for change in the curricula designed at foundation level (at D.Ed/B.Ed levels). Our globe being highly prone to destruction due to human interference, there is an urgent need to educate the public regarding the phenomena like global

warming, environmental degradation, etc. This can be very well initiated at school level by giving advanced training to teachers on environment related aspects. If children at their early age learn about these negative effects, as they grow at least they can make some effort for sustainable development. The results obtained in the present study are more or less not in accordance with some of the studies mentioned here. Badkobi and Hadipour (2001) reported significant difference among male and female teachers in their awareness about environmental education where male teachers had higher awareness. Jinarajan (1999) in his study on student teachers from Bangalore did not find any gender difference in environmental awareness. Again, Vipinder and Jaswinder (2005) reported that male and female teachers had equal levels of scores on environmental education awareness.

As far as the school type is considered teachers working in private schools had better awareness as compared to government schools. One reason could be that in private schools, the emphasis would be given to recent developments, encouragement in participation on various programs on environment related issues, which is not so pronounced in government schools. Even, Dinakara (2000) reported significant difference in environmental awareness between government and private school teachers. However, Sabhlok (1995) reported government

teachers found to be better in awareness than private school teachers.

CONCLUSION

To protect and conserve the Environment, emphasis should be given to Environmental Education in both formal and non-formal system of education. In formal system of education, teachers play a very significant role in developing a greater awareness about environment among students. This calls for a radical change in the way we think, live and work. It therefore goes without saying that sustainable development calls for a paradigm shift in our educational system right from school level to university level. In fact, it cannot be thought of achieving a sustainable way of life without an appropriate educational system designed to internalize the principles of sustainability in the life and work of our youth. Because of the government initiative to make Environmental Education an integral part of formal education through its national curriculum framework, considerable work is being done in the direction of integrating environmental concepts into the existing curriculum, developing new strategies, preparing instructional material for effective implementation of Environmental Education in the formal system.

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