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# Collaborative Learning in Bangladesh College Education: Challenges, Perceptions, and Pathways to Implementation

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**Abstract:**

This study examines the current landscape of collaborative learning (CL) within Bangladesh's college education system, which encompasses approximately 2,300 institutions affiliated with the National University of Bangladesh. Despite the potential benefits of CL, including enhanced student engagement and improved learning outcomes, its implementation remains limited due to various structural, psychological, and systemic barriers. Utilizing a mixed-methods approach, this research integrates semi-structured interviews with students and surveys of teachers to explore their perceptions of CL and the challenges they face. Findings reveal a significant discrepancy between teachers' reported use of CL and students' experiences, with the latter predominantly experiencing traditional lecture-based instruction. Key barriers identified include overcrowded classrooms, inflexible seating arrangements, a rigid examination system focused on rote memorization, and a lack of teacher training in interactive pedagogical methods. However, both educators and students recognize the value of CL in fostering active learning and social interaction. This study provides recommendations for improving the integration of CL in Bangladesh's colleges, emphasizing the need for targeted teacher training, classroom redesign, and assessment reform to create a more conducive environment for collaborative learning. The insights from this research aim to inform policymakers, educators, and administrators, contributing to the ongoing discourse on enhancing educational quality in Bangladesh.

**Keywords:** Collaborative Learning, Bangladesh College Education, Student Learning, Teaching Method, Educati

## 1. Introduction:

Bangladesh College Education (BCE) operates through a network of approximately 2,300 colleges affiliated with the National University of Bangladesh (NU), which oversees admissions, curriculum development, examinations, and degree conferral (National University, Bangladesh, 2018). Despite being under the umbrella of NU, these colleges operate independently, each with its own administrative and teaching structures. However, teaching methods across the system remain largely traditional, with a heavy reliance on lecture-based instruction. Modern pedagogical approaches, such as collaborative learning (CL), have yet to be fully integrated into the BCE framework.

The educational landscape within BCE reflects a broader challenge in transitioning from conventional lecture-based methods to more interactive, student-centered approaches. Faculty members are often either appointed through

government civil service or recruited directly by individual colleges. Unfortunately, opportunities for professional development and pedagogical training are limited, resulting in a slow shift toward progressive teaching methods. Collaborative learning, rooted in Vygotsky's theory of the Zone of Proximal Development (ZPD) (Vygotsky, 1978) and Bruner's scaffolding theory (Barkley, Cross, & Major, 2014), emphasizes the importance of social interaction in learning processes. Nevertheless, the adoption of CL in BCE remains minimal, despite its potential to enhance student engagement and academic performance (Sakshi and Dhull, 2018).

This study delves into the current state of CL in BCE, exploring the structural, psychological, and systemic barriers that hinder its effective implementation. It also assesses the potential of CL to transform the teaching and learning experience in Bangladeshi colleges. Data collected through semi-structured interviews from students and surveys from teachers provide a nuanced perspective on the challenges and possibilities of integrating CL into BCE classrooms. This triangulated approach ensures a more reliable understanding of the factors influencing CL adoption (Creswell and Creswell, 2018).

The classroom environment in Bangladesh presents unique challenges to CL. Overcrowded classrooms with fixed seating arrangements make group activities difficult to organize. Additionally, limited access to learning resources reinforces the preference for lecture-based teaching, which is less resource-intensive (Laal, 2012). Teachers, already burdened with completing extensive syllabi within tight academic schedules, find it difficult to incorporate more interactive, time-intensive methods like CL. This pressure exacerbates the reliance on traditional methods and further restricts the use of collaborative techniques that require flexibility in both time and teaching strategies.

Moreover, systemic issues in teacher recruitment and training also play a significant role. Many educators in BCE have little exposure to CL or modern pedagogical theories. Without access to adequate professional development programs, the transition to innovative teaching approaches remains slow. This lack of training creates psychological barriers, where educators may feel unprepared or resistant to adopting new strategies, especially those requiring shifts in classroom dynamics and control.

The objective of this study is to identify the key barriers preventing the widespread adoption of CL in BCE and to examine how CL could contribute to improving educational outcomes. The central research question guiding this study is: What are the main structural, psychological, and systemic barriers that limit the effective implementation of collaborative learning in Bangladesh College Education?

By addressing these issues, the study aims to provide valuable insights for educators, policymakers, and administrators. The findings will offer recommendations to promote the integration of CL in the BCE system, with potential implications for teacher training, classroom design, and assessment practices. This research aims to contribute to the broader discourse on enhancing educational quality in Bangladesh's college system and will serve as a foundation for future studies on collaborative learning within this context.

## 2. Literature Review:

Collaborative learning (CL) is an active learning method that unites students to achieve common goals. Laal (2012) emphasizes that CL groups students of varying abilities, allowing them to optimize learning through shared intellectual effort. Unlike traditional methods where students work independently, CL leverages the strengths of group members to accomplish outcomes that surpass individual efforts. The foundation of CL lies in Vygotsky's Zone of Proximal Development (ZPD), suggesting that students can learn more with assistance from others than they can independently (Barkley et al., 2014). This is further supported by Bruner's Scaffolding Theory, which underscores the importance of guidance in extending learning capabilities. Johnson and Johnson (1999) assert that CL encourages collaboration among small groups, enhancing

learning for all participants.

CL not only fosters social skills but also promotes diverse thought and approaches (Loes et al., 2018). It shifts the classroom dynamic from teacher-centered instruction to student-driven learning, where teachers facilitate rather than direct learning, providing resources and guiding discussions (Smith & MacGregor, 1992). However, this transition requires careful planning, as traditional classroom settings may not support the collaborative structure of CL. The success of CL hinges on each member's active participation, fostering interdependence and creating a supportive environment. Madden and Slavin (1983) stress that trust and mutual respect are vital for synergy, while Slavin (1990) notes that diverse groups—comprising high, average, and low-performing students—are key to optimizing learning outcomes. Instructors play a critical role in forming and guiding these groups to ensure productive collaboration.

The implementation of CL faces several challenges. Students often experience unequal participation, where stronger students dominate discussions and weaker students may remain passive (Panitz, 1996). Building the necessary communication and collaboration skills is essential yet challenging. Teachers encounter more complex obstacles, requiring them to transition from traditional methods to a facilitative role. This involves designing meaningful group tasks, balancing dynamics, and managing classrooms to foster collaboration. Le et al. (2018) identify listening to and considering each other's ideas as a key hurdle in CL. Additionally, free riding—where some students contribute less—can undermine group progress. Teachers must also develop assessment strategies that accurately reflect both individual and group performance, ensuring that learning goals remain clear and achievable (Panitz, 1996).

While collaborative and cooperative learning are often used interchangeably, distinct differences exist. Panitz (1996) describes collaboration as a philosophy of interaction, emphasizing the learning process as equally important as the outcome. In contrast, cooperative learning involves a structured method that divides tasks among group members, with each responsible for specific project components. Slavin (1997) clarifies that cooperative learning is suited for well-structured tasks with clear outcomes, while CL is better suited for open-ended tasks that encourage creativity. In cooperative learning, members work individually towards a collective goal, whereas CL requires continuous engagement among members to achieve that goal (Roschelle & Teasley, 1995). This makes CL a more interactive process, focused on mutual participation rather than mere task division.

For CL to be effective, it must incorporate several key elements: positive interdependence, individual accountability, and frequent interaction (Johnson et al., 1990). In a CL environment, students rely on each other to achieve goals, fostering a sense of responsibility for their own learning and their peers' success. This dynamic cultivates trust and social skills such as leadership, communication, and conflict management (Paul, 2016). Accountability is critical in CL, as members realize their individual efforts directly impact group success, motivating engagement and participation.

Collaborative learning offers numerous benefits, both academically and socially. D'Souza and Wood (2003) argue that CL enhances critical thinking, oral communication skills, and fosters active involvement in learning. Furthermore, CL promotes social interaction skills, helping students develop empathy and teamwork abilities. It encourages regular class attendance and active participation, resulting in deeper engagement with the material. This is particularly advantageous in fields like mathematics, where students may otherwise feel isolated (D'Souza & Wood, 2003). The collaborative environment also empowers weaker students, helping them build confidence and encouraging full participation.

In the context of Bangladesh's college education system, which encompasses over 2,265 colleges under the National University of Bangladesh,

traditional lecture-based teaching predominates. Although CL could remedy many shortcomings of this system, its adoption remains limited. Many educators are accustomed to lectures and may lack motivation or training to implement CL effectively (Thornton, 2006). Furthermore, infrastructural limitations, such as fixed seating arrangements, hinder CL's utilization. Despite these obstacles, CL has the potential to enhance learning significantly in Bangladesh. The current evaluation system, which emphasizes rote memorization, could greatly benefit from CL methods that promote critical thinking, problem-solving, and active participation.

While the advantages of CL are well-documented, most research has concentrated on developed nations and STEM fields. This indicates a clear gap in literature regarding CL's application in developing countries like Bangladesh, particularly in the social sciences. Further investigation is essential to explore how CL can adapt to resource-limited contexts and how it might improve educational outcomes in BCE.

## 3. Methods:

This study follows a mixed-method approach, combining both qualitative and quantitative methods to identify key barriers preventing the widespread adoption of Collaborative Learning (CL) in Bangladesh's college education context. To ensure triangulation and strengthen the internal validity of the findings, semi-structured interviews with students and surveys with teachers were incorporated (Creswell & Creswell, 2018).

Semi-structured interviews were conducted with students from Government Barishal College (GBC) who had experienced both traditional and collaborative teaching methods. The interviews aimed to gather in-depth qualitative insights into their understanding of CL, its effectiveness, and the challenges they encountered during its application. In parallel, a survey was administered to teachers from various government colleges to collect quantitative data on their experiences and views regarding collaborative learning. The survey explored their understanding of CL, its impact on improving learning outcomes, and the obstacles to effective implementation.

Data from student interviews were collected through face-to-face interactions at GBC, using an interview schedule designed to focus on their experiences and perceptions of collaborative learning. Surveys, distributed to teachers via email and social media using a Google Form, aimed to capture quantitative data on teachers' experiences with CL, including its advantages, barriers, and overall effectiveness.

Non-probability convenience sampling was employed to select participants for both the interviews and the survey. This technique was chosen because the study is exploratory and does not aim to produce generalizable findings (Flick, 2014). Students were selected based on their availability on the college campus, while teachers were chosen based on their accessibility through digital communication.

Both qualitative and quantitative data were analyzed. Narrative analysis was used to process qualitative data from the interviews, with themes emerging from the students' responses. Quantitative survey data were analyzed using Microsoft Excel, with bar charts and pie charts illustrating key findings. The mixed-method approach provides a comprehensive exploration of collaborative learning, enhancing the depth and breadth of the research outcomes.

## 4. Findings:

### Introduction

The survey included 200 teachers, representing a diverse range of teaching experiences. Figure 1 indicates that the majority (55.40%) of participants had between 6 and 10 years of experience, with another significant portion (26.60%) having over 10 years of experience. Teachers with less experience were less represented, as only 14.30% had 3 to 5 years of experience, and just 1.80% had fewer than 2 years of experience. This imbalance in participation highlights that mid-to-late-career teachers were more accessible or inclined to take part in the survey. Additionally, 20 students

participated in semi-structured interviews, with most being third-year students (40%), followed by second-year students (28%), indicating a skewed distribution of student respondents across different academic years (figure 2).

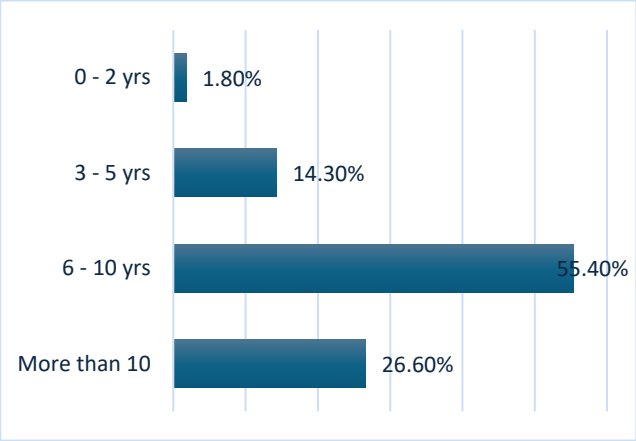


**Figure 1: Teaching experience of respondents**

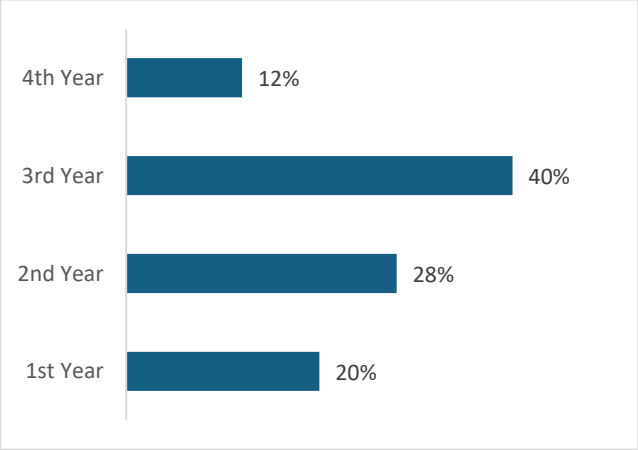


**Figure 2: Class of Student-respondents**

**Current Teaching Methods in BCE**

**Teacher Responses:**

When asked if they incorporate CL in their teaching, 71% of the teacher respondents claimed to use it (Figure 3). This high percentage suggests that many teachers have at least some experience with CL. However, a closer analysis reveals significant differences based on teaching experience. Over 50% of teachers with 6 to 10 years of experience report using CL, while 27% of those with more than 10 years of experience also apply this method. On the other hand, CL usage is notably low among teachers with less than five years of experience, suggesting that newer educators may not be as familiar or comfortable with CL methods.

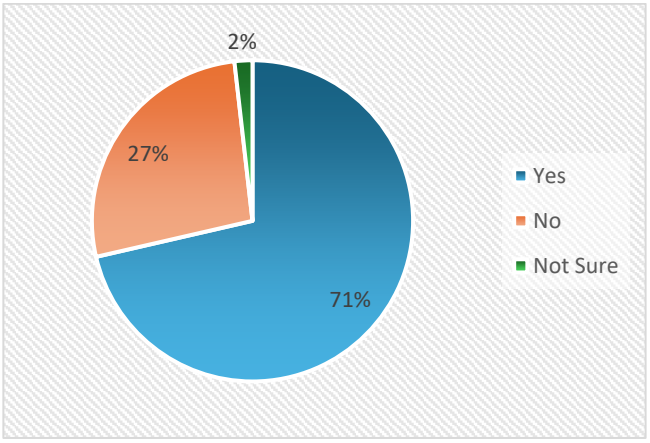


**Figure 3: Use of Collaborative Learning**

**Student Responses:**

In stark contrast to the teachers' reports, 74% of students stated that lectures are the predominant teaching method in their classrooms (Figure 4). Only 26% of students reported experiencing group work or collaborative learning activities. This discrepancy between teacher and student responses may arise from differing definitions of CL, with teachers possibly considering even minor student engagement as collaboration, while students do not perceive these activities as true collaborative learning experiences.

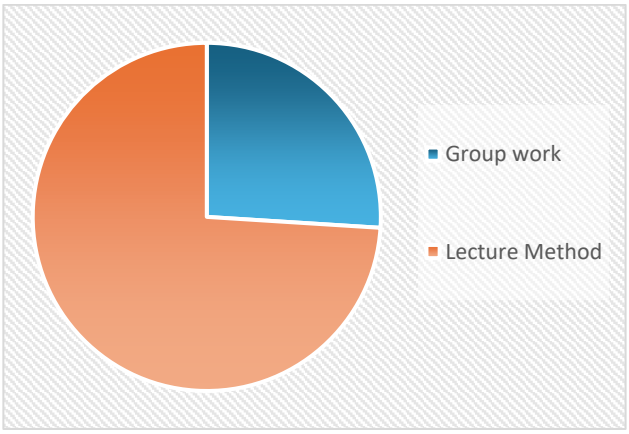


**Figure 4: Practice of Teaching Method: Group work Vs. Lecture method**

Despite the predominant use of lectures, a majority of students (53%) expressed a preference for group work over other methods (Figure 5). Additionally, 96% of students indicated they prefer an interactive classroom where both teachers and students are actively involved (Figure 8). This shows a strong student interest in collaborative learning, despite its limited application in their educational experience.

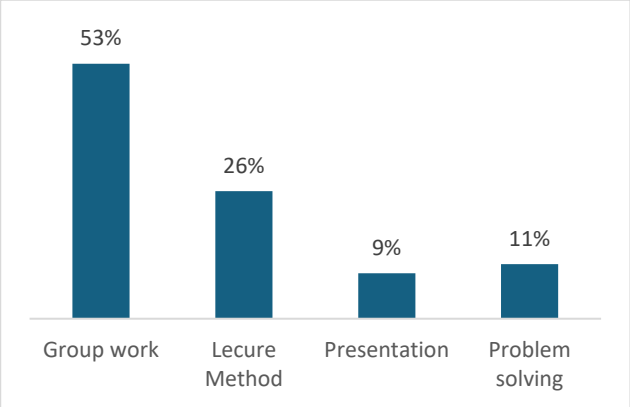


**Figure 5: Students' preferred method of Learning Barriers to Collaborative Learning in BCE**

### *Challenges Identified by Students*

Students identified several barriers to the effective implementation of CL. The top three challenges were short class durations (28%), inflexible seating arrangements (27%), and fear or shyness in participating (27%) (Figure 6). These issues highlight structural and psychological barriers that prevent students from engaging in collaborative activities. The traditional seating arrangement, where multiple students share a bench, limits the ability to form small groups conducive to collaboration. Additionally, large syllabi and an examination system focused on rote memorization further constrain the adoption of interactive methods.

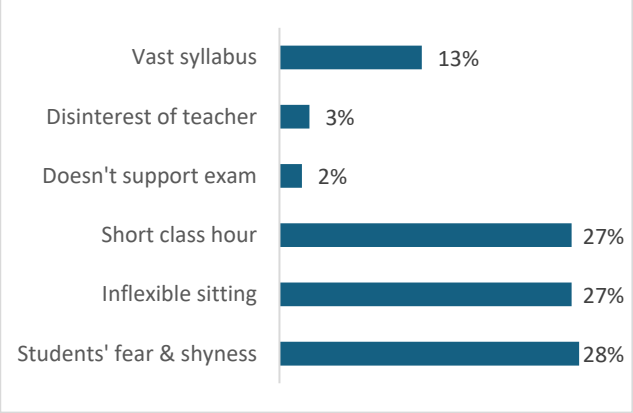


**Figure 6: Obstacles to CL, students' opinion**

### *Challenges Identified by Teachers*

Teachers also cited structural issues as major barriers to CL. Inflexible seating arrangements were the top concern for 39% of teachers, followed by the challenge of working with mixed-ability groups of students (Figure 7). Irregular attendance and lack of student interest were also noted, although to a lesser degree.

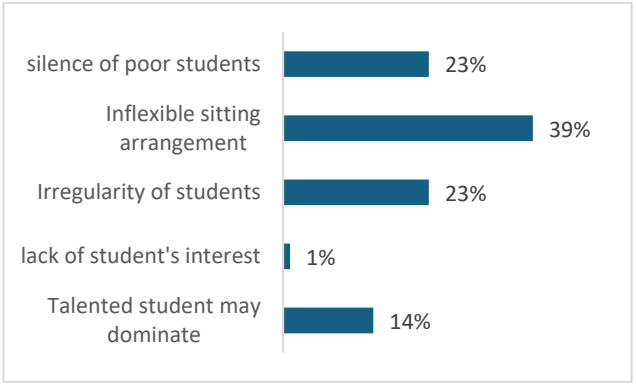


**Figure 7: Obstacles to CL, Teachers' opinion**

Interestingly, no teacher had received direct training in CL, though 39% had formal training in pedagogy and interactive teaching methods (Figure 8). This lack of specific CL training may contribute to the inconsistent application of the method across classrooms. Despite this, teacher interest in CL was relatively low, with 38% rating their interest as "poor" and only 7% expressing high enthusiasm for the method (Figure 9).

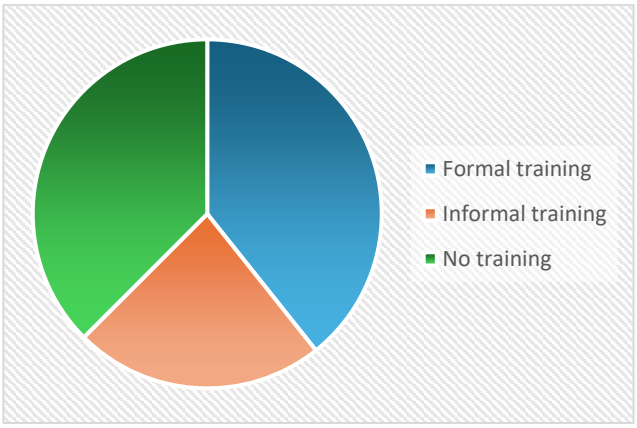


**Figure 8: Teachers Training on CL**

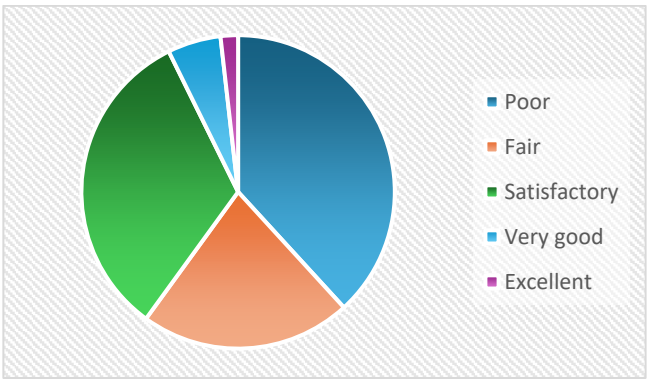


**Figure 9: Teachers' interest in CL, teaches' opinion**

### *Influence of Teacher Attitudes*

A key finding is that teacher attitudes significantly influence the adoption of CL. Teachers who rated their own interest in CL as "excellent" were more likely to incorporate it into their teaching (Figure 10). Similarly, those who believed that students showed strong interest in CL were more likely to use it themselves (Figure 11). This suggests that fostering positive attitudes among teachers could be a crucial step in increasing the adoption of collaborative learning in BCE.

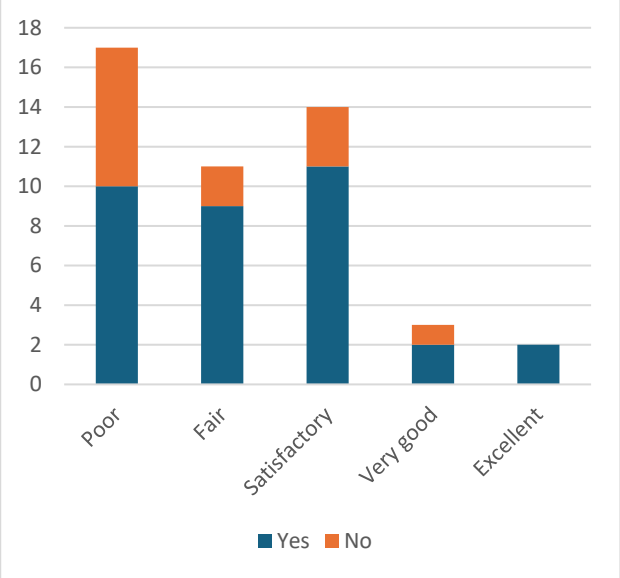


**Figure 10: Use of CL by teachers Vs. their opinion on teachers' interest in CL**

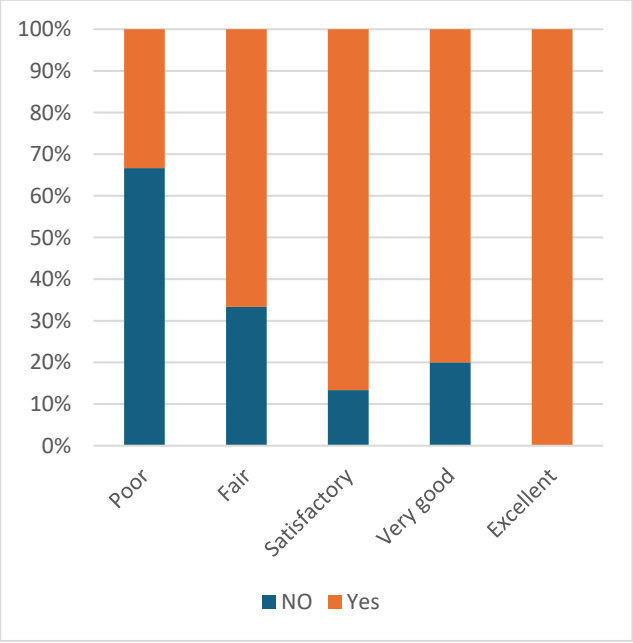


**Figure 11: Use of CL by teachers against their opinion on students' interest in CL**

### *Systemic Limitations*

Teachers also highlighted broader systemic challenges that hinder CL implementation. These include large class sizes, vast syllabi, and the disconnect between CL activities and the summative examination system (Figure 12. In Bangladesh, the education system emphasizes exams that test memorization rather than interactive learning, which discourages both teachers and students from engaging in more dynamic classroom practices. Transforming this exam-centric approach to one that includes formative assessment could help create an environment more conducive to collaborative learning.

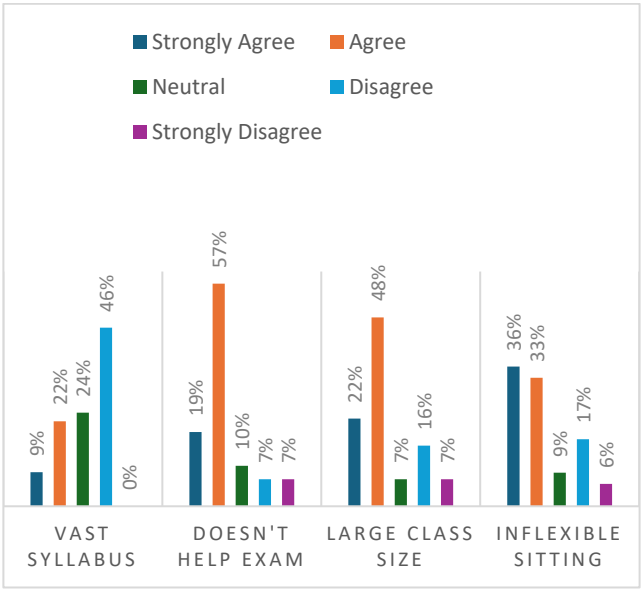


**Figure 12:contextual limitation to apply collaborative learning**

Contribution of Collaborative Learning to Student Learning

### Teacher Perspectives

Teachers largely agreed on the benefits of CL in fostering student learning. Over 63% of teachers indicated that CL makes learning more active, while 41% noted that it helps develop social skills by encouraging interaction among students (Figure 13). Additionally, 40% of teachers felt that CL makes learning more sustainable, helping students retain knowledge longer. A small proportion (11%) saw CL as a complement to traditional lecture methods, rather than a replacement.

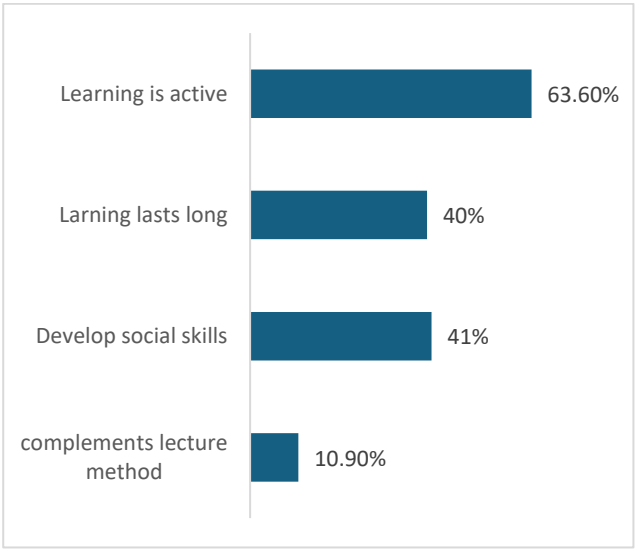


**Figure 13: Benefit of CL: teachers' opinion**

### Student Perspectives

Students also recognized the advantages of CL. The highest number of student respondents (27%) reported that CL helps increase concentration during learning, addressing one of the key weaknesses of the lecture method, which often fails to sustain student engagement (Figure 14). Other students noted that CL improves social interaction skills (19%) and makes learning more lasting (18%). Students also appreciated CL for making learning more interesting (17%) and helping to avoid rote memorization (15%).

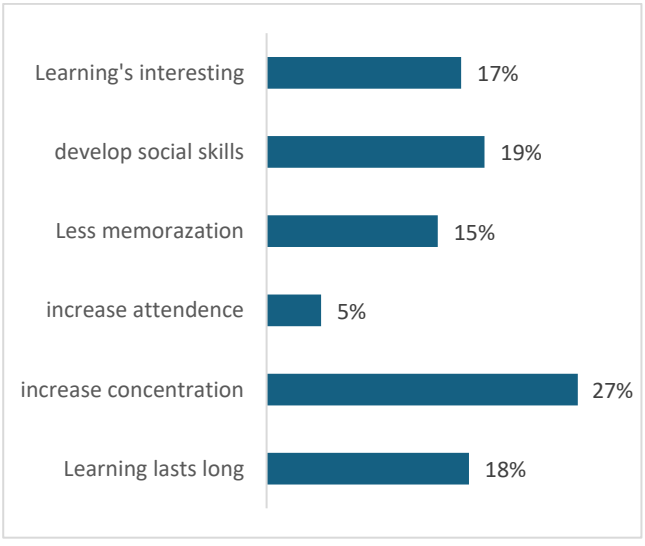


**Figure 14: Advantage of CL, Students' response**

### Student Preference for CL Over Lectures

When asked to compare CL and lecture methods, 87.5% of students agreed that CL is a better method for their learning (Figure 15). This overwhelming preference indicates that students are eager for a shift towards more interactive, collaborative approaches in the classroom.

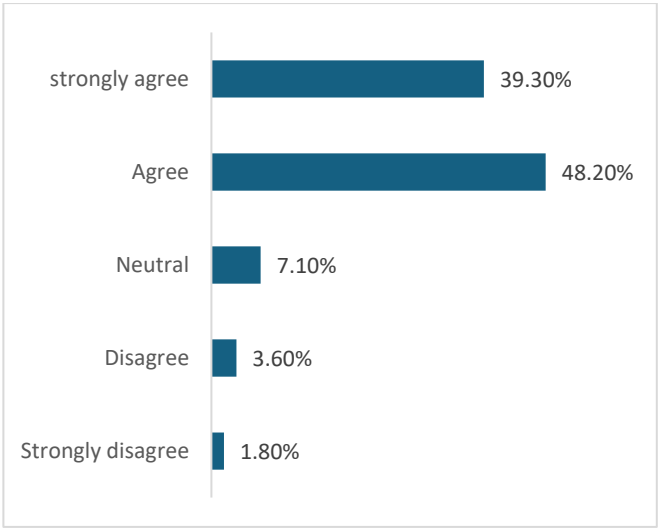


**Figure 15: Collaborative Learning better than lecture method**

### 4.5 Conclusion:

The findings suggest a significant gap between teachers' reported use of collaborative learning and students' experiences in the classroom. While a majority of teachers claim to use CL, students overwhelmingly experience lecture-based methods. Structural challenges, such as inflexible seating and short class durations, alongside systemic issues like an exam-driven education system, hinder the effective implementation of CL. Despite these barriers, both teachers and students recognize the potential of collaborative learning to foster more active, engaging, and lasting educational experiences.

To fully realize the benefits of CL in Bangladesh College Education, systemic changes are necessary. This includes providing specific training for teachers on CL methods, redesigning classrooms to support group work, and shifting from a summative to a formative assessment system that values active participation over rote memorization. With these adjustments, the education system in Bangladesh could better support collaborative learning and its potential to enhance student engagement and learning outcomes.

## 5. Discussion and Conclusion:

### Discussion:

The findings of this study reveal several critical insights into the current state of teaching methods and the application of collaborative learning (CL) in Bangladesh College Education (BCE). One of the most striking results is the discrepancy between teachers' self-reported use of CL and students' experiences in the classroom. While a significant proportion of teachers (71%) claim to use collaborative learning, the majority of students (74%) report that lectures remain the dominant instructional method. This disconnect suggests a difference in perception between what teachers believe constitutes collaborative learning and what students experience as active, collaborative engagement.

A potential explanation for this gap may be that teachers view small instances of student interaction, such as asking questions or initiating brief group discussions, as forms of collaborative learning. In contrast, students may not recognize these limited interactions as genuine collaboration, particularly when the predominant classroom environment is lecture-focused. This mismatch highlights the need for clearer definitions and expectations regarding what constitutes effective collaborative learning in the BCE context.

The data also point to structural barriers that hinder the broader implementation of CL in Bangladeshi colleges. Both teachers and students identify inflexible seating arrangements, short class durations, and large class sizes as significant obstacles. The traditional seating setup, where multiple students share benches, restricts the formation of small groups that are essential for collaborative activities. Additionally, short class periods limit the time available for interactive and student-centered learning approaches. Large class sizes pose further challenges by making it difficult for teachers to manage group dynamics and ensure meaningful participation from all students.

The systemic nature of these challenges is further exacerbated by the education system's focus on summative examinations, which emphasize rote memorization over active, collaborative learning. Both students and teachers are caught in an environment where the priority is often covering vast syllabi in preparation for exams, leaving little room for experimentation with more interactive methods. This summative system reinforces teacher-centered approaches and limits the potential for student-centered learning practices, such as CL, to take root.

Despite these barriers, there is a clear recognition among both teachers and students of the potential benefits of collaborative learning. Teachers largely agree that CL makes learning more active (63.6%) and helps develop essential social skills, while also supporting longer retention of knowledge. Similarly, students report that CL enhances their concentration, makes learning more interesting, and helps reduce reliance on rote memorization. These positive perceptions from both groups suggest that CL is not only desirable but also necessary for improving student engagement and educational outcomes.

One of the most critical findings from this study is the influence of teacher attitudes on the successful implementation of CL. Teachers who expressed a stronger interest in CL were more likely to use it effectively in their classrooms. This underscores the importance of fostering positive teacher attitudes towards collaborative learning, as their willingness to adopt and promote such methods directly impacts how frequently and effectively CL is used. Furthermore, teachers who believed their students were interested in CL were more inclined to incorporate it, highlighting the reciprocal nature of motivation in the classroom.

However, it is concerning that none of the teachers in the survey had received specific training on CL. Although many had undergone general pedagogy or interactive teaching training, the lack of focused professional development on CL suggests a significant gap in teacher preparation. Without targeted training, teachers may lack the skills and confidence necessary to fully implement CL, further contributing to the discrepancy between reported usage and actual classroom practice.

To overcome these barriers, several key changes are needed. First, professional development programs should focus on equipping teachers with the necessary skills and strategies to implement collaborative learning effectively. Training should go beyond general pedagogy and offer practical, context-specific guidance on how to create and manage collaborative activities, especially in environments with large class sizes and rigid seating arrangements.

Second, there needs to be a systemic shift from an exam-driven, summative assessment model to a more formative approach that values active participation and learning processes. Formative assessments, which emphasize continuous evaluation and feedback, would provide the flexibility for teachers to incorporate more collaborative learning activities into their curricula without the pressure to cover extensive syllabi for exams. Such a shift would create an environment where students can engage in deeper, more meaningful learning experiences through collaboration.

Third, colleges should consider redesigning classrooms to better support collaborative learning. Flexible seating arrangements, where students can easily form small groups, would make it easier to facilitate CL activities. Addressing infrastructural limitations like class size and seating could enhance the practicality and scalability of CL in BCE settings.

To summarize, while collaborative learning holds great promise for enhancing student engagement and learning outcomes in Bangladesh College Education, several barriers currently hinder its widespread adoption. By addressing these structural and systemic issues, and by fostering positive teacher attitudes through targeted professional development, the education system in Bangladesh can create a more supportive environment for CL. Such changes would not only align teaching practices with student preferences but also promote a more active, collaborative, and lasting approach to learning in BCE institutions.

**Conclusion:**

This study explored the role of collaborative learning (CL) in Bangladesh College Education (BCE), highlighting the limited adoption of the method due to teacher attitudes and institutional barriers. While lecture-based teaching dominates BCE, the research confirms that CL offers significant potential for enhancing student engagement, participation, and long-term retention of knowledge. The findings align with previous research, such as that of Postholm (2008), which asserts that CL can either complement or replace traditional lecture methods by fostering an interactive, problem-solving, and student-centered learning environment.

The barriers to CL adoption in BCE include rigid seating arrangements, irregular student attendance, and teacher perceptions of student disinterest or inability. However, students expressed strong enthusiasm for group work, problem-solving, and collaborative approaches, signaling a readiness for more active learning methods. This indicates a misalignment between student preferences and current pedagogical practices. The study shows that when implemented properly, CL can encourage students to take ownership of their learning, reduce reliance on rote memorization, and help develop critical social and problem-solving skills.

Overall, while CL is still in its nascent stages in BCE, the study concludes that it has the potential to transform traditional learning methods and improve educational outcomes if teachers, administrators, and policy makers commit to its integration.

### 5.3 Limitations of the Study

While this study provides valuable insights into the potential of collaborative learning (CL) in Bangladesh College Education (BCE), several limitations must be acknowledged. First, the literature reviewed predominantly originated from foreign sources due to a scarcity of studies on CL in the context of Bangladesh. This limitation may have influenced the research objectives, questions, and methods, underscoring the need for more localized studies on collaborative learning within

the country's educational system. Second, the study relied heavily on self-reported data from teachers and students, which may have been influenced by personal biases or perceptions rather than objective measures of CL effectiveness. Third, due to time constraints, the study focused primarily on the perceptions and current practices of CL rather than conducting longitudinal research to assess the long-term impacts of CL on student outcomes. Finally, the study did not thoroughly investigate the role of digital tools and technology, which could significantly enhance collaborative learning practices in the modern educational environment. Despite these limitations, the study provides a foundation for further research and offers practical recommendations for integrating CL in BCE.

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