[Thesis Abstract]

AWARENESS OF ENVIRONMENTAL POLLUTION AMONG THE SECONDARY STUDENTS IN RELATION TO THEIR CONCEPTS AND APITUDE IN SCIENCE - A CRITICAL STUDY

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Problem: The study attempts to find the impact of Concepts in Science (CS), Aptitude in Science (AS) (Independent Variables) of the students of upper primary level on their Awareness of Environmental Pollution (AEP) (Dependent Variable). The particular focus of this study is to compare the awareness of the students of the schools located in polluted areas and non-polluted areas of West Bengal.

Objectives of the study:

(1) To study the significance of mean difference sex-wise and habitat-wise on each of the independent variables.

(2) To find the significance of inter correlations of the variables under study

(3) To find the significance of effect each independent variable on the dependent variable

(4) To find the significance of independent & joint impact of independent variables on the dependent variable

Methodology:

24 null hypotheses were used. Tests in Concepts in Science and Aptitude in Science have been prepared with particular emphasis on environment. For concepts in science test Conjunctive Concept of Bruner et al. (1956) was used. For Aptitude in Science, Dimensions of Freeman (1965) was used. The test has also construct validity and high Cronbach’s Alpha. For Awareness of Environmental Pollution air, water & soil were only considered. All the tests were prepared and standardized. For Concepts in Science test & EAP content validity was found. For internal consistency subtest-total correlations were found out. The sample was drawn by cluster sampling method from the schools under WBBSE in WB located in polluted and non-polluted zones. The final tests were applied on 1063 boys and girls of class VIII just promoted to class IX.

For testing the significant differences, ANOVA & t-test were used. Test-retest reliability was found for all the tests. To find the impact of concepts in science & aptitude in science separately on awareness of environmental pollution t-tests were also used. To predict the scores of AEP a regression equation was developed with AEP on Aptitude and Concept in science. Paired OGIVES were drawn to compare the different distributions of scores on different variables.

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Major Findings:

- Students belonging to the schools of non-polluted zones and those polluted zones differ in the following ways
- Boys of the two zones differ significantly in all the tests: Concepts, Aptitude and Awareness of Environmental Pollution
- Boys and girls of polluted zones differ significantly in all the tests
- Students of polluted and non-polluted zones differ significantly in Aptitude only
- Boys and girls differ significantly in Concept and Aptitude
- Both Concepts and Aptitude in Science have separately significant impact on AEP
- The variables of study are significantly inter correlated
- AEP scores can be predicted individually or jointly by Concepts in Science and Aptitude in Science

Conclusion

- Students of both the zones do not significantly differ in AEP. Also Boys and Girls do not significantly differ in AEP. So effect of sexes or environmental pollution has no all-pervasive effect on AEP
- Concept in Science and Aptitude in science has significant effect on AEP