Analysis of Teacher's Perceptions Regarding the Use of Collaborative Learning Approach at University Level

1. **Iqra Naveed**, M.phil Scholar in Education, Air University Islamabad

   iqranavedkhann@gmail.com

2. **Dr. Sadaf Zamir Ahmed**, Assistant Professor Education, Air University Islamabad

   sadaf.zamir@mail.au.edu.pk

Abstract

The topic of the research is analyses the perception of collaborative learning approach at university level. The purpose of the study is to determine the different perceptions of teacher's about the use of collaborative learning approach. The objectives of the study are to unfold the perception of teachers about the use of collaborative approach at university level. To identify the challenges faced by the teachers while using collaborative learning approach at university level. To identify the challenges faced by the teachers while using collaborative learning approach at university level. Population of study was 513 teachers serving in university of Okara. This includes 92 teachers with PhD 124 full time and 314 part time teacher. The sample of the study convenient sampling technique was used to select 50 teachers serving in university of Okara. The design of this research was descriptive research. This study was quantitative in nature. Self-made questionnaire was used for data collection. The questionnaire was consisted of 10 items and these items were close-ended. Statistical Techniques were used in this research i-e Descriptive Statistics (Frequency, Percentage, and Mean) and independent sample t for demographic factors (Gender). And it's concluded that male and female's perception is same regarding the use of collaborative learning approach at university level.

It is concluded that teacher's perception regarding the use of collaborative learning approach is positive as (58.0%) teachers believe that collaborative learning will be the part of their classroom in future. Collaborative learning approach may not help with student management but data also reveal that it help in developing communication skills of students.

Findings also concluded that collaborative learning has positive effect on the academic achievement of the student. After reviewing the related literature it is also concluded that there are some hurdles that are in to overcome for effective collaboration between the teacher and student and student with other student one of them is time management. This study shows a significant positive perception of teachers regarding collaboration in classroom which helps in developing confidence level and communication skills.

Keywords: Collaborative learning approach, Teacher's perception

1. INTRODUCTION

Collaborative learning is playing a greater role in students' lives now than it has ever before. Education is described as interaction between students and professors, as well as interaction between students and other sources of knowledge, which is no longer limited to professors alone.

As a result, the focus has changed to using collaborative learning as a tool to help students shape their professional activities. Cognitive activities can be interpreted as challenges that inspire participants to become more involved in future work.

However, the students must comprehend and acknowledge these assignments. Collaborative learning strategies play an important and effective role in skill development process.

Using student groups to improve learning through collaborative work is referred to as collaborative learning. Students in groups of two or more collaborate to solve a problem, complete an assignment, or learn a new idea. Jigsaw puzzles, regular meetings, peer review scaffolding, and other collaborative learning methods are available. These techniques allow students to benefit from one another's prior knowledge and experience.

Representing the collaborative learning ideology (Elliot Aronson) by US educators from Johns Hopkins University (Robert Slavin), of Minnesota (Roger Johnson and David Johnson), and University of California in Santa Cruz (Roger Johnson and David Johnson)

This approach includes the use of different techniques which help student to learn from each other and learn on their own, it may include group study where students make groups to learn new things.(Johnson& Johnson , 1999)

This method aids in the development of students' self-esteem and communication abilities. In the sense of collaborative learning, Stacey (1999) emphasizes that learners exchange several perspectives and improve their higher order thinking skills with the help of this process of assessing, valuing, endorsing, and various viewpoints.

However, research shows that the implementation of collaborative learning is not always adequate in daily classroom practice. For example, even though teachers organize different types of student groupings (e.g. heterogeneous or homogeneous according to ability or gender), they dint always structure these group interactions to foster effective collaboration (Baker & Clark, 2010; Blatchford, Kutnick, Baines, & Galton, 2003).

When examining the effectiveness of collaborative learning, researchers have noted challenges that students experience such as unequal individual participation in group tasks (e.g. Freeman & Greenacre, 2010; Janssen, Erkens, Kanselaar, & Jaspers, 2007), and students' lack of communicative and collaborative skills (e.g. Li & Campbell, 2008; Pauli, Mohiyeddini, Bray,

608

Michie, & Street, 2008). Teachers face similar difficulties when planning team activities, such as creating effective group assignments, forming groups, controlling class time (Gillies & Boyle, 2010), and enhancing and shadowing efficient collaboration (Hämäläinen & Vähäsantanen, 2011; Van Leeuwen, Janssen, Erkens, & Brekelmans, 2013).

1.1 Statement of The Problem

Collaborative learning is playing a greater role in students' lives now than it has ever been. Education is described as interaction between students and professors, as well as interaction between students and other sources of knowledge, which is no longer limited to professors alone.

Collaborative learning approach in education is the use of student groups to enhance the learning through working together. Group of two or more students work together to solve problem complete a task or learn new concept. This approach actively encourages the students to learn from each other's previous knowledge and experience. The statement of the problem is the analysis of teacher's perception regarding the use of collaborative learning approach at university at university level.

1.2 Research Objectives

Objectives of the study are:

1. To unfold the perceptions of teachers regarding the use of collaborative approach at university level.
2. To find out the challenges faced by the teachers while using CL approach at university level.
3. To find out effects of demographic factors (gender) on the perception of teachers

1.3 Research Questions

1. What are teacher's perceptions about the use of collaborative learning approach?
2. What are the issues faced by teachers while using collaborative learning approach in classroom?
3. What are the effects of demographic factors (gender) on the perception of teachers?

1.4 Hypothesis

H_0 There is no effect of demographic factors towards the use of collaborative learning approach.

1.5 Significance Of The Study

Firstly this study will pours light on the importance of collaborative approach. Secondly this study will help teachers by investigating all type of issues, problems and challenges encountered by teachers while the use of different collaborative learning strategies in classrooms. Thirdly

study will make valuable and practical suggestions to help teachers in dealing with issues and for the better use of collaborative learning strategies.

Theoretical Framework

Students can learn how to function as a team using collaborative learning strategies, but they must be trained.

Tuckman's Model

Teams go through stages of developing, storming, norming, performing, and adjourning, according to psychologist Bruce Tuckman (1965). (or mourning)

- Little agreement
- Unclear purpose
- Guidance and Direction

Forming

- Conflict
- Increased clarity of purpose
- Power Struggles
- Coaching

- Agreement and Consensus
- Clear Roles and Responsibility
- Facilitation

Norming

- Clear Vision and purpose
- Focus on goal achievement
- Delegation

- Task completion
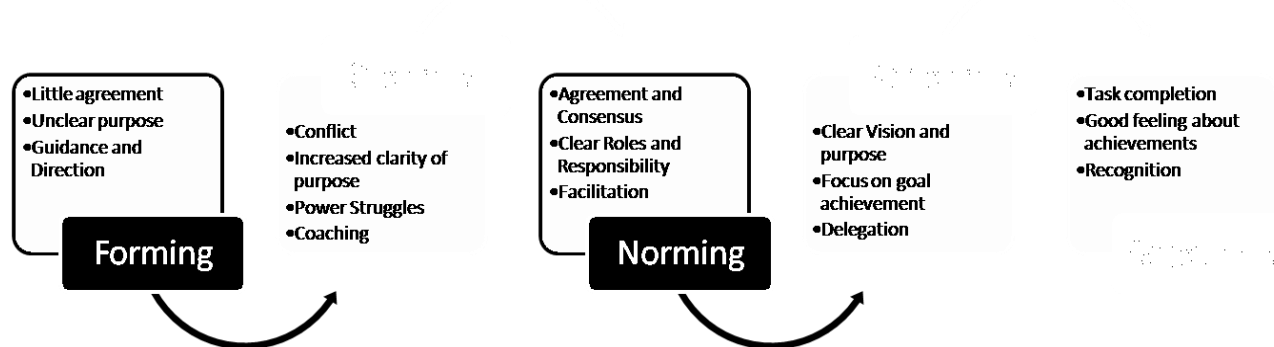- Good feeling about achievements
- Recognition

Figure: Theoretical framework Analysis of teacher's perceptions regarding the use of collaborative learning approach at university level

In 1965, psychologist Bruce Tuckman coined the phrase forming, storming, norming, and executing to describe the course that most teams take.

610

1.6 Delimitation of the Study

Because of limited time and resources study was delimited to the teaching faculty of University of Okara.

2. LITERATURE REVIEW

According to Gerlach Learning takes place by conversation. It's a teaching learning process in which a group of students cooperate for solving a problem or completion of task collaborative learning is a process where learning is a social act student learns through interacting with each other.

3.1 Origin Of Collaborative Learning Approach

Collaborative learning as an instructional tool can be traced all the way back to ancient civilizations. Other learning philosophies, both in the West and in the colonized East, eventually supplanted it. Collaborative learning received a new lease on life in the second half of the twentieth century, when studies revealed that students learned more quickly and retained more information when they were participants in the teaching and learning process rather than passive recipients of information from their teachers.

2.2 Collaborative Learning in the 20th Century

Early seeds of the Collaborative Learning process can be seen in john Dewey explore relational essence of learning and promote teaching through interaction and concept of learning by doing Elwin concept of social interdependence.

Piaget viewed academic growth is something that can be aided by socially interacting with each other. If you are not agreeing with me about anything, it throws me into disarray and forces myself to reconsider my positions. As a result, I'm broadening and deepening my understanding of the universe.

Vygotsky advocate that learning is a social learning process we learn from are surroundings and then apply that knowledge.

Collaborative approach based on the principle of constructivism which is the base of this approach. And it believes that people learn from their experiences which make it active leaning. And that we make sense of the world we are living in by asking questions, seeking new concepts, and so on is at the heart of Constructivism and evaluating our existing knowledge. We strive to fit new experiences with what we already know every time we have one. The new experience can either contribute to our existing understanding of the world, or it can change our viewpoint or provide us with new beliefs.

We are not passive absorbers of information provided to us by others, according to constructivists. On the opposite, we are willing participants in the learning process. The sense of

the interactions from which it started has an effect on this learning process. As a result, learning is a social activity that is aided by our interpersonal interactions.

As a result, Collaborative Learning and is associated with the teachers who attempt to introduce constructivist philosophies in the classroom.

Collaborative learning is a catch-all word for a range of instructional methods that include students working together on a collaborative intellectual project, or students and teachers working together. Typically, students work in groups of two or more, seeking common understanding, answers, or definitions, or developing a product.

Collaborative learning activities vary greatly, but the majority focuses on students' exploration or application of course content rather than the teacher's presentation or explanation. In college classrooms, collaborative learning represents a major departure from the traditional teacher-centered or lecture-centered setting.

The lecture, listening, note-taking method does not entirely vanish in collaborative classrooms, but it coexists with other processes focused on student interaction and communication to help in active work with course content. Teachers who use collaborative learning methods see themselves as expert creators of intellectual environments for students, rather than as expert transmitters of information to students as coaches or midwives of a more emergent learning process.

3.2 Collaborative Learning Techniques

Collaborative learning is a method of teaching and learning in which a group of students collaborates in order to solve problems. Collaborative learning, according to Gerlach, is founded on the premise that learning is a spontaneously social act in which participant's converse with one another (Gerlach, 1994). Learning takes place by conversation**.**

Think/Write, Pair, Share: The think/write, pair, share approach is a cooperative learning method that promotes individual interaction and can be used in any grade or class size. Students use three distinct measures to work about questions:

1. Think/Write: Students think independently about a topic and come up with their own thoughts, which they then write down.

2. Pair: Students are paired up to talk about their ideas. This move helps students to express themselves and respect the opinions of others.

3. **Share:** A wider audience, such as the entire class, hears student pairs' thoughts. Students also feel more at ease sharing ideas to a community with the help of a partner. Furthermore, through this three-step method, students' ideas have become more developed.

Table in the Round: Round Table is a method of collaborative learning that enables students to evaluate prior knowledge, remember information, and practice communication skills. The measures are as follows:

1. Write: On a piece of paper, each student writes one (or two, or three) sentences about a given subject (or an answer to a question).

2. Share: The paper is passed around to each member of the community one at a time. Each member of the community responds in writing.

3. Write a summary: When the original is returned, the student reads the group's comments and shares the group's collective understanding of what was said about the subject (or question).

Jigsaw: Jigsaw is a method of teaching that allows students to practice acquiring and presenting new content, reviewing previous material, and engaging in informed debate. Interdependence and equality of status are established. The procedure is as follows:

1. Each team member becomes an expert on a single subject.

2. Experts party, which includes representatives from other teams who have been assigned to the expert subject.

3. When they return to their teams, each person teaches the community in turn.

4. Each student is graded on all aspects of the subject.

Concept Mapping

Concept mapping is a collaborative learning method that helps students to illustrate the relations between words or concepts covered in class through working in groups. The procedure is as follows:

1. Students write words from the course on paper.

2. Lines are drawn by students to connect individual term which show the relationships between terms. In a concept diagram, the majority of the terms have several associations.

3. Students must define and arrange information while creating a concept map.

Guided Design

This technique is the most systematic approach to problem-centered instruction. Small groups of students are asked to discuss different concept in a series of activities, with detailed feedback at each point. The Guided Design method was established in the late 1960s in West Virginia University's engineering program and has since been implemented in variety of programs and in

almost in every department not only sciences but social sciences and art.(Borchardt, 1984; Day et al, 1984; deTornay and Thompson, 1987; Miller, 1981; Roemer, 1981; Vogt et al., 1992).

2.4 Issues Faced By Teachers When Applying Collaborative Learning

Earlier research (Chiriac & Granström, 2012; Hämäläinen & Vähäsantanen, 2011) identified a number of issues that teachers face when implementing collaborative learning in the classroom. We discuss two issues that impact the efficacy of collaborative learning: the organisation of collaborative learning activities and the evaluation of learning. To begin with, teachers face difficulties structuring collective activities such as tracking students' on-task actions, controlling group-work time, providing relevant resources, assigning individual roles, and developing teamwork values and behaviours (Gillies & Boyle, 2010). Ruys, Van Keer, and Aelterman (2012) found that teachers pay inadequate attention to coordinating collaborative activity, such as deciding group norms and initiating tasks, in their analysis of pre-service teachers' planning of collaborative activities.

Furthermore, research has revealed that many primary and secondary school teachers often position students in groups and allow them to work together without adequately training them to engage in meaningful collaborative activities (Blatchford et al., 2003). Second, when implementing collaborative learning in classrooms at all levels of education, teachers often find it challenging to measure students' success and achievements (Strijbos, 2011). Teachers in some primary and secondary schools, for example, expressed confusion and ambiguity about what to measure and how to assess it (Frykedal & Chiriac, 2011).

Furthermore, according to Chiriac and Granström (2012), the appraisal requirements or rules lacked clarity and concreteness. Furthermore, the lack of assessment tools to assess each group member's collaborative performance could lead to student dissatisfaction with the assessment's transparency and fairness (Strom & Strom, 2011).

While previous research has identified a number of issues that teachers face while implementing collaborative learning, these studies have not adequately explored the underlying causes or antecedents of these issues (e.g. Gillies & Boyle, 2010; Lopata, Miller, & Miller, 2003). Furthermore, the issues that teachers face are likely to impact students who collaborate.

This connection between teacher and student problems, on the other hand, has received little attention in previous research. If teachers, for example, are unsure how to track students' group discussions and are unable to interfere as needed or model acceptable collaborative actions, the quality of the collaborative process as witnessed by students will most likely suffer (Van De Pol, Volman, & Beishuizen, 2011; Van Leeuwen et al., 2013; Webb, 2009)

Collaborative classrooms, at their best, engage both students and teachers. The collaborative learning process exemplifies what it means to question, learn, and understand with others in the most authentic way possible. Collaborative learning necessitates responsibility, perseverance, and sensitivity, but the end result can be a learning group in which everyone is invited to enter, participate, and develop.

3. RESEARCH METHODOLOGY

Methodology for conduction the research and achieving, objectives the researcher adopted following procedure.

3.1 Research Design

A descriptive survey research design was used for this study. This research adopted the survey research to facilitate the gathering of information and data to assist in achieving study goals.

3.2 Population of the Study:

Population of this study was comprised of 513 teacher of university of Okara. Researcher gathered data from them.

3.3 Sample of the Study

The researchers used convenient sampling technique to select 50 teachers.

3.4 Research Instruments

Keeping in view the nature of content, descriptive survey research was considered appropriate to collect the data. One questionnaire was designed consisted 10 questions at three rating scale, i.e. Yes, No, To some extent.

3.5 Data Collection
Questionnaire was used to assemble data from university teachers the researcher use online platform to collect data.

3.6 Statistical Analysis

Data is analyzed according to the objectives of the study. Data is analyzed by calculating Mean and percentage for each statement. The researcher applied t-test for the demographic factors.

4. Data Analysis and Interpretation

This study was conducted to analyze the perception of teacher's regarding the use of collaborative learning approach. This chapter deals with data analysis and its interpretation.

4.1 Descriptive Statistics

1. Tabular and Graphical Representation (Frequency, Percentage) of Demographic Factors.

2. Percentage Response over Questionnaire (Percentage, Mean)

4.2 Inferential Statistics

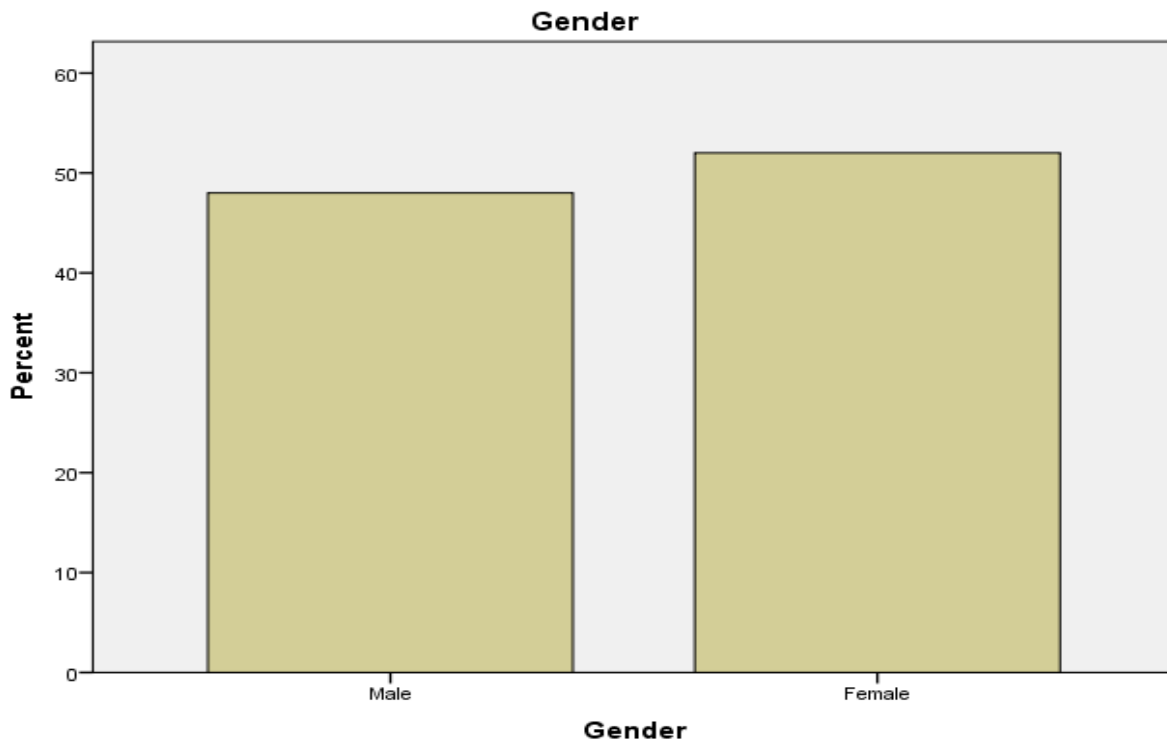1. t-test is used for demographic factors (Gender, Qualification)

Descriptive statistic

a. Tabular And Graphic Representation Of Demographic Factors

Table 4.1 Gender representation

Serial no.	Gender	Frequency	Percentage
1	Male	24	48.0
2	Female	26	52.0

Above table shows that 24 male and 26 females were participated.

Graph 4.1 shows the teachers presentation on the basis of Gender

616

Table 4.2 Qualification Representation

Serial no.	Qualification	Frequency	Percentage
1	M.Phil.	30	60.0
2	Ph.D.	20	40.0

The Above table shows that 30 M.Phil. Qualified teachers and 20 PhD qualified teachers were participated in this study.
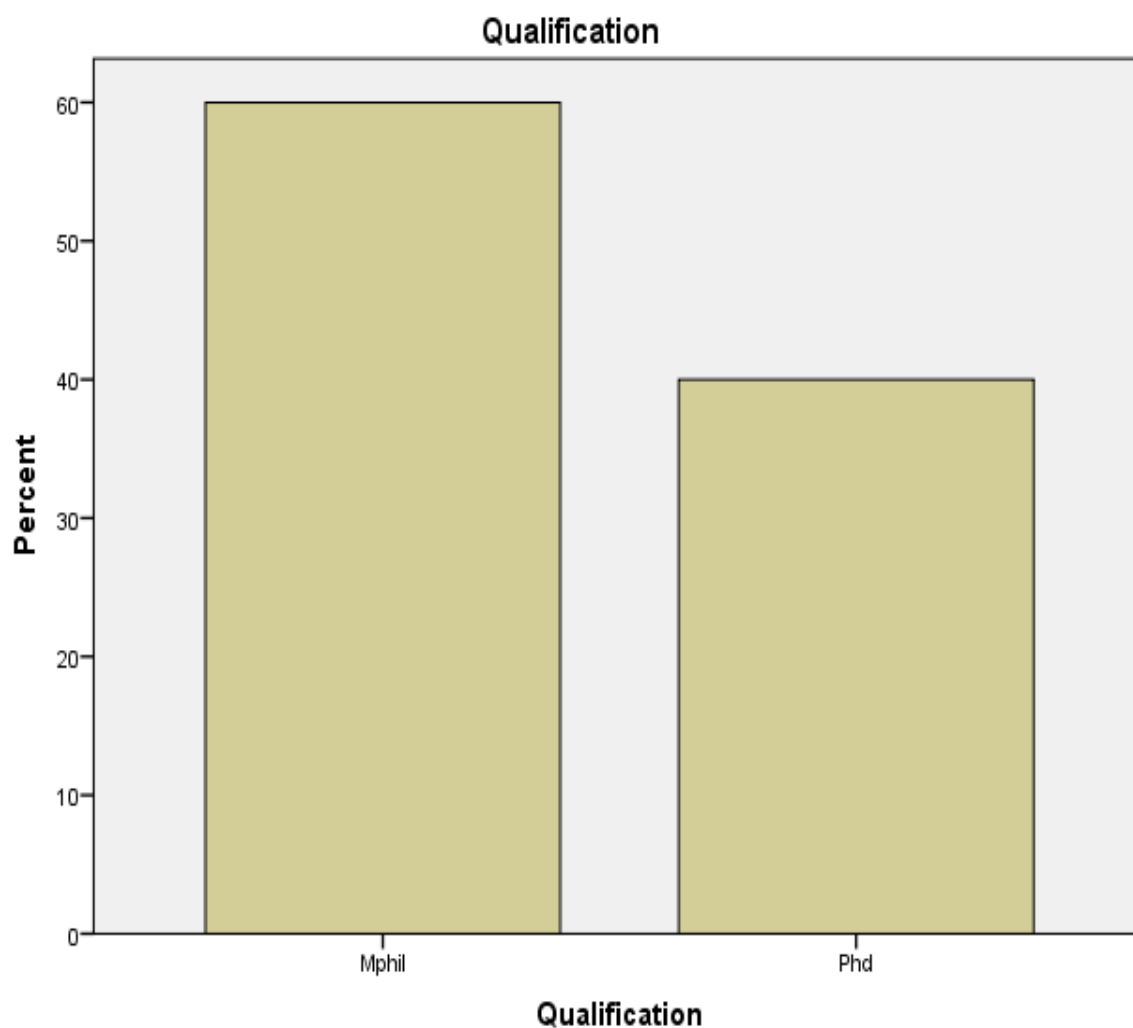
Graph 4.2 Representation of teachers on the basis of qualification

617

b. Item Wise Mean Analysis

Serial no	Item	Mean score
1	Collaborative learning approach is a part of my current classroom routine .	1.2400
2	Group formation while using CL technique is an easy task for me.	1.3600
3	Monitoring on task behavior of student's while utilizing different collaborative learning activities is an easy task.	1.7400
4	Managing class time while using collaborative techniques is an easy task for me.	2.1400
5	In a collaborative learning activity in my classroom, students actively participate in group work	1.9000
6	Collaborative learning strategies work positively in order to increase students' academic achievements.	1.6800
7	Collaborative learning activities are effective for my subject.	1.5200
8	Collaborative learning helps in order to improve communication skills.	1.4000
9	Assessment during collaborative learning activities is a transparent process in my classroom.	1.5600
10	I will continue integrating collaborative learning in my classroom in the future.	1.8400

The mean score of the items, Monitoring on task behavior of student's during collaborative learning activities is an easy task. (1.2400) Group formation while using collaborative learning

activities is an easy task for me. (1.3600) Monitoring on task behavior of student's during collaborative learning techniques is an easy task. (1.7400) Managing class time during collaborative learning activities is an easy task for me. (2.1400 In a collaborative learning activity in my classroom, students actively participate in group work (1.9000) Collaborative learning strategies work positively in order to increase students' academic achievements. (1.6800) Collaborative learning activities are effective for my subject. (1.5200) Collaborative learning helps in order to improve communication skills. (1.4000) Assessment during collaborative learning activities is a transparent process in my classroom. (1.5600) I will continue integrating collaborative learning in my classroom in the future. (1.8400)

The highest mean score is collaborative learning activity in my classroom; students actively participate in group work (1.9000).

c. Percentage Responses Over Questionnaire

Sr. No	Item	Yes	No	To some extent
1	Collaborative learning approach is a part of my current classroom routine.	88.0	0	12.0
2	Group formation while using CL techniques is an easy task for me.	82.0	0	18.0
3	Monitoring on task behavior of student's while utilizing different collaborative activities is an easy task.	56.0	14.0	30.0
4	Managing class time while using collaborative techniques is an easy task for me.	40.0	6.0	54.0
5	In a collaborative learning activity in my classroom, students actively participate in group work.	54.0	2.0	44.0
6	Collaborative learning strategies work positively in order to increase students' academic achievements.	64.0	4.0	32.0

7	Collaborative learning helps in order to improve communication skills.	80.0	0	20.0
8	Collaborative learning activities are effective for my subject.	74.0	0	26.0
9	Assessment during collaborative learning activities is a transparent process in my classroom.	72.0	0	28.0
10	I will continue integrating collaborative learning in my classroom in the future.	58.0	0	42.0

The above table shows that most of the teachers agree that Collaborative learning approach is a part of my current classroom routine. (88.0%) Group formation while using collaborative learning techniques is an easy task for me.(82.0%) Monitoring on task behavior of student's during collaborative learning activities is an easy task. (56.0%) Managing class time during collaborative learning activities is an easy task for me. (54.0%) In a collaborative learning activity in my classroom, students actively participate in group work. (54.0%) Collaborative learning strategies work positively in order to increase students' academic achievements. (64.0%) Collaborative learning helps in order to improve communication skills. (80.0%) Collaborative learning activities are effective for my subject. (74.0%) Assessment during collaborative learning activities is a transparent process in my classroom. (72.0%) I will continue integrating collaborative learning in my classroom in the future (58.0%).

Inferential Statistics

For comparing the means of two independent groups (Gender male, female) Qualification (MPhil, PhD) independent t test is used.

H_O :There is no effect of demographic factor (Gender) over the use of collaborative learning approach at university level.

Gender

Perception of teachers	Gender	N	Std. Deviation	Mean	df	Sig.(2-taild)	f	Confidence level
Regarding use of collaborative learning approach	Male	24	3.41247	16.5833	48	.683	.008	95%
	Female	26	3.32288	16.1923	47.444	.684		

Above table with the mean score and standard deviation Male (M= 16.5833, SD 3.41247) Female (M=16.1923, SD 3.32288). As a= 0.05 < P= 0.684 shows that there is evidence to accept the null hypothesis.

It shows that no significance difference between the perception of male and female regarding the use of collaborative learning approach.

H_0 :There is no effect of demographic factor (Qualification) over the use of collaborative learning approach at university level.

Qualification

Perception of teachers	Qualification	N	Std. Deviation	Mean	df	Sig.(2-taild)	f	Confidence level
Regarding use of collaborative learning approach	M.Phil.	30	3.72086	16.5000	48	.759	1.346	95%
	Ph.D.	20	2.74533	16.2000	47.429	.745		

Above table shows the mean score and standard deviation of M.Phil. Teachers (M=16.5000, SD=3.72086) Ph.D. teachers (M=16.2000, SD= 2.74533). As a= 0.05 < P= 0.759 shows that there is evidence to accept the null hypothesis.

It shows that no significance difference between the perception of M.Phil. And PhD teachers regarding the use of collaborative learning approach.

5. Findings Conclusion And Recommendations

FINDINGS

- Results show that Majority of teachers (88.0%) agreed that collaborative learning approach is part of their classroom.

- Result of the study shows that teachers (82.0%) teachers agreed that Group formation while using CL activities is an easy task for me.

- Result of the study shows that Majority of teachers (56.0%) agreed that Monitoring on task behavior of student's while utilizing different collaborative learning activities is an easy task.

- Results of the study shows the Majority of teachers (54.0%) agreed that managing class time while using collaborative techniques is an easy task for me.

- Results of the study shows the Majority of teachers (54.0%) agreed that Collaborative learning strategies work positively in order to increase students' academic achievements.

- Results of the study shows the Majority of teachers (64.0%) agreed that Collaborative learning strategies work positively in order to increase students' academic achievements.

- Results of the study shows the Majority of teachers (80.0%) agreed that Collaborative learning helps in order to improve communication skills.

- Results of the study shows the Majority of teachers (74.0%) agreed that Collaborative learning activities are effective for their subject

- Results of the study shows the Majority of teachers (72.0%) agreed that Assessment during collaborative learning activities is a transparent process in their classroom.

- Results of the study shows the Majority of teachers (58.0%) agreed that they will continue integrating collaborative learning in my classroom in the future.
- The mean score and standard deviation Male (M= 16.5833, SD 3.41247) Female (M=16.1923, SD 3.32288). As a= 0.05 $<$ P= 0.684 shows that there is evidence to accept the null hypothesis. It shows that no significance difference between the perception of male and female regarding the use of collaborative learning approach.

- The mean score and standard deviation of M.Phil. Teachers (M=16.5000, SD=3.72086) Ph.D. teachers (M=16.2000, SD= 2.74533). As a= 0.05 $<$ P= 0.759 shows that there is evidence to accept the null hypothesis.
 It shows that no significance difference between the perception of M.Phil. And PhD teachers regarding the use of collaborative learning approach.

CONCLUSION

Keeping in view findings and review of related literature it's concluded that teacher's perception regarding the use of collaborative learning approach is positive as (58.0%) teachers believe that collaborative learning will be the part of their classroom in future. Collaborative learning approach may not help with student management but data also reveal that it help in developing communication skills of students. Findings also concluded that collaborative learning is

622

positively effecting the academic achievement of the student. And it's concluded that there is no significance difference between the perception of male and female regarding the use of collaborative learning approach at university level.

After reviewing the related literature it is also concluded that there are some hurdles that are in to overcome for effective collaboration between the teacher and student and student with other student one of them is time management. This study shows a significant positive perception of teachers regarding collaboration in classroom which helps in developing confidence level and communication skills.

RECOMMENDATIONS

1. There is need to provide teachers with forum for training in time management.
2. There is needed to make rules for transparency in assessment.
3. Teachers are needed to ensure equal and active participation during classroom.

References

Abrami, P. C., Poulsen, C., & Chambers, B. (2004). Teacher motivation to implement an educational innovation: Factors differentiating users and non-users of cooperative learning. Educational Psychology, 24, 201–216.

Chiriac, E. H., & Granström, K. (2012). Teachers' leadership and students' experience of group work. Teachers and Teaching, 18, 345–363

Frykedal, K. F., & Chiriac, E. H. (2011). Assessment of students' learning when working in groups. Educational Research, 53, 331–345.

Gerlach, J. M. (1994). "Is this collaboration?" In Bosworth, K. and Hamilton, S. J. (Eds.), Collaborative Learning: Underlying Processes and Effective Techniques, New Directions for Teaching and Learning No. 59.

Gillies, R., & Boyle, M. (2010). Teachers' reflections on cooperative learning: Issues of implementation. Teaching and Teacher Education, 26, 933–940.

Lopata, C., Miller, K. A., & Miller, R. H. (2003). Survey of actual and preferred use of cooperative learning among exemplar teachers. The Journal of Educational Research, 96, 232–239

MacGregor, B. L. (1992). What is Collaborative Learning? In M. M. AnneGoodsell, *Collaborative Learning* (pp. 1,9). Washington Center for Improving the Quality of Undergraduate Education: National Center on Postsecondary Teaching, Learning, and Assessment at Pennsylvania State University.

Peter N. Osipov, J. N. (2015). Collaborative Learning: Pluses and Problems. *2015 International Conference on Interactive Collaborative Learning (ICL* (p. 1). Republic of Tatarstan: ResearchGate.

Stacey, E. (1999). Collaborative learning in an online environment.Journal of Distance Education, 14 (2), 14-33. Wadhwa,Shalini.(2005).Teaching and Learning through problem Solving methods, New Delhi:Sarup&Sons. Zhu, C., Valcke, M. & Schellens, T. (2010).A cross-cultural study of teacher perspectives on teacher roles and adoption of online collaborative learning in higher education.European Journal of Teacher Education, 33(2), 147-165.

strom, P. S., & Strom, R. D. (2011). Teamwork skills assessment for cooperative learning. Educational Research and Evaluation: An International Journal on Theory and Practice, 17, 233–251.

Strijbos, J. W. (2011). Assessment of (computer-supported) collaborative learning. IEEE Transactions on Learning Technologies, 4, 59–73.

Van De Pol, J., Volman, M., & Beishuizen, J. (2011). Patterns of contingent teaching in teacher-student interaction. Learning and Instruction, 21, 46–57

www.brighthubeducation.com,