



STUDY OF THE EFFICACY OF CO-OPERATIVE LEARNING IN TEACHING STATISTICS AT HIGHER SECONDARY LEVEL

Dr. Balkrishna Shripad Bhave

M.Sc.,M.Ed.,D.C.S.,D.B.M.,Ph.D.

Associate Professor , Kasturba College of Education, Solapur .

ABSTRACT:

At various levels and in various educational streams Statistics is an subject or a pre-requisite for at-least partial fulfillment of the course. Statistics has been recognized as the most worrying subjects to learn in the higher education context. Statistics is related to numerical facts. It refers to collection, presentation analysis and interpretation of data. Statistics is very important in education and especially in research as it helps in collecting, presenting analysis and interpreting data. It also helps in drawing general conclusion, inferences and predictions.



KEYWORDS: various educational streams , presentation analysis and interpretation of data.

INTRODUCTION :-

The educationalists have continuously worked for finding solutions to integrate the technology and innovative strategies in the classroom to eliminate the fear of statistics. The purpose of this study is to identify efficacy i.e. the suitability of co-operative learning in Statistics classroom.

OBJECTIVES:

1. To study the efficacy of Conventional method of teaching Statistics at Higher Secondary level.
2. To study the efficacy of Cooperative Learning for teaching Statistics at Higher Secondary level.

3. To compare the effects of both methods of teaching Statistics on achievement of the students.

Hypothesis : H_0 - There will be no significant difference in achievement of students taught Statistics content using conventional and Co-operative learning methods.

Research Method: In view of the research problem, the Experimental method was selected to carry out the research work. The Post-test only equivalent group design was chosen to carry out the research.

Tools: The Post-test i.e. achievement test was used to measure and compare the effects

of both the teaching methods.

The mean scores of both the groups were compared for significance using t-test so as to find the effective teaching method.

Study Sample:

For this research, the sample consisted of 80 students of XIth std from a private renowned coaching class in Solapur city. A merit list was prepared with the help of the marks obtained by the students in Mathematics in SSC examination. The first 50 students in merit list were selected for the study. These students were further divided systematically into two groups of 25 students in each group.

RESEARCH PROCEDURE:

In view of the objectives, The Post-test only equivalent group design was chosen to carry out the research. After forming the groups of 25 students both the groups were taught the Unit - Measures of Dispersion (Statistics content) prescribed for XI th standard Mathematics (Part-1). The concepts and examples based on Range, Quartile deviation & Standard deviation were taught. The Experimental group was taught by using Co-operative learning method and the control group was taught by using conventional method. A post test of 50 marks was conducted and the difference in Mean scores of both the groups were compared using t-test for statistical significance and the results were interpreted.

MAJOR FINDINGS:

1. The experimental group ($M_1 = 35.8$ S.D.= 3.38) obtained a higher mean than the control group ($M_2 = 32.56$ S.D= 4.21).
2. The efficacy of Cooperative learning proved significant for teaching-learning of the Statistical content at IXth std Mathematics.
[t- value = 3.001 > t- alpha= 2.021 df = 48 level of significance = 0.05]
3. Students were engaged all the time in discussions in their groups with their peer. They were more active in the class. Also it was observed that the students showed more interest in learning the content.

BIBLIOGRAPHY:

1. Best J.W. and Kahn. J.V.; (1998); Research in Education; New Delhi; Prentice Hall of India
2. संशोधनात सांख्यिकी तंत्राचे उपयोजन (2002) : संपादक, यशवंतराव चव्हाण महाराष्ट्र मुक्त विद्यापीठ, नाशिक
3. Text Book of Mathematics for Arts and Science STD IX (Part-1) – Pune Board

Websites:

- <http://www.stat.uci.edu>
- <http://www.geeksforgeeks.org>