



A Relational Study on Environmental Values and Environmental Competencies of Pre-Service Teachers

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Abstract: *The present investigation was proposed to study the correlation between environmental values and environmental competencies of Pre-service teachers. A sample of 600 B.Ed. Pre-service teachers were selected from various private and government B.Ed. colleges of Chittoor and Guntur districts of Andhra Pradesh. The investigator used environmental values and environmental competencies scales to meet the objectives of the study. The results of the study showed that there is a significant positive correlation existed between environmental values and environmental competencies of pre-service teachers with respect to whole sample. Gender and type of management of pre-service teachers make a significant difference in the relationship between environmental values and environmental competencies. Locality of pre-service teachers doesn't make a significant difference in the relationship between environmental values and environmental competencies.*

Key Words: *Environmental Values, Environmental Competencies, Pre-Service Teachers*

Introduction

Teachers are the great transformers of the society, they are considered as pillars of any education system. After parents, the child spends much of the time in the school during childhood. This is the time to develop sense of responsibility among the students towards society and its related environmental issues. Environmental degradation is the current problem of the society, it is the main reason to focus on environmental education in school curriculum. The main aim of environmental education is to create environmental awareness among all age groups. Teachers can influence the students as well as society by their curricular and co-curricular activities. She/he takes a major accountability to implement environmental education formally and informally. The students take the teachers as a role model they follow the values, attitudes and behaviour of the teachers, so the teachers should hold constructive environmental values and competencies to motivate the students. To create environmental awareness among the students, the teacher must have sound knowledge, awareness regarding environmental problems and concerns. In this regard the teacher education colleges should prepare environmentally effective teacher trainees. The chief aim of introducing environmental education in teacher education is to enable the Pre-service teachers to inculcate environmental values and competencies among the students. Environmental values of the human beings reveal their behaviour towards the society. In environmental education, environmental values play an important role in issues of environment and makes a significant impact on human behavior. They guide them towards the solution for the environment and its related issues faced by the societies. These issues may include such pollution, global warming, acid rains, loss of biodiversity and the destruction of wildlife etc. In order to overcome these problems the environmental values and competencies of individuals towards environment is the most important. By modifying these values we can reach the goal of environmental education by conserving natural resources and achieve the sustainable behavior. Teachers are role models to their students, they can take a dynamic role in teaching the environmental values to the student community through their actions as students imitates the teacher actions and behaviour directly or indirectly. Environmental education becomes vital to achieve certain goals of sustainable development. It is possible only through the proper execution of environmental education in teacher education.

Review of Related Literature

Vidhya Meena, and K.M. Goyal (2014) revealed that environmental values related to health care, entertainment religion, and scientific sense are more prevail in male rather than female on the other hand aesthetics and social senses are better in female than to male prospective teachers.



Mamta Barman (2015) revealed that government school students are having low degree of environmental value than private school students.

Uma Soni (2016) indicated that environmental knowledge and environmental values of the students were positively correlated.

Yelena V. Ponomarenko (2016) revealed that 77% students' have low level of environmental competence, 23%, possessed average level of environmental competence. It was noticed that there is no high level environmental competence among the students.

Kuo-Shu Yuan, et.al. (2017) shown that there is a significant positive relationship between professional knowledge and competence in Environmental Education.

Genalyn Panganiban. Lualhati (2017) Concluded that pre-service teachers require more appropriate training in order to improve their environmental competency, particularly in terms of ecological foundation. Pre-service teacher education, mostly at the elementary level, lacks proper preparation for environmental education. As a result, public and private Teacher Education Institutions (TEIs) can use these quantitative data to design, plan, and improve environmental education aspects in teacher education programmes.

Pakala Naga Suresh Kumar and T. Swarupa Rani (2018) noticed that gender, subject and qualification of the teacher trainees make a significant difference in their environmental values.

Statement of the Problem

The present study is entitled as follows.

“A Relational Study on Environmental Values and Environmental Competencies of Pre-Service Teachers”

Operational Definitions of Key Terms

Study

It refers to a process for gaining knowledge of the subject.

Environment

The term 'environment' refers to the surroundings of an organism which includes both living and non-living components.

Values

Values are basic and fundamental beliefs that guide or motivate attitudes or actions.

Environmental Values

It can be defined as ".the values that propose or support action – oriented towards environmentally conscious and responsible”

Pre-Service Teachers

The Students who are enrolled in B.Ed. Programme at colleges of education are considered as pre-service teachers in this study.

Environmental competence

It can be defined as “people’s ability to deal with their immediate surroundings in an effective and stimulating manner”

Objectives of the Study

- To find out the correlation between environmental values and environmental competencies of Pre-service teachers.
- To study the significance of difference in the relationship between environmental values and environmental competencies of Pre-service teachers with respect to the variables gender, locality and type of management.

Hypotheses of the Study

- There would be no significant correlation between environmental values and environmental competencies of Prospective teachers with respect to whole sample.
- There would be no significant difference in the relationship between environmental values and environmental competencies of Pre-service teachers due to variation in gender, locality and management.

Method adopted for the study

The researcher has adapted survey method to investigate the correlation between environmental values and environmental competencies of Pre-service teachers.

Sample and Sampling technique

In the study the investigator used stratified random sampling technique to get a sample of 600 B.Ed. Pre-service teachers who are enrolled B.Ed. Programme in government and private colleges of Education from Chittoor and Guntur districts of Andhra Pradesh.

Tool Used for the Study

In order to meet the needs and objectives of the research the investigator used five point rating scales. The scales are developed and validated by the investigator. Those are (i) EVS (Environmental Values Scale, it consists of 38 statements, the reliability of EVS was calculated as 0.88). (ii) ECS (Environmental competencies scale, it comprises of 56 statements, the reliability of the ECS was computed as 0.92.)

Analysis and interpretation of Data

Data analysis and interpretation of the study have been done with the help of Pearson's Product Moment Coefficient of Correlation and Critical ratio.

Table -1: Coefficient of Correlation between Environmental Values (EV) and Environmental Competencies (EC) of Pre-Service Teachers

Variables	N	Df = N-2	r- value
EV	300	df = (300-2) = 298	0.88**
EC			

**Significant at 0.01 level

The table-1, shows that the coefficient of correlation (r-value) between environmental values and environmental competencies of pre-service teachers of the whole sample is 0.88 for df 298 which is significant at 0.01 level. It confirms there is a significant positive correlation between environmental values and environmental competencies of pre-service teachers. Hence the formulated null hypothesis is rejected.

Table-2: Difference in the Relationship between Environmental Values (EV) and Environmental Competencies (EC) of Pre-Service Teachers –Gender, - r, Fisher Z - C.R.

Variable		Sample Size	r	Fisher's Z	Dz	σ_{dz}	CR
Male	EV	300	0.86	1.29	0.34	0.08	4.25**
	EC	300					
Female	EV	300	0.74	0.95			
	EC	300					

**Significant at 0.01 level

Table-2, reveals that the obtained critical ratio (4.25) value is significant at 0.01 level. Therefore, the null hypothesis is rejected. Hence, it can be said that gender of pre-service teachers makes a significant difference in the relationship between environmental values and environmental competencies.

Table -3: Difference in the Relationship between Environmental Values (EV) and Environmental Competencies (EC) of Pre-Service Teachers –Locality, - r, Fisher Z - C.R.

Variable		Sample Size	r	Fisher's Z	Dz	σ_{dz}	CR
Rural	EV	300	0.35	0.37	0.15	0.08	1.88#
	EC	300					
Urban	EV	300	0.22	0.22			
	EC	300					

Not Significant at 0.05 level

Table-3, reveals that the obtained critical ratio (1.88) value is not significant at 0.05 level. Therefore, the null hypothesis is retained. Hence, it can be said that locality of pre-service teachers does not make any significant difference in the relationship between environmental values and environmental competencies.

Table-4: Difference in the Relationship between Environmental Values (EV) and Environmental Competencies (EC) of Pre-Service Teachers –Management, - r, Fisher Z - C.R.

Variable		Sample Size	r	Fisher's Z	Dz	σ_{dz}	CR
Government	EV	300	0.27	0.28	0.20	0.08	2.50*
	EC	300					
Private	EV	300	0.45	0.48			
	EC	300					

*Significant at 0.05 level

Table-4, reveals that the obtained critical ratio (2.50) value is significant at 0.05 level. Therefore, the null hypothesis is rejected. Hence, it can be said that type of management of pre-service teachers makes significant difference in the relationship between environmental values and environmental competencies.

Major Findings

- There is a significant positive correlation existed between environmental values and environmental competencies of pre-service teachers with respect to whole sample.
- Gender and type of management of pre-service teachers make a significant difference in the relationship between environmental values and environmental competencies.
- Locality of pre-service teachers doesn't make a significant difference in the relationship between environmental values and environmental competencies.

Conclusions

The results of the study showed that there was a significant positive relationship between environmental values and environmental competencies of pre-service teachers. It was also similarly found that there was a significant positive relationship between environmental values and environmental competencies of pre-service teachers with reference to gender and management. It can conclude that the pre-service teachers who have possess better environmental values tend to hold better environmental competencies. Hence the teacher educators should create environmental awareness among students and inculcate positive environmental attitude, environmental values and environmental competencies among pre-service teachers by adopting appropriate teaching strategies such as project method, problem solving method, seminars and workshops to protect the environment, thus the colleges of teacher education should take an important role to instil environmental values and competencies among pre-service teachers.

References

- Aggarwal, J.C. (2005). Education for values, Environment and Human Rights, Shipra Publication, Delhi.
- Best, J. W., (1982). Research in Education, Fourth Edition Prentice Hall of India Pvt. Ltd., New Delhi.



- Bubela, O.V. (2012). Socio-Environmental Competence – the Dominant in Modern Higher Pedagogical Education. Electronic Periodical Scientific Edition. *Herald of the International Academy of Sciences. Russian section*, 1, 80-82.
- Genalyn Panganiban-Lualhati. (2017). Filipino Student Teachers' Environmental Competencies: Basis for Development of a Training Module. *Asia Pacific Journal of Multidisciplinary Research*, 5(1), 62-72.
- John W. Best and Khan, J. V. (2010). *Research in Education*, Tenth Edition, Pearson Education Pvt. Ltd, New Delhi.
- Kuo-Shu Yuan, et.al. (2017). A Study on the Teachers' Professional Knowledge and Competence in Environmental Education. *EURASIA Journal of Mathematics Science and Technology Education*, 13(7), 3163-3175.
- Mamta Barman (2015). Environmental problems and environmental values. *Social Issues and Environmental problems, International Journal of Research and Granthaalayah*, 3 (9), 1-3.
- Pakala Naga Suresh Kumar and T. Swarupa Rani (2018). A Study on Environmental Values of Teacher Trainees. *International Journal of Multidisciplinary Educational Research*, 7, 1(3), 265-275.
- Sharma, Y.K. Kuldeep, S. Katoch (2007). *Education for Values, Environment and Human Rights*, Deep and Deep Publications, Pvt. Ltd., New Delhi.
- Uma Soni. (2016). A Study of Environmental Knowledge and Values of Undergraduate Students of the Maharaja Sayajirao University of Baroda, Vadodara. Ph.D. Thesis, Department of Extension and Communication, the Maharaja Sayajirao University of Baroda, Vadodara.
- Vidhya Meena and K.M. Goyal (2014). Environmental Values amongst Prospective School Teachers from Tribal Community. *International Journal of Education and Psychological Research (IJEPR)*. 3 (2), 92-94.
- Yelena V. Ponomarenko (2016). Students' Environmental Competence Formation as a Pedagogical Problem. *International Journal of Environmental & Science Education*, 11(18), 11735-11750.