Action Research: Improving Students' Achievement Through Cooperative Learning

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Abstract

Cooperative learning is a "set of methods in which students work together in small groups and help one another to achieve learning objectives" (Johnson & Johnson, 2009). It is well recognized as a pedagogical practice that promotes learning, higher level thinking, pro-social behavior, and a greater understanding of children with diverse learning, social and adjustment needs (Cohen 1994). The purpose of this Action research is to improve the achievement of students in general and to examine perception of students & teachers towards cooperative learning, identify major factors affecting the implementation of cooperative learning and to identify the possible strategies to improve cooperative learning in Haramaya University College of Education and Behavioral Sciences particularly department of Adult Education and Community Development. To conduct this study, descriptive Case study design and both qualitative and quantitative research methods were employed. The quantitative data are collected from 30 adult education and community development 2nd year students. Qualitative data was collected through observation and focus group discussion from all students. In the selection of the sample population, available sampling was employed. The data was analyzed by using percentage,

mean and grand mean, t-test also used to check whether significance difference exists between the achievement of students in different courses and pre-test and post-test of the same course. The finding of the study revealed that students participation was low in cooperative learning and the practice of Cooperative learning was challenged by different problem like lack of awareness and motivation both in the side of teachers and students, dependence of lower achievers on higher achievers, unequal sharing of work among group members, inappropriate group organization, Uncomfortable seating arrangement of students, Insufficient support and follow up from teachers and etc before the implementation of action plan. Nevertheless, by utilizing the proposed actions like creating awareness about the importance of cooperative learning, reorganizing group arrangement, providing different responsibilities for each member of the group and providing the required support for all the groups the researchers observed improvement on achievement of students. Thus, it is possible to conclude that, cooperative learning can improve the achievement of students if it is conducted in well-organized way by using different strategies that help learners to take responsibility by themselves.

Keywords

Cooperative Learning, Achievements, Collaborative Learning

Background of the study

Learning is generally defined as cognitive change, that is, some addition to a learner's knowledge structures or reorganization and reconstruction of that learner's existing knowledge. This change occurs as connections is made between new material and prior knowledge and then integrated into the learner's existing knowledge base. The more complex the learning, the more complex those cognitive changes are. According to socio-cognitive learning theory (Mugny & Doise, 1978, Vygotsky 1978), cognitive change is strongly influenced by interaction and activity with others. Because of this reason, today various College and university students are increasingly being asked by faculty to work co-operatively and learn collaboratively. This increased emphasis on group learning is partly a reaction to societal changes including a new emphasis on team work in the business sector (Millis and Cottell, 1998) coupled with a realization that in a rapidly changing information society communication skills are increasingly important (Hansen and Stephens, 2000).

At the tertiary level of education, the reasons include an increasingly diverse student population who need to develop ways of learning together in order to achieve (Millis and Cottell, 1998), the increased use of teaching and learning that emphasize learner-driven approaches such as peer learning (Hansen and Stephens, 2000) as cited by (Robyn M. Gillies and Adrian F. Ashman, 2003).

Researchers have shown that group learning leads to academic and cognitive benefits. Group learning promotes student learning and achievement (Cockrell et al. 2000; Hiltz 1998; Johnson et al. 2000; Slavin 1992), increase the development of critical thinking skills (Brandon and Hollingshead

1999; Cockrell et al. 2000), and promote greater transfer of learning (Brandon and Hollingshead 1999). Group learning also aids in the development of social skills such as communication, presentation, problem solving, leadership, delegation and organization (Cheng and Warren 2000) as cited by (Robyn M. Gillies and Adrian F. Ashman, 2003). These days,

Ethiopian public schools starting from primary to tertiary level implementing cooperative learning in the name locally called 'one-to-five' organization even though the implementation is at its infant stage. The method was implemented with the objective of enhancing students' educational achievements in particular and improving quality of education in general. Therefore, it is sensible idea that conducting action researches in the area of cooperative learning in order to facilitate better learning environment for students who engage in it and to enhance outcomes of the cooperative learning.

Statement of the Problem

Cooperative learning is an approach to group work that minimizes the occurrence of those unpleasant situations and maximizes the learning and satisfaction that result from working on a high-performance team. A large and rapidly growing body of research confirms the effectiveness of cooperative learning in higher education. Relative to students taught traditionally i.e. with instructor-centered lectures, individual assignments, and competitive grading. Cooperatively taught students tend to exhibit higher academic achievement, greater persistence through graduation, better high-level reasoning and critical thinking skills, deeper understanding of learned material, greater time on task and less disruptive behavior in class, lower levels of anxiety and stress, greater intrinsic motivation to learn and achieve, greater ability to view situations from others' perspectives, more positive and supportive relationships with peers, more positive attitudes toward subject areas, and higher self-esteem (P.A. Mabrouk, 2007)

There are several reasons why cooperative learning works as well as it does. The idea that students learn more by doing something active than by simply watching and listening has long been known to both cognitive psychologists and effective teachers and cooperative learning is by its nature an active method. Beyond that, cooperation enhances learning in several ways. Weak students working individually are likely to give up when they get stuck; working cooperatively, they keep going. Strong students faced with the task of explaining and clarifying material to weaker students often find gaps in their own understanding and fill them in. Students working alone may tend to delay completing assignments or skip. The term cooperative learning (CL) refers to students working in teams on an assignment or project under conditions in which certain criteria are satisfied, including that the team members be held individually accountable for the complete content of the assignment or project.

The proven benefits of cooperative learning notwithstanding, instructors who attempt it frequently encounter resistance and sometimes open hostility from the students. Bright students complain about begin held back by their slower teammates; weak or unassertive students complain about being discounted or ignored in group sessions; and resentments build when some team members fail to pull their weight. Knowledgeable and patient instructors find ways to deal with these problems, but others become discouraged and revert to the traditional teacher-centered instructional paradigm, which is a loss both for them and for their students P.A. Mabrouk, (2007). This action research try to find criteria for effective implementation of cooperative learning, challenges of CL applications and outlines proven methods for implementing CL and overcoming

common obstacles to its success. Then altogether, but when they know that others are counting on them, they are motivated to do the work in a timely manner P.A. Mabrouk, (2007).

Recently implementing cooperative learning strategies started in Ethiopian education system from lower grade level to higher institution to enhance student learning.   However, the implementation is not successful compared to the desired objectives. This is because of different factors. Among these problem of awareness about cooperative learning and questions like what do students gain from cooperative learning?" Why do we need cooperative learning? Is cooperative learning appropriate for all students? How does cooperative learning improve student achievement? What types of cooperative learning structures more successful in the classroom? Are some of the fundamental question raised by different people various educational institution in Ethiopia. In addition to clear above confusion, the researchers motivated to improve student achievement using cooperative learning strategies because the CGPA of second year students in the department of AECD is low when we compare it with first year students even if the teachers working in the department AECD are try to implementing cooperative learning.

Therefore, the major purpose of this action research is to improve student achievement by addressing the above issues. The researchers designed the following basic questions to investigate the problems and made proper intervention to improve student achievement; this action research project was answers the following basic questions:

1. What is the status of Students' participation in cooperative learning?

2. How can we improve Students' achievement through cooperative learning?

3. What are the factors contributing to low participation of Students' in cooperative learning?

4. What are the possible strategies that help to improves Students' cooperation in learning?

Objectives of the Study

The general objective of this action research is to improve student achievement through cooperative learning. In addition to this, the following specific objectives are treated.

1. To Improve students: positive interdependence and social skills (social relations within and between groups) in the department, awareness about cooperative learning

2. To improve students achievement through the application of cooperative learning

3. To reduce the major challenges that hinders the implementation of cooperative learning

4. To apply possible strategies that help to facilitate cooperative learning

Review of Related Literature

Historical Development of Cooperative Learning

One of the most influential educators of the early twentieth century was the philosopher, John Dewey. He believed that education was a process of living and that schools had a responsibility to capture children's interests, to expand and develop their horizons, and assist them in responding

appropriately to new ideas and influences. Moreover, learning should be an active and dynamic process based on children's expanding curiosity in their world. It should be child- centered and responsive to the child's own developing social interests and activities. In this regard, he believed that schools had a responsibility to build on students' natural interest in their social environment by fostering interpersonal communication and group involvement. By interacting with others, children receive feedback on their activities, they learn socially appropriate behaviors, and they understand what is involved in co-operating and working together (Dewey 1940, 1966) as cited in Robyn M.et.al, (2003). Dewey's ideas were quite revolutionary at the time and had a profound influence on education, particularly as the effects of developments in the field of group dynamics began to be realized Robyn M.et.al, (2003).

Watson (1928) noted that groups think more efficiently than the best member of the group working alone; and Shaw (1932) observed that individuals were more productive when they worked in groups than when they worked alone. In fact, Mead (1937) observed that people worked cooperatively when they sought to obtain mutual outcomes, and May and Doob (1937) noted that individuals co-operate when they are in close contact and expected to work together to achieve a shared goal. In contrast, individuals compete when they have limited contact and are not expected to achieve a shared goal. In effect, the expectations placed on groups affect how members behave towards each other.

What Is Cooperative Learning

It is important first to establish exactly what we mean by cooperative learning. We could say the essence cooperative learning requires pupils to work together in small groups to support each other to improve their own learning and that of others. To work effectively certain key elements need to be in place. These five elements are essential and these are known by the acronym 'PIGS F': **P**ositive interdependence, **I**ndividual accountability, **G**roup processing, **S**mall Group and interpersonal Skills, **F**ace-to-face interaction (Spencer K.et, al., 2009).

Cooperative learning is also different from group work. In-group work, students are put together and asked to work together to learn, to complete a group project, or to do a group presentation. Like cooperative learning, the social organization of group work is cooperative. Cooperation is the goal. However, as anyone that has worked in an unstructured group can attest, often that is not what happens. Some students may do most or all the work. Some students do little or none. Some students work independently. What is the main difference between group work and cooperative learning? Group work lacks structure. Effective cooperative learning carefully structures the interaction to ensure students work together well (Spencer K.et, al., 2009).

The effect of cooperative learning

Cooperative learning has perhaps the strongest empirical research base of any educational innovation. Over 1,000 studies demonstrated the positive effect of cooperative learning on academic achievement, social and emotional development, and cognitive development, linking for school and class, as well as a host of other positive outcome (Spencer K.et.al., 2009). According to Wendy Joliffe (2007), Cooperative learning has extensively researched. Syntheses of research have shown three main categories of advantages of cooperative learning:

Achievement: - Over 375 studies in the past 100 years have shown how working together to achieve a common goal produces higher achievement and greater productivity than working alone. Cooperative learning also results in process gain (that is, more higher-level reasoning), greater

transfer of what was learned within one situation to another and more time on task. *Interpersonal relationships*: - Over 180 studies have conducted since the 1940s, which have shown that cooperative learning experiences promote greater interpersonal skills. *Psychological health and social competence*: - **Working** co-operatively with peers and valuing co-operation, results in greater psychological health, higher self-esteem and greater social competencies than competing with peers or working independently.

Cooperative learning is an educational approach, which aims to organize classroom activities in to academic and social learning experiences. There is much more to Cooperative Learning than merely arranging students into groups, and it has been described as "structuring positive interdependence.

Generally, Cooperative learning is an educational approach, which aims to organize classroom activities into academic and social learning experiences. There is much more to Cooperative Learning than merely arranging students into groups, and it has been described as "structuring positive interdependence. In addition, According to (Wilson, 1978) as cited in Lema Setegn (1993) student grouping helps to develop student self-confidence, reduces the level of individual differences in their academic achievements, helps the students to share their experience, knowledge and skills, promotes constructivist way of learning, student construct knowledge, helps to use the limited educational resource effectively, reduces the burden of the teachers in the teaching learning process, promotes active learning methods in the teaching learning process, helps to create positive competition among the students and helps to increase the academic achievement of the students. In general, academic achievement of students are improved when there is differentiation in the teaching methods, material, modification in the educational objectives, curriculum reorganization etc

Student grouping enhances cooperation, sharing of ideas among students; in contrast, this kind of grouping had the following disadvantage (drawbacks): if not well managed Students, who are slow in learning dominated by their group leader, who are superior in their academic performance, Organizing students based on ability in the same group may increase dependency, Because homework and group work is done only by their superior), If the teacher does not properly manage the group, students may waste time by doing something, which is insignificant to accomplish the task and   If not properly managed, the ability grouping may discourage low achiever students

Role of Teachers and Students in Cooperative Learning

When we are conducting this research, the researchers will develop strategies that clearly identified the role of teacher and the role of the students. The teacher's role in cooperative learning is fundamentally different from that in a more traditional model. It is vital that the teacher first provides the supportive classroom ethos to encourage cooperative learning and opportunities for team building. Alongside this is the necessity for developing interpersonal skills as part of a planned programme. The teacher play indispensable roles for the success of the programme among the fundamental roles undertake by teachers are the following are some of them: Plans lessons that decide on (a) objectives, (b) size of groups, (c) how to group pupils, (d) group roles, (e) organisation of the classroom, and (f) materials needed, Explain the tasks and the cooperative skills for the success of group, Monitors and intervenes with groups where necessary, Evaluates the quality and quantity of achievement and ensures that groups reflect on their achievement and effectiveness as a group and set goals for improvement.

When we come to the role of the student's in Cooperative learning is different from traditional classrooms is the inclusion of cooperative student-to-student interaction over subject matter as an integral part of the learning process. In contrast, the traditional classroom consists primarily of teacher-fronted lessons, independent work, and competition. Student practice is usually independent— independent problem solving or worksheet work. Often, student interaction is discouraged: "Keep your eyes on your own paper." "No talking." In addition, there is often a competitive component to the traditional classroom as when students vie for the teacher's attention by answering teacher review questions. Cooperative learning is characterized by frequent student cooperation (Spencer K. 2009).

Research Design and Methodology

This part deals with research design, source of data, population, sample and sampling techniques, data collection instrument, procedures of data collection, and methods of data analysis. The researchers use descriptive case study research design. This design was selected because it enables to obtain data about practice and challenges of cooperative learning and based on the finding it helps to improve student achievement and implementation of cooperative learning at Haramaya University college of education and behavioral sciences; department of adult education and community development. Both qualitative and quantitative research methods was applied for the study. The major methodological concern of the research was descriptive analysis and interpretation of the responses for the given questionnaires, observation and FGD in reference with the theoretical and practical framework of cooperative learning. The analysis and interpretation was mainly emphasize on the role of cooperative learning to improve student achievement.

Source of data, Sample Population, Sampling Techniques and Data Collection Instrument

The required data was collected both from primary and secondary sources. The primary data sources were teachers and students, through questionnaires, direct observations of the real situations related to the practices of cooperative learning process in the classroom and Focus group discussion with AECD Students. In addition to primary data, secondary data was collected from related research works, documents at different line, students' achievement in the previous semester and social interaction changes.

By available sampling techniques all 36 students were participated in the research. Educators have advocated the use of multiple methods of data collection, because by selecting complementary methods, a researcher can improve the weakness of one method with the strength of another. In line with this Hunter (1989), Patton (1987) as cited Yamane Gama (2005) stated that the use of a single data collection technique has both strengths and weaknesses. The use of more than one data collection techniques in a single study helps the researcher to substantiate the strength and corrects the defect of any one source of data. Based on this idea the researchers employed variety of tools to gather information about the practice and challenges of student cooperative learning. Observation, Focus group discussion and questionnaire were the common instruments used in data collection. The instruments are use to assess teachers and students perception towards cooperative learning, the role to improve student achievement and social interaction, challenges and possible strategies to improve students cooperative learning.

Questionnaire containing both close ended and open-ended types was used to collect data from students about their perception, roles and problems encounters the effectiveness of cooperative learning. The investigators preferred to use questionnaire as instrument of data collection for this study because it is the most flexible of tools and possesses a unique advantage over others in collecting both qualitative and quantitative information (Kumar, 2006).

Direct classroom observation was conducted to see the extent to which students is cooperative learning organization, support of teachers, and participation of students in cooperative learning in the entire classroom.

As a method for collecting qualitative data, focus groups emphasize learning about the thoughts and experiences of others. When the participants take part in a group interview, they can demonstrate interest in the discussion topic. When the participants are mutually interested in the discussion, their conversation often takes the form of sharing and comparing thoughts about the topic (Victor 2006). Based on this assumption, FGD was used to elicit data regarding the teachers and students perception towards the implementation of cooperative learning, challenges and possible strategies to enhance cooperative and collaborative learning in Ethiopian higher institution.

Procedures of data collection and Methods of Data Analysis

The researchers informed both the college and the department about the issues and also research group make clear the idea for the student to engage freely to the project. From the beginning of data, collection to the intervention action made by teachers in the classroom to improve the achievement of student's information was accountably communicated.

The researchers analyzed quantitative data through percentage, mean and frequency. Percentage was utilize to analyze and determine different characteristics and personal back ground of the respondent, the frequency was utilized to analyze and describe the extent to which cooperative learning affect student achievement. Independent sample t- test also utilized to check whether there is significant achievement difference between pre-test and post-test student achievement. The data obtained through observation and FGD were analyzed using narrative description (qualitative methods of analysis).

Analysis and Interpretation of Data

This part of the paper has two sections. Section one deal with the background information of respondents while section two deals with the overall result of the analysis of the issue under investigation (views of respondents about cooperative learning)

Table 1 -Background Information of the Respondents

Sex	No	%	Age	<18	19-23	24-28
Male	24	80	No	0	30	0
Female	6	20	%	0	100	0

From 36 questionnaires dispatched to students, 83.3% (30) questionnaire were filled properly and returned. Therefore, the analysis part presents the data obtained from these 30 students. Regarding the sex of students, 24 (80%) were males and the remaining 6 (20%) were females. In

terms of age, all the respondents were between 19 and 23. This indicates that, the respondents were matured enough to understand and fill the questionnaire dispatched to them.

The table contains questioners designed to collect data on the attitude and interest of student participants of this research towards cooperative learning. Questions were carefully designed and administered in such away each participants of the study choose the idea that most appropriately match with their feelings as very high (5) & high (4) to show there agreements with the ideas of the questioner, and low (2) & very low (1) to disagree and (3) to undecided, when they face difficulties to agree or disagree with the ideas of each questioners. Accordingly, each questions of the questioner were analyzed as follows.

Table 2 Analysis of Data Obtained through Questionnaire about Students Perception in Cooperative Learning

No	Items	Responses Scale									
		5		4		3		2		1	
		n	%	n	%	n	%	n	%	n	%
1	Students interest in cooperative learning	1	4	8	36	6	27	3	13	4	18
2	Students participation in cooperative learning	1	4	8	36	5	22	4	18	3	13
3	Students sharing of different responsibility in group at Different time	4	18	5	22	6	27	2	9	3	13
4	Receive feedback from instructors about cooperative Learning group work	7	31	6	27	4	18	3	13	1	4
5	Students knowledge about importance of cooperative Learning	1	4	10	45	6	27	2	9	2	9
6	Instructors support of cooperative learning if necessary	7	31	7	31	4	18	2	9	2	9
7	Role of cooperative learning in improving achievement	6	27	6	27	3	13	3	13	3	13
8	Role of cooperative learning in improving social interaction	9	40	5	22	3	13	3	13	2	9
9	Cooperative learning creates common understanding among Students	3	13	14	63	3	13	1	4	1	4
10	Students awareness of cooperative learning practices	3	13	8	36	7	31	2	9	3	13
11	Students motivation to participating in cooperative learning Fully (assignment & project work)	4	18	4	18	4	18	3	13	6	27
12	Cooperative learning creates positive inter-dependence Among students in the class room.	6	27	2	9	5	22	5	22	4	18

From the table-2, for item one 36% of respondents had chosen scale number "4" which indicates the largest response for this particular question. Even though significant numbers 27% of participants were reluctant to decide on this issue, vast majority of the students have interest in cooperative learning. Some 18% respondents indicated students' interest in cooperative learning is very low and 13% indicated the prevalence of low interest in cooperative learning among students. From this, one can conclude that there is a variation of interest in cooperative learning in the classroom. This also showed that the prevalence of gap on students knowledge about cooperative learning question 5 of the questioner Even though majority 45% of the responded that students have knowledge/ understanding on cooperative learning.

The second item of the questioner was designed to collect information on "Students participation in cooperative learning". As indicated on the table: 18% & 13% participant responds low & very low participation and 36% indicated high participation. This indicated that still significant numbers of students are reluctant to participate in cooperative learning.

The role of cooperative learning in improving academic achievement and social interaction among students is one of the questions presented for participant students. Even though Significant number i.e. 27% and 40% of the respondents scaled very high and 27% &22% respondents scaled high, some 13% of respondents scaled low and 13% &9% of respondents scaled very low. This indicated that there is no uniformity among students about the role and importance of cooperative learning in improvement of academic achievement and social interactions among students.

Another important question is about "Students awareness of cooperative learning practices". As indicated in the table above, 13% and 36% participants scaled very high & high and 9% and 13% of participants responds low and very low. This indicates that still significant number of students did not have aware about cooperative learning. Even though, majority of students have good understanding & better awareness on cooperative learning: There is no uniformity of understanding among students about cooperative learning, Some students are reluctant or not fully participated in cooperative learning, there is a gap in practicing cooperative learning among students in the classroom, Significant number of students did not aware clearly what cooperative learning is and the implication is that there is the need for awareness rising program for the students in the classroom to help all learners have common understanding of cooperative learning among all students.

Table-3 Respondent's Views for Items Related with Factors Affecting the Participation of Students on Cooperative Learning.

No	Item/Indicator	N	Mean
1	Lack of awareness about the benefits of cooperative learning	30	3.43
2	Lack of students motivation to work in group	30	3.97
3	Uncomfortable seating arrangement of students	30	3.1
4	Insufficient support and follow up from teachers	30	3.1
5	Lack of teachers motivation to use cooperative learning	30	2.43
6	Shortage of time given by instructors to deal with the given issue	30	3.0
7	Domination of some group members (higher achievers)	30	3.37
8	Dependence of lower achievers on higher achievers	30	3.9
9	Unequal sharing of work among group members	30	4.07
10	Lack of reinforcement by teachers	30	3.23
11	Problem of grouping/ Organization structure	30	3.83
12	Relating cooperative learning with politics	30	2.17
	Grand Mean		3.3

Scales <1= Very Low, 1.01-2= low, 2.01-3= Undecided 3.01 – 4=highly, 4=Very Highly

As indicated in table-3 above, the overall mean score for all items is 3.3. This indicates that the indicated factors are highly affecting the participation of students in cooperative learning in general. Among all, factors indicated in item number 2, 8, 9, and 11 have high effect in hindering student's participation. This means lack of students motivation to work in groups (mean=3.97), dependence of lower achievers on higher achievers (mean=3.9), unequal sharing of work among group members (mean=4.07), and problem of grouping/ Organization structure (mean=3.83) are highly affecting the participation of students in cooperative learning.

In similar manner, lack of students awareness about the benefits of cooperative learning (mean=3.43), Uncomfortable seating arrangement of students (mean=3.1), Insufficient support and follow up from teachers (mean=3.1), Shortage of time given by instructors to deal with the given issue (mean=3), Domination of some group members (mean=3.37) and Lack of reinforcement by teachers (mean=3.23) are highly affecting the participation of students in cooperative learning even if their effect is a little bit lower than those identified earlier.

Analysis of data obtained through Focus group discussion.

In the group, discussion conducted with 2nd year AECD students we have identified the following major challenges that hinder successful implementation of cooperative learning.

a. Lack of awareness about the advantage of cooperative learning

b. Problem of organization or group structuring

c. Lack of continuous support from the instructors

d. Lack of materials to conduct project and different assignment

e. Some student develop dependency on higher achiever students

f. Shouldering all the responsibility up on group leader

g. Problem of providing different responsibility to group members

h. Absence of rotating the responsibility and re-organizing the group

Based on these findings the research team proposed different actions to be taken in order to improve the participation of students in general and their academic achievement in particular under the next section. The possible solution identified from the practical experience of students were the following to improve the effectiveness of cooperative learning that promote student social interaction, positive interdependence, confidence, self-esteem and achievement.

a. Improve the awareness of all stakeholders about cooperative learning

b. Re-organize students into groups for a particular topic and rotating responsibility.

c. Give clear instructions, and explain how them work together and asses effectively

d. Each member of the group will have a specific task to complete within the group.

e. Assign different tasks like facilitator, note taker, timekeeper, leader, observer, reporter or tasks specific to the topic.

f. The group is responsible for the outcomes, which are evaluating against agreed criteria.

g. Provide material and academicals Support to the student to improve their self-esteem and confidence to reduce dependence.

Action Plan, Implementation and Evaluation

When we are conducting this action research, the researchers developed strategies that clearly identified the role of teacher and the role of the students. The teacher's role in cooperative learning is fundamentally different from that in a more traditional model. It is vital that the teacher first provides the supportive classroom ethos to encourage cooperative learning and opportunities for team building. Alongside this is the necessity for developing interpersonal skills as part of a planned programme. The teacher play indispensable roles for the success of the programme among the fundamental roles undertake by the teachers see the following action plan table.

The role of the student's in Cooperative learning is different from traditional classrooms is the inclusion of cooperative student-to-student interaction over subject matter as an integral part of the learning process. In contrast, the traditional classroom consists primarily of teacher-fronted lessons, independent work, and competition. Student practice is usually independent— independent problem solving or worksheet work. Often, student interaction is discouraged: "Keep your eyes on

your own paper." "No talking." In addition, there is often a competitive component to the traditional classroom as when students vie for the teacher's attention by answering teacher review questions. Cooperative learning is characterized by frequent student cooperation (Spencer K. 2009) see also the following table about the role of the students in cooperative classroom:

Based on the major findings of the analysis result, the following action plan is designed for implementation.

Table 3. Action Plan

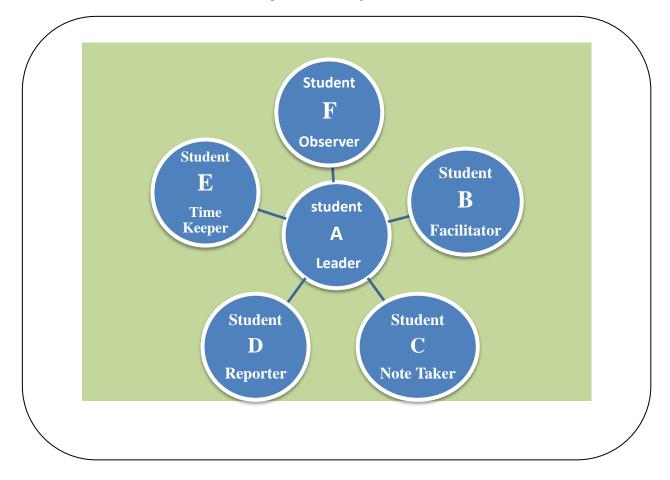| No	Activities	Role of students and instructors	Time require	Expected out come
1	Creating awareness about cooperative Learning	Instructor provides training for students. Student actively participate in the training	2 hrs	All student have good understanding about cooperative learning
2	Reorganizing group arrangement	Instructor restructures the organization of group members based on achievement. Student should participate in new group.	2 hour	Well organized group will be formed
3	Providing different roles for each group members like facilitator, note taker, leader, observer, reporter, or tasks specific to the topic	Instructor develops cooperative learning models, which comprises different roles. Student should perform their role	1 hour	Each group member will feel responsible for his/her roles
4	Plans lessons that decide on: (a) objectives , (b) size of groups (c) how to group pupils, (d) group roles and (e) Materials needed.	Instructors Prepare plan for cooperative learning	2 hrs	Prepared Effective cooperative learning plan
5	Determine the number of students who will be assigned to each group with a range of levels, mixed by intellectual ability or achievement level.	Instructor Organize students based on achievement and participation	1hrs	Create mixed ability group of students
6	Develop a cooperative climate and esprit de corps in the classroom. Develop a positive classroom environment.	Instructor should inspire students about cooperative learning. Student should develop positive interdependence	5 Minute s each class	Created cooperative learning climate
7	Reward students for such social skills as helping others, in different activities	Instructor should provide simple reward to the students	A class per week	Create rewarding Environment
8	Present and clearly explain the Activities that will student take parts to complete.	Instructor should provide clear direction and students should follow the direction	½ hrs	Student which follow the instruction properly
9	Monitor and assist as needed by providing the task to be performed	Instructor provides the necessary support. Student should ask teacher when they need	12 hours	Each group will gain sufficient support from the instructor
10	Evaluate each group's performance /product	Make ready themselves to the exam and done the assignment cooperatively.	3 hours	A high student academic achievement

Implementation of the Action Plan

Activity-1- Creating Awareness about Cooperative Learning For Students

Lack of awareness about cooperative learning was one of the major factors affecting the participation of students in cooperative learning and hence it has been one of the causes for low achievement of students in the department of AECD. As a result, awareness creation discussion was held with students for two periods (2 hours) on Monday 15/04/2015 and Thursday 18/04/ 2015.

Activity -2- Re-organize and Re-structuring the group

Since group arrangement of students was found to be one of the factors affecting cooperative learning, reorganization of groups was conducted based on three semesters commutative GPA of students on April 2, 2015. After this, the research team members developed a model that enhance cooperative learning environment by providing responsibility for each and every member of the group as indicated here under.

1.1 Cooperative Learning Model

Based on this model, details elaboration about the responsibilities of each member was given on 30 March 2015 as follows;

- **Leader:** a group leader provides direction, instructions and guidance to a group of individuals, for achieving a certain goal.

- **Facilitator:** A **facilitator** of a group helps a group members to understand their common objectives and assists them to plan how to achieve these objectives; in doing so, the facilitator remains "neutral" meaning he/she does not take a particular position in the discussion. Responsible for getting the group started, keeping it on task, and involving all members.

- **Note taker:** a student who takes notes during cooperative learning activities

- **Reporter:** a student who is responsible for summarizing group decisions for the larger class

- **Timekeeper:** a student who is responsible for keeping group on task and on time particularly with in-class and other activities

- **Observer:** a student who pays close attention to cooperative learning activities

Based on the above model each member of the group was assigned for a specific responsibility. This was held on 6 April 2015. The summary of responsibility given for every member of the group is described as follows; for the sake of consent, we cannot write the name of students.

Table-4 Provide Different Role for Newly Re-Organized Group

GROUP-1		GROUP-2		GROUP-3		Academic Advisor
Student A1	Reporter	Student B1	Leader	Student C1	Time keeper	Mr. x and y
Student A2	Leader	Student B2	Reporter	Student C2	Note taker	
Student A3	Time keeper	Student B3	Observer	Student C3	Reporter	
Student A4	Observer	Student B4	Time keeper	Student C4	Leader	
Student A5	Facilitator	Student B5	Facilitator	Student C5	Facilitator	
Student A6	Note taker	Student B6	Note taker	Student C6	Observer	
GROUP -4		GROUP-5		GROUP-6		
Student D1	Leader	Student E1	Note taker	Student F1	Note taker	Mr. A and Z
Student D2	Note taker	Student E2	Observer	Student F2	Time keeper	
Student D3	Reporter	Student E3	Reporter	StudentF3	Reporter	
Student D4	Observer	Student E4	Leader	Student F4	Leader	
Student D5	Facilitator	Student E5	Facilitator	Student F5	Facilitator	
Student D6	Time keeper	Student E6	Time keeper	Student F6	Observer	

Activity-4. Monitoring and assisting each group members as needed after providing the task to be performed.

The instructor started to provide task to be done in cooperative learning groups based on the above newly arranged grouping system. In doing so, the instructors also provided all the necessary support as needed by all group members as much as possible. The instructor conducted this activity for almost one month starting from April 9, 2015 to May 20, 2015. The following photos highlight some of the activities that were conducted while assisting each group of learners.

Activity -4- Providing different activities and tasks for newly organized groups

Cooperative Learning Practice in Groups in the Actual Classroom

Reading Assignment in the Classroom Sitting Arrangement in the Classroom Student in doing assignments

Activity 5. Evaluating the performance of each group's

To evaluate the performance of each group the instructor used two techniques. The first one is by observing the number of students who participate and try to answer the questions raised by the instructor while the instructor is rotating around all groups to provide feedback. The second technique is by providing a post-test from the topics which are totally covered through cooperative learning for one month. The result of pre-test and post- test which were scored out of ten are presented under action evaluation.

Action Evaluation

After intervention had take place, the research team evaluate what change occurred. Some of the major changes that have been observed are briefly presented as follows;

1. After two hours, training and interactive discussion with AECD students about their awareness towards cooperative learning methods 19 (73.07%), of student's rate their awareness about cooperative learning is high and the rest 7(26.92%) rate their awareness about cooperative learning is medium.

2. Re-organize and Re-structuring of the group: After rearranging their group almost all students become happy and asked the department of AECD in order to have continuity for other courses to be taken in the next year beyond using it for only this research purpose. Beyond this re-arrangement/re-organization of group members also provided an additional opportunity for

students to create and strengthen their social life with new members of the group in which they did not practiced such behavior in the past two years even if they are learning in the same class

3. Providing different roles: Regarding the provision of a specific task for every member of the group most students (>90%) agreed that it enhanced their feeling of responsibility for their task as it mandates every student to participate in cooperative learning.

At the end of taking all the actions discussed above the research team observed slight improvement on student's achievement. Look at the table below.

Table 5. Results of Students on Pre-test and Post-test

Score of students	In pre-test		In post-test	
	n	%	n	%
5 and below 5	8	22.2	2	5.6
Between 5 and 8	24	66.7	25	69.4
above 8	4	11.1	9	25

As table 5 indicates, the number students who scored below 5 reduced from 8 (22.2%) to 2 (5.6%). In addition to this, the number of students who scored above 8 increased from 4 (11.1%) to 9 (25%). This change indicates that the implementation of the identified actions has great role in improving the achievement of students.

Table 6. Values of Independent Samples t-test for Pre & Post Test

Group	Number of student	Mean Score	SD	Mean Difference	P value at $\alpha=0.05$ level
Pre-test	36	6.14	1.74	1.33	0.001
Post-test	36	7.47	1.50		

As indicated in table 6 above, the mean score of students in pre-test and post-test is 6.16 and 7.47 respectively. This indicates that, planned and well-organized implementation of cooperative learning improves the achievement of students. In supporting this, the analysis of data obtained through observation indicated that, the number of students who participate during cooperative learning at the time of classroom discussion was also high. The result of t- test t (70) = -3.47, p=0.001<0.05, indicates that, there is significant difference in the score of students at pre-test and post-test. In some courses, we can observe change in pre and post cooperative learning implementation, let see the following table.

Table 7. Change in Score Pre-implementation and Post-implementation

No	Post test			Pre- test	
1.	Course Name	Curriculum development, implementation and evaluation in ANFE		Multicultural Education	
2.	Mid exam	24.77/38	SD=5.9	Mid	16.22/30
3.	Assignment	8.83/10	SD=0.69	Assign	12.83/20
4.	Final	35.6/48	SD=6.54	Final	38.91/50
5.	Total	73.08/100	SD=11.85	Total	67.97/100

As we observed from the above table in 1st semester, multiculturalism and education course the average score of the student was 67.97/100. However, after the implementation in 2nd semester students score 73.08/100 in curriculum development, implementation and evaluation in ANFE. This indicates that there was a positive change after the implementation of cooperative learning.

Conclusion

Scholars like Gamson (as cited in Muhamed, 2014) stated that 'Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding and achievement.' In similar manner, the research team had full confidence to improve the achievement of students through the application of cooperative learning. To this end the research team, undertake different actions such as: (1)Awareness creation because Lack of awareness about cooperative learning was one of the major factors affecting the participation of students in cooperative learning and hence it has been one of the causes for low achievement of students in the department of AECD. As a result, awareness creation discussion was held with students for two periods (2 hours) on Monday 15/04/2015 and Thursday 18/04/ 2015. At the end improved the awareness of students. (2) Re-organized the group Since group arrangement of students was found to be one of the factors affecting cooperative learning, reorganization of groups was conducted based on three semesters commutative GPA of students and possible to create working group. (3) Providing different responsibility to all member of the group to reduce dependency each student has one role facilitator, timekeeper, observer, leader, note taker and reporter. At the end, it is observed that student responsibilities are improved. (4) Monitoring and providing feedback, the instructor started to provide task to be done in cooperative learning groups based on the newly arranged grouping system. In doing so, the instructors also provided all the necessary support as needed by all group members as much as possible. Finally we can observed that student teacher interaction are improved and also their participation.

While conducting this action research the researchers faced some challenges. One of the main challenges was lack experience in doing action research, awareness of student and teacher in implementing all activities and managing time to cover all the contents of the course within the specific amount of time and to provide sufficient and timely feedback for all groups.

At the end, the research team found out that, there is slight academic improvement on students due to the application of cooperative learning. This indicates that, cooperative learning improves the achievement of students when it is applied in more organized and well-planned way. In addition, the research teams recommended that all department and colleges across the university should implement and improve the achievement of their students through cooperative learning

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