

Identifying Students' Attitude Toward Cooperative Learning at the University Level

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Abstract

Cooperative learning empowers people to work together towards success that not only benefits them but also to the benefit of the group at large. This study focuses on the investigation of attitudes toward cooperative learning among students at a university and whether such attitudes contain gender-based differences. It also investigated the relationship between academic performance and attitudes toward cooperative learning among students and student mindset towards attendance in morning or evening shifts. Descriptive survey design was used in the study. Postgraduate students were chosen from the Department of Education of three public-sector universities in Lahore. A sample comprising 250 students was selected by using simple random sampling. The researcher collected the data through personal visits. The analysis involved calculating the mean, standard deviation, independent sample t-test, and Pearson correlation to explore the study's findings. Findings showed that students' general attitude towards cooperative learning is positive as the mean scores range from 2.84 to 3.34 on the survey scales. The analysis showed that male and female students' opinions were the same during the morning and evening shifts. There is a negative correlation between students' attitudes toward cooperative learning and their CGPA. In relation to these results, the study also revealed that incorporating cooperative learning into the classrooms can be particularly beneficial for those who might fail academically.

Keywords: Cooperative Learning, Attitude, University Students.

Introduction

Cooperative learning is among the ways of teaching since instructors organize students in small groups so that they can work together on assigned tasks or projects. The approach fosters social and academic growth as students pool together in small groups to achieve the same objective (Cohen, 1994). Such a setting ensures that each member of the group has chances to make inputs and help other members out since collaboration becomes the means of attaining the common goal in a supportive setting. Cooperative learning empowers people to work together towards success that not only benefits them but also to the benefit of the group at large.

In cooperative learning, students will be working as groups, and also, they shall start and complete the assignments with their classmates. Among the benefits of this method is that it teaches cooperation and therefore helps in making each member proud of the group's efforts. Five necessary elements in cooperative learning, according to Johnson and Johnson (1999), are:

1. **Positive Interdependence:** Group members will be working cooperatively toward a common goal.

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2. **Individual Responsibility:** Each member is held responsible for individual participation towards the success of the group.
3. **Face-to-face Interaction:** Members of the group interact face-to-face with each member of the group to offer the required help and motivation.
4. **Development of Social Skills:** Required group work skills are learned by students in order to have better cooperation.
5. **Group Processing:** The group will summarize what they worked on and make a group decision about how their collaboration can be enhanced in the future.

The two main elements that make cooperative learning successful are positive interdependence and individual accountability, Slavin, 1995. Cooperative learning differs from group work in traditional settings. Tasks in collaborative learning are planned, monitored, and structured with special care in such a way that the group would work effectively, according to Jacobs (1997).

Hilke, in his work (1990), referred to cooperative learning as a systematic process whereby students, working in groups, utilize the strengths and weaknesses of other members to deliver a task or set of criteria. The technique has produced highly significant positive effects on the student's academic performance by encouraging collaborative learning whereby the students work together to attain a specific set of criteria. According to Johnson et al. (1984), cooperative learning is a very structured group process that depends on group coordination, accountability, social skills, and group reflection. In the process, students strive collectively toward common goals, such as mastery of a concept or completing a task, which heightens individual and collective learning.

Cognitive development theory supports cooperative learning, as children cognitively develop from social interactions (Amjad et al., 2023, a, b, c). Moreover, developmental theorists like Jean Piaget and Lev Vygotsky argued that children learn better in groups because knowledgeable people share behaviors and knowledge with others to grow (Slavin, 1995).

Cooperative learning became popular in the United States during the early 1970s but was actually everyday use during the mid-1970s to 1980s. Its primary goal was to make students accountable for their learning and that of their peers. Research indicates that scholars learn better academically with cooperative learning while developing their language and social skills, all of which are based on motivational theories. There have been various studies that confirm the effectiveness of cooperative learning. For instance, Arbab (2003) found out that with the use of collaborative learning, 9th-grade students' science achievement had a considerable boost, as evidenced by the scores they got before the treatment intervention and the scores they got after the treatment intervention. Similarly, Parveen et al. found that collaborative learning was positive for 8th-grade Social Studies students, and it was more beneficial than the traditional method.

Haberman et al. (2007) define cooperative learning as one of the most motivating and advancing approaches to learning. This method has been used for the past two decades and has become popular among college and university instructors (Gillespie et al., 2006). It is practiced in core disciplines, including but not limited to science, education, business, medicine, and the like.

Kosar (2003) also discussed the effect of cooperative learning on double the 7th-grade students in Social Studies. Their results showed that cooperative learning groups got higher marks than students taught by the literate method. Work such as these provides support for the proposition that cooperative learning is perhaps one of the most effective teaching strategies for improving academic outcomes and utility across all fields of study.

This article highlighted that cooperative learning had received significant research attention with the purpose of demonstrating how it works in different education contexts and for students of various ages. This teaching approach involves the grouping of students in structured structures

with the hope of achieving set objectives as a group. According to Johnson and Johnson (1999), five key elements that are necessary for enhancing groups' success in cooperative learning include; these elements Stress, group work, and mutual responsibility, which have been vested in students to improve their performance both academically and socially.

Benefits of Cooperative Learning

This theory has found that cooperative learning does improve performance as compared to traditional didactic approaches to learning (Slavin, 1995; Tabbasam et al., 2023; Tabassum et al., 2024). The structure of cooperative learning is also effective because students are accountable for the individual part of it that will benefit them and the overall group (Hilke, 1990). Perhaps one of the most notable benefits of this teaching method is that students are made to feel that they have a responsibility to add to the teacher's effort in class. It can enhance achievement motivation since each group member feels that they are an essential component of the group (Amin et al., 2024; Johnson et al., 1984).

In addition, cooperative learning helps the child develop social skills (Qureshi et al., 2023). Direct communication allows students to build and strengthen the interpersonal skills needed for successful group collaboration. Such skills include communication skills, conflict-solving skills, and leadership skills (Jacobs, 1997; Ong et al., 2024). Skills such as these are pivotal, especially as far as learning in an academic environment and applying the natural world that necessitates working in a group.

Cognitive Development and Cooperative Learning

The origin of cooperative learning is in line with cognitive development theories in as much as one defines it. According to Jean Piaget's theory of cognitive development, learning of children is highly role of social interactions during the learning process, the same as in Lev Vygotsky's concept of the Zone of Proximal Development (ZPD). This writer is of the view that Piaget (1964) opined that children build knowledge through processes involving their environment, which includes other children. According to Vygotsky, meaning is constructed in context. The only way a learner can acquire specific knowledge is by working under the guidance of someone more knowledgeable who helps fill the gaps. Cooperative learning thus corresponds with these developmental theories in as much as it affords the students the chance to discuss the information actively and also share this information with other students (Slavin, 1995).

Impact of Cooperative Learning on Academic Achievement

The overall literature evidence also proves a positive effect of cooperative learning on the academic performance of students. Another research done by Arabab about three years ago focused on 9th graders and identified that the use of collaborative learning raised the scores in the science subject a lot higher than conventional instructions. Likewise, Parveen et al. (2010) established that cooperative learning groups positively impact student achievement in Social Studies, where 8th-grade students who learn cooperatively yielded better class averages compared to students who did not know through group work.

Kosar (2003) identified that the students who underwent cooperative learning in 7th-grade Social Studies had higher status compared to the conventional method of teaching and learning. This further supports the notion that work examples used in collaborative learning profit the students' attainment and recall of the material. Moreover, Haberyan et al. (2007) and Gillespie et al. (2006)

underlined that cooperative learning tends to be used to an increasing extent within various fields, including Science, Education, Business, Medicine, etc.

Cooperative Learning in Higher Education

The use of the cooperative learning technique has, however, extended to other levels of education beyond the earlier mentioned primary and secondary schooling. It has been one of the most frequently used instructional models in higher education learning environments in the last two decades (Gillespie et al., 2006). In college and university classrooms, cooperative learning has been used across various fields of study, and this includes the sciences and business. Generally, the use of group assignments has been recommended as a best practice that enhances student learning and critical thinking because of their social nature, which is particularly effective where topics and concepts are complex and require higher-order thinking (Haberyan et al., 2007).

Cooperative learning by enhancing the student's academic-related and social related skills together with improving students' motivation and engagement. When learners have been grouped in a way that fosters group cooperation, there tend to be higher levels of ownership and, thus, motivation among the students, which helps boost intrinsic motivation among them (Slavin, 1995). This is very effective in that it requires everybody in the group to participate in order to have the group win. Therefore, it creates traffic. Moreover, the continuous grouping allows for overcoming certain inequities in classrooms since all students, including those of low accomplishment and demonstrated ability, get to participate actively and learn from their colleagues. It means that there is a form of equality in the learning environment as the poor-performing students are placed with the better-performing students and thus do away with the usual comparison of low achievers (Johnson & Johnson, 1999). In general, cooperative learning fosters a practical environment that would allow students to succeed both in academic and interpersonal aspects.

In conclusion, cooperative learning has emerged as a powerful instructional strategy that not only improves academic achievement but also promotes the development of essential social skills. Its effectiveness is supported by both theoretical frameworks and empirical research, making it one of the most effective teaching methods in both K-12 and higher education settings. The incorporation of structured group work, individual accountability, and social interaction into learning environments has proven to be beneficial in fostering student engagement and enhancing learning outcomes

Objectives of the Study

1. Find the students' perceptions regarding the existence of cooperative learning in universities.
2. Differentiate along gender lines in regard to attitudes about cooperative learning.
3. Determine the differences in attitude between students enrolled under morning and evening shifts.
4. Find the relationship between the students' attitudes towards cooperative learning and their achievement.

Research Questions

1. What is the attitude of students towards cooperative learning?
2. What is the difference in the attitudes of males and females regarding cooperative learning?
3. Do morning and evening shift students have different attitudes toward cooperative learning?
4. Is there an association between the attitude of the students regarding cooperative learning and the achievements of those students?

Research Methodology

This was a quantitative study based on a cross-sectional survey in which the researcher directly contacted the participants to collect data.

Population and Sampling

The target population was all of Lahore's public universities. The available population for this study was all of the students registered at the University of the Punjab, Lahore's Institute of Education and Research, which currently has 2322 enrolled students. Simple random selection was used to choose the 250 people who made up the study's sample.

Research Instrument and Validation Process

"Students' Attitudes towards Group Environment (SAGE)," the quantitative questionnaire used in this study, was first created by Abrami and Kouros. Peer support, student dependency, process and product quality, and group member frustration make up its four subscales. Two experts—a PhD student and an assistant professor from the University of the Punjab, Lahore's Institute of Education and Research—reviewed the research tool to guarantee its authenticity. The instrument was updated in response to their input, maintaining the required psychometric qualities as suggested by the specialists. Data collection was then conducted using the completed questionnaire.

Results and Interpretation

After collecting the required data, it was summarized, organized, and analyzed using suitable statistical techniques. Specifically, mean, standard deviation, independent sample t-test, and Pearson correlation were employed for data analysis in this study.

Table 1: Attitudes towards Cooperative Learning

	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
Attitudes towards cooperative learning	250	2.31	4.07	3.16	.32
Quality of Process and Product	229	1.47	4.47	3.26	.58
Support among peers	240	1.25	5.00	3.34	.66
Interdependence of the students	230	2.00	4.62	3.28	.45
Frustration with members of the group	248	1.29	5.00	2.84	.56

The results provide a summary of responses from a sample of 250 individuals, revealing scores ranging from 2.31 to 4.07, with an average score of 3.16 and a standard deviation of 0.32. The peer support subscale stands out with a mean score of 3.34, indicating that respondents generally view peer support more favorably than other subscales. Overall, each subscale scored above the average, with scores ranging from 2.84 to 3.34, suggesting that students generally have a positive outlook on cooperative learning. However, the score for frustration with group members is lower, at 2.84, pointing to a less favorable attitude in this specific area.

Table 2: Gender wise Difference in Cooperative Learning

<i>Gender</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>Sig.</i>
Male	80	3.11	.29			
Female	170	3.19	.34	-1.91	208.48	.056

An independent sample t-test was conducted to compare the attitudes of male and female students toward cooperative learning, with a sample of 80 males and 170 females. The mean scores were 3.11 (SD = 0.29) for males and 3.19 (SD = 0.34) for females. The analysis found no significant difference between the two groups, with $t(208.48) = -1.91$ and $p = 0.056$. The mean difference of -0.08 and a p-value above 0.05 indicate that male and female students do not significantly differ in their attitudes toward cooperative learning.

Table 3: Shift wise Difference in Cooperative Learning

<i>Shift</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
Morning	152	3.40	.67	1.72	238	.086
Evening	98	3.25	.63			

This analysis examined 152 morning and 98 evening students. Results showed no significant difference in scores: morning students had a mean of 3.40 (SD = 0.67) while evening students averaged 3.25 (SD = 0.63). The t-test yielded $t(238) = 1.72$ with a p-value of 0.86. Despite a mean difference of 0.15 suggesting a noticeable gap, the p-value greater than 0.05 indicates this difference is not statistically significant. Thus, there is no significant shift-wise difference in attitudes toward cooperative learning.

Table 4: Relationship between Achievement and Cooperative Learning

		<i>CGPA</i>	<i>Attitudes</i>	<i>Aspect 1</i>	<i>Aspect 2</i>	<i>Aspect 3</i>	<i>Aspect 4</i>
CGPA	Pearson Correlation	1					
Attitudes	Pearson Correlation	-.045	1				
Aspect 1	Pearson Correlation	-.035	.815	1			
Aspect 2	Pearson Correlation	-.039	.807	.521	1		
Aspect 3	Pearson Correlation	.020	.730	.589	.526	1	
Aspect 4	Pearson Correlation	-.072	.000	-.340	.057	-.305	1

Pearson's correlation was used to assess the relationship between attitudes toward cooperative learning and CGPA. The analysis indicated a low-level negative correlation between overall attitudes and CGPA ($r = -0.045$, $n = 250$, $p > 0.05$), suggesting no significant relationship. Similarly, peer support showed a negative correlation with CGPA ($r = -0.039$, $n = 229$, $p > 0.05$), indicating no significant relationship. In contrast, a positive correlation was found between CGPA and student interdependence ($r = 0.020$, $n = 230$, $p < 0.05$), indicating higher mean attitudes in this area. Additionally, a negative correlation between CGPA and frustration with group members was noted ($r = -0.072$, $n = 248$, $p > 0.05$), reflecting low levels of favorable attitudes in this aspect.

Research Findings

1. The findings show generally positive attitudes, with mean scores above 3.0 across subscales. Peer Support scored highest ($M = 3.34$), suggesting that students value collaboration and assistance from peers. In contrast, Frustration with Group Members scored lowest ($M = 2.84$), reflecting some dissatisfaction, likely due to challenges in managing group dynamics.
2. No significant difference was found in cooperative learning attitudes between male ($M = 3.11$) and female students ($M = 3.19$), with $p = 0.056$. This indicates that attitudes toward cooperative learning are consistent across genders, possibly because both groups experience similar classroom and peer interactions.
3. Both morning ($M = 3.40$) and evening students ($M = 3.25$) displayed similar attitudes toward cooperative learning ($p = 0.86$). The lack of significant shift-wise difference suggests that learning environment factors like time of day have minimal impact on cooperative learning perceptions.
4. The overall attitude toward cooperative learning showed no significant correlation with CGPA ($r = -0.045$), indicating that positive cooperative learning perceptions may not directly impact academic achievement. However, a slight positive correlation between CGPA and Student Interdependence ($r = 0.020$, $p < 0.05$) suggests that students who rely on each other may experience minor academic benefits. The negative correlation between CGPA and Frustration ($r = -0.072$) implies that students less frustrated with group work may achieve slightly better academically, though the relationship remains weak.

These findings provide a nuanced understanding of student attitudes toward cooperative learning, suggesting that while attitudes are generally positive, aspects like group frustration and time of study do not substantially impact academic performance.

Discussion

This paper addressed four key research questions. The first question focused on students' perspectives regarding cooperative learning. The study found that most students actively utilized cooperative learning techniques. Similarly, a study by Akhtar, Parveen, Kiran, Rashid, and Satti (2012), titled "A Study of the Perspective of Students Regarding Cooperative Learning," indicated that over the past two decades, students have engaged in cooperative learning, feeling responsible for their assigned tasks and contributing to the work to better understand concepts and ideas. Students in that study also viewed cooperative learning as a valuable and adaptable classroom technique.

The second research question examined gender-based differences in attitudes toward cooperative learning. This study revealed no significant differences, as both boys and girls equally used cooperative learning techniques. However, a study by Rodger et al. (2007) at the University of

Western Ontario found a gender difference in cooperative learning, where girls scored significantly higher than boys in their use of cooperative learning.

The third research question explored attitude differences between morning and evening shift students. No significant difference was found in their attitudes toward cooperative learning.

The final research question investigated the relationship between students' perspectives on cooperative learning and their academic achievement. The current study demonstrated that students engaged in cooperative learning achieved higher grades than those who did not participate. This aligns with a study by Iyer (2013), which showed that cooperative learning enhances academic performance by helping students understand each other's ideas and gain new knowledge. As a result, cooperative learning is recognized as an effective tool for improving academic performance and should be incorporated into classroom instruction.

Conclusion and Recommendations

This study highlighted that students at the university level commonly used cooperative learning techniques, with no significant differences in attitudes based on gender or shift (morning vs. evening). Both groups employed cooperative learning techniques equally. Additionally, the research demonstrated that students who actively engaged in cooperative learning achieved better academic success compared to those who did not. Cooperative learning is shown to be a valuable tool, allowing students to exchange ideas and support each other in understanding concepts more effectively, ultimately leading to improved grades.

Based on these findings, the following recommendations are suggested:

- Future research should explore attitudes toward cooperative learning at the secondary and higher secondary levels to gain a broader understanding.
- The study's scope could be expanded to include additional institutions, which would help validate the findings across different contexts.
- Researchers should consider focusing on specific cooperative learning methods, such as Student Team Learning (STL), Student Teams-Achievement Divisions (STAD), Teams Games Tournaments (TGT), Team Accelerated Instruction (TAI), Cooperative Integrated Reading and Composition (CIRC), and Peer-Assisted Learning Strategies (PALS).
- Cooperative learning strategies should be adapted for classroom settings, as they have shown to be particularly effective for students who may struggle academically. These methods can help improve their grades and overall performance in their fields.

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