



Impact of Co-operative Learning on Achievement Motivation of the Students Learning in Secondary School: An Experimental Study

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ABSTRACT

Learning Achievement is the keynote need of today's society. Today Student Achievement only depends on acute learning methods and motivation. It is obvious that students need motivation in their learning process and Achievement. This Study was focussed on Achievement motivation of Secondary School Students, and how they are affected by Cooperative learning techniques. A total sample of 6 participants was collected from the population with the help of simple random sampling Technique. The researcher got the implementation of the Quasi-Experimental method of non-equivalent group design of Experimental research. The researcher took two sections consisting of the Control group and Treatment Group by randomization. The Co-operative learning method and Lecture method were used in Treatment group and control Group respectively. The present research denotes that both girls and boys are active in the process of Achievement motivation while there is no significant difference of gender in this variable.

INTRODUCTION

Knowledge is not a material to remain constant and fixed but can be enhanced and developed by motivation. An individual needs such a learning method which can motivate him or her towards learning and Achievement. Achievements require Motivation of the individual hence Motivation is a significant factor in

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the student learning process (Zimmerman, 2000). Motivation theory indicates, potentials of Achievement relate to three factors, i.e.: in what way the student gives acknowledgement to earlier achievement or failures, in what way the student infers their competence, and in what way the student concerns self-honour. It is the situation where the learner interacts with each other in a given learning environment including learning strategies during the learning situation. Student confidence level whether he/ she can complete the task properly or not signify the student success (Ryan & Deci, 2000). Using the attribution of Co-operative learning, Achievement motivation can forecast the learning Achievement. Our NEP and Inclusive Education can attain their goals with the reinforcement of Co-operative learning (CL) method which helps in learning of all types of students through activation of Achievement Motivation.

Learning is progressive work for an individual. In knowing social science topics or any other topic, students are required to relate themselves to give attention in lessons, to practice the activities based on topics and skills being taught, and to obtain information for them. Students give their attention as per the degree of their motivation. So learning Achievement needs such momentum which can bring them motivation. Numerous students used to come to school to get underpinning for their learning based on social activities. “Many subjects are Integrally curious to students or can be moulded so by creative teachers. However, few subjects or teachers are so curious and few students are so internally motivated as to make extrinsic rewards unnecessary” (Slavin; 1987, P-30). It is impractical to expect that intrinsic curiosity and internal motivation will keep them enthusiastically working throughout the day. Mere use of lecture method or teaching in mother language could not help in learning and Achievement of Students. So in order to develop basic learning skills and eagerness towards achievement, CL teaching procedures and techniques become obligatory to be implemented. Such Teaching techniques bring the students to be necessarily involved in learning. “Through the CL method, they feel a learning environment, where possibilities are taken to be optimistic. It is the learning method where probability of failure for individual is endorsed to the whole group, as the group's Achievement is related to the individual efforts of the group (Kirbaş, 2010: 6)

According to Johnson and Johnson (1999) four aspects of cooperative learning are goal, levels of co-operation, interaction pattern and evaluation of outcomes. Positive interdependence, face to face promotive interaction, individual and group accountability, group processing and interpersonal and small group skills are important elements of cooperative learning. While among the CL techniques such as; Think-Pair-Share, Think-Pair- Write, Reciprocal Teaching Technique, Jigsaw, and Student-Team- Achievement Divisions (STAD), researchers commonly used the last two techniques. Further “it is an informative use of small groups to attain shared goals and provide the students working together” Johnson and Johnson (1997). When students learn in groups, analysing his capacity and progress as well as the mean while



CL method enhances the motivation of learners in the process of learning and motivates the individual creativity of the learners to set up for self-learning. The most effective learning in CL method occurs when the students in the group inspire each other (Håller et al., 2000: 285). It is a proven fact that Traditional Teaching methods are ineffective while CL method and its techniques motivate the learners in the forefront (Kırbaş, 2010: 56). The Two major determined features, which must be presented or improved for obtaining the student achievement, are; 1. While designing cooperative learning tasks and reward structures, individual responsibility and accountability must be identified. Individuals must know exactly what their responsibilities are and that they are accountable to the group in order to reach their goal. 2. All group members must be involved to complete the task. For this to occur each member must have a task that they are responsible for which cannot be completed by any other group member.

R.E. Slavin's research indicates that high achievers gain from cooperative learning (relative to high achievers in the traditional classes) just as much as do low and average achievers' (Slavin, 1995). For Cooperative learning Jhonson and Johnson; defines the instructional goals, limit the group size, division forming the groups, forming the class, selecting the teaching aids in the manner that fulfils necessities, assignment of roles to all members of the small group, instruction of curriculum, assessment of individual. In CL Teaching technique students consisting of 4 to 6 members form a small group. Educators give instructions to each group to finish the part of work in a particular group and in the class 5 to 6 groups share their group work themselves. Finally, the task is over and group work is evaluated by the Instructor. "CL brings significant techniques, which brought individual participation for group success in the class"(Oral, 2000).

Further, the positive aspects of using CL in teaching can be listed as follows; 1. The CL technique brings motivation towards learning. 2. It allows us to learn from each other. 3. This teaching method brings the group members on equal footing. 4. CL method creates students' self-assurances. 5. CL makes every individual responsible for his own part of learning and sharing. 6. Studies on CL always witnessing that CL method affects achievement motivation rather than any other learning method. 7. CL brings students groups motivated towards each other. 8. It gives leadership quality in students to actively participate in the learning process. 9. It enhances individual learning. 10. CL method is innovative and group based and motivated. (Kemertaş, 2004: 167; Kırbaş, 2015: 118).

We notice the competitive environment of learning becomes hurdled for the students in their achievement. According to Johnson and Johnson (1991) group techniques such as cooperative learning may solve these problems if applied systematically and carefully. Cooperative learning is a set of instructional methods



"which employs small teams of pupils to promote peer interaction and cooperation for studying academic subjects. "The noun cooperative learning refers to an instruction method in which students of numerous performance levels learn together in their specific formed groups towards a common goal. Every student is responsible for one another's learning as well as his own learning. The CL teaching method practices require students to cooperate as a team and as a necessary condition of acquiring academic learning. Hence it means that it results from the individual to common efforts, that the instructional goal is shared, that individual Achievement depends on group Achievement and vice versa. They know that one's performance is mutually caused by oneself and one's team members. They achieve learning and motivation and jointly celebrate when a group member is recognized for achievement. In cooperative learning pupils share materials, divide up the labour required to complete the assignment, assist the other members of the group and receive rewards based upon the group's performance. Consequently this method got prominence as students are motivated to get the achievement of the group and the individual gets his own achievement.

Rationale of the Study

Co-operative learning is one of the teaching-learning strategies which is not expensive, makes learning easier and more enjoyable for the students. CL is an easy technique to be implemented in the classroom, particularly in continuous classroom or a scheduled time table. The rationale for using cooperative learning techniques is that it makes the people work better and together and recognizes one's need and strengths. Progressive impact of modernization not only improved our culture and way of life but also affected our educational system which needed progressive methods to construct the child.

It is clear that our future will experience high strength of students in the classroom. The usual practice of teaching will not be capable of solving the problem then the motivation towards achievement and this teaching method will be acute to get the learning done. It is true that achievement can be achieved by motivation. In the new era we want to bring the motivation in the students towards improving habits, ambition, Standard of life and fruitful learning achievement to encounter all hurdles of life. While the Achievement motivation probes the individual to be self-motivated toward learning and academic performances. Achievement Motivation makes the students self-motivated on the one hand and to attain the goal of life on the other. This present study is new in the Indian Context with mere CL method to develop the Achievement motivation of the students. The progress of society and economy of a country depends on its living population which should be highly motivated. We know the Indian Education system demands creative and highly motivated students to surpass all problems of economy and technology. Hence an innovative teaching method is to be endorsed as compulsory. CL method is based on constructive approach



which affects achievement Motivation positively and inculcates high motivation of learning in the students. The judicious objective of this research is to confirm if CL has significant difference in enabling the students gaining Achievement skills between the groups (experimental group) in which the CL method is implemented and the control group in which the traditional lecture methods are implemented in the Ninth-grade students of the secondary school.

Objectives of the Study

1. To Study the Achievement Motivation of Students learning in Secondary school
2. To Study the Achievement Motivation of Boys Students learning in terms of gender in secondary School.
3. To Study the Achievement Motivation of Girls Students learning in terms of gender in secondary School.

Hypothesis of the Study:

H01: There is no significant difference of CL on Achievement Motivation of Students, learning in Secondary School.

H02: There is no significant effect of CL on Achievement Motivation of Boys Students in terms of gender in Secondary School.

H03: There is no Significant Effect of the Co-operative Learning Method on the Achievement Motivation of Girls in terms of Gender in Secondary school students.

Methodology of the study

A sample of 65 students was framed for the study. Researcher used to determine the impact of Co-operative Learning method on Achievement Motivation of secondary school Students with the technique of Quasi-experimental design of non-equivalence group design. The total sample of the study consisted of two sections of the Secondary School Students where the Control group had 30 (20Boys & 10 Girls) and in the experimental group had 35 (15Boys & 20 Girls) students. Through the Independent variable i.e. Co-operative Learning techniques method, the dependent variable i.e. Achievement Motivation is affected for 2 periods each day for 8 weeks. To know the Achievement Motivation level of the students, Pre-test was conducted and kept in record. Now the Quasi experiment started with teaching 3 lessons of social Science Subject. The Academic Achievement Motivation test (T.R Sharma, 1971) contained 38 items in



Likert scale. A Self-made questionnaire on 3 lessons of Social science containing 25 Items were used to get the data both from Pre-test and Post-test.

The needful steps for Experimental Work for both Experimental and control groups were followed by the guidance of the supervisor from the University. Having consultation with the school and stakeholders, research activities were done. Under the guidance of Supervisor and his given instruction the researcher got a successful experiment. In the conduct of CL method 6 small groups in both control and Treatment Groups were formed and randomization was done for socio-economic status, gender and intelligent considerations. Such small groups were named with a 'group name' Like daffodils, Rose and likewise. As per the need, interest, interaction, interpersonal relation the assignment were allotted. Participants of the experimental group where CL method was implemented were expected to do the learning works in their respective Co-operative small groups. The Three lessons of Social Science each from History, Geography, Political Science, and Economics were endorsed for learning, including Projects and activities assessment and evaluation. These were made through considering CL techniques. The research during the CL techniques process had to check the active participation of all members of the small groups of the experimental class. After the experimental process, the Achievement Motivation Test was administered for Post-test and the experiment came to an end.

Administration and Observation of Co-operative Learning method

The Investigator conducted the Experiment with following steps; (i) the very first day of the experiment the pre-test was conducted in both the Control Groups and Treatment Groups. (ii) The Group B of STD 9 was selected as an Experiment group with help of the random sampling and Co-operative learning method was applied for 8weeks. Whole participants of Experimental group were framed into 7 sub-group and given the task on CL techniques on 'Think Pair Share, and Jigsaw' for Lesson learning and Assignments. The Researcher accordingly checked the learning procedure based on Co-operative Learning Method (iii) The Social Science topics of STD 9 NCERT, "Russian Revolution (History) , Population (Geography) , Democratic Right (Political Science), People as Resource (Economics)" of the CBSE board was taken as learning lesson in both groups and observed for 8weeks then Post-test was conducted in both groups.

Data Analysis and Interpretation

Statistical Technique used in Data Analysis: To determine the analysis of data Mean, SD and t-test were taken for statistical need. In the analysis of the data, two descriptive and inferential statistical analyses were

used and an MS-Excel application was used to find the data analysis. These analyses are; mean differences SD and t-test.

1 -Objective: To Study the Achievement Motivation of Students learning in Secondary school.

1: Null Hypothesis: There will be no significant difference of CL on Achievement Motivation of Students, learning in Secondary School between their Pre-test & Post –test of both control group and Experimental Group.

Alternative Hypothesis: There will be significant effect of CL on Achievement Motivation of Students , learning in Secondary School between the Pre-test & Post-test of control group and Experimental Group.

1 a) Summary Table of Pre-test on Achievement Motivation between both groups.

Pre-test	N	Mean	SD	t-value	df	T-critical	P-Value	Significance
Control Group	30	26.83	4.44	0.51	62	1.998	0.60	Not Significant at 0.05 level
Experimental Group	35	27.48	5.71					

1b) Summary Table of Post-test on Achievement Motivation between both groups.

Post-test	N	Mean	SD	t-value	df	T-critical	P-Value	Significance
Control Group	30	28.63	4.50	4.65	60	2.000	2.14	Significant at 0.05 level
Experimental Group	35	33.65	4.22					

Interpretation: The above two table 1A & B shows the result on Achievement Motivation of both Pre-test & Post-test of control group and experimental group brought by t-test two samples assuming unequal variance where the result of Post-test on Achievement Motivation is significant.

The result in table 1a) shows Pre-test of Students in both control and Experimental group at 0.05 level where the mean score of both was 26.83 & 27.48 respectively. The t-critical value at $df=62$ found as 1.998 while t-value as 0.51.

The result in table 1 b) shows Post-test of Students in both control and Experimental group at 0.05 level where the mean score was 27.63 & 33.65 respectively. The t-critical value at $df=60$ was found as 2.000 while the t-value was 4.65. The researcher after 2 month intervention of CL method in experimental group 9B, found the Post test result in the favour of 9B. Table 1 b) shows the P-Value= 2.14 while the Tabulated Value is 1.996 & Calculated t-value as 4.65 then the t-Critical Value=1.995 which is significant that is why the null hypothesis is rejected and the alternate hypothesis is accepted.

2: Objective: To Study the Achievement Motivation of Boys Students, learning in terms of gender in secondary School.

Ho2: Null Hypothesis: There will be no significant effect of CL on Achievement Motivation of Boys Students in terms of gender learning in Secondary Schools between the Pre-test & Post-test of control group and Experimental Group.

Alternative Hypothesis: There will be significant effect of CL on Achievement Motivation of Boys Students, in terms of gender learning in Secondary Schools between the Pre-test & Post- test of control group and Experimental Group.

2(a) Summary Table of Pre-test on Achievement Motivation among Boys between both groups.

Pre-test	N	Mean	SD	t-value	df	t-critical	P-Value	Significant
Control Group	20	26.25	4.78	0.222	24	2.063	0.825	Not Significant at 0.05 level
Experimental Group	15	25.08	6.68					

2(b) Summary Table of Post-test on Achievement Motivation of Boys between both groups.

Post-test	N	Mean	SD	t-value	df	t-critical	P-Value	Significant
Control	20	28.65	3.93	3.09	30	2.042	0.004	Significant at 0.05 level
Group	15	32.8	3.91					
Experimental Group								

Interpretation: The above two table 2 A & B shows the result on Achievement Motivation of Boys in terms of gender of both Pre-test & Post-test of control group and experimental group brought by t-test two-sample assuming unequal variance where the result Boys of experimental group in Achievement Motivation is not significant.

The result in table 2a) shows Pre-test of Boys of both control and Experimental group where the mean score was 26.25 & 25.08 respectively. The t-value at 0.05 level is 0.222 & df is 24.

The result table 2 b) shows Post-test of Boys of both control and Experimental group where mean score was 28.65 & 32.8 respectively. The t-value at 0.05 level is 3.09 which is greater than t-critical value of 2.04 and df is 30. The researcher after 2 month intervention of CL method in experimental group 9B Boys, found the Post test result in their favour which is significant that is why the null hypothesis is rejected and the alternate hypothesis is accepted.

3. Objective: To Study the Achievement Motivation of Girls Students, learning in terms of gender in secondary School.

Ho3: Null Hypothesis: There will be no significant effect of CL on Achievement Motivation of Girls Students, learning in Secondary Schools between the Pre-test & Post-test of control group and Experimental Group.

Alternative Hypothesis: There will be significant effect of CL on Achievement Motivation of Girls Students in terms of gender, learning in Secondary Schools between the Pre-test & Post-test of control group and Experimental Group.

3(a) Summary Table of Pre-test on Achievement Motivation of Girls between Control group and Experimental group.

Pre-test	N	Mean	SD	t-value	df	t-critical	P-Value	Significance
Control Group	10	28	3.62	0.482	23	2.068	0.633	Not Significant at 0.05 level
Experimental Group	20	28.75	4.7					

3(b) Summary Table of Post-test on Achievement Motivation of Girls between control group and Experimental group.

Post-test	N	Mean	SD	t-value	df	t-critical	P-Value	Significance
Control Group	10	28.6	5.71	2.76	15	2.131	0.014	Significant at 0.05 level
Experimental Group	20	34.03	4.24					

Interpretation: The above two table 3 A & B shows the result on Achievement Motivation of Girls in terms of gender of both Pre-test & Post-test of control group and experimental group brought by t-test two-sample assuming unequal variance where the result of girls of experimental group in Achievement Motivation of 9B Girls is significant.

The result in table 3 a) shows Pre-test of Girls in both control and Experimental group where the mean score was 28 & 28.75 respectively. The t-value at 0.05 level is 0.48 and df is 23.

The result in table 3 b) shows Post-test of Girls of both control and Experimental group where the mean score of both was 28.6 & 34.03 respectively. The t-value at 0.05 level is 2.76 which is significant than t-



critical value of 2.13 and df is 15 .The researcher after 2 month intervention of CL method in experimental group 9B Girls and found, the Post test result is in the favour of 9B Girls which is significant that is why the null hypothesis is rejected and the alternate hypothesis is accepted.

FINDINGS AND REMARKS: Researcher obtained finding in the present research in which data are analysed & determined at 0.05 level.

Objective 1: To study the Achievement Motivation of Students, learning in Secondary School.

Main Finding: The effect of CL method on Achievement Motivation of Students learning in secondary schools found significant.

Objective 2: To study the Achievement Motivation of Boys Students in terms of Gender learning in Secondary Schools.

Main Finding: The effect of CL method on Achievement Motivation of Boys Students in terms of gender of secondary schools students found significant.

Objective 3: To study the Achievement Motivation of Girls Students, in terms of Gender learning in Secondary Schools.

Main Finding: The effect of CL method on Achievement Motivation of Girls Students in terms of gender of secondary schools found significant.

Educational Implications

It is the matter of the fact that Students cannot get achievement motivation unless promoted to Co-operative learning classroom environment. Recent Teachers adopt this Co-operative learning method in their teaching. However it is apparent that achievement Motivation develops in Girls in particular and in Boys in general. Evidence from the collected data that Achievement motivation develops in the students with the implementation of co-operative learning methods. It is in fact true that Girls' mean score in Achievement Motivation is greater than boys. The present study; "Effect of Co-operative learning on Achievement Motivation of Secondary School Students: An Experimental study" in which the variable Achievement Motivation is analysed on the secondary CBSE School students of Holy Christ school. Kolkata, "With systematic use of techniques and method the learner participate in Learning Process and, they understand better and learn faster"(Topal & Kırbaş 2014: 297); while using CL method



“it makes possible participation of all members with different abilities and ease the work of teacher” (Sünbül1995).

The Educational Implications in nutshell as follows:

1. The intro of CL method is keynote for creating a Co-operative learning environment. 2. Promotion of CL method creates a joint effort of teacher and students.. 3. Teachers and Parents should put effort into the Co-operative environment for their learning. 4. A Special method should be implemented for the consistent development of Achievement Motivation of the students.

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