

A Study of Self-Confidence in Collaborative Work in the Classroom

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ABSTRACT

Participating and contributing effectively to collaborative classroom settings depends heavily on students' self-confidence. It is often necessary for students to share ideas, communicate effectively, and solve problems in group settings, all of which are influenced by their level of self-confidence. Those with a higher level of self-confidence are more likely to take initiative and collaborate more efficiently, while those with a lower level may find it difficult to fully engage in the learning process. This study was conducted to investigate how self-confidence influences collaborative work among students in the classroom. The objectives of this study are to investigate learners' perceptions of their self-confidence, satisfaction in learning, and group dynamics in classroom collaborative work, and to examine the relationships between self-confidence and satisfaction in learning, as well as between self-confidence and group dynamics in classroom collaborative work. This quantitative study utilised a 35-item survey instrument based on a five-point Likert scale, adapted from Studnicka et al., (2023), and organised into two main sections. The respondents comprised 250 students from both public and private universities in Malaysia, representing two academic clusters, namely Science and Technology and Social Science and Business. The study found that learners had high self-confidence, satisfaction, and positive group dynamics in classroom collaborative work. Students were more confident when they received support from instructors and worked actively in groups. They also found collaborative activities, such as role-play, engaging and helpful for learning. In addition, self-confidence, satisfaction, and group dynamics were strongly related to each other. The findings suggest that teachers should use more collaborative and interactive teaching methods, provide clear guidance, and create a supportive learning environment. This can help improve students' confidence, participation, and overall learning experience.

Keywords: Self-confidence, learner's perception, collaborative work, group dynamic, satisfaction

INTRODUCTION

Background of Study

In recent years, the approach to learning in higher education institutions has changed from the traditional way of learning to a more collaborative way of learning. Collaborative learning encourages an active engagement within group work, discussing the content of the subject with the guidance of an instructor. A report by Awang-Hashim et al., (2023) found that the social component and effective teaching maximise the experience of a student learning activities and suggest that it be included in the academic institution. For collaborative learning to work, the self-confidence of each individual needs to be studied, along with the role of the instructor at every step of the learning process. Both external and internal factors is known to influence the confidence of a student. Study by Zee et al., (2016) highlight the teacher self-efficacy directly impacts the student motivation thus provide better learning experience. These studies suggest that strengthening teacher practices and fostering students' self-belief are essential for building confidence in educational settings

Bach et al., (2024) studied the collaborative task without the involvement of an instructor. The quality of the outcome depends on two factors. First, it depends on the ability to think and solve problem and second, it is dependent on the group's mutual support and dynamics. This study focuses on the online setting and was conducted during the COVID-19 pandemic. Saqr et al., (2024) studied the emergence of different roles during collaborative work. It is concluded that a leader may appear in many groups and initiate an active discussion. Mediators are needed in a group with moderate interaction, and some participants tend to isolate themselves during the task by staying quiet. Therefore, both group structure and instructor involvement can strongly influence how the roles emerge. This study focuses on examining the learners' self-confidence, perception of their confidence, satisfaction, and dynamics within their group during the collaborative work and the relationship between them.

Statement of Problem

Collaborative learning is currently a common practice in higher education institutions to create a better learning experience in class. This can be achieved by promoting better engagement and teamwork when given a task by the instructor. Since every individual has a different approach and personality when communicating, their levels of self-confidence, satisfaction, and participation in group work may contribute to the effectiveness of a collaboration. There is limited research on the influence of self-confidence in a classroom setting. Self-confidence plays an important role in group work. A student with a lack of confidence is hesitant to contribute, while an overconfident student leads single-minded discussions. Both will hinder the progress of the collaboration. This study provides a discussion on students' perception of self-confidence, satisfaction, and group dynamics in the classroom during collaborative learning.

Objective of the Study and Research Questions

This study is done to explore the influence of self-confidence in collaborative work in the classroom setting. Specifically, this study is done to answer the following questions;

- How do learners perceive their self-confidence in classroom collaborative work?
- How do learners perceive their satisfaction in learning in classroom collaborative work?
- How do learners perceive their group dynamics in classroom collaborative work?
- Is there a significant relationship between self-confidence and satisfaction in learning for classroom collaborative work?
- Is there a significant relationship between self-confidence and group dynamics in learning for classroom collaborative work?

LITERATURE REVIEW

Theoretical Framework of the Study

Bandura Concept of Self- Efficacy

The theoretical foundation of this study is grounded in Bandura, (1997) Self-Efficacy Theory, which posits that an individual's belief in their capability to perform a task significantly influences their motivation and emotional reactions. This model is built upon triadic reciprocal determinism, suggesting that human behaviour results from a dynamic, bidirectional interplay among personal factors, environmental events, and the behaviour itself Schunk et al., (2020). In collaborative classroom work, self-efficacy acts as a critical mediator of engagement; learners with high self-perceived competence are more likely to embrace group challenges and persist through setbacks Miao et al., (2025). Bandura identifies four primary sources that shape these beliefs: mastery experiences, vicarious experiences, social persuasion, and physiological states Yim, (2023). By applying this framework, the study examines how these internal appraisals of confidence interact with the social environment of the classroom to facilitate successful group dynamics.

Group Work Theory

Group Work Theory, primarily anchored in Social Interdependence Theory, posits that the structural alignment

of a group determines how members interact, which subsequently dictates the success of the collaborative outcome Johnson et al., (2009). According to this framework, "positive interdependence" is the essential condition where individuals perceive that their personal success is intrinsically linked to the success of their peers, fostering a "sink or swim together" mentality Deutsch, (1949). Within the classroom, this theory emphasizes that effective collaboration requires more than mere proximity; it necessitates individual accountability, promotive interaction, and the deliberate application of small-group social skills to resolve cognitive conflicts Gillies, (2016). By shifting the focus from individualistic competition to collective achievement, this theory provides a scaffold for students to negotiate meaning and build shared knowledge, ultimately enhancing both their academic performance and their social competence.

Past Studies

Past Studies on Collaborative Work

The study by Mercier et al., (2023) reviews numerous studies on collaborative learning, particularly focusing on engineering education, to explore how teamwork, task design, tools, and teacher facilitation influence learning processes and outcomes in classroom collaboration. The authors analyse findings from 285 published studies (2010–2022) that involved learners in higher education engineering programs and K–12 contexts, concentrating on various instruments such as classroom observations, surveys, video analyses, and meta-analytic datasets. Their analysis reveals that collaborative work helps to enhance active learning, problem-solving, and instructional engagement, especially when tasks require collaborative learning processes, structured interaction, and collective accountability. Findings also highlight relentless challenges, including free-riding, dominance, unequal contribution among group members, and status-based marginalisation of minoritised students, which often reduce self-confidence and limit collaborative gains. The implications of these past studies suggest that effective collaboration depends on an intended design to ensure that all learners benefit and develop both collaborative competence and confidence in group work settings.

The study by Hackett et al., (2023) was conducted to explore whether Collaborative Online International Learning (COIL) effectively enhances students' intercultural competence and how collaborative online tasks influence learning outcomes in higher education. This quasi-experimental investigation involved 108 undergraduate students drawn from universities in the Netherlands and the United States. The participants were organised into four cohorts: a U.S. experimental group ($n = 30$), a Dutch experimental group ($n = 24$), a U.S. control group ($n = 31$), and a Dutch control group ($n = 24$). Data collection involved pre- and post-intervention surveys using the Cultural Intelligence Scale (CQS) and the Multicultural Personality Questionnaire (MPQ). To enrich the quantitative findings, qualitative data were gathered through focus group discussions and individual reflective reports, allowing for an in-depth exploration of students' experiences in collaborative and intercultural learning contexts. The results showed that participants in the United States experimental group demonstrated significantly greater improvements in intercultural competence compared to their counterparts in the control group. Notably, improvements were most pronounced in the motivational and cognitive dimensions of cultural intelligence, suggesting that COIL-based collaborative work had a positive impact on students' intercultural development. In contrast, no significant differences emerged between the experimental and control groups in the Netherlands. This outcome may be attributed to students' prior exposure to internationalised learning environments, which had already played a role in strengthening their intercultural competence. The study suggests that collaborative online international learning has the potential to improve students' self-confidence and capacity to collaborate across cultures; however, its impact is influenced by learners' previous experiences and the specific instructional context. These findings underscore the importance of carefully designed collaborative tasks to optimise intercultural and collaborative learning outcomes.

Overall, the both studies demonstrate that collaborative learning provides valuable opportunities for students to enhance conceptual understanding, engage purposefully with peers, and cultivate essential interpersonal and collaborative skills. Both studies underscore that collaborative learning is most effective when it is intentionally structured, incorporating well-designed tasks, appropriate technological support, and active instructor facilitation, while ensuring equitable opportunities for participation among all learners. At the same time, the findings also draw attention to persistent challenges in collaborative settings, including unequal participation, dominance by certain group members, and variations in students' prior knowledge and experience. These challenges are

significant because they can undermine students' comfort and self-confidence when engaging in collaborative work. In relation to the present study, such insights indicate that self-confidence should not be viewed merely as a secondary outcome of collaboration, but as a crucial factor shaping how students participate in and experience group tasks. While collaborative learning has the potential to enhance students' confidence in sharing ideas and interacting with peers, this benefit is more likely to emerge in learning environments that are inclusive, supportive, and intentionally designed to enable all learners to succeed. Accordingly, the existing literature highlights the importance of examining self-confidence as a central construct, particularly in classroom contexts where students differ considerably in their willingness and readiness to engage in collaborative activities.

Conceptual Framework of the Study

Figure 1 presents the study's conceptual framework, which examines how students' self-confidence shapes their experiences in teamwork. Drawing on Studnicka et al., (2023), the framework recognizes that effective communication within teams enhances learners' self-confidence and overall satisfaction. Participants in teamwork usually participate in group conflicts and these conflicts improves their critical thinking skills Rahmat, (2020) are It also incorporates insights from Bateman et al., (2002), who emphasize that group work fosters essential elements such as shared purpose and goals, clearly defined roles, supportive team processes, strong team relationships, constructive intergroup relations, as well as passion, commitment, and the development of skills and learning. These perspectives guide the study in investigating the connections between self-confidence and learning satisfaction, as well as between self-confidence and teamwork.

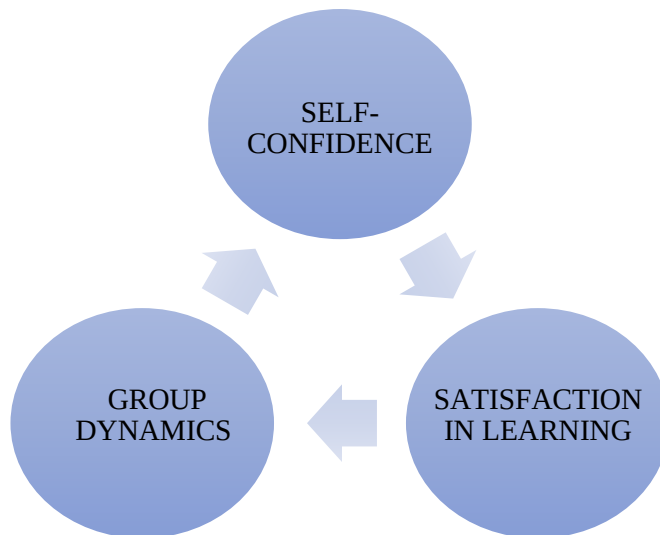


Figure 1- Conceptual Framework of the Study

Self-confidence in Collaborative Work

METHODOLOGY

This quantitative study is done to explore self-confidence in collaborative work. A convenient sample of 250 Participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted in Studnicka et al., (2023) on student self-satisfaction and self-confidence in learning as well as Bateman et al., (2002) on group work to reveal the variables in table 3 below. Table 1 below shows the categories used for the Likert scale: 1 is for Strongly Disagree, 2 is for Disagree, 3 is for Undecided, 4 is for Agree, and 5 is for Strongly Agree.

Table 1 – Likert Scale Use

1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Table 2 – Distribution of Items in the Survey

SECTION	VARIABLE	CONSTRUCT	ITEM		CA
B	STUDENT SATISFACTION AND SELF-CONFIDENCE IN LEARNING Studnicka et al., (2023)	Satisfaction with Current Learning	5		.920
		Self-Confidence in Learning	8		.942
C	GROUP DYNAMICS Bateman et al., (2002)	Purpose and Goals (PG)	3	22	.980
		Roles (R)	3		
		Team Processes (TP)	3		
		Team Relationships (TR)	4		
		Intergroup Relations (IR)	3		
		Passion and Commitment (PC)	3		
		Skills and Learning (SL)	3		
				35	.984

Table 2 presents the distribution of survey items. Section B has 13 items on Student Satisfaction and Self-Confidence. Section C has 22 items on Group Dynamics.

Table 3 – Reliability Levels, Cronbach’s Alpha Ranges, and Their Interpretations

Reliability Level	Cronbach’s Alpha range	Interpretation
Excellent	0.9 and above	Indicates very high internal consistency
Good	0.80-0.89	Reflects strong internal consistency
Acceptable	0.70-0.79	Indicates acceptable internal consistency
Questionable	0.60-0.69	Reflects questionable internal consistency
Poor	Below 0.6	Indicates poor internal consistency

In order to determine the internal reliability of the instrument, reliability analysis is one. Table 3 above shows the distribution and interpretation of the Cronbach Alpha range. According to Ahmad et al., (2024), Cronbach Alpha scores between 0.7 and 0.9 are considered acceptable to excellent.

Table 2 also shows the reliability of the survey. The analysis shows a Cronbach alpha of .920 for Satisfaction, .942 for Self-Confidence, and .980 for Group Dynamics. The overall Cronbach's Alpha for all 35 items is .984, thus revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

FINDINGS

Demographic Analysis

According to Ziegenfuss et al., (2021), researchers report demographic data in percentages to establish sample representatives and allow for generalizability to a larger population. The reporting also provides an overview of participants’ characteristics. Percentages offer a clear and understandable picture of the sample makeup.

Table 4 – Percentage for Demographic Profile

Question	Demographic Profile	Categories	Percentage (%)
1	Gender	Male	75%
		Female	25%
2	Cluster	Science & Technology	53%
		Social Sciences & Business	47%

Table 4 above presents the percentage for the demographic profile. The demographic distribution of respondents shows that the majority were male (75%), while female respondents accounted for 25% of the sample. Regarding

academic clusters, 53% of the respondents belonged to the Science and Technology cluster, while 47% were from the Social Science and Business cluster. This suggests that the sample was male-dominated, which may reflect the actual gender distribution in the studied population or the higher participation rate among male respondents. Consequently, the perspectives captured in this study may be more representative of male participants. The distribution between the two clusters is relatively balanced, although respondents from Science and Technology slightly outnumber those from Social Science and Business. This balance indicates that the study captured perspectives from both technical and non-technical academic backgrounds, which may offer a more holistic understanding of the research topic.

Descriptive Statistics

Why is there a need to report the mean and standard deviation? According to Vetter, (2017), Mean (M) represents the average, or centre of a data set. Standard deviation (SD) indicates the typical distance of individual observations from the mean, which shows the data's variability or spread. A low SD means the data points are clustered close to the mean, whereas a high SD indicates they are more spread out. It is good to have a high SD.

Findings for Self-Confidence

Table 5 – Mean and Standard Deviation for Self-Confidence in Learning (L)

ITEM	Mean	SD
LQ1 – I am confident that I am mastering the class role-play/activity presented to me by my instructors.	3.92	0.82
LQ2 – I am confident that this role play/activity covered the essential content necessary to master the material covered in the curriculum.	3.97	0.84
LQ3 – I am confident that I am developing the skills and gaining the required knowledge from this role play/activity to perform the necessary tasks in my course	3.98	0.82
LQ4 – My instructors used a variety of helpful resources to teach this role play/activity	4.02	0.83
LQ5 – It is my responsibility as a student to learn what I need during role-play/activity classes.	4.12	0.88
LQ6 – I know how to get help when I do not understand the concepts in the role play/activity.	3.98	0.87
LQ7 – I know how to use role play exercises to learn the critical/key aspects of this course.	3.92	0.84
LQ8 – It is the instructor's responsibility to show me what I need to learn during the role play/activity in class.	4.01	0.87

Table 5 presents the mean and standard deviation (SD) for Self-Confidence in Learning. A high mean score ranging from 3.92 to 4.12 indicates that the respondent strongly agreed to be involved and take responsibility for the content during the role-play activities. From all the items, LQ5 records the highest mean and SD (LQ5, M = 4.12), which indicates that the respondent is reflecting a proactive attitude during the collaboration activities and can recognise their responsibility for each task given by the instructor. However, without the proper guidance and clear instruction from the instructor, the critical aspect of the role-play exercise is done without full confidence, as shown in low mean and SD in LQ4 and LQ8 (LQ4, M = 4.02) (LQ8, M = 4.01). These conditions show that an effective interaction between the instructor and the respondent is crucial during the activities. Otherwise, the respondent feels that the confidence level is slightly lower during the critical aspect of the course outcome. It shows by the mean value of LQ1 and LQ7 (LQ1 and LQ7, both M = 3.92). Respondent reported to gain their confidence, skills and knowledge by seeking help when needed (LQ3, M = 3.98) (LQ6, M = 3.98) to complete the task and engaged in the role-play activities. Overall, the results indicate that respondents balance self-responsibility with reliance on instructor support, and while confidence is generally high, targeted improvements in instructional design could further strengthen their ability to use role-play as a tool for mastering key concepts.

Findings for Satisfaction in Learning

This section presents data to answer research question 2- How do learners perceive their satisfaction in learning in classroom collaborative work?

Table 6 – Mean and Standard Deviation for Satisfaction with Current Learning (CL)

ITEM	Mean	SD
CLQ1 – The methods used in this role-play/activity were supportive and effective	4.02	0.78
CLQ2 – The role play /activity provided me with a variety of educational materials and activities to promote my learning.	4.06	0.82
CLQ3 – I liked the way my instructor taught me the role play /activity	4.11	0.63
CLQ4 – The teaching materials used in this role-play/activity were motivating and helped me learn.	4.04	0.87
CLQ5 – The way my instructor taught the role play /activity was appropriate to my way of learning.	4.07	0.84

Table 6 shows the mean and Standard Deviation for Satisfaction with Current Learning (CL). Since the mean value for all CL is high ($M > 4.00$), it shows that the respondent mostly agrees and is satisfied with classroom collaborative work. From CLQ1 (CLQ1, $M = 4.02$) and CLQ2 (CLQ2, $M = 4.06$), they agreed that both the method and educational materials and activities are very useful to improve the learning process. Respondents have higher satisfaction with the instructor's teaching style (CLQ3, $M = 4.11$) because the instructor did not fully dictate the method of teaching but gave more flexibility to the group role-playing during the session. Some respondents also feel that the way the instructor taught was seen as motivating and helpful, as shown in the mean value of CLQ4 (CLQ4, $M = 4.04$). Besides, they agreed that the way of learning is appropriate (CLQ5, $M = 4.07$). Overall, learners appreciated both instructional methods and materials, highlighting role-play as an engaging and effective approach.

Findings for Group Dynamics

This section presents the empirical data gathered to address the third research question: How do learners perceive their group dynamics in classroom collaborative work? In the context of this study, group dynamics are operationalized through seven distinct dimensions: (i) Purpose and Goals (PG), (ii) Roles (R), (iii) Team Processes (TP), (iv) Team Relationships (TR), (v) Intergroup Relations (IR), (vi) Passion and Commitment (PC), and (vii) Skills and Learning (SL). The following subsections detail the mean scores and standard deviations for the first four dimensions based on participant responses.

(i) Table 7 – Mean and Standard Deviation for Purpose and Goals (PG)

ITEM	Mean	SD
PGQ1 – Our team has a meaningful, shared purpose.	4.07	0.82
PGQ2 – We are strongly committed to a shared mission.	4.11	0.82
PGQ3 – We set and meet challenging goals.	4.12	0.84

The results for Purpose and Goals (PG) in Table 7 suggest that learners perceived a high degree of clarity and alignment regarding their group objectives. All items scored above 4.0, with the highest mean attributed to the team's ability to set and meet challenging goals (PGQ3, $M = 4.12$), followed closely by a strong commitment to a shared mission (PGQ2, $M = 4.11$). Even the lowest-rated item in this category, having a meaningful, shared purpose (PGQ1, $M = 4.07$), indicates a robust sense of direction. The relatively low standard deviations ($SD \approx 0.82$) reflect a consistent agreement among respondents, implying that the collaborative tasks were structured effectively to ensure that students felt their collective efforts were both purposeful and goal-oriented.

(ii) Table 8 – Mean and Standard Deviation for Roles (R)

ITEM	Mean	SD
RQ1 – Team members clearly understand their roles.	4.02	0.82
RQ2 – When an individual's role changes, an intentional effort is made to clarify it for everyone on the team.	4.10	0.78
RQ3 – Everyone values what each member contributes to the team	4.12	0.79

The findings for Roles (R) presented in Table 8 indicate that students felt secure in their responsibilities and valued within their teams. The most positive perception was related to the appreciation of individual contributions (RQ3, $M=4.12$), which suggests a supportive and inclusive team culture. Additionally, students noted that intentional efforts were made to clarify roles during transitions (RQ2, $M=4.10$), ensuring minimal confusion during collaborative shifts. While the clear understanding of roles (RQ1, $M=4.02$) was rated slightly lower, it remains well above the neutral threshold. These results collectively suggest that role clarity and mutual respect were key pillars of the learners' group experiences.

(iii) Table 9 – Mean and Standard Deviation for Team Processes (TP)

ITEM	Mean	SD
TPQ1 – We address and resolve issues quickly.	4	0.77
TPQ2 – Our team works with a great deal of flexibility so that we can adapt to changing needs.	4.02	0.81
TPQ3 – When we choose consensus decision-making, we do it effectively.	4.07	0.80

As shown in Table 9, the results for Team Processes (TP) highlight a high level of operational adaptability and collaborative decision-making. Students felt most confident in their group's ability to utilise consensus decision-making effectively (TPQ3, $M=4.07$). Flexibility was also a strong point, with groups adapting well to changing needs (TPQ2, $M=4.02$). Although the promptness of issue resolution (TPQ1, $M=4.00$) received the lowest mean in this section, it still indicates a satisfactory level of group efficiency. The low standard deviation for TPQ1 ($SD=0.77$) further suggests that most groups were able to resolve conflicts or issues with a similar level of consistency and speed.

(iv) Table 10 – Mean and Standard Deviation for Team Relationships (TR)

ITEM	Mean	SD
TRQ1 – Team members appreciate one another's unique capabilities.	4.09	0.80
TRQ2 – Team members are effective listeners.	4.09	0.80
TRQ3 – Communication in our group is open and honest.	4.06	0.86
TRQ4 – Members of our team trust each other.	4.14	0.83

The data for Team Relationships (TR) in Table 10 underscores a high degree of interpersonal trust and mutual respect among learners. The item regarding mutual trust among team members (TRQ4, $M=4.14$) achieved the highest mean score in this dimension, reflecting a strong socio-emotional bond. This is supported by high perceptions of mutual appreciation for unique capabilities (TRQ1, $M=4.09$) and effective listening among peers (TRQ2, $M=4.09$). While open and honest communication (TRQ3, $M=4.06$) was rated slightly lower, the overall results indicate that the classroom environment successfully fostered positive relationships, which are essential for maintaining long-term collaborative engagement.

(v) Table 11 – Mean and Standard Deviation for Intergroup Relations (IR)

ITEM	Mean	SD
IRQ1 – We are able to resolve conflicts with other teams collaboratively.	4.06	0.79
IRQ2 – We communicate effectively with other groups.	4.08	0.79
IRQ3 – Our collaborations with other teams are productive, worthwhile, and yield good results.	4.09	0.84

The results for Intergroup Relations (IR) indicate that students generally viewed their interactions with other teams positively. All three items received mean scores slightly above 4.0, indicating that students perceived themselves as reasonably confident in their ability to communicate, collaborate, and resolve issues across groups. Among the indicators, perceptions of productive collaboration (IRQ3, $M = 4.09$) were rated just slightly higher than effective communication (IRQ2, $M = 4.08$) and collaborative conflict resolution (IRQ1, $M = 4.06$), reflecting a consistent sense that working with other teams was both smooth and meaningful. The relatively similar standard deviations further suggest that these positive experiences were shared across most respondents rather than concentrated within a small subgroup. Overall, these results imply that the collaborative environment supported

constructive intergroup engagement, which is an important condition for fostering students' confidence in navigating teamwork beyond their immediate groups.

(vi) Table 12 – Mean and Standard Deviation for Passion and Commitment (PC)

ITEM	Mean	SD
PCQ1 – Working on our team inspires people to do their best.	4.10	0.81
PCQ2 – People are proud to be part of our team.	4.12	0.80
PCQ3 – My team is proud of its accomplishments and optimistic about our work.	4.15	0.83

The results for Passion and Commitment (PC) show that students generally felt highly positive about the motivational climate within their teams. All three items received mean scores above 4.10, indicating that team members perceived their groups as inspiring, motivating, and fostering a sense of pride. The highest-rated item, “My team is proud of its accomplishments and optimistic about our work” (PCQ3, $M = 4.15$), suggests that teams not only valued their progress but also maintained a forward-looking mindset. Similarly, students expressed pride in being part of their teams (PCQ2, $M = 4.12$) and felt that their teams encouraged members to perform at their best (PCQ1, $M = 4.10$). The relatively close standard deviations (0.80–0.83) further suggest that these positive feelings were consistently shared across the majority of participants. Overall, these findings suggest that the collaborative environment successfully nurtured a sense of enthusiasm, ownership, and collective commitment, conditions that likely reinforce students' confidence and willingness to contribute meaningfully to team-based tasks.

(vii) Table 13 – Mean and Standard Deviation for Skills and Learning (SL)

ITEM	Mean	SD
SLQ1 – We have the skills we need to do our jobs effectively.	4.13	0.83
SLQ2 – We view everything, even mistakes, as opportunities for learning and growth	4.16	0.82
SLQ3 – Team members embrace continuous improvement as a way of life.	4.12	0.79

The findings for Skills and Learning (SL) suggest that students hold strong confidence in their team's capabilities and approach to improvement. All three items recorded mean scores above 4.10, indicating consistently positive perceptions. Students most strongly agreed that they view mistakes as opportunities for learning and growth (SLQ2, $M = 4.16$, $SD = 0.82$), reflecting a healthy learning culture where errors are reframed as part of the developmental process rather than failures. Similarly, respondents felt that their teams possessed the necessary skills to complete their tasks effectively (SLQ1, $M = 4.13$, $SD = 0.83$) and that continuous improvement was embraced as a core team value (SLQ3, $M = 4.12$, $SD = 0.79$). The relatively tight spread of the standard deviations indicates shared agreement among team members, suggesting that these positive perceptions were widely experienced rather than limited to a few individuals. Overall, the results point to a collaborative environment that not only supports competence but also encourages a growth-oriented mindset, both of which are essential for boosting students' confidence and willingness to participate fully in team-based learning activities.

Exploratory Statistics

According to He, (2024), correlation is a statistical technique that shows how strongly two variables are related to each other or the degree of association between the two. It's a common tool for describing simple relationships without making a statement about cause and effect. This section presents data to answer the research question on correlation.

Findings for the Relationship between self-confidence and satisfaction in learning

This section presents data to answer research question 4: Is there a significant relationship between self-confidence and satisfaction in learning for classroom collaborative work?

To determine if there is a significant association in the mean scores between self-confidence and satisfaction in learning, data is analysed using SPSS for correlations. Results are presented separately in Table 14 below.

Table 14 – Correlation between self-confidence and satisfaction in learning

		Self-confidence	Satisfaction
Self-confidence	Pearson Correlation	1	.814**
	Sig (2-tailed)		<.001
	N	250	250
Satisfaction	Pearson Correlation	.814**	1
	Sig (2-tailed)	<.001	
	N	250	250

**Correlation is significant at the 0.01 level (2-tailed)

Table 14 shows there is an association between self-confidence and satisfaction in learning. Correlation analysis shows that there is a highly significant association between self-confidence and satisfaction in learning ($r=.814^{**}$) and ($p=.000$). According to He, (2024), the coefficient is significant at the .05 level, and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between self-confidence and satisfaction in learning.

Findings for the Relationship between self-confidence and self-confidence and group dynamics

This section presents data to answer research question 5: Is there a significant relationship between self-confidence and group dynamics in learning for classroom collaborative work?

To determine if there is a significant association in the mean scores between self-confidence and group dynamics in learning, data is analysed using SPSS for correlations. Results are presented separately in Table 15 below.

Table 15 shows there is an association between self-confidence and group dynamics. Correlation analysis shows that there is a highly significant association between self-confidence and group dynamics in learning ($r=.846^{**}$) and ($p=.000$). According to He, (2024), the coefficient is significant at the .05 level, and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between self-confidence and self-confidence and group dynamics.

Table 15 – Correlation between self-confidence and group dynamics in learning

		Self-confidence	Group Dynamics
Self-confidence	Pearson Correlation	1	.846**
	Sig (2-tailed)		<.001
	N	250	250
Group Dynamics	Pearson Correlation	.846**	1
	Sig (2-tailed)	<.001	
	N	250	250

**Correlation is significant at the 0.01 level (2-tailed)

Table 15 shows there is an association between self-confidence and group dynamics. Correlation analysis shows that there is a highly significant association between self-confidence and group dynamics in learning ($r=.846^{**}$) and ($p=.000$). According to He, (2024), the coefficient is significant at the .05 level, and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between self-confidence and self-confidence and group dynamics.

CONCLUSION

Summary of Findings and Discussions

This study explored learners' self-confidence, satisfaction in learning, and group dynamics in classroom collaborative work, as well as the relationships among these variables. The findings provide important insights into how collaborative learning environments influence students' perceptions and experiences. Firstly, in relation to the Research Question: How do learners perceive their self-confidence in classroom collaborative work?, the findings indicate that learners generally perceived themselves as having high self-confidence in classroom collaborative work. Learners demonstrated an exemplary sense of responsibility, engaged actively, and participated in role-plays. It is important to note, however, that their confidence is not entirely independent, as it has been influenced by the level of guidance and clarity provided by the instructor. It is possible to develop self-confidence both through individual effort and instructional scaffolding, as learners indicated more confidence when they could seek help and receive support. In line with Albert Bandura's Self-Efficacy Theory (1997), this finding emphasizes the importance of social influence and environmental factors in shaping confidence. Learners' reliance on instructor feedback reflects the role of external support in strengthening self-efficacy beliefs.

Second, in response to the Research Question: How do learners perceive classroom collaboration satisfaction?, the results show that learners were highly satisfied with classroom collaboration. Role-playing was particularly appreciated as a motivating, engaging and effective teaching method by learners. The flexibility provided by the instructor further enhanced their learning experience, allowing them to participate more actively. The finding is consistent with that of Mercier et al., (2023), who found that well-structured collaborative tasks enhance student engagement and promote deeper learning. Similarly, the positive perception of flexible and interactive teaching approaches reflects the findings of Hackett et al., (2023), who reported that collaborative activities can improve learning outcomes and student motivation when appropriately designed.

Thirdly, concerning Research Question: How do learners perceive their group dynamics in classroom collaborative work?, learners perceived group dynamics in classroom collaborative work very positively across multiple dimensions, including shared goals, role clarity, teamwork processes, relationships, intergroup interactions, commitment, and learning orientation. Students believed that their groups had a strong sense of mutual respect and interpersonal trust, were cooperative, supportive, and purposeful. These results imply that the classroom setting effectively promoted productive teamwork and a feeling of community. This bolsters the ideas of Social Interdependence Theory, especially the notion of positive interdependence, which Deutsch, (1949) established, in which members of a group cooperate to achieve common objectives. The results are also in line with Johnson et al., (2009) emphasis that reciprocal accountability, clear responsibilities, and encouraging interaction are necessary for productive group work. Additionally, this result is consistent with the study of Mercier et al., (2023), which emphasized that when group activities are effectively managed, structured collaboration improves workgroup quality and learning results.

Fourthly, in relation to Research Question: Is there a significant relationship between self-confidence and satisfaction in learning for classroom collaborative work?, the study found a strong positive relationship between self-confidence and satisfaction in learning. This indicates that learners who feel more confident in their abilities tend to experience greater satisfaction in collaborative learning environments. This relationship suggests that confidence not only influences participation but also shapes how learners evaluate their learning experiences. This finding is in accordance with the study by Hackett et al., (2023), which demonstrated that increased confidence in collaborative settings contributes to improved learning outcomes and overall satisfaction. From a theoretical perspective, this result further supports Bandura, (1997) assertion that self-efficacy influences motivation, engagement, and emotional responses in learning contexts.

Finally, addressing Research Question: Is there a significant relationship between self-confidence and group dynamics in learning for classroom collaborative work?, the findings suggest that self-confidence is positively associated with group dynamics in classroom collaborative work. Learners with higher confidence were more likely to engage effectively in teamwork, communicate openly, and contribute to group success. Positive group dynamics, in turn, reinforced learners' confidence, indicating a reciprocal relationship between these variables. This reflects the concept of triadic reciprocal determinism proposed by Bandura, (1997), where personal factors,

behaviour, and environmental influences interact dynamically. This finding is also in accordance with the study by Mercier et al., (2023), which noted that supportive and inclusive group environments enhance students' confidence and participation, while poorly managed group dynamics can hinder them. In conclusion, the overall findings of this study demonstrate that classroom collaborative work, when effectively designed and supported, promotes high levels of self-confidence, satisfaction, and positive group dynamics among learners. These elements are closely interconnected, with self-confidence playing a central role in shaping both learning satisfaction and the quality of group interactions. The results highlight the importance of instructional design, teacher facilitation, and structured collaboration in creating an inclusive and engaging learning environment that supports both individual and group development.

IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Theoretical and Conceptual Implications

The findings of this study support and extend Albert Bandura's Self-Efficacy Theory and Social Interdependence Theory by Deutsch, (1949) and Johnson et al., (2009). Consistent with Self-Efficacy Theory, learners' confidence was shaped by both personal engagement and external support, particularly instructor guidance and peer interaction. The strong relationship between self-confidence and satisfaction reinforces the idea that self-efficacy influences motivation and emotional outcomes in learning. This reflects the principle of reciprocal interaction between the individual, behaviour, and environment. In terms of Social Interdependence Theory, the findings confirm that positive group dynamics, such as shared goals, clear roles, and mutual trust, enhance both learning experiences and confidence. The study highlights that effective collaboration depends on the alignment of individual (self-confidence) and social (group processes) factors. Thus, self-confidence emerges as a key link connecting individual learning and group outcomes in collaborative settings

Pedagogical Implications

There are several important recommendations for teaching practices. First, instructors should provide clear structure and guidance during collaborative activities, as students' confidence is partly dependent on instructional support. A balance between facilitation and learner autonomy is essential. Second, the positive response to role-play and collaboration indicates that teachers should adopt more interactive, student-centred approaches, such as group work and problem-based learning, to enhance engagement and satisfaction. Third, effective collaboration requires intentional design. Educators should structure group work carefully, including defining roles, setting shared goals, and monitoring participation to ensure inclusivity. Finally, since self-confidence is closely linked to both satisfaction and group dynamics, teachers should actively foster a supportive learning environment through feedback, encouragement, and opportunities for meaningful participation.

Suggestions for Future Research

There are several ways this study could be extended in the future. First, studies could compare different collaborative strategies (e.g., role-play, problem-based learning, digital tools) to identify their impact on self-confidence and learning outcomes. In addition, broader samples from a variety of disciplines, educational levels, and cultural contexts would enhance generalization. It is also recommended to conduct longitudinal studies to examine how self-confidence, satisfaction, and group dynamics evolve. Finally, the use of mixed-method approaches will enable future researchers to gain a better understanding of working collaboratively with students by examining challenges such as unequal participation or conflict.

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