

Examining Satisfaction and Self-Confidence as Predictors of Group Interaction in French as a Foreign Language Learning: A PLS-SEM Approach

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ABSTRACT

Collaborative learning is important in higher education because it encourages group interaction, helping students to develop a better understanding as well as academic and social skills. However, the success of group work depends on students' affective factors, particularly their satisfaction and self-confidence. This study is grounded in Tuckman's model of group development and Bandura's Self-Efficacy Theory. It examines how students' satisfaction and self-confidence influence group interaction. Data were collected from 113 university students through a questionnaire survey, comprising 55 male and 58 female students. The study measured satisfaction, self-confidence, and six aspects of group interaction: goals, roles, team processes, intergroup relations, commitment, and skills. The data were analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4, conducted in two main stages: the measurement model and the structural model. The results indicate that the measurement model is reliable and valid. Both satisfaction and self-confidence have a significant impact on all aspects of group interaction. Satisfaction has a particularly strong effect on skills and learning, while self-confidence strongly influences roles and skills development. Overall, the findings show that students' satisfaction and self-confidence are important determinants of effective group work. This study supports the integration of emotional factors in understanding group interaction and demonstrates that PLS-SEM is suitable for this type of research. It also suggests that instructors should design group activities that enhance students' learning experiences and build their confidence. Furthermore, the results highlight the importance of fostering a supportive learning environment that encourages active participation among students. Future studies may expand the model by incorporating mediating or moderating factors, such as motivation, willingness to communicate, or group size, to better understand how satisfaction and self-confidence influence group dynamics in higher education settings.

Keywords: Group Interaction, Student Satisfaction, Self-Confidence, Collaborative Learning, PLS-SEM

INTRODUCTION

Group interaction plays an important role in modern educational settings, especially in collaborative and learner-centered approaches. Well-structured group work helps students share knowledge, think critically, and develop interpersonal skills that are important for academic achievement and future professional practice. Established

theories of group development, most notably Tuckman's model of group development (1965), suggest that effective collaboration develops over time through guided participation and shared experiences. In these settings, affective factors are important in shaping how learners engage with one another. Students' satisfaction with their learning experiences and their confidence in expressing ideas are particularly important, as they influence motivation, effort, and willingness to take part in group activities. Consistent with Self-Efficacy Theory, Bandura (1977) argues that individuals' beliefs about their abilities influence their actions, effort, and emotional responses, showing that students who feel confident and satisfied are more likely to take an active and positive role in group interaction.

Although group work is widely used in educational settings, ensuring effective collaboration is still challenging. Previous research shows that students do not benefit equally from group activities, as differences in confidence, motivation, and satisfaction affect their level of engagement and learning outcomes (Alzubi et al., 2025; De Prada et al., 2024). While satisfaction and self-confidence have been studied in relation to learning performance or communication, they are often treated as secondary factors rather than main influences on the quality of group interaction. In addition, much of the existing literature focuses on single outcomes such as speaking skills, motivation, or self-esteem without fully examining how satisfaction and self-confidence together affect different aspects of group work, including role clarity, team processes, intergroup relationships, and skill development (Bateman et al., 2002; Studnicka et al., 2023). As a result, there is still a lack of an integrated and empirically tested model that explains how these psychological factors influence group interaction.

This limitation is further increased by methodological issues in earlier studies. Many studies have used descriptive or simple correlational designs, which are not suitable for examining complex and related factors within one model (Tanaka, 2025). Studies that use advanced methods, such as Partial Least Squares Structural Equation Modelling (PLS-SEM), are still limited in this area. PLS-SEM is especially suitable for exploratory research and theory development involving hidden variables and layered relationships (Fornell & Bookstein, 1982; Hair et al., 2017). To address these gaps, this study examines the effect of satisfaction and self-confidence on group interaction using a comprehensive PLS-SEM framework, providing a clearer theoretical understanding and useful practical insights into how effective collaborative learning works.

Research Objective, Research Questions, and Hypothesis

To answer the research questions, data were analysed using SmartPLS by examining the measurement model and the structural model.

Table 1 - Research Objective, Research Questions, and Hypothesis

RO	RQ	RESEARCH HYPOTHESIS
To investigate if there is a significant relationship between Satisfaction and Purpose	Is there a significant relationship between Satisfaction and Purpose?	Ho1: There is no significant relationship between Satisfaction and Purpose
To investigate if there is a significant relationship between Satisfaction and Roles	Is there a significant relationship between Satisfaction and Roles?	Ho2: There is no significant relationship between Satisfaction and Roles
To investigate if there is a significant relationship between Satisfaction and Team Processes	Is there a significant relationship between Satisfaction and Team Processes?	Ho3: There is no significant relationship between Satisfaction and Team Processes

To investigate if there is a significant relationship between Satisfaction and Intergroup Relations	Is there a significant relationship between Satisfaction and Intergroup Relations?	Ho4: There is no significant relationship between Satisfaction and Intergroup Relations
To investigate if there is a significant relationship between Satisfaction and Passion	Is there a significant relationship between Satisfaction and Passion?	Ho5: There is no significant relationship between Satisfaction and Passion
To investigate if there is a significant relationship between Satisfaction and Skills	Is there a significant relationship between Satisfaction and Skills?	Ho6: There is no significant relationship between Satisfaction and Skills
To investigate if there is a significant relationship between Self-Confidence and Purpose	Is there a significant relationship between Self- Confidence and Purpose?	Ho7: There is no significant relationship between Self-Confidence and Purpose
To investigate if there is a significant relationship between Self-Confidence and Roles	Is there a significant relationship between Self- Confidence and Roles?	Ho8: There is no significant relationship between Self-Confidence and Roles
To investigate if there is a significant relationship between Self-Confidence and Team Processes	Is there a significant relationship between Self- Confidence and Team Processes?	Ho9: There is no significant relationship between Self-Confidence and Team Processes
To investigate if there is a significant relationship between Self-Confidence and Intergroup Relations	Is there a significant relationship between Self- Confidence and Intergroup Relations?	Ho10: There is no significant relationship between Self-Confidence and Intergroup Relations
To investigate if there is a significant relationship between Self-Confidence and Passion	Is there a significant relationship between Self- Confidence and Passion?	Ho11: There is no significant relationship between Self-Confidence and Passion
To investigate if there is a significant relationship between Self-Confidence and Skills	Is there a significant relationship between Self- Confidence and Skills?	Ho12: There is no significant relationship between Self-Confidence and Skills
To investigate if there is a significant effect between Satisfaction and Team Interactions	Is there a significant effect between Satisfaction and Team Interactions?	Ho13: There is no significant effect between Satisfaction and Team Interactions
To investigate if there is a significant effect between Self-Confidence and Team Interactions	Is there a significant effect between Self-Confidence and Team Interactions?	Ho14: There is no significant effect between Self-Confidence and Team Interactions

LITERATURE REVIEW

Theoretical Framework

Group Work

The group development model proposed by Tuckman (1965) explains how interactions among members evolve as groups work together to accomplish shared goals. The process by which group relationships and collaboration develop over time was described by Tuckman (1965), who identified four main stages of group development: forming, storming, norming, and performing. In the forming stage, group members first come together and begin to understand the task and each other's roles. Interaction at this stage is usually polite and cautious, as individuals try to establish relationships and clarify expectations. As the group progresses to the storming stage, members may experience conflicts or disagreements as they express different ideas, opinions, or working styles. Although this stage can involve tension, it is important for developing open communication and addressing differences. During the norming stage, group members begin to establish shared norms, mutual respect, and clearer roles, which improves cooperation and strengthens group cohesion. Finally, in the performing stage, the group functions effectively as members collaborate productively, share ideas openly, and work together to achieve their objectives. In educational settings, particularly in collaborative learning environments, Tuckman's model highlights the importance of interaction in group work. Through discussions, negotiation of meaning, and shared problem-solving, students can exchange knowledge, clarify misunderstandings, and support one another's learning. Effective group interactions encourage participation, enhance communication skills, and foster deeper understanding of academic content. Therefore, Tuckman's model demonstrates that productive group work develops gradually through stages of interaction, cooperation, and collective engagement, ultimately contributing to more meaningful and effective learning outcomes.

Self-Efficacy Theory & Satisfaction

Individuals' beliefs in their competence to successfully complete specific activities or responsibilities, which strongly influence their motivation, behaviours, and psychological responses in educational settings, were explained by Albert Bandura (1977) through the Self-Efficacy Theory. The theory further describes individuals' beliefs in their ability to plan and implement the actions necessary to achieve specific goals. Later, four main sources that shape self-efficacy were identified by Bandura: personal accomplishments, learning through observation, external encouragement, and mental and physical well-being. When students successfully accomplish tasks, which further strengthens their self-confidence, a sense of personal accomplishment takes place. To enhance their confidence while performing the same activity, they must first observe how others complete the task, which is identified as learning through observation. Two other significant catalysts of self-efficacy are positive reinforcement from peers or educators, and mental and physical well-being, such as lower anxiety levels. All these four elements contribute to resilient self-efficacy. In the context of learning in a group, self-efficacy plays a significant role in developing students' self-confidence and satisfaction with the learning process. When students believe in their abilities to contribute meaningfully to group tasks, they are more inclined to engage actively in discussions, share ideas, and collaborate effectively with peers. Observing capable group members and receiving supportive feedback from teammates can further strengthen students' confidence in their academic abilities. As students experience success in collaborative activities, their sense of competence increases, which leads to greater satisfaction with the group learning experience. Conversely, low self-efficacy may cause learners to hesitate in expressing their ideas or engaging in group tasks. Therefore, Bandura's theory highlights that fostering students' confidence in their abilities can enhance both their participation and satisfaction when learning collaboratively in group settings.

Past Studies on Group Work

Past Studies on Satisfaction and Group

Many scholarly endeavors have examined the dimensions of satisfaction within group-based learning. In this

regard, Alzubi, Nazim, and Ahmad (2025) observed the attitudes of EFL students toward the enrichment of speaking proficiency in cooperative settings. According to Alzubi, Nazim, and Ahmad (2025), group members held a deep gratitude for the diverse viewpoints presented by their teammates during discussions. Different ideas, viewpoints, and backgrounds brought up during discussions were regarded as very important and appreciated. Furthermore, group members found it very satisfying to watch their peers successfully complete speaking assignments. Finally, they also thoroughly enjoyed and were satisfied with identifying with the roles assigned during the speaking activities. More specifically, the study focused on students' perceptions of the development of their oral communication abilities.

Methodologically, the research employed a descriptive survey design and was conducted among 1,200 students enrolled in the Preparatory Year (PY) program at Najran University, Saudi Arabia, during the 2023 academic year. A total of 360 Saudi students, accounting for 30% of the overall population, participated in the study. These participants were pursuing PY certificates in computer science, engineering, and medicine. To ensure comprehensive data collection, the study utilized both a closed-ended questionnaire and semi-structured interviews.

The findings revealed that students' speaking skills can be strengthened when they demonstrate positive attitudes toward collaborative learning environments. Moreover, it was found that respondents' level of study did not influence their responses regarding the improvement of speaking skills. However, female students displayed comparatively lower attitudes than their male peers. Taken together, the implications suggest that collaborative learning strategies may be effectively implemented to improve other language skills.

It is widely accepted among scholars that group work significantly influences the process of language acquisition. However, with regard to the specific elements of satisfaction within collaborative learning, Akoto (2021) investigates how group size and diverse group work environments have an effect on students' motivation in second language learning. In particular, the researcher examines how these settings may regulate the role of individual learner differences. Nevertheless, these areas remain largely under-researched in the existing literature.

In terms of research design, questionnaire responses from 154 Japanese university students who took part in L2 group work during a semester-long project-based learning (PBL) course were analyzed. Following this, the study employed hierarchical linear modeling, a multilevel analysis method, to examine the data in a more structured and systematic way. Noteworthy variances in L2 motivation across groups were identified in the findings, and these were influenced by the quality of the group work settings. Nevertheless, L2 motivation across the diverse group work environments was not affected by either group size or individual learner differences. Overall, in a PBL setting, an important role is played by both contextual factors and individual characteristics.

Overall, both studies highlight that collaborative learning environments are essential in shaping learners' motivation, attitudes, and speaking development in L2 contexts.

Past Studies on Self-Confidence in Group Work

Studies on second or foreign language learning in collaborative tasks have increasingly focused on willingness to communicate (WTC), motivation, self-confidence, and group dynamics. In this context, the term *self-efficacy* is frequently used interchangeably with *self-confidence*. Furthermore, it is closely associated with learners' perceived ability to successfully perform tasks, whether individually or in collaborative group settings.

For instance, Bui (2026) examined the causal relationships between WTC and L2 fluency using an experimental design. Specifically, in this study, 88 undergraduate English as a second language learners in Hong Kong participated in a task-based experiment to investigate how speech fluency is influenced by task type (monologic vs. dialogic) and willingness to communicate (WTC). Based on a WTC questionnaire, participants were assigned to either a monologic or dialogic collaborative "spot-the-picture-difference" task, and they were subsequently categorised into high- and low-WTC groups.

In terms of measurement, speaking fluency was assessed using several indicators, including speech rate, filled pauses, unfilled pauses, and repairs. The findings revealed that students with high WTC displayed notably faster speech rates and demonstrated fewer repairs compared to their low-WTC peers. Additionally, speaking alone (monologic tasks) caused students to make more pauses in the middle sentences and a few more hesitation sounds than conversation with others (dialogic tasks). Importantly, the findings also showed that the difference in speech rate between high- and low-WTC learners differs more in monologic tasks than in dialogic tasks. The results show that emotions and attitudes (like motivation and confidence), the type of speaking task, and learners' speaking ability in a second language are closely connected and influence each other in a closely interrelated manner.

Similarly, De Prada, Mareque, and Pino-Juste (2024) carried out a study aimed at examining the connection between group work skills and the development of self-esteem, an important emotional factor in education. Moreover, the study also explored the correlations between self-esteem and various socio-academic variables, specifically age, gender, and Grade Point Average (GPA). A total of 615 social science students completed the Rosenberg 10 item Scale and the Teamwork Skills Questionnaire to examine the relationship between key self-esteem constructs, namely decision making, leadership and communication. The majority of participants were women aged 18 to 43, representing students across all academic years.

The results suggest that individual characteristics like gender and age have an impact. In this study, lower self-esteem was observed among female students and older students compared to their peers. Furthermore, based on the findings, universities are encouraged to promote cooperative training and activities which contribute to higher perceived self-worth. As a result, students may use the essential skills which they build over the course of their lives and careers.

Collectively, the findings suggest that supporting academic success requires educational practices that promote both language production and social-emotional learning (SEL), as communication, collaboration, and self-related beliefs are highly interrelated.

Conceptual Framework and Proposed Model of the Study

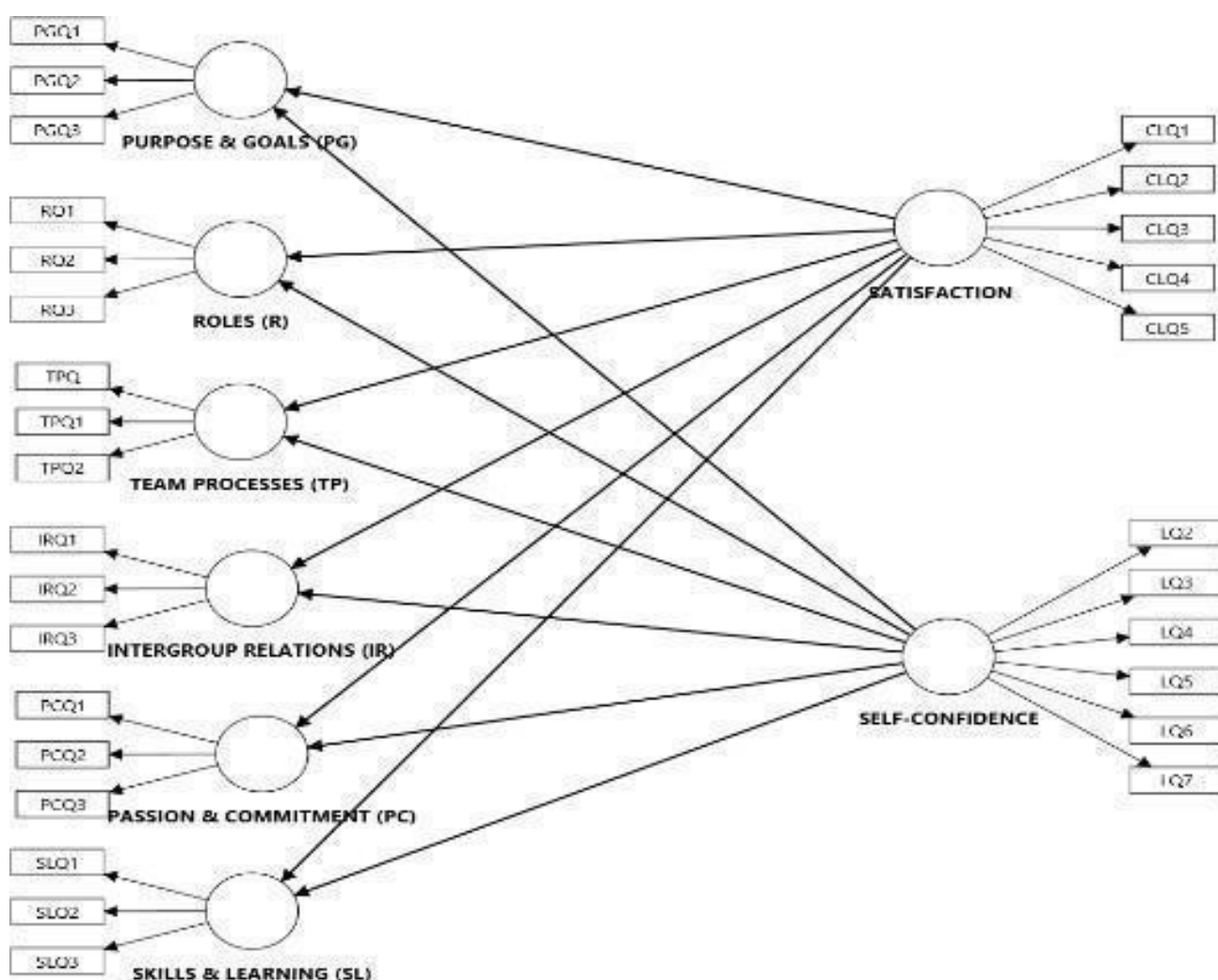
The theoretical framework of this study (Figure 1) investigates the impact of group interaction factors on students' satisfaction and self-confidence in learning using Partial Least Squares Structural Equation Modelling (PLS-SEM). The framework is guided by the group work instrument developed by Thomas S. Bateman et al. (2002), which identifies several key dimensions of effective group interaction, including purpose and goals, roles, team processes, intergroup relations, passion and commitment, and skills and learning. These constructs represent essential elements that shape the quality of collaboration and interaction within group learning environments. Purpose and goals refer to the clarity of shared objectives among group members, while roles relate to the distribution of responsibilities within the group. Team processes involve the mechanisms through which members communicate, coordinate tasks, and solve problems collectively. Intergroup relations emphasize the quality of relationships and cooperation among group members, whereas passion and commitment reflect the motivation and dedication of individuals toward achieving group goals. Finally, skills and learning represent the development of competencies and knowledge through collaborative engagement. These aspects of group interaction are hypothesized to influence students' learning outcomes, particularly their satisfaction and confidence during group-based learning activities.

The framework also incorporates the measurement of student satisfaction and self-confidence in learning, based on the instrument developed by Andrej Studnicka (2023). In collaborative learning environments, satisfaction reflects students' positive perceptions of their learning experiences, including their engagement, enjoyment, and perceived value of group interactions. Self-confidence refers to students' belief in their ability to contribute effectively to group tasks and succeed in learning activities. The theoretical basis for group interaction in this study is anchored in the group development model proposed by Tuckman (1965), which explains that effective collaboration develops through stages of forming, storming, norming, and performing. According to this model, group members gradually develop productive relationships and communication patterns that enhance teamwork

and learning outcomes.

In addition, the framework is supported by the Self-Efficacy Theory developed by Albert Bandura (1977), which highlights the role of individuals' beliefs about their capabilities in shaping motivation and performance. Within group learning contexts, students' confidence in their abilities to contribute meaningfully to group discussions and tasks can significantly influence their engagement and satisfaction. The proposed model suggests that positive group interaction factors—such as clear goals, well-defined roles, effective team processes, supportive relationships, strong commitment, and opportunities for skill development—contribute to higher levels of student satisfaction and self-confidence. Through PLS-SEM analysis, the framework enables the examination of how different dimensions of group interaction influence students' perceptions of their learning experiences and their confidence in collaborative learning environments. Overall, the model highlights the importance of structured and supportive group interactions in fostering positive learning outcomes and enhancing students' confidence and satisfaction in group-based learning settings.

Figure 1- The Conceptual Framework – The Influence of Satisfaction and Self-Confidence in Group Interaction



METHODOLOGY

Research Design

This study employs a quantitative design. The research objective is to discover an extension of an existing theory or predict a theory. The model (Figure 2) chosen for this study is a hierarchical component model, Type II, which uses a mixture of reflective-reflective models. According to Fornell and Bookstein (1982), a reflective model is employed when the construct is a trait and explains the indicators.

Population and Sample

The demographic profile is presented in percentages. According to Ziegenfuss (2021), researchers report demographic data in percentages to demonstrate sample representativeness and permit findings to be generalized to a wider population. Displaying data in percentages also provides an overview of participants' characteristics and offers a clear and understandable picture of the sample composition.

Table 2 - Percentage for Demographic Profile

Question	Demographic Profile	Categories	Percentage (%)
1	Gender	Male (55)	48.7%
		Female (58)	51.3%
2	Discipline	Social Sciences (71)	62.8%
		Science & Technology (42)	37.2%

Table 2 summarises the demographic characteristics of the respondents, focusing on gender and academic discipline. A total of 113 students participated in the study, consisting of 55 male students (48.7%) and 58 female students (51.3%), showing a balanced gender distribution. In terms of academic background, most respondents were from Social Sciences programmes, with 71 students (62.8%), while 42 students (37.2%) were from Science and Technology fields. Overall, the sample includes students from different academic areas, although Social Sciences students made up a slightly larger group of participants.

Instrument

Table 3 presents the distribution of items included in the questionnaire. The instrument used a 5-point Likert scale with scale 1 is never. Scale 2 represents rarely. Scale 3 represents sometimes, while scale 4 is often and scale 5 is always.

Table 3 - Distribution for Item in Instrument

Section	Variable	Construct	Items
B	Student Satisfaction and Self-Confidence in Learning (Studnicka, 2023)	Satisfaction with Current Learning	5
		Self-Confidence in Learning	8
	Subtotal		13
C	Group Work (Bateman et al., 2002)	Purpose and Goals (PG)	3
		Roles (R)	3
		Team Processes (TP)	3
		Intergroup Relations (IR)	3
		Passion and Commitment (PC)	3
		Skills and Learning (SL)	3
	Subtotal		18
	Total Items		31

Table 3 summarises how the questionnaire items are organised in Sections B and C, showing the constructs measured and the number of items for each section. Section B measures students' satisfaction with their current learning and their self-confidence in learning, using instruments adapted from Studnicka (2023). This section includes 13 items for satisfaction and 8 items for self-confidence. Section C focuses on group work aspects based on Bateman et al. (2002), which include purpose and goals, roles, team processes, intergroup relations, passion and commitment, and skills and learning. Overall, Section C contains 22 items, making a total of 31 items in the research instrument. For self-confidence construct, two items: LQ1 and LQ8 were removed due to low factor

loadings.

Data Collection and Data Analysis

Google Form is used to collect data. Data analysis is then conducted using SmartPLS 4 in two main stages. As outlined by Hair et al. (2017), data analysis is carried out in two stages: the measurement model and the structural model. Firstly, the measurement model is employed to assess the outer model. Secondly, the structural model is used to assess the inner model. The data analysis results are used to address the research questions and support the selected model.

FINDINGS

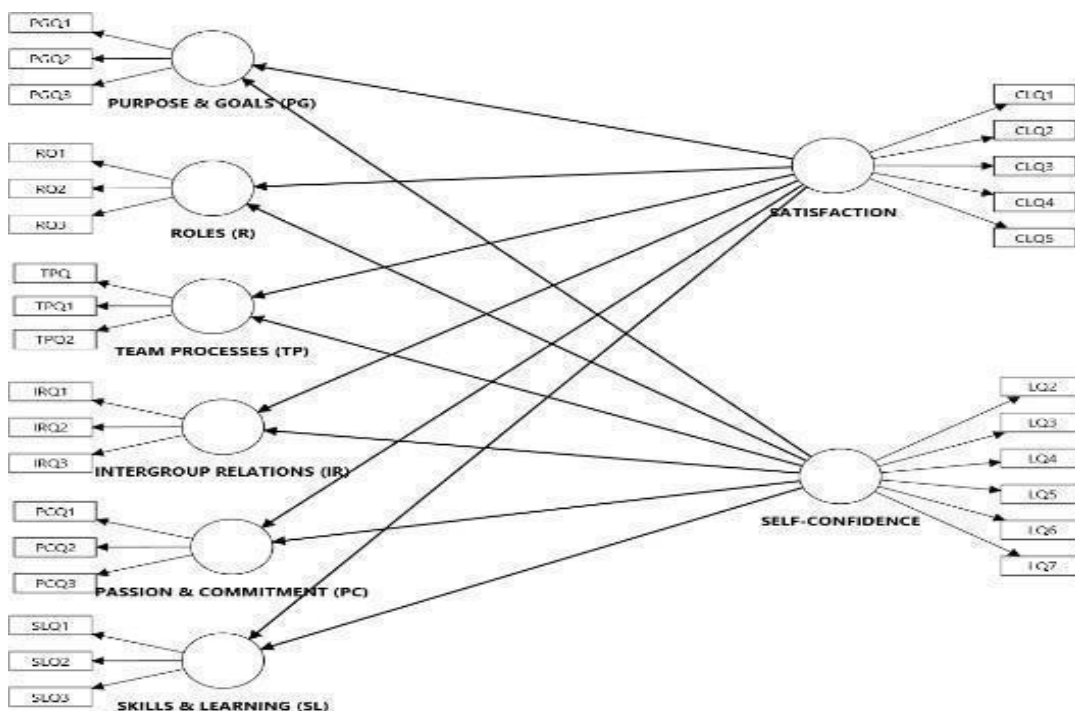
Lower order construct (LOC) is the model shaped for the current study and the reflective measurement model, which is the formation of a single unobserved latent construct was selected. This construct impacts multiple variables (indicators). An additional key aspect of LOC is that the indicators are interchangeable. In this study, the measurement model includes two main parts: student-related factors and group work-related factors. Student-related factors include satisfaction with current learning and self-confidence in learning, which show students' perceptions and psychological readiness. Group work-related factors include purpose and goals, roles, team processes, intergroup relations, passion and commitment, and skills and learning, which describe how group work functions and how effective it is. Together, these constructs form a complete framework for examining how students' perceptions influence group performance and learning outcomes in an educational setting.

The findings are presented in two stages. The first stage presents the measurement model, and the third stage presents the structural model as well as answers research questions.

Measurement Model

In SmartPLS, the reliability and validity of the constructs are assessed using the measurement model (Figure 2), which is carried out by examining the relationships between constructs and their observable indicators. The measurement model evaluates the outer model. A more detailed description of this model is presented in the tables below.

Figure 2 - Measurement Model for the current study



Reliability

Reliability is assessed by examining indicator reliability and internal consistency reliability (Ringle & Sarstedt, 2016). Internal consistency is evaluated using Composite Reliability (ρ_c) and Cronbach's Alpha. The recommended cut-off value for Cronbach's Alpha is between 0.70 and 0.90, while the cut-off values for Composite Reliability (ρ_c) are also between 0.70 and 0.90. For indicator reliability, factor loadings should exceed 0.70, and squared loadings should be ≥ 0.50 . In addition, the Average Variance Extracted (AVE) should be ≥ 0.50 to establish adequate convergent validity.

Table 4 - Results for Reliability-Satisfaction

CONSTRUCT/ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (ρ_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.902	0.928	0.719
CLQ1	0.874			
CLQ2	0.826			
CLQ3	0.866			
CLQ4	0.815			
CLQ5	0.858			

Table 4 presents the results of the reliability and convergent validity analysis for the Satisfaction construct. The findings show strong internal consistency, with a Cronbach's alpha value of 0.902 and a composite reliability score of 0.928, both above the recommended levels. The five items (CLQ1–CLQ5) show strong factor loadings ranging from 0.815 to 0.874, indicating that each item contributes well to the construct. In addition, the average variance extracted (AVE) value of 0.719 is above the required threshold, showing good convergent validity for the Satisfaction construct.

Table 5 - Results for Reliability-Self-Confidence

CONSTRUCT/ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (ρ_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.887	0.914	0.64
LQ2	0.774			
LQ3	0.738			
LQ4	0.789			
LQ5	0.853			
LQ6	0.812			
LQ7	0.829			

Table 5 presents the results of the reliability and convergent validity analysis for the Self-Confidence construct. The results show a high level of internal consistency, with a Cronbach's alpha of 0.887 and a composite reliability (ρ_c) value of 0.914, both above the accepted benchmark levels. The six items (LQ2–LQ7) show acceptable to strong factor loadings, ranging from 0.738 to 0.853, indicating that each item represents the construct well. In addition, the average variance extracted (AVE) value of 0.64 is above the minimum required level, confirming good convergent validity for measuring students' self-confidence in learning.

Table 6 - Results for Reliability- Purpose and Goals (PG)

CONSTRUCT/ ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (rho_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.927	0.954	0.872
PGQ1	0.936			
PGQ2	0.939			
PGQ3	0.927			

Table 6 presents the results of the reliability and convergent validity analysis for the Purpose and Goals (PG) construct. The results show very strong internal consistency, with a Cronbach's alpha of 0.927 and a composite reliability (pc) value of 0.954, both above the accepted threshold levels. The three items (PGQ1–PGQ3) show very strong factor loadings, ranging from 0.927 to 0.939, indicating that each item strongly represents the construct. In addition, the average variance extracted (AVE) value of 0.872 shows a high level of convergent validity for the Purpose and Goals construct.

Table 7 - Results for Reliability-Roles (R)

CONSTRUCT/ ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (rho_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.914	0.946	0.853
RQ1	0.921			
RQ2	0.921			
RQ3	0.929			

The results of the reliability and convergent validity analysis for the Roles (R) construct are presented in Table 7. The results confirm very high internal consistency, as reflected in a Cronbach's alpha value of 0.914 and a composite reliability (pc) of 0.946, both of which surpass the recommended threshold levels. The three items (RQ1–RQ3) exhibit very high factor loadings, ranging from 0.921 to 0.929, indicating that each item contributes significantly to the construct. In addition, the average variance extracted (AVE) value of 0.853 provides strong evidence of convergent validity, substantiating the reliability and strength of the Roles construct.

Table 8 - Results for Reliability-Team Processes (TP)

CONSTRUCT /ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (rho_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.908	0.942	0.844
TPQ1	0.914			
TPQ2	0.908			
TPQ3	0.934			

Table 8 presents the results of the reliability and convergent validity analysis for the Team Processes (TP) construct. The results show a high level of internal consistency, with a Cronbach's alpha of 0.908 and a composite reliability (pc) value of 0.942, both above the accepted reliability standards. The three items used to measure team processes show strong factor loadings, ranging from 0.908 to 0.934, indicating that each item clearly reflects the construct. In addition, the average variance extracted (AVE) value of 0.844 is above the recommended level, showing strong convergent validity for the Team Processes construct.

Table 9 - Results for Reliability- Intergroup Relations (IR)

CONSTRUCT/ ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (rho_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.914	0.946	0.853
IRQ1	0.904			
IRQ2	0.923			
IRQ3	0.944			

Table 9 presents the results of the reliability and convergent validity analysis for the Intergroup Relations (IR) construct. The results show very strong internal consistency, with a Cronbach's alpha of 0.914 and a composite reliability (pc) value of 0.946, both above the recommended reliability criteria. The three items (IRQ1–IRQ3) show high factor loadings, ranging from 0.904 to 0.944, indicating that each item strongly contributes to the construct. In addition, the average variance extracted (AVE) value of 0.853 provides strong evidence of convergent validity, confirming the reliability and strength of the Intergroup Relations construct.

Table 10 - Results for Reliability- Passion & Commitment (PC)

CONSTRUCT/ ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (rho_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.894	0.934	0.826
PCQ1	0.92			
PCQ2	0.897			
PCQ3	0.909			

Table 10 presents the results of the reliability and convergent validity analysis for the Passion and Commitment (PC) construct. The results show a high level of internal consistency, with a Cronbach's alpha of 0.894 and a composite reliability (pc) value of 0.934, both above the recommended threshold values. The three items (PCQ1–PCQ3) show strong factor loadings ranging from 0.897 to 0.920, indicating that each item accurately represents the construct. In addition, the average variance extracted (AVE) value of 0.826 provides strong evidence of good convergent validity for the Passion and Commitment construct.

Table 11 - Results for Reliability- Skills & Learning (SL)

CONSTRUCT/ ITEM	FACTOR LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY (rho_c)	AVERAGE VARIANCE EXTRACTED (AVE)
		0.919	0.948	0.86
SLQ1	0.927			
SLQ2	0.933			
SLQ3	0.922			

Table 11 presents the results of the reliability and convergent validity analysis for the Skills and Learning (SL) construct. The results show excellent internal consistency, with a Cronbach's alpha of 0.919 and a composite reliability (pc) value of 0.948, both above accepted reliability standards. The three items (SLQ1–SLQ3) show very strong factor loadings, ranging from 0.922 to 0.933, indicating that each item effectively represents the construct. In addition, the average variance extracted (AVE) value of 0.860 provides strong evidence of good convergent validity for the Skills and Learning construct.

Validity

According to Ramayah et.al. (2018), for validity, the Discriminant validity (HTMT) needs to be <0.85 or <0.90 .

Table 12 - Discriminant Validity (HTMT)

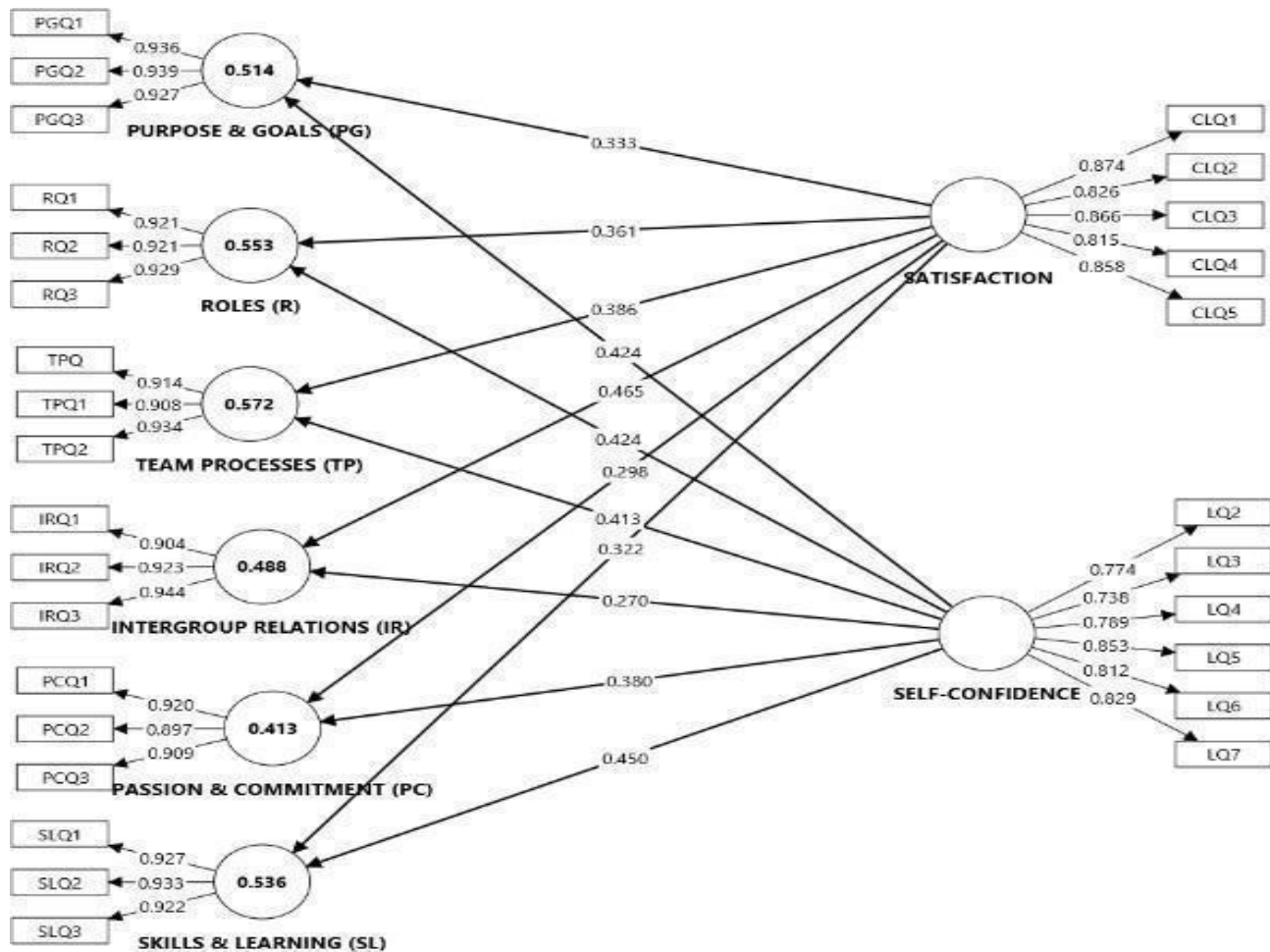
Variables	IR	PC	PG	R	Satisfaction	Self-Confidence	SL	TP
Intergroup Relations (IR)	—							
Passion & Commitment (PC)	0.932	—						
Purpose & Goals (PG)	0.834	0.830	—					
Roles (R)	0.846	0.847	0.891	—				
Satisfaction	0.745	0.664	0.725	0.762	—			
Self-Confidence	0.708	0.692	0.758	0.786	0.885	—		
Skills & Learning (SL)	0.827	0.898	0.803	0.865	0.741	0.779	—	
Team Processes (TP)	0.882	0.882	0.892	0.921	0.786	0.800	0.898	—

Table 12 shows the results of the discriminant validity assessment for the study variables using the Heterotrait–Monotrait (HTMT) criterion. Overall, the HTMT values for all constructs: intergroup relations, passion and commitment, purpose and goals, roles, satisfaction, self-confidence, skills and learning, and team processes, are below the recommended cut-off value of 0.90, although a few are close to it. These results indicate that the constructs are different from each other and measure separate aspects. Therefore, acceptable discriminant validity is confirmed, showing that multicollinearity is not a problem and that each construct remains unique in the measurement model.

Structural Model

The hypothesized causal relationships between constructs are visualized in SmartPLS through the structural model (Figure 3). Reliability and validity in the measurement model are first established, after which the structural model is formed. For the analysis of the structural model, bootstrapping is conducted, and collinearity, path coefficients, coefficients of determination, effect size, PLS predict, and IPMA are examined. In addition to that, the analysis in the structural model allows the researcher to answer research questions 1-14 and hypotheses 1-14. Figure 3 below shows the structural model for this study. Detailed explanation is elaborated in Tables below.

Figure 3 - Structural Model of the Study



Collinearity

According to (Ringle & Sarstedt (2016), the cut-off value for collinearity inner model VIF is ≤ 5.0 .

Table 13 - Collinearity

	Original sample (O)
SATISFACTION -> INTERGROUP RELATIONS (IR)	2.684
SATISFACTION -> PASSION & COMMITMENT (PC)	2.684
SATISFACTION -> PURPOSE & GOALS (PG)	2.684
SATISFACTION -> ROLES (R)	2.684
SATISFACTION -> SKILLS & LEARNING (SL)	2.684
SATISFACTION -> TEAM PROCESSES (TP)	2.684
SELF-CONFIDENCE -> INTERGROUP RELATIONS (IR)	2.684
SELF-CONFIDENCE -> PASSION & COMMITMENT (PC)	2.684
SELF-CONFIDENCE -> PURPOSE & GOALS (PG)	2.684
SELF-CONFIDENCE -> ROLES (R)	2.684
SELF-CONFIDENCE -> SKILLS & LEARNING (SL)	2.684
SELF-CONFIDENCE -> TEAM PROCESSES (TP)	2.684

Variance inflation factor (VIF) values from the original sample are used to assess collinearity in the structural

model, as presented in Table 13. Intergroup relations, along with passion and commitment, purpose and goals, roles, skills and learning, and team processes, are all predicted by satisfaction and self-confidence, with all paths showing the same variance inflation factor (VIF) value of 2.684. Since these values are below the accepted threshold of 5.0, multicollinearity is not a problem. Overall, the results show that the predictor variables are independent of each other, supporting the stability, strength, and reliability of the structural model estimates.

Coefficients of determination (R^2)

According to Ramayah et al. (2018), coefficients of determination (R^2) 0.2 to 0.7, depending on the field of study. Social Sciences and Economics follows the range above.

Table 14 - R^2

	Original sample (O)
INTERGROUP RELATIONS (IR)	0.488
PASSION & COMMITMENT (PC)	0.413
PURPOSE & GOALS (PG)	0.514
ROLES (R)	0.553
SKILLS & LEARNING (SL)	0.536
TEAM PROCESSES (TP)	0.572

Table 14 presents the coefficients of determination (R^2) for the endogenous variables in the structural model, showing how much the predictor variables explain the variance in each construct. The R^2 values range from 0.413 to 0.572, indicating moderate to strong explanatory power. Team Processes (TP) has the highest R^2 value at 0.572, followed by Roles (0.553), Skills and Learning (0.536), and Purpose and Goals (0.514). Intergroup Relations (0.488) and Passion and Commitment (0.413) also show meaningful levels of explained variance. Overall, these results show that satisfaction and self-confidence provide sufficient explanatory power in explaining differences across the group work-related constructs.

P-Value

Table 15 - Interpretation for p-value

Thresholds	Interpretation	Decision
$p \leq 0.05$	Often considered statistically significant	Reject H_0
$p \leq 0.01$	Indicates very strong evidence against H_0	Reject H_0
$p > 0.05$	Weak or no evidence against H_0	Failure to reject H_0

According to Goodman (1999), a threshold of p-value is the cut-off for determining statistical significance, most commonly set at 0.05. Below is the table that interprets the threshold.

Table 16 - Path Coefficient for the current study

	T statistics ($ O/STDEV $)	P values
SATISFACTION -> INTERGROUP RELATIONS (IR)	4.221	0
SATISFACTION -> PASSION & COMMITMENT (PC)	2.641	0.008
SATISFACTION -> PURPOSE & GOALS (PG)	2.863	0.004
SATISFACTION -> ROLES (R)	3.691	0
SATISFACTION -> SKILLS & LEARNING (SL)	3.294	0.001

SATISFACTION -> TEAM PROCESSES (TP)	3.563	0
SELF-CONFIDENCE -> INTERGROUP RELATIONS (IR)	2.391	0.017
SELF-CONFIDENCE -> PASSION & COMMITMENT (PC)	3.259	0.001
SELF-CONFIDENCE -> PURPOSE & GOALS (PG)	3.64	0
SELF-CONFIDENCE -> ROLES (R)	4.447	0
SELF-CONFIDENCE -> SKILLS & LEARNING (SL)	4.686	0
SELF-CONFIDENCE -> TEAM PROCESSES (TP)	4.026	0

Table 16 presents the path coefficient results of the study, showing both the strength and significance of the relationships between satisfaction, self-confidence, and the group work constructs. All hypothesised paths have T-values above the critical level of 1.96 and p-values below 0.05, confirming that the relationships are statistically significant. Satisfaction has a significant effect on intergroup relations, passion and commitment, purpose and goals, roles, skills and learning, and team processes. Similarly, self-confidence shows strong and significant effects on all related constructs, with higher T-values found for roles and skills and learning. Overall, these results show clear and strong relationships within the structural model.

Effect Size (f^2)

According to Ramayah et al. (2018), the cutoff values for effect sizes (f^2) are 0.02 (small), 0.15 (medium), and 0.35 (large). This section presents data to answer research questions;

RQ13 - Is there a significant effect between Satisfaction and Team Interactions?

H13 - There is no significant effect between Satisfaction and Team Interactions

RQ14 - Is there a significant effect between Self-Confidence and Team Interactions?

H14 - Is there a significant effect between Self-Confidence and Team Interactions?

According to Ringle et al. (2024), for effect size, values from 0.02 to 0.15 are considered small. Values between 0.15 to 0.35 are considered medium while values 0.35 and above are considered large.

Table 17 - Effect Size

	Original sample (O)	Interpretation
SATISFACTION -> INTERGROUP RELATIONS (IR)	0.157	MEDIUM
SATISFACTION -> PASSION & COMMITMENT (PC)	0.057	SMALL
SATISFACTION -> PURPOSE & GOALS (PG)	0.085	SMALL
SATISFACTION -> ROLES (R)	0.109	SMALL
SATISFACTION -> SKILLS & LEARNING (SL)	0.083	SMALL
SATISFACTION -> TEAM PROCESSES (TP)	0.13	SMALL
SELF-CONFIDENCE -> INTERGROUP RELATIONS (IR)	0.053	SMALL
SELF-CONFIDENCE -> PASSION & COMMITMENT (PC)	0.092	SMALL
SELF-CONFIDENCE -> PURPOSE & GOALS (PG)	0.138	SMALL
SELF-CONFIDENCE -> ROLES (R)	0.15	MEDIUM
SELF-CONFIDENCE -> SKILLS & LEARNING (SL)	0.163	MEDIUM
SELF-CONFIDENCE -> TEAM PROCESSES (TP)	0.149	SMALL

Table 17 presents the effect size (f^2) results, showing how much influence satisfaction and self-confidence have on the different group work dimensions. The results show that satisfaction has small to medium effects on most constructs, with its strongest effect on skills and learning, which is considered a large effect. In comparison, self-

confidence generally shows small to medium effect sizes, with moderate effects especially on roles and skills and learning. Overall, the findings show that although both satisfaction and self-confidence significantly influence group work constructs, the strength of their effects varies across outcomes, ranging from small to meaningful. This difference provides useful insight into the relative importance of each predictor in the structural model.

PLS Predict (Q^2)

In PLS-SEM, it is stated that $Q^2 \geq 0$ (Ringle et al., 2024). Table 18 below reveals the PLS Predict (Q^2) for the dependent variable. The analysis reveals the Q^2 for all items in the dependent variable - connectedness.

Table 18 - PLS Predict (Q^2)

	Q^2predict	RMSE	MAE
INTERGROUP RELATIONS (IR)	0.472	0.736	0.571
PASSION & COMMITMENT (PC)	0.392	0.79	0.583
PURPOSE & GOALS (PG)	0.496	0.719	0.521
ROLES (R)	0.537	0.691	0.491
SKILLS & LEARNING (SL)	0.518	0.703	0.52
TEAM PROCESSES (TP)	0.557	0.673	0.494

Table 18 presents the PLS Predict (Q^2) results, which assess the predictive relevance of the model and its ability to predict outcomes beyond the sample data. All constructs show positive Q^2 predict values, ranging from 0.392 to 0.557, indicating strong predictive relevance in the model. Among the constructs, Team Processes (TP) and Roles (R) have the highest Q^2 values, showing better predictive accuracy. In addition, the RMSE and MAE values for all constructs are low and consistent, indicating acceptable prediction error levels. Overall, the results show that the proposed model has good predictive ability for key group work dimensions, including intergroup relations, motivation and commitment, goal clarity, role clarity, skills development, and team processes.

IPMA

To evaluate the performance and importance of the chosen constructs or indicators within a model, Importance-Performance Matrix Analysis (IPMA) is used, as proposed by Ringle and Sarstedt (2016). In the context of this study, individual IPMA analysis was prepared on each construct and reported in Table 19.

Table 19 - Latent Variables Average Performance (Performance)

	LV performance value, average
INTERGROUP RELATIONS (IR)	67.007
PASSION & COMMITMENT (PC)	66.983
PURPOSE & GOALS (PG)	73.242
ROLES (R)	73.133
SATISFACTION	70.887
SELF-CONFIDENCE	69.094
SKILLS & LEARNING (SL)	66.165
TEAM PROCESSES (TP)	67.139

Table 19 presents the average performance scores of the latent variables, showing respondents' overall perceptions of each construct. Purpose and Goals (PG) and Roles (R) have the highest scores, at 73.242 and 73.133 respectively, indicating very strong perceptions in these areas. Satisfaction (70.887) and Self-Confidence (69.094) also show relatively high performance levels. In comparison, Skills and Learning (66.165), Passion and Commitment (66.983), Intergroup Relations (67.007), and Team Processes (67.139) show moderate

performance levels. Overall, the results show generally positive perceptions across all constructs, although some areas are rated higher than others.

CONCLUSION

Summary of Findings and Discussions

Table 20 - Outcome of Research Hypothesis

NO	Research Question	Research Hypothesis	Outcome
1	Is there a significant relationship between Satisfaction and Purpose?	Ho1: There is no significant relationship between Satisfaction and Purpose	Reject the null hypothesis. There is a relationship between Satisfaction and Purpose.
2	Is there a significant relationship between Satisfaction and Roles?	Ho2: There is no significant relationship between Satisfaction and Roles	Reject the null hypothesis. There is a relationship between Satisfaction and Roles.
3	Is there a significant relationship between Satisfaction and Team Processes?	Ho3: There is no significant relationship between Satisfaction and Team Processes	Reject the null hypothesis. There is a relationship between Satisfaction and Team Processes.
4	Is there a significant relationship between Satisfaction and Intergroup Relations?	Ho4: There is no significant relationship between Satisfaction and Intergroup Relations	Reject the null hypothesis. There is a relationship between Satisfaction and Intergroup Relations.
5	Is there a significant relationship between Satisfaction and Passion?	Ho5: There is no significant relationship between Satisfaction and Passion	Reject the null hypothesis. There is a relationship between Satisfaction and Passion.
6	Is there a significant relationship between Satisfaction and Skills?	Ho6: There is no significant relationship between Satisfaction and Skills	Reject the null hypothesis. There is a relationship between Satisfaction and Skills.
7	Is there a significant relationship between Self-Confidence and Purpose?	Ho7: There is no significant relationship between Self-Confidence and Purpose	Reject the null hypothesis. There is a relationship between Self-Confidence and Purpose.
8	Is there a significant relationship between Self-Confidence and Roles?	Ho8: There is no significant relationship between Self-Confidence and Roles	Reject the null hypothesis. There is a relationship between Self-Confidence and Roles.
9	Is there a significant relationship between Self-Confidence and Team Processes?	Ho9: There is no significant relationship between Self-Confidence and Team Processes	Reject the null hypothesis. There is a relationship between Self-Confidence and Team Processes.

10	Is there a significant relationship between Self-Confidence and Intergroup Relations?	Ho10: There is no significant relationship between Self-Confidence and Intergroup Relations	Reject the null hypothesis. There is a relationship between Self-Confidence and Intergroup Relations.
11	Is there a significant relationship between Self-Confidence and Passion?	Ho11: There is no significant relationship between Self-Confidence and Passion	Reject the null hypothesis. There is a relationship between Self-Confidence and Passion.
12	Is there a significant relationship between Self-Confidence and Skills?	Ho12: There is no significant relationship between Self-Confidence and Skills	Reject the null hypothesis. There is a relationship between Self-Confidence and Skills.
13	Is there a significant effect between Satisfaction and Team Interactions?	Ho13: There is no significant between Satisfaction and Team Interactions	Effect of Satisfaction on; Intergroup relations = small Passion & commitment = medium Purpose & goals = medium Roles = medium Skills & Learning = large Team processes = small
14	Is there a significant effect between Self- Confidence and Team Interactions?	Ho14: There is no significant between Self- Confidence and Team Interactions	Effect of Self-Confidence on; Intergroup relations = small Passion & commitment = small Purpose & goals = small Roles = Medium Skills & Learning = medium Team processes = small

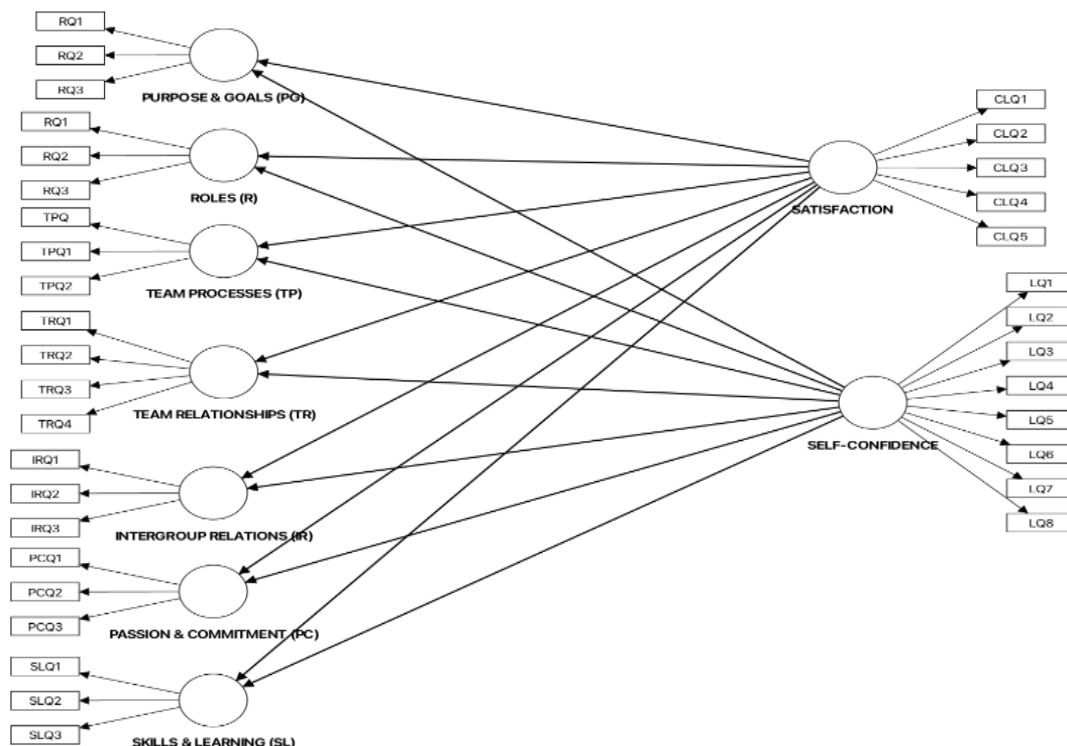
Table 20 summarises the outcomes of 14 research hypotheses examining relationships and effects involving Satisfaction and Self-Confidence. Hypotheses H1– H12 indicate relationships between Satisfaction and Self-Confidence with six team dimensions: purpose, roles, team processes, intergroup relations, passion, and skills. For effect analysis, Satisfaction shows small effects on intergroup relations and team processes, medium effects on passion, purpose, and roles, and a large effect on skills and learning. Self-Confidence demonstrates mostly small effects, with medium influence on roles and skills and learning. Overall, both constructs contribute to multiple aspects of team interactions.

This study set out to explore the influence of satisfaction and self-confidence on group interaction using a PLS-SEM approach, focusing on key aspects of effective teamwork such as purpose and goals, roles, team processes, intergroup relations, passion and commitment, and skills and learning. The findings show that both student satisfaction and self-confidence significantly predict all group interaction factors, confirming the strength of the proposed conceptual model. Satisfaction has a particularly small effect on skills and learning, while self-confidence has a strong influence on roles as well as skills and learning. These results suggest that students who are more satisfied with their learning experience and more confident in their abilities are more likely to participate actively in group processes and gain better benefits from collaborative learning. Overall, the model shows good reliability, validity, and predictive relevance, supporting the use of PLS-SEM for studying complex psychological factors in educational group work contexts (Fornell & Bookstein, 1982; Hair et al., 2017; Ramayah et al., 2018).

Implications and Suggestions for Future Research

Figure 4 below presents the proposed model for the influence of satisfaction and self-confidence in group interaction.

Figure 4 - The Proposed Model



From a theoretical standpoint, the results are consistent with Tuckman's model of group development, which highlights the importance of effective interaction in achieving successful group performance. The findings also support Self-Efficacy Theory by showing that students' beliefs in their own abilities strongly affect their engagement, motivation, and satisfaction in group activities. In practical terms, the study shows that educators should design group tasks that improve student satisfaction and build confidence. This can be done through clear role assignment, setting shared goals, encouraging good team processes, and building supportive relationships within and between groups (Bateman et al., 2002; Studnicka et al., 2023). Using these strategies can improve the quality of teamwork and also support deeper learning and long-term motivation, in line with previous studies on collaborative learning and emotional factors (Alzubi et al., 2025; De Prada et al., 2024).

Despite its contributions, this study also has some limitations that suggest areas for future research. The sample size and research setting were limited, so future studies could use larger and more varied samples from different disciplines or institutions to improve generalisability. In addition, the use of self-reported data may lead to response bias. Future research could use mixed methods, such as interviews or classroom observations, to gain deeper understanding of group interaction. Finally, future studies could also examine possible mediating or moderating factors, such as motivation, willingness to communicate, or group size, to better understand how satisfaction and self-confidence influence group dynamics in collaborative learning.

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APPENDIX

ROLE PLAY /ACTIVITY AND TEAM WORK

(This instrument is adapted from Bateman, et al., 2002 and Studnicka, et.al, 2023)

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SECTION	VARIABLE	CONSTRUCT	ITEM	
B	STUDENT SATISFACTION AND SELF-CONFIDENCE IN LEARNING Studnicka (2023)	Satisfaction with Current Learning	5	13
		Self-Confidence in Learning	8	
C	GROUP WORK Bateman et al. (2002)	Purpose and Goals (PG)	3	22
		Roles (R)	3	
		Team Processes (TP)	3	
		Intergroup Relations (IR)	3	
		Passion and Commitment (PC)	3	
		Skills and Learning (SL)	3	
				35

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

Section B- Student Satisfaction and Self Confidence in Learning (Sscl)

Satisfaction with Current Learning (CL)

ITEM	1	2	3	4	5
CLQ1 The methods used in this role play /activity were supportive and effective.					
CLQ2 The role play /activity provided me with a variety of educational materials and activities to promote my learning.					
CLQ3 I liked the way my instructor taught me the role play /activity					
CLQ4 The teaching materials used in this role play /activity were motivating and helped me learn.					
CLQ5 The way my instructor taught the role play /activity was appropriate to my way of learning.					

Self-Confidence in Learning (L)

ITEM	1	2	3	4	5
LQ1 I am confident that I am mastering the class role- play/activity presented to me by my instructors.					
LQ2 I am confident that this role play/activity covered the essential content necessary to master the material covered in the curriculum.					
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.					
LQ4 My instructors used a variety of helpful resources to teach this role play/activity.					
LQ5 It is my responsibility as a student to learn what I need during role play /activity classes.					
LQ6 I know how to get help when I do not understand the concepts in the role play/activity.					
LQ7 I know how to use role play exercises to learn the critical/key aspects of this course.					

LQ8 It is the instructor's responsibility to show me what I need to learn during the role play/activity class.

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SECTION C- GROUP WORK

Purpose and Goals (PG)

ITEM	1	2	3	4	5
PGQ1 Our team has a meaningful, shared purpose.					
PGQ2 We are strongly committed to a shared mission.					
PGQ3 We set and meet challenging goals.					

Roles (R)

ITEM	1	2	3	4	5
RQ1 Team members clearly understand their roles.					
RQ2 When an individual's role changes, an intentional effort is made to clarify it for everyone on the team.					
RQ3 Everyone values what each member contributes to the team.					

Team Processes (TP)

ITEM	1	2	3	4	5
TPQ1 We address and resolve issues quickly.					
TPQ2 Our team works with a great deal of flexibility so that we can adapt to changing needs.					
TPQ3 When we choose consensus decision-making, we do it effectively.					

Intergroup Relations (IR)

ITEM	1	2	3	4	5
IRQ1 We are able to resolve conflicts with other teams collaboratively.					
IRQ2 We communicate effectively with other groups.					
IRQ3 Our collaborations with other teams are productive, worthwhile, and yield good results.					

Passion and Commitment (PC)

ITEM	1	2	3	4	5
PCQ1 Working on our team inspires people to do their best.					
PCQ2 People are proud to be part of our team.					
PCQ3 My team is proud of its accomplishments and optimistic about our work.					

Skills and Learning (SL)

ITEM	1	2	3	4	5
SLQ1 We have the skills we need to do our jobs effectively.					
SLQ2 We view everything, even mistakes, as opportunities for learning and growth					
SLQ3 Team members embrace continuous improvement as a way of life.					