EFFECT OF CO-OPERATIVE LEARNING ON THE EDUCATIONAL ATTAINMENTS OF STUDENTS AT ELEMENTARY SCHOOL LEVEL

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ABSTRACT
The foremost purpose of this study was to probe that how cooperative learning effect educational attainment of students *at elementary school level*. Regarding this research sample consisted of 8th class elementary school student. These students divided into two equal groups i.e. control and experimental. Results of this research work indicated that cooperative learning affect the educational attainment of students at elementary school level.
Key Words: Cooperative learning, Educational attainment, Elementary schools.

INTRODUCTION

Cooperative Learning means structuring classes about small groups. These groups work together for the achievement of success, in such a way that each group member depends on the group. In cooperative learning different groups work in different situations, these groups work differently but one thing is common in between the group i.e. attainments of goal. Cooperative learning groups balance some main elements i.e. students sit side-by-side at the same time and same table to talk with each other. In cooperative learning there is too much involvement of each and every student like discussing materials, helping, or sharing material with other students. In cooperative learning, group of students are structuring in such a way that there is interdependence among students.

Co-operative learning plays a very imperative role in the educational triumph of students in teaching learning process, so the role of a teacher should be co-operative. Effective teaching learning process requires the conscious, effective, cooperative and active efforts of the teacher and the student. At elementary level in Pakistan teaching learning process is totally based on rote memorization and students are given very less time for active participation and interaction.

Johnson & Johnson (1999) so many studies have been undertaken to measure the success of cooperative learning as an instructional method/technique regarding social skills, student learning, knowledge and various achievements across all levels so in this perspective the general consensus is that cooperative learning play a very crucial role in positive student outcomes in all domains.

STATEMENT OF THE PROBLEM

In teaching learning process at elementary school level this research was designed to probe the effect of co-operative learning on the educational attainments of students.

OBJECTIVE OF THE STUDY

The core objective of research was to find the attainment of the students regarding co-operative learning.

HYPOTHESIS

Following null hypothesis was formulated and tested through the process of research.

H_0: There is no significant effect of the co-operative learning on educational attainments of students at elementary school level.

LITERATURE REVIEW

Cooperative Learning

Slavin (1990) Cooperative learning is an approach to organize, arrange, systematize, assemble and classify classroom activities into academic learning experiences to get maximum learning outcomes. So the main focus of the cooperative learning is "structuring positive interdependence" in teaching learning process.

Kagan (1990) regarding academic gathering students must work in groups to complete academic tasks collectively. Cooperatively students learning capitalize on one another's resources and skills. In the process of cooperative learning the role of teachers has been changed, the teacher should facilitate students' learning. It has been discussed that in cooperative learning students work in a group so everyone succeeds when the group succeeds.

Ross and Smyth (1995) depict cooperative learning as creative, intellectually demanding, open-ended, and involve higher order thinking tasks. In cooperative learning group work is more effective and efficient in quality and quantity when compared to working alone in teaching learning process.

Johnson (1994) elaborate cooperative learning in such a way that promote better communication, mutual liking, high acceptance and support, as well as exhibit an increase in a variety of thinking strategies among individuals in the group.

Johnson and Johnson (1989) introduce five elements (face-to-face interaction, positive interdependence, individual accountability, processing, and social skills) indispensable for effective group learning, achievement, and higher-order skills (e.g., problem solving, organizing, reasoning, planning, reflecting and decision-making).

Cooperative learning Techniques

Schul (2011) discusses that there are number of cooperative learning techniques available i.e. think Pair Share, Jigsaw, Reciprocal teaching, student-teams-achievement divisions, three-step interview, roundtable, numbered heads together, pairs check etc all these techniques improve skills, education, knowledge, thinking, attitude, aptitude, interdependence and social values of the students.

Research supporting cooperative learning

Brown & Ciuffetelli (2009) different researches in the perspective of cooperative learning demonstrated extremely positive results. In school situation cooperative learning engage students in group and increase learning, education, knowledge, skills. On the subject of cooperative learning the positive outcomes include: academic attainments, improved relations and increased personal, social and intellectual development.

Sapon-Shevin (1994) from pre-school to post secondary school cooperative learning has been found to be a successful teaching strategy. At elementary level cooperative learning is a fine teaching strategy in order to fulfill the needs of

students. Basic educational needs of teenagers can be completed easily with the help of cooperative learning.

Ke and Grabowski (2007) indicated that cooperative learning is a doing well teaching strategy because small teams are prepared to interact with each other so in this way students of different levels and ability use a variety of learning activities to improve their understanding of different subjects.

Kamuran and Fikri (2008) engaged student to teach by using cooperative learning technique improved performances of students. Innovative cooperative learning model positively improve students' attainment and learning motivation.

Brady & Tsay (2010) describe that students who fully take part in group activities, provide useful feedback and positive behavior which is essential for their academic carrier. Study supports the perception that cooperative learning is an active pedagogy that promotes higher educational attainment. Cooperative learning increases enjoyment of school and class regarding skill, motivation, behaviour, attitude and interdependence.

Johnson and Johnson (1989) concluded cooperative learning results in:

- Increased higher level way of thinking.
- Increased generation of new ideas and solution of various problems.
- Greater transfer of learning between situations.

METHODOLOGY OF THE STUDY

Population of the Study

The Population for the study included all the secondary school students of District Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan.

Sample of the Study

Following sample was selected by simple random sampling technique.

1. Government Higher Secondary School # 1D.I.Khan.
2. 60 Students of 8^{th} class were selected for this study.

Instruments

The following two instruments were used in this study.

- **Pre-Test**
  Pre-test was used to know the performance of experimental group and control group at initially.
- **Post-Test**
  Post-test was used to know the performance of experimental group and control group at the end of experiment.

Procedure of the Study

The procedure of this study was two equal performance groups of students were selected on pre-test. One group was called experimental group and the other was the control group. Both groups were taught by the same type of teachers. The experimental group was provided cooperative learning facility while the control group was not provided such facility. After one month teaching a post test was given to the students. The marks of both tests were arranged and compared by using t-test and coefficient of variation (CV).

STATISTICAL ANALYSIS

To determine significant effect of cooperative learning on the educational attainments of students, t-test and coefficient of variation (CV) was used.

Chaudhary (1996), "To compare the performance of two candidates co-efficient of variation was used" (p.106).

Alam (2000), "Stability or consistency in the variables is used as terms opposite to variation or dispersion i.e. more stable will be the data if it has less variation similarly less stable will be the data if it has more variation". (p.151)

Applied test formulae are as under:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{S_p\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$With \quad \nu = n_1 + n_2 - 2 \quad d.f$$

$$Where$$

$$\overline{X}_1 = \frac{\Sigma f_1 x_1}{\Sigma f_1} \qquad \overline{X}_2 = \frac{\Sigma f_2 x_2}{\Sigma f_2}$$

$$S_P^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$Where \quad S_1^2 = \frac{1}{n_1 - 1}\Sigma(X_{1i} - \overline{X}_1)^2$$

$$And \quad S_2^2 = \frac{1}{n_2 - 1}\Sigma(X_{2i} - \overline{X}_2)^2$$

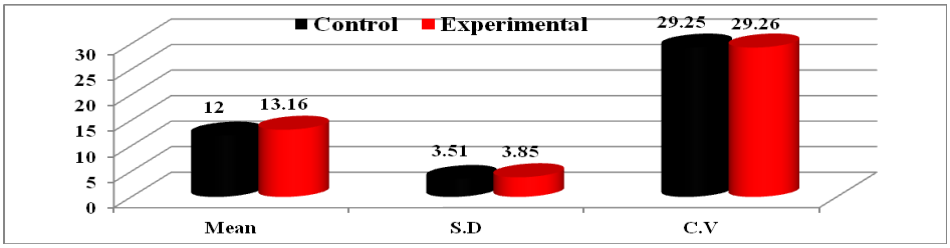
$$Co-efficient \quad of \quad Variation = C.V = \frac{S}{\overline{X}} \times 100$$

$$Where S = s\tan dard \quad deviation \quad and \quad \overline{X} = Mean$$

ANALYSIS & INTERPRETATION OF DATA

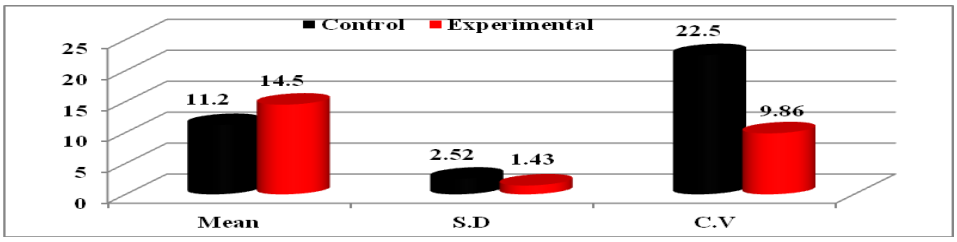
TABLE#1: SHOWING THE PRE-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUP

Group	n	Mean	S.D	C.V	d.f	Level of Significance(α)	t-tabulated	t-calculated
Control	15	12	3.51	29.25	28	0.05	+2.048	-0.000904
Experimental	15	13.16	3.85	29.26				



TABLE#2: SHOWING THE POST-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUPS

Group	n	Mean	S.D	C.V	d.f	Level of Significance (α)	t-tabulated	t-calculated
Control	15	11.2	2.52	22.5	28	0.05	+2.048	+4.25
Experimental	15	14.5	1.43	9.86				



RESULTS

Table#1 indicates that the mean of control group is 12 and mean of experimental group is 13.16 similarly standard deviation of control group is 3.51 and mean of experimental group is 3.85. The co-efficient of variation of control group is 29.25 and experimental is 29.26. The t-calculated value -0.000904 is less than the t- tabulated +2.048, so we accept H_0 and conclude that there is no significant difference between the performance of control and experimental group.

Table#2 indicates that the mean of control group is 11.2 and mean of experimental group is 14.5 similarly standard deviation of control group is 2.52 and mean of experimental group is 1.43. The t-calculated value +4.25 is greater than the t- tabulated +2.048, so we accept H_1 and conclude that there is significant difference between the performance of control and experimental group. Regarding results difference was in the favor of experimental group. The co-efficient of variation (C.V) of controlled and experimental group is 22.5 and 9.86 respectively. Since C.V of experimental group is less than the controlled group so there is consistency in the performance of experimental group.

CONCLUSION OF THE STUDY

Regarding findings it is concluded that there is a difference between the achievement of control and experimental group's students. The experimental group was taught by cooperative learning techniques performed significantly better than the control group in which cooperative learning techniques were not provided.

RECOMMENDATIONS

In perspectives of the findings and the drawn conclusion it is recommended that:-

1. Cooperative learning techniques may be used in the classroom at elementary level to include students in teaching learning process.
2. Teachers may be established high level of interaction through questioning as it promotes involvement enhances learning and motivates students.
3. Teachers may be given attention to all the students in the class including back benchers to increase achievement of students.
4. Teachers may be provided chances to the students to participate in the teaching learning process.

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