

**Effect of Collaborative Learning on the Academic Achievements of Post-Graduate Students at
University of Agriculture Faisalabad**

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Abstract



Higher education plays an important role in human life by creating new information, transferring it to students and bringing up revolution. Standards of teaching are very important for academic achievements of students in higher education. Bringing up the standard of teaching requires advanced learning organizations to ensure that the education they offer meets to the students' desires both today and for the next. Collaborative learning is an instructional way of learning and teaching in which a group of students cooperate to tackle an issue, accomplish a piece of work, and generate new thoughts. In the condition of collaborative learning, socially and spiritually characteristics are tested as they hear alternative points of view, and are required to verbalize and protect their thoughts. In this manner, students start to generate their own theoretical ideas and do not depend on specialists and books structure. Despite of the effectiveness of collaborative learning in teaching leaning process a very limited research work is organized to highlight the obstacles that effect collaborative learning manipulation for projection of related to its for reaching influences of the collaborative learning. In collaborative learning, the students have an opportunity to speak with companions, generate their own thoughts, share believes and other structure. The study entitled "Effect of collaborative learning on the academic achievements of post-graduate students" was conducted at University of Agriculture Faisalabad. The post graduate students of faculty of education were the target population of this study. The total students of M.Sc. education (2nd and 4th) semesters were 160. The sample size of 113 students was selected by using online software www.surveysystem.com with confidence interval five percent and confidence level ninety-five percent. Simple random sampling technique was used for sample selection. For data collection, a well-developed questionnaire was used for this study. For analyzing the data collection, SPSS (Statistical Package for Social Sciences) was used. The result indicated major facilitating factors and inhabiting factors . The facilitating factors were using A.V aids in classroom, each member of group participate with preparation, and relaxed environment. Inhabiting factors were competition, diverse personality of members, and no-weightage of group members' effort.

Keywords: Diverse Personality of Members, Academic Achievements, Alternative Points of View, Manipulation for Projection.

Introduction

Collaborative learning accomplishes thinking of higher level and gain long term permanent knowledge rather than a learner who learns individually (Johnson and Johnson, 1986). Collaborative learning is an environment wherein at least two or more individuals learn or try together to master something and specially solve the common problems (Dillenbourg, 1999). In collaborative learning, all students collectively coordinate in assignment without the supervision of teacher (Wilczenski *et al.*, 2001). The possibility of collective learning goes back to somewhere in the range of 1950 and 1960 to that utilized by specialists to bargain and speak with the students of medical, where noticed that the learners who were working in gathering had better results rather than the individuals who were working alone which mirrored the extraordinary accomplishment of this thought. The most ideal approach to comprehend the strategy for collaboration is with the meaning of these ideas: 1) Collaboration is an instructing system that incorporates a little gathering of students cooperating so as to build up the maximum and feasible instructive experience. 2) Shared learning is characterized as crafted by people as individuals from gatherings, and every student in this group is mentally, emotionally, and behaviorally involved in achieving the objectives community of society and

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frameworks whose unmistakable destinations help students in the dynamic procedure and expend the sight of group. 3) Community oriented learning remains on the possibility that learning is a normally social act wherein students talk among them, and among the discussion the learning happens. 4) Collaborative learning is, "where such a case incorporates the accompanying principle viewpoints: initial, at least 2 understudies attempt to get the hang of something together; second, 'at least two' might be clarified as a pair, a small collaboration consist on three to five learners or a class consist on twenty to thirty learners; third, 'get the hang of something' might be clarified as follow a course or perform learning practices, for example, analytical thoughts. At last, 'gathering' might be clarified the same number of the kinds of collaborative learning which might be up closed and personal interpose" (Swan *et al.*, 2006).

Different factors such as learners' identification, economic conditions and personality effecting on the collaborative learning and the learners' academic achievements that related to the family, sex, age group, expertise, identification of information etc. For instance, the function of these elements in online gatherings depicted that the old students go about as teacher. Moreover, gatherings of companions who shaped a sub-gathering and work together without welcoming other gathering individuals had negative impact on the other gathering or individual learning execution. It is obvious that learners' racial or social foundation can influence the joint effort and congruity of a learning gathering, which was reflected in singular execution. For instance, racial minority of learners' exhibitions declined when they were moved out of their social safe place into another gathering, while it improved when they worked with individuals from their own racial or social gathering (Hughes, 2010).

Students "embed information through tuning in and sharing". In various examinations it is demonstrated that learners are all the more excitedly to realize when they are talking about with their companions. "The exchange and discussion over ground breaking considerations and approaches to manage unwinding the assignment make it more fundamental and require a more significant level of abilities." 2) Collaborative learning urges students to turn out to be more certain about them. This is because of the way that through cooperation the students can comprehend that their thoughts and considerations are fundamental in settling the tasks. 3) Collaborative learning empowers "inclusivity" as each kid is esteemed and their credit is likewise significant in the learning cycle. 4) Learners are given the abilities to manage when confronting social circumstances later on. It urges the students to manage critical thinking and conversation so as to improve the students' aptitudes towards a more community oriented society later on (ResourcEd, 2019).

Successful collaborative learning in institution of education isn't a simple system to educate. There are difficulties to creating positive communication apparatuses that are successful enough to cultivate agreeable understudy work. Social collaboration is an essential piece of instructing the learning measure at any school (Contreras León & Chapetón Castro, 2016).

Need of the study

In every field of life, education plays a vital role and several educational methods are used for the achievement of students' academic performance. But collaborative learning is one an educational approach which improves the social skills as well as academic achievements. The purpose of the study is to investigate the effect of collaborative learning on post graduate students at U.A.F. The study targets to enhance the critical thinking of students because mostly students like to work in group and to reduce the negative factors which influence on students' academic achievements in collaborative learning.

Objectives of the study

1. Effect of collaborative learning on the academic achievements of post-graduate students at University of Agriculture, Faisalabad.
2. To investigate the factors influencing the collaborative learning for students' academic achievements.

Review of Literature

Bower and Richards (2006) examined that learning in group has gotten seen as a method for engaging significant learning and a key method in issue and experienced based learning. For Computing understudies composed exertion is not only a learning technique but a result of learning. While this is certifiably not another thought, there gives off an impression of being hesitance with respect to instructors and understudies to make and take those chances. This paper looks to return to the

conceivable outcomes that exist for collaborative learning from group based work to peer views in the expectation of persuading an adjustment in culture furthermore, practice. We incorporate conversation of these methodologies along with features from understudy studies with respect to understudy auras towards collective learning. We note that the apparent overheads and strategic troubles, to understudies and instructors, will frequently debilitate the utilization of collaborative learning, yet that the instructive results reachable through communitarian learning surpass those conceivable when understudies work in disconnection. Specific consideration is given to innovative methodologies for encouraging shared learning. While the conversations that follow identify with software engineering training in particular, it is proposed that a considerable lot of the methodologies and related issues will apply to other learning areas.

Cooper *et al.* (2008) conducted this research to observe the affect of different techniques and tools on the effectiveness of small groups interaction. So, it was found that mostly students of small group had created some qualities in them by working for solving in limited time, cooperating with each other and facing the problem. It was concluded that every student was improved by 10% in his ability to solve a problem by using collaborative approach in his learning. There were not the same results for each student some exceptions were also existing such as female students to whom a tag of pre-formal was allotted after their test of logical thinking were found to be improved by 20% if they were grouped with a concrete student. But if a group was made between two concrete students then there would be no improvement it was also concluded through this research.

Liu *et al.* 2010 investigated the inhabiting factors that lead to the collaborative learning to the unsuccessful learning. For this research data were collected from the 173 students of different universities of United Kingdom that were the sample. Data were collected through survey research and extensive review of literature. Results that were collected through survey indicated that lack of motivation, accountability of learners and negative interdependence are the inhabiting factors that cause unsuccessful collaborative learning. Results through extensive review of literature showed that different inhabiting factors were identified in which minor and major were included. In addition, also students' demographic characteristics are investigated in survey to find out the relationship of students' demographic characteristics on the factors that cause unsuccessful collaborative learning. The results indication chi-square test was used which showed that relationship of students' demographic characteristics on factors is not found statistically that cause unsuccessful collaborative learning.

Methodology:

The study entitled “Effect of collaborative learning on the academic achievements of post-graduate students” was conducted at University of Agriculture Faisalabad. The post graduate students of faculty of education were the target population of this study. The total students of M.Sc. education (2nd and 4th) semesters were 160. The sample size of 113 students was selected by using online software www.surveysystem.com with confidence interval five percent and confidence level ninety-five percent. Simple random sampling technique was used for sample selection. For data collection, a well-developed questionnaire was used for this study. For analyzing the data collection, SPSS (Statistical Package for Social Sciences) was used.

Results

Table 1: Distribution of respondents according to their perceptions about facilitating factors of collaborative learning influencing on students' academic achievements

Opinion	Mean	Standard deviation	Weighted score	Rank order
Using A.V aids in classroom develop more interest	4.09	1.043	463	1
Relaxed environment	4.01	1.077	454	2
Each member of group participates with preparations	4.00	0.925	452	3
Organized group with directions and goals	3.90	1.060	441	4
Small group with clear directions and goals	3.88	1.050	439	5
Support of leader	3.86	1.129	437	6
Relevant and interesting topics of learning	3.82	1.010	432	7
Sense of group ownership	3.72	1.095	421	8
The right batch of students	3.68	1.0112	416	9

Measure scale: 1; strongly disagree **2;** disagree **3;** somewhat agree **4;** agree **5;** strongly agree
 Table 4.3.1 show the mean, standard deviation, weighted score and ranking order about facilitating factor of collaborative learning.

The results about the statement “Collaborative learning is time consuming” ranked 1 with the mean value 4.14 which lies between strongly agree and agree but more tended toward agree. The value of standard deviation and weighted score is 468 and 0.895 respectively.

The results of the statement “Collaborative learning requires more active teachers” ranked 2 with the mean value 4.03 which lies between strongly agree and agree but more tended toward agree. The value of standard deviation and weighted score is 456 and 0.925 respectively.

The results of the statement “Collaborative learning creates confusion in groups” ranked 3 with the mean value 4.00 which lies between strongly agree and agree but more tended toward agree. The weighted score is 452 and standard deviation is 0.719.

The results of the statement “Passive participation of some students in collaborative learning” ranked 4 with the mean value 3.84 which lies between strongly agree and agree but more tended toward agree. The weighted score is 434 and standard deviation is 0.774.

The results of the statement “In collaborative learning sometimes group management is difficult” ranked 5 with the mean value 3.76 which lies between strongly agree and agree but more tended toward agree. The weighted score is 426 and standard deviation is 1.069.

The results of the statement “Collaborative learning is not suitable for all students” ranked 6 with the mean value 3.76 which lies between strongly agree and agree but more tended toward agree. The weighted score is 426 and standard deviation is 1.069.

The results of the statement “Collaborative learning is not effective for large classrooms” ranked 7 with the mean value 3.76 which lies between strongly agree and agree but more tended toward agree. The weighted score is 458 and standard deviation is 1.062.

The results of the statement “collaborative learning creates disciplinary problems” ranked 8 with the mean value 3.67 which lies between strongly agree and agree but more tended toward agree. The weighted score is 415 and standard deviation is 1.121.

The results of the statement “Collaborative learning requires more time for implementation” ranked 9 with the mean value 3.50 which lies between strongly agree and agree but more tended toward agree . The weighted score is 396 and standard deviation is 1.070.

Table 2: Distribution of respondents according to their perceptions about inhabiting factors of collaborative learning influencing on students’ academic achievements.

Opinion	Mean	Standard deviation	Weighted score	Rank order
Competition	4.23	0.966	479	1
Diverse personality of group members	3.53	1.052	400	2
No weightage of group members’ efforts	3.52	1.165	398	3
Inappropriate guideline of leader	3.35	1.231	379	4
Increased workload (time-pressed)	3.29	1.139	372	5
Group leader- related stress	3.25	1.201	368	6

Measure scale: 1; strongly disagree **2;** disagree **3;** somewhat agree **4;** agree **5;** strongly agree
 Table 4.3.2 shows the mean, standard deviation, weighted score and ranking order about inhabiting factor of collaborative learning.

The results of the statement “Collaborative learning inhabiting factor is competition” ranked 1 with the mean value 4.23 which lies between strongly agree and agree but more tended toward agree. The value of standard deviation and weighted score is 479 and 0.966 respectively.

The results of the statement “Collaborative learning inhabiting factor is diverse personality of the group members” ranked 2 with the mean value 3.53 which lies between strongly agree and agree but more tended toward agree. The weighted score is 400 and standard deviation is 1.052.

The results of the statement “Collaborative learning inhabiting factor is no weightage of group members efforts” ranked 3 with the mean value 3.52 which lies between strongly agree and agree but more tended toward agree. The weighted score is 398 and standard deviation is 1.165.

The results of the statement “In collaborative learning inhabiting factor is inappropriate guideline of leader” ranked 4 with the mean value 3.35 which lies between strongly agree and agree but more tended toward agree. The weighted score is 379 and standard deviation is 1.231.

The results of the statement “Inhabiting factor of collaborative learning is increased workload” ranked 5 with the mean value 3.29 which lies between strongly agree and agree but more tended toward agree. The weighted score is 372 and standard deviation is 1.139.

The results of the statement “Collaborative learning inhabiting factor is leadership related stress” ranked 6 with the mean value 3.25 which lies between strongly agree and agree but more tended toward agree. The weighted score is 368 and standard deviation is 1.201.

Discussion

Results of table 1 regarding facilitating factors of collaborative learning influencing on students’ academic achievements showed the strongly agree response using A.V aids in class room develop more interest. Result in rank second also show strong response related to the relaxed environment. Statement “each member of group participates with preparation” in rank third also showed agrees response. As compare to the other research Ku *et al.* (2013) conducted research for checking the use of collaborative learning through this investigation it was concluded that there were 3 factors such as group dynamics, team introductions and tutor support had accelerated to higher degrees by collaborative learning through online. It was also investigated that these three factors had 53% of changing in teamwork satisfaction. At last both tools survey and open-ended questions revealed that online courses enhance the collaborative learning.

Results of table 2 point out the three major inhabiting factors such as competition, diverse personality and no weightage of group members’ efforts. These factors showed strongly agree response of respondents. There are many inhabiting factors are revealed such as inappropriate guidance of leaders, workload and leadership related stress. As compare to the other research Liu, (2010) investigated the inhabiting factors that lead to the collaborative learning. The results that were collected through survey indicated that lack of motivation, accountability of learners and negative interdependence are the inhabiting factors that cause unsuccessful collaborative learning. Results through extensive review of literature showed that different inhabiting factors were identified in which minor and major were included. In addition, also students’ demographic characteristics are investigated in survey to find out the relationship of students’ demographic characteristics on the factors that cause unsuccessful collaborative learning. The results indication chi-square test was used which showed that relationship of students’ demographic characteristics on factors is not found statistically that cause unsuccessful collaborative learning.

Conclusion

To make the delivery of education more intuitive, teacher and representative should collaborate with one another. On collaborative learning, numerous elements affect such as, students’ skills, information, aptitudes, and trust. This implies that students must realize how to collaborate with each in effective way, and this must be accomplished by everybody contributing decidedly. One’s involvement in the group is vital for the accomplishment of the entire group can be a solid inspirational factor. Students collaboration in small groups enable to identify students and easily make misunderstandings correct and to develop understanding of the topic. Small group collaboration has been especially identify the full worth of students. The one of the most important purpose for any instructional institution to facilitate their students to obtain knowledge and expertise for future, so, the most important for these institutions to adjust their instructional programs with the passage of time and for setting of workplace. Considering the instructional point of view, in working environment, the role of expended learning is the most important trend, where individual’s constant learning and knowledge are considered to the one of the most important responsibility in an organization. To enhance learners’ social interactions, meta-cognition and psychological skill, a cooperatively rich condition has been suggested strongly.

There are some suggestions that may be help in future,

1. Establish the climate of mutual respect for collaborative learning.
2. The teachers’ role should be crucial in order to scaffold the students’ participation in the classroom.
3. For collaborative learning the norms and values of interactions should be flexible.
4. Create relaxed environment for learning.
5. Every member of the group must be given a chance to speak or open communication.
6. Teachers should appreciate the efforts of every member of the group to get better output from the collaborative learning technique.

7. To enhance the students learning authorities should provide a research base work in group forms in different aspects.
8. Further research work in different aspects should be continued to bring forward the effectiveness of collaborative teaching technique.

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