



RESEARCH PAPER

Effect of Cooperative Learning Techniques on Students' Performance at University Level

¹Dr. Sadia Jabeen, ²Dr. Tahseen Arshad and ³Dr. Mehwish Gull

1. Lecturer, Department of Education, University of Lahore, Lahore, Punjab, Pakistan
2. Visiting Assistant Professor, Department of Education GC Women University Silakot, Punjab, Pakistan
3. Assistant Professor, Department of Education, University of Lahore, Lahore, Punjab, Pakistan

Corresponding Author: sadia.jabeen@ed.uol.edu.pk

ABSTRACT

The present study aimed to examine the effect of cooperative learning techniques on students' performance at university level. Study was experimental in nature. An A-B-A single subject research design was employed to conduct the experiment. Students who were taught educational assessment at undergraduate level were participants of the study. Students' performance in the subject of educational assessment was observed by the researcher during three phases (baseline, treatment and withdrawal phase). Lesson plans were developed to implement cooperative learning techniques. An achievement test was developed by the researcher to compare students' performance in the subject of educational assessment during baseline, intervention and withdrawal phase. Item analysis was conducted to test item difficulty of the test. Rubrics were developed to measure validity of the extended response items in the test. A repeated measures one-way ANOVA were applied to test the hypothesis of the study. Study findings revealed that a significant effect of cooperative learning techniques in the subject of educational assessment was examined during treatment and withdrawal phase. Students' performance in the subject of educational assessment enhanced by implementing cooperative learning techniques in class. It is recommended to incorporate cooperative learning techniques to enhance students' performance in the subject of educational assessment at undergraduate level.

KEYWORDS Cooperative Learning Techniques, Students' Performance, Undergraduate Level

Introduction

Angela and Walmsly (2003) suggested that strategies of cooperative learning can also convey and make over best results. Students can be capable to get over understanding, and can be capable to examine and apply the difficulties. The learning of students can be much efficient and can support them to utilize it in their coming experience. Zakaria and Iksan (2007) argued that it is a procedure of group activities in which students are individually responsible. This technique of learning also needs face to face interaction, social and interpersonal skills and encouraging inter-dependence. They work together in order to complete assigned duty.

Cooperative learning also supports learners to convey and interact with someone in compatibility. This teaching method encourages values for example cooperation, respect, sincerity, responsibility, patience and temperament to achieve shared goal. In cooperative learning execution of various responsibilities can build self-confidence in students (Zakaria et al., 2013).

This method of cooperative learning is a student focused that employs different educational strategies and tactics that link up to different styles which help students to think and learn. Tactics are viewed simple and demand of research based for example think pair-share activity, and strategies like jigsaw activities are more than tangled as they are planned on the brain of research that link up them to learning theories (Bennet, 2010). Cooperative

learning is a teaching approach which purpose to manage activities of classroom into social learning and academic experience (Gillies, 2016).

Cooperative learning has been tested and attract all kinds of students, including gifted, regular and English language learner, as it encourage learning, respect and friendly relationship among different categories of learners. As a matter of fact the much variety in a group leads towards the higher performance for each learner. Mutual learning depends on one another in supportive manner for different learning projects (Kagans, 1989). The method of cooperative learning is a healthy scheme of learning where small groups, all groups having learners of different capability, utilize various educational activities to modify their understanding of the topic. All teammates are accountable not simply for learning what is guided but also for supporting one another understanding, and then creating an atmosphere of achievement.

Literature Review

Kyndt et al. (2013) argued that the result of cooperative learning is positive on students' performance. Johnson et al. (1984) stated that students complete work in cooperative learning with some others to fulfil a common and shared goal. Comparison with the formal competitive classroom, it experiences support and very high self-esteem for the students. Strom & Strom, (2011) argued when students work in cooperative learning environment they consider that their class fellows like them. They feel that they are acknowledged by others and these feelings let them to think that their performance is very good. This appreciation of accomplishment changes their' self-respect. Cooperative learning strategies are encouraged by their trust on the cultural view of education and they like to be broad-minded. Getting educational ability is frequently relating skills which best fostering in grouping where molding and response come much often than in individual work.

According to Ferguson-Patrick (2010) students in cooperative groups are come at table to show the ability to give instructions and explanations. They develop profound understanding of the requirements of different members of group than in other types of groups" It is also expressed by the Melbourne Declaration (2008) that those students who are successful must be capable to design activities individually, cooperate in groups and pass on their opinions. Baker and Clark (2010) Concluded in his study that students who work in groups enhanced cultural understanding, better social ability and they are ready for the participation in new work. Cooperative learning was remarkably used form of active teaching method in the 1980's, and still continues as an important tool for learning in educational institutions.

According to Johnson et al., (2007) that cooperative learning gives benefits for tudents as well as teachers. Shimazoe and Aldrich (2010) stated that cooperative learning is one of the largest broad and rich areas of research, theory and practice in education. Johnson et al., (2000) finished a meta-analysis and establish many research work that investigated eight cooperative learning techniques. All these members analyze the outcomes of cooperative learning techniques and compare with traditional method of teaching and established that all techniques of cooperative learning had a important affirmative result on students learning. The reliability of the outcomes and different techniques of cooperative learning show powerful evidence for its success and quality. Keramati (2010) examined cooperative learning outcome on students learning in his study and initiate a positive result of cooperative learning method on students performance.

Cooperation is process of working together to accomplish a common goal. This mean that individuals cooperatively work to increase final results that profit them and some other group members. It exists when many students work in a small group to improve their group mates and their own learning. For this purpose, the research on cooperative learning is an active procedure in which student actively take part in their learning process and cooperate

to achieve their learning goals and take on new knowledge according to their skills, needs and interest (Johnson & Johnson, 2018).

Kolawole (2008) supporting cooperative learning is make efficient group learning in a social context with a safe and sound learning environment. This method can be utilizing for long period or short time period goal inside the classroom. This idea targets to improve learners' problem-solving, critical thinking and interpersonal skills, in order to make successful this procedure for same instructor and students both requires to complete very carefully and efficiently certain very necessary roles (Bennett, 2010).

Students should work in groups in order to complete project collectively towards learning goals. Like individual education that can be combative, pupils learning in a cooperative way can furnish each and every one skills as well as resources asking one another for content, monitoring each and every one work, evaluating one another, idea. Cooperative learning is more than arranging students in to groups as it has been represented as composing affirmative interdependence /construction (Fitriasari, 2019). No matter what the setting is right for this scheming and utilizing interactive education takes five important steps. To follow these steps is critical to ensure that five main steps distinguish cooperative learning from group learning to meet the objective (Johnson & Johnson, 2009).

Cooperative learning refers to working of students with one another to attain common objectives and this awareness of mutuality motivates students of group to support and to help one another. Once they work mutually they take comprehend to what other people say, receive as well as give helps in resolving problems and adjusting difference by using democratic measure (Palmer et al., 2017). In view of Johnson and Johnson's meta-analysis, in mutual learning environment students with comparison to those who learn in combative learning environment accomplish more, understand better, attain more confidence as class fellows and more learning project have more detected social help (Johnson & Johnson, 2009).

Cooperative leaning effort may be as easy or it can be as problematic as a task that may cross class time period. These can be represented mostly regarding high, moderate and low faculty/ student's time investment. Furthermore, the function of teacher changes from giving information to helping the student (Balkcom, 1992). Everyone succeed when the group succeed and this method of cooperative learning is also related to enhance level of enjoyment and happiness of students (Maxwell-Stuart et al., 2018).

Araban et al. (2012) examined cooperative learning results on high school students' educational achievements and self-efficacy. Outcomes of this study shows important difference on both variables of the study in advantage of experimental group. Beyond the past hundred years several researchers have been analyzed the effect of cooperative learning on students results and established different results for example: achievement, transition of learning, preservation, higher level understanding, motivational perception, time on task, social skills, self-respect, mental health, social health, valuing discrimination's, and stereotypes, the quality of social process learning and a good deal of some other outcomes.

Investigation has indicated that there can be no some other teaching method that at the time carry out so much varied effect. The positive and different effects that at the same time resultant from cooperative learning method have outcomes of different research studies on cooperative learning. Cooperative learning has powerful effect on various learning results, distinct it from some other teaching methods and form this instrument more important and powerful (Arban et al., 2012).

Difference between Cooperative Learning and Small Groups

Traditionally Formed Groups

In these little groups, the teachers only guide class members to form groups to accomplished assignment of class. These groups have no individual accountability, no organized interdependence, and ability to intercommunication are either ignored or taken for granted. Sometime the teacher or the group can nominate an individual leader and the stress of the work to be accomplished and here is no group processing procedure. All persons are answerable only for themselves in the end. Often teacher make the groups and so allow the group members to perform activity on their own until the period of time assigned to the activity is finished (Ahmad, 2014).

Cooperative Learning Groups

Positive interdependence is organized in cooperative learning groups and in all the activities of group work and all members of groups are answerable for each other learning. Its expected result will be individual accountability. Ability of communication are determined, immediately taught, and supposed it will be used by every group member. With shared out leadership there are selected functions, monitored and assigned by the teacher and group members. The groups are processed on a regular basis how they are working collectively and accordingly set their individual and group behaviors. Regular work, emphasize on improvement in functions and results. Teacher note and interfere if needed to check that the procedure is succeed (Ahmad, 2014).

Hypothesis

H₀₁: There was no significant effect of cooperative learning techniques on students' performance at university level

Material and Methods

The present study aimed to examine effect of cooperative learning techniques on students' performance at university level. Study was experimental in nature. An A-B-A single subject research design was employed to conduct the experiment. Students who were taught educational assessment at undergraduate level were participants of the study. Students' performance in the subject of educational assessment was observed by the researcher during three phases (baseline (A), treatment (B) and withdrawal phase (A)). Lesson plans were developed to implement cooperative learning techniques. An achievement test was developed by the researcher to compare students' performance in the subject of educational assessment during baseline, intervention and withdrawal phase. Item analysis was conducted to test item difficulty of the test. Rubrics were developed to measure validity of the extended response items in the test. A repeated measures one-way ANOVA were applied to test the hypothesis of the study.

Results and Discussion

Table 1
Cooperative Learning Techniques and its Effect on Students' Performance during Baseline across Three Steps of Intervention

Measures	Baseline Period		
	N	Mean	SD
Test 1	10	13.30	3.19
Test 2	10	13.00	2.40
Test 3	10	13.60	3.02
F		304.270	
Df		9	
Sig.		.507	
Partial Eta squared		.971	

Cooperative learning technique has insignificant effect on students' performance at $p \leq .05$ level of significance during baseline period in the subject of educational assessment in undergraduate students.

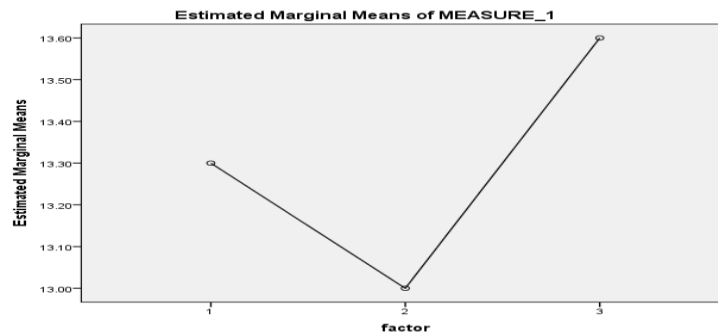


Figure 1: Baseline Period

Table 2
Cooperative Learning Technique and its Effect on Students' Performance during Treatment Phase across Three Steps of Intervention

Measures	Treatment Phase		
	N	Mean	SD
Test 1	10	16.90	1.52
Test 2	10	19.10	1.10
Test 3	10	18.60	1.07
Test 4	10	18.30	1.41
Test 5	10	19.10	.73
F		5684.776	
df		9	
Sig.		.000	
Partial Eta squared		.998	

Cooperative learning technique has significant effect on students' performance at $p \leq .05$ level of significance during treatment phase in the subject of educational assessment in undergraduate students.

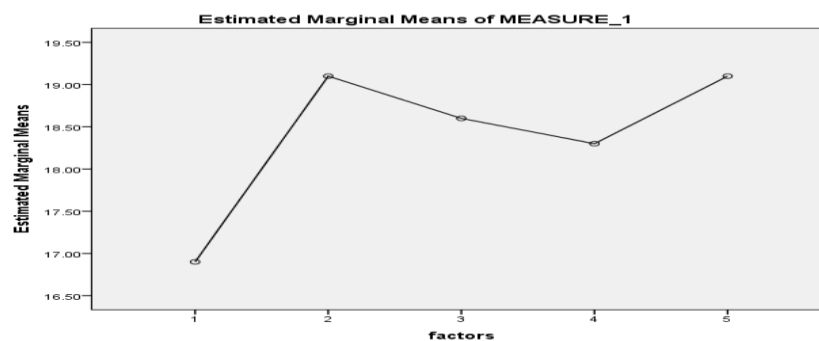


Figure 2: Treatment Phase

Table 3
Cooperative Learning Technique and its Effect on Students' Performance during Baseline across Three Steps of Intervention

Measures	Baseline Period		
	N	Mean	SD
Test 1	10	18.50	1.35

Test 2	10	18.40	1.42
Test 3	10	19.00	1.05
F		5316.312	
df		9	
Sig.		.000	
Partial Eta squared		.998	

Cooperative learning technique has significant effect on students' performance at $p \leq .05$ level of significance during withdrawal phase in the subject of educational assessment in undergraduate students.

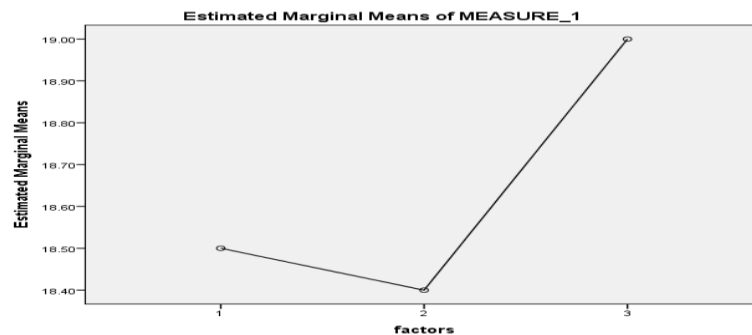


Figure 3: Withdrawal Phase

Discussion

The present study aimed to examine the effect of cooperative learning techniques on students' performance at university level. Study findings revealed that a significant effect of cooperative learning techniques in the subject of educational assessment was examined during treatment and withdrawal phase. Students' performance in the subject of educational assessment enhanced by implementing cooperative learning techniques in class. Kolawole (2008) supporting cooperative learning is make efficient group learning in a social context with a safe and sound learning environment. This method can be utilize for long period or short time period goal inside the classroom. This idea targets to improve learners problem solving, critical thinking and interpersonal skills, in order to make successful this procedure for same instructor and students both requires to complete very carefully and efficiently certain very necessary roles (Bennett, 2010). Students should work in groups in order to complete project collectively towards learning goals. Like individual education that can be combative, pupils learning in a cooperative way can furnish each and every one skills as well as resources asking one another for content, monitoring each and every one work, evaluating one another, idea. Cooperative learning is more than arranging students in to groups as it has been represented as composing affirmative interdependence /construction (Fitriasari, 2019). No matter what the setting is right for this scheming and utilizing interactive education takes five important steps. To follow these steps is critical to ensure that five main steps distinguish cooperative learning from group learning to meet the objective (Johnson & Johnson, 2009).

Conclusion

The present study aimed to examine effect of cooperative learning techniques on students' performance at university level. Study findings revealed that a significant effect of cooperative learning techniques in the subject of educational assessment was examined

during treatment and withdrawal phase. Students' performance in the subject of educational assessment enhanced by implementing cooperative learning techniques in class.

Recommendations

- It is recommended that cooperative learning techniques significantly effect students' performance in the subject of educational assessment. Therefore, to enhance students' performance cooperative learning techniques might be incorporated regularly.
- It is recommended to replace traditional lecture method to cooperative learning method to enhance students' performance, active participation, peer interaction and collaboration at undergraduate level.
- There might be a balance group formation of the students to develop teamwork, communication and their interpersonal skills.

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