

EFFECTIVENESS OF MUTUAL LEARNING APPROACH IN THE ACADEMIC ACHIEVEMENT OF B.ED STUDENTS IN LEARNING OPTIONAL II ENGLISH

By

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ABSTRACT

The present study aims at finding out the effectiveness of Mutual learning approach over the conventional method in learning English optional II among B.Ed students. The randomized pre-test, post test, control group and experimental group design was employed. The B.Ed students of the same college formed the control and experimental groups. Each group consists of 25 learners. The "t" test analysis reveals the experimental fact that mutual learning has effectiveness in learning English better than the conventional method. There is a wide scope for the application of mutual learning approach in learning English among B.Ed students.

Keywords: Mutual Learning Approach, Learning by Teaching, Content exchange, Information sharing, Increased self confidence.

INTRODUCTION

The field of language teaching is very broad and extensive. The teaching process and instructional procedure of English are different from other subjects. English teaching has two main areas. Language teaching and literature teaching. These areas are related and complementary to each other. But their nature is quite different from each other. The two areas have their own form and methods of learning. The one year Bachelor degree of Education (B.Ed) program aims to provide in depth knowledge in the area of language teaching, developing professional competencies along with relevant skills, designed to prepare students to face the challenges of 21st century in the field of educational break through.

English is taught as an Optional subject in the B.Ed course and its curriculum is designed with a view to introduce students a detailed content cum practicum of English Language Teaching. In the rural colleges, most of the students who take Optional English I and II have a strong back ground of their mother tongue and they struggle hard to understand and obtain the course. The researcher has identified the need for a professional development activity to support the student teachers' understanding and to relate each other during intellectual experiences. She has decided to conduct a very little research in the strategy of

teaching learning process and it has been conducted to have the desired impact on teacher understanding. Instructional methods are used by teachers to create learning environments and to specify the nature of the activity in which the teacher and learner will be involved during the lesson, and the researcher selected Mutual learning as a teaching strategy for the purpose.

In professional education, learning by teaching designates currently the method by Jean-Pol Martin that allows pupils and students to prepare and to teach lessons, or parts of lessons. Learning by teaching means selecting a particular topic in the content and exchanging knowledge on the selected topic and to improve coordination and decision making. It should not be confused with presentations or lectures by students, as students not only convey a certain content, but also choose their own methods and didactic approaches in teaching classmates that subject. Neither should it be confused with tutoring, because the teacher has intensive control of, and gives support for, the learning process in learning by teaching as against other methods.

Usually student teachers were taught simply with lecture methods and they are given classes to teach and left to get on with it. Mentor teachers also observe student teachers teaching their classes. The researcher made a

change in the instructional method in which the students work in small groups. Every individual student in the groups activate and share valid information of the topic selected for the research. Through the sharing of information and different ideas, everyone has the opportunity to learn more. Thus, the parties involved in a difficult situation may end up changing their perspectives, leading to new and fresh outcomes. By eliminating the class division of authoritative teacher and passive audience, an emotive solidarity is obtained. Student work is more motivated, efficient, active and intensive due to lowered inhibitions and an increased sense of purpose. Students may perform many routine tasks, otherwise unnecessarily carried out by the instructor. Next to subject-related knowledge students gain important key qualifications like teamwork, planning abilities, reliability, presentation and moderation skills and self-confidence. Operating this model, there is increased understanding and trust with the reduced need for defensiveness.

- Increased understanding, reduced conflict and defensiveness.
- Increased trust.
- Fewer self-fulfilling, seal-sealing processes.
- Increased learning.
- Increased effectiveness.
- Increased quality of work life.

Mutual learning is used essentially in a small group instructional technique. For example, a class 30 students can be divided into six groups, five in each group and all the members of each group study together, share ideas and receive recognition. When group of students work together for a common purpose, they are dependent on one another's efforts to achieve that purpose. This interdependence motivates and encourages the individuals to share whatever they need to succeed.

Mutual learning has a wide application in foreign countries and its importance is realised in India in recent times. Mutual learning approach provides opportunities for intellectual, psychological and social development of learners and enables all the learners in the class room work together and find solutions to the problem of team work. In

the present study, an attempt is made to find out the effectiveness of Mutual learning approach among B.Ed students in learning Optional II English. In the Mutual learning teams positive interdependence is structured into the group task activities and members are responsible for each other's success. Individual accountability is an expected outcome. Communication skills are identified, directly taught, and expected to be used by all group members. There are designated roles with shared leadership assigned and monitored by the group and the instructor.

Review of Related Literature

Tone Bratteteig, 1997, Mutual learning between users and designers is an important part of participatory systems design. Examples from a mutual learning process are used to discuss problems that highlight important principles for mutual learning. The process of mutual learning benefits from being based on theories about learning and teaching, in particular principles of problem oriented pedagogy. Mutual learning is an important part of participatory design. Mutual learning means that users and designer learn from each other during the design process, and both qualify themselves with respect to the systems development process they are involved in. The mutual learning typically deals with knowledge about the application area and the work that the future computer system is supposed to support, as well as technology and possible applications of new technology.

Barannik N.S, Gorbatyuk V.F. 2012, investigated the characteristics of mutual learning in the study of teaching high school students a new and difficult topic, "Basics of multimedia learning". The experiment showed that the use of peer education dramatically increased the efficiency of learning and contributed to the development of self-organization and learning in the student group. Application of the ideas of meta-learning project has led to targeted teaching of students who have acquired a deep and useful knowledge, and formed the ability to solve real problems that are encountered in life. As a result, the entire study group met in full all of the seven tasks on the subject, and has been certified and passed the examination.

Fran Martin, 2007, investigated the pilot research project

which explored the process of mutual learning and displacement spaces through a study visit course to the Gambia. The course, which ran from November 2006 to April 2007, sets out to challenge teachers' world views about development and global partnerships. A model was devised to show the key elements of experiential and mutual learning; this was informed by earlier courses and theories of learning drawn from the literature. Interviews, evaluations and group discussions of the 10 course members are analysed for key themes and presented in relation to the course structure and the model. Evidence at this stage suggests displacements spaces are uncomfortable and challenging but beneficial because of the security provided by the mutual learning. This process enabled the majority of teachers to challenge and revise their world views.

Michelle Grenier, Ben Dyson, & Pat Yeaton (2005) found that Mutual learning can be both reciprocal and inclusive, offering students the opportunity to be contributing members of the learning community by providing a safe environment for students of all abilities. Whether a child is identified as "typical," "at-risk," or "gifted," Mutual learning encourages respect and learning between peers. This article depicts a classroom scenario in mutual learning that includes a student with cerebral palsy. Several keys to implementing mutual learning are described, including planning, assessment, and problem-solving skills. Although implementation may be time-consuming and require practice, the use of cooperative learning helps all students attain social, cognitive, and physical skill development.

Nedergaard, Peter (2009) says that learning changes in language-constituted relations to others. This argument is elaborated into a model for mutual learning. It deals with the conflictual views on the size and character of the learning processes of the EES in recent studies and proposes a new methodological path to investigate the mutual learning processes based upon a social constructivist approach. This study concluded that there was a significant effect concerning the use of Mutual learning on students achievement.

Michal Rosen-Zvi and Wolfgang Kinzel (2002) say that Mutual learning of a pair of tree parity machines with

continuous and discrete weight vectors is studied analytically. The analysis is based on a mapping procedure that maps the mutual learning in tree parity machines onto mutual learning in noisy perceptions. The stationary solution of the mutual learning in the case of continuous tree parity machines depends on the learning rate where a phase transition from partial to full synchronization is observed. In the discrete case the learning process is based on a finite increment and a full synchronized state is achieved in a finite number of steps. The synchronization of discrete parity machines is introduced in order to construct an ephemeral key-exchange protocol. The dynamic learning of a third tree parity machine which is an attacker that tries to imitate one of the two machines while the two still update their weight vectors is also analyzed. In particular, the synchronization times of the naive attacker and the flipping attacker recently introduced are analyzed. All analytical results are found to be in good agreement with simulation results.

Gail Greig (2004) presents a study conducted by the practitioners in the community hospital of Scotland. Mutual learning is tried between general practitioners with community hospital beds and consultants in Scotland. The group found that Mutual learning is a very effective instructional technique for applying innovative treatments to the patients admitted in the hospital.

Chung-Te Ting and Chin-Wei Huang (2010) Taiwan's international business and leisure hotels have created specific, divergent service operating systems to gain competitive advantage based on their distinctive target markets. Given that hotel operators frequently benchmark direct competitors to improve on performance, researchers have suggested that hotel operators use a mutual learning strategy by benchmarking strategic techniques from hotels in disparate market segments. This study evaluates the effectiveness of the suggested mutual learning strategy between Taiwan's business hotels and its leisure hotels, using the Different Systems model of data envelopment analysis (DEA) to examine potential improvements in efficiency. On the other hand, more than half of the leisure hotels in this sample would be able to achieve best practices from the mutual learning

approach.

Objectives of the study

The major objective of the study is to find out whether Mutual learning approach is more effective than the traditional approach.

Hypotheses

- I. There exists no significant difference between the pre and post mean scores of the Experimental group.
- II The Control and Experimental groups do not differ in their academic achievement Scores.

Methodology

In the present study the non-randomised control group pre test, post test design was adopted. The groups were formed according the requirements of the Mutual Learning Approach.

Sample Selection

In the present study, the experimental group and the control group were selected. The two groups were selected from a College of Education in Namakkal District. Bachelor of Education students were considered for this purpose. Although the two groups were equal in terms of achievement scores, the subjects in each group were not equal and they varied in terms of their academic abilities. The composition of the mutual learning teams were made on the basis of the achievement scores of the learners. The subjects of the two groups were selected and the application of randomness led to the classification of the Control and Experimental groups.

Selection of the Experimental Group

The Experimental group is formed on the basis of the academic achievement scores of the students. The 25 learners were grouped in to 5 teams with 5 members in each team based on the scores of the first term examination of the English language. The first five highest scorers formed the first members of the five teams and the remaining scorers were distributed to each team as per the procedure of distribution. This sort of distribution of the subjects would enable achieving considerable equality among the teams in each group, but as the same time, heterogeneity of learner ability within a team is maintained as per the requirement of the Mutual learning approach.

Selection of the Control Group

The control group consisted of 25 learners studying in the same class of the same college. The group was exposed to the traditional method instruction and no novel treatment was given to this group.

Research Tools

The investigator's self made achievement tests were used for the pre-tests and post-tests of both the groups. The same question paper was used for both the groups to evaluate the pupils' skills in Optional II English covering selected topics of the content. At the beginning of the test, the instructions of answering was given and the subjects were asked to write the answer. The time allotted for answering was one hour.

Both the groups were administered a pre test in which the previous knowledge of the students were assessed. Advanced Grammar in Optional II English was the unit selected for the administration of the pre test. In order to increase the reliability and validity of the Post test performance and to eliminate the testing effect of the pre test, other two achievement tests were constructed. These tests were a slight modification of the Pre test. Same type of questions and same number of questions were used for these two tests. The procedures adopted in developing the pre test tool were employed while constructing these tools also. Other important units like Teaching Vocabulary, Reference and Study skills were selected for administering the other two tests.

Test Validity

The content of both the test was validated by a team of English language specialists. The team validated the content and instructions of the test, the relevance of the questions to the content, its suitability of attaining the goals, number and arrangement of questions and time allotted. The remarks and suggestions of the team were taken into consideration and the researcher made the necessary modification before its application.

Test Reliability

A pilot group of 30 students were randomly selected from the population of the study who were excluded from the sample. Test-retest method was used to check the

reliability. First a test was administered to them and it was repeated on the same group after two weeks. The reliability correlation coefficient of the tests result were calculated using Pearson correlation method. The obtained value of the Pre test was 0.753 which was an indication of its reliability. The obtained value of the Post tests were 0.78 and 0.81 respectively.

Test Administration Procedure

Both the experimental group and the control group were administered a pre test in which the previous knowledge of the students were assessed. Advanced Grammar in Optional II English was the unit selected for the administration of the pre test. Other two achievement Post tests were also constructed. These tests were slight modification of the Pre test. Same type of questions and same number of questions were used for these two tests. The procedures adopted in developing the pre test tool were employed while constructing these tests. Other important units like Teaching Vocabulary, Reference and Study skills were selected for administering the other two tests.

Results and Discussion

The results of the study are presented in Tables 1-6 with interpretation.

A. Pre test was administered to both the control and the experimental groups. Both the groups do not differ in their Pre-test mean achievement scores as testified by the 't' value is 0.16 which is not significant at 0.05 level.

Group	N	M	SD	't'
Control	25	46.2	10.54	0.16
Experimental	25	45.7	10.42	

Table 1. Pre Test – Comparison between Control and Experimental groups

Test	N	M	SD	't'
Pre Test	25	45.7	10.42	7.87
Post Test 1	25	68	9.6	

Table 2. Comparison of the Pre test and Post test-1 of the Experimental Group

Test	N	M	SD	't'
Pre Test	25	68	9.6	0.38
Post Test 1	25	70	9.0	

*Significant at 0.01 level

Table 3. Comparison of the Post test I and Post test-II of the Experimental Group

Test	N	M	SD	't'
Pre Test	25	45.7	10.42	8.83
Post Test 1	25	70	9.0	

Table 4. Comparison of the Pre test and Post test-II of the Experimental Group

Group	N	M	SD	't'
Control	25	52.4	7.6	13.52
Experimental	25	84.6	9.16	

Table 5. Post Test – 1 Comparison between Control group and Experimental group

Group	N	M	SD	't'
Control	25	59.8	6.8	12.5
Experimental	25	87.2	8.6	

Table 6. Post Test – II Comparison between Control and Experimental group

B. The overall conclusion is that the homogeneity of the two groups is maintained during the Pre-test period. This proves the true composition of the control and experimental group.

Achievement scores of the Pre test and Post test I of the experimental group were compared. The experimental group shows significant difference between its pre- test and post-test -1 mean achievement scores ('t' = 7.87, significant at 0.01 level). The performance of the experimental group is found better in the post-test -1 when compared with its Pre-test performance. This reveals the effectiveness of Mutual learning approach.

Achievement scores of Post test 1 and Post test II of the experimental group were compared and there exists no significant difference between these two scores by the 't' value 0.38 which is not significant at 0.01 level of significance. It is observed that the academic performance of the experimental group in Post test I and Post test II is equally better and the experimental group is slightly better in Post test II when it is compared with post test I performance.

Achievement scores of the Pre test and Post test II of the experimental group were compared and there exists significant difference between these two scores by the 't' value 8.83 which is significant at 0.01 level of significance. The group shows better performance in Post test II than in its Pre test performance. This shows the effectiveness of the Mutual learning approach in enhancing the academic achievement of the learners.

Achievement scores of the Post test I of the control and experimental groups were compared and there exists significant difference between these two scores by the 't' value 13.52 which is significant at 0.01 level. From the table it is inferred that the experimental group excels the control group in academic performance. This indicates the effectiveness of the Mutual learning approach over the traditional methods of Instruction.

Achievement scores of the Post test II of the control and experimental groups were compared and there exists significant difference between these two scores by the 't' value 12.5 which is significant at 0.01 level. From the table it is inferred that the experimental group excels the control group in academic performance. This indicates the effectiveness of the Mutual learning approach over the traditional methods of Instruction.

The results of the comparisons clearly stated that both hypotheses are rejected.

Findings of the Study

The present study clearly reveals the effectiveness of Mutual learning approach over the conventional method of instruction. It is found that Mutual learning approach is more effective than the traditional approach in enhancing the academic achievement of the learners. The results indicate that Mutual learning structures can be used successfully for students of diverse abilities. Mutual learning structures can be easily used as a modification to instruction with no extra time or effort required of the teacher. One lesson plan using Mutual learning structures has built in peer tutoring and support within the heterogeneous class groupings, which eliminates the requirement for several different plans to meet the needs of all students. The following qualities were developed among students while using Mutual learning method.

- Increased understanding, reduced conflict and defensiveness.
- Increased trust.
- Fewer self-fulfilling, seal-sealing processes.
- Increased learning.
- Increased effectiveness.
- Increased quality of work life

- Individual Accountability
- Equal Participation
- Simultaneous Interaction
- Positive Interdependence

Based on the findings and conclusion discussed, the researcher suggests the following implications.

- Teachers should encourage Mutual learning method where students interact with each other to acquire and practise the elements of a subject matter and to meet common learning goals.
- Mutual learning approach help students to carryout active learning activities which help them develop their potentials.
- In Mutual learning teams, positive interdependence is structured into the group task activities and members are responsible for each other's success. Individual accountability is an expected outcome.
- The group regularly processes how they are working together and adjusts their personal and group behaviours accordingly.
- There was increased Achievement, Increase in Positive Relationships, Greater Intrinsic Motivation, Higher Self-Esteem, More "On-Task" Behavior, and Better Attitudes Toward Teaching and learning.

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