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Enhancing Team Performance Unveiling Novel Insights into Teamwork Dynamics

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Abstract

This article presents experimental results aimed at assessing the influencing factors on teamwork effectiveness by elucidating the interplay of variables and their impact on collaborative outcomes. The study involved 252 primary data points from students in universities across major provinces and cities in Vietnam. The findings reveal that five factors directly influence students' teamwork effectiveness: the quality of communication within the group, the strength of the team, the goals of group activities, the utilization of resources, and innovation. Moreover, three factors impact teamwork effectiveness through intermediary conditions: knowledge sharing, charismatic leadership, and the skills of team members. These results provide valuable insights for educators and administrators in higher education institutions, offering guidance for enhancing teamwork effectiveness among students.

Keywords: *teamwork, effectiveness, team performance, communication, resource, goal, objective, innovation, synergy, leadership, skill, knowledge, PLS, higher education, Vietnam*

1. Introduction

The importance of team performance cannot be denied, as it plays a crucial role in achieving accomplishments and driving organizational growth. A team is where a unique combination of individuals with diverse skills, knowledge, and perspectives come together, enabling the exploration of new ideas, solving complex problems, and achieving outstanding results. Team performance is a determining factor in the success of an organization. When team members work together effectively, their collaboration leads to creativity, increased productivity, and superior outcomes. Team performance not only influences the achievements and success of an organization but also plays a crucial role in fostering innovation, personal development, and enhancing organizational adaptability, as indicated by the research conducted by Chen, B., & Lu, Y. (2020).

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Previous researchers have found that the following factors directly promote teamwork effectiveness: quality of internal communication (Eman, Hernández and Romá, 2023), teamwork quality (Berber, Slavić and Aleksić, 2020), team culture (Tsai and Compeau, 2021) (Jamshed and Majeed, 2019), perceived leadership (Baviera, Baviera-Puig and Escribá-Pérez, 2022). According to Eman, Hernández and Romá (2023), the quality of communication inside the group is the key to fostering team effectiveness, and this element plays a role in associating charismatic leadership with group efficiency. The average member perception of charismatic leadership and the homogeneity of group members' perceptions of charismatic leadership are two aspects of team effectiveness. Another research by Berber, Slavić and Aleksić (2020) in the banking industry in Serbia measures employee innovative behavior, collaboration among members, and team work quality, shows that team performance is positively connected to communication quality, coordination, member balance, mutual support, effort, and cohesiveness. Furthermore, the findings of Jamshed and Majeed (2019) show that information sharing improves the effectiveness of healthcare teams. At the same time, team member emotional intelligence promotes team performance by encouraging necessary group member actions for team effectiveness. Through information sharing and group emotional intelligence, subculture has been demonstrated to have an indirect and beneficial impact on team performance. Team culture fosters mutual support among members of a work group, improves the quality of communication, and allows members of a team to respect and share information, all of which contribute to team effectiveness ((Jamshed, Mohd Nor and Abu Bakar, 2017), (Kessel, Kratzer and Schultz, 2012), (Kucharska, 2016), (Pe et al., 2006). On the other hand, the research of Baviera, Baviera-Puig and Escribá-Pérez (2022) in the field of higher education indicates that self-perception regarding leadership abilities of self and demanding groups would have a good influence on group performance.

Teamwork is characterized as a process wherein a team concentrates on collaborative interactions and actions to cultivate an environment that esteems cooperation among its members. This distinctive collaborative process empowers team members to forge effective and mutually beneficial partnerships, facilitating the achievement of team objectives through the sharing of information and skills (Mijakoski et al., 2018). Positioned as one of the human resource management approaches, teamwork significantly contributes to enhancing a company's competitiveness (Nzewi, Chiekezie and Nnesochi, 2015). In the contemporary workplace, teamwork holds essential significance by enhancing team members' productivity, fostering creativity, building connections, solving problems, and promoting personal growth. This underscores the pivotal role of collaboration not only in individual development but also in the advancement of communities, nations, and the global community at large. Team spirit is recognized as a critical attribute across various settings, spanning classrooms to workplaces. Beyond its benefits for the organization, teamwork plays a vital role in individuals' professional development, improving their skills, knowledge, and task performance.

Previous research has underscored the significance of teamwork and its broader impact on various factors, such as employee satisfaction Ruotsalainen et al. (2023), leadership skills (Ruotsalainen et al., 2023), and work processes (Martín-Sómer, Linares and Gomez-Pozuelo, 2023). These studies lay the groundwork for further exploration and enhancement of teamwork to achieve specific outcomes. In the hospital field, a study by Ruotsalainen et al. (2023), revealed that self-organization within teams positively influences job quality control, task distribution, and contributes to the reduction of job strain. Similarly, in the higher education sector, a study of 159 university students in Spain by Martín-Sómer, Linares and Gomez-Pozuelo (2023) demonstrates that when engineering students manage workgroups with assigned roles. The

impact of teamwork on performance extends to employee-related decisions, encompassing promotion, transition, firing, secondment, as well as the analysis of training needs, employee development, research, and planning assessment (Askari et al., 2020).

Teamwork activities in higher education have been extensively examined in previous studies. Klonek and Parker (2021) research in the higher education field underscores the growing significance of virtual teams and virtual work in the era of Industry 4.0. Moreover, the research conducted by Marlow et al. (2018) has illustrated that the correlation between the quality of team communication and team performance is significantly stronger than the correlation between the frequency of communication and team performance. Petkova, Domingo and Lamm (2021) conducted research involving 266 undergraduate students at the individual predictive level and group prediction level. At the individual predictive level, mid-term peer evaluation scores that students received were found to have a negative impact on individual improvement within the team, especially when these scores were low. At the group prediction level, increased task conflict, process conflict, interdependence, and member cohesion contributed to enhanced team performance improvement. Conversely, an increase in conflict within the relationships among team members led to a decrease in team performance improvement.

It is evident that there exists a research gap in the realm of teamwork process and team performance within higher education, despite the university environment being a setting where students consistently hone their teamwork skills through presentations, group projects, and team reports. This study aims to explore whether a positive correlation exists between teamwork process and team performance in the context of university education. To address this research objective, the study formulates the research question: "Does the teamwork process have a positive or negative impact on the effectiveness of team activities?"

Vietnam boasts a rich cultural heritage and a profound historical legacy, characterized by narratives that highlight a resilient spirit of unity in response to foreign incursions (Ngo, Hoang and Tran, 2023). The essence of Vietnamese culture embodies the guiding principle of "one for all," exerting a noticeable influence on collaborative dynamics within student interactions and teamwork. Moreover, Vietnam stands out as a youthful nation undergoing a rapid transformation of its educational system. Exploring the nuances of teamwork dynamics among university students and assessing the effectiveness of learning methodologies holds the promise of making a substantial contribution to the improvement of educational quality within the nation.

The research endeavors to discern the integral factors in evaluating the teamwork process and subsequently identify specific elements within teamwork that can enhance team effectiveness in the university setting. In terms of theoretical contribution, this study aims to enrich Cognitive Load Theory (Van Merriënboer and Sweller, 2005) by introducing the quality of communication processes and efficient resource utilization as pivotal determinants of group activity effectiveness. It also seeks to enrich Social Learning Theory (Bandura, 1973) by incorporating the role of charismatic leadership in enhancing members' teamwork skills, and Belbin role theory (Belbin, 2011) by highlighting an optimal number of roles for each member. Additionally, it contributes to Similarity-Attraction Theory (Byrne, 1971) by emphasizing individual skills and leadership skills for continuous innovation, while expanding Knowledge-Based Theory (Spender, 1996) by advocating for regular and reasonable knowledge sharing, coupled with continuous innovation, to positively impact team performance. On a practical level, a comprehensive understanding of these teamwork factors will empower university

lecturers and leaders to systematically train their personnel in developing students' teamwork skills. These training initiatives not only strengthen individual competencies but also reinforce collaborative aptitudes, thereby fostering a conducive and positive work environment.

The structure of the article encompasses six distinct sections. Section 1 delivers a comprehensive introduction to the research issue. Section 2 is dedicated to the discussion of the theoretical framework and literature review. The research methodology is expounded upon in Section 3, followed by the presentation of research findings in Section 4. Section 5 encapsulates the drawing of conclusions and the discussion of implications for policies and theoretical contributions.

2. Literature Review

2.1 Theory

This paper adheres to the principles of Cognitive load theory (Van Merrienboer & Sweller, 2005), Social learning theory (Bandura, 1973), Belbin role theory (Belbin, 2011), Similarity-attraction theory (Byrne, 1971), and Knowledge-based theory (Spender, 1996).

Cognitive load theory (Van Merriënboer and Sweller, 2005). Based on cognitive load theory (Van Merriënboer and Sweller, 2005), a large volume of communication may lead to difficulties in accurately remembering and comprehending more relevant, previously received information.

Social learning theory (Bandura, 1973). Based on social learning theory, the position and power of team leaders play an important role model for team members. Charismatic leaders usually enact effective communication skills, techniques, and behaviors in their interactions with team members, the latter can learn and put them into practice, thereby contributing to improving the quality of intra-team communication.

Belbin role theory (Belbin, 2011). Forming teamwork in different ways has been studied over years of research (Garrido and Garine, 2014). Concretely, team-forming method which has widely used to develop this skill is based on classifying by students' roles and actually the Belbin role method is the most accepted theory worldwide. Belbin proposed the categorization of individual behavior into nine roles within the team: Plant, Monitor Evaluator and Specialist; Coordinator, Team worker and Resource Investigator; Shaper, Implementer, Completer and Finisher (Aranzabal, Epelde and Artetxe, 2022). However, the Belbin role theory could suggest that more than one role, even 2 or 3 would have to be developed by a student in a work team, being confirmed that if the group is not more than five members, all the proposed skills of Belbin are not covered (Bullen and Wood, 2006). Furthermore, it should be mentioned that this method will likely confuse students more than benefit them in terms of learning and the appropriate development of teamwork skills if it is used in their first or second year of higher. This is because these studnets are less mature.

Similarity-attraction theory (Byrne, 1971). This theory emphasizes how perceptual similarity reinforces ifself. Interactions with team members who have the same views reinforce members' beliefs, therefore when team members have similar perceptions about a significant issue related to their work objectives, supporting one member's ideas will have a positive outcom.

Knowledge-based theory (Spender, 1996) . Knowledge-based theory, which considers the organization as a dynamic entity that continuously evolves through knowledge production and utilization, is founded on the idea that knowledge is a unique strategic resource (Spender, 1996).

Given that knowledge is the primary strategic resource that enables businesses to compete in the dynamic environment (Grant, 1996) (Grant, 2009) (Spender, 1996), top management must place a high value on knowledge, establish and sustain practices for sharing it that foster open innovation and the targeted levels of organizational performance.

2.2 Knowledge Sharing and Team Performance

Shan et al. (2023) highlights the need to enhance knowledge sharing among supply chain partners while minimizing knowledge distance. To achieve this, companies are advised to prioritize knowledge sharing among their supply chain cooperative partners and establish a knowledge-sharing platform to broaden communication channels. Moreover, Yao et al. (2023) investigate how individual-level knowledge sharing and hiding behaviors collectively influence employees' creative behaviors, along with the mechanisms involved in the interaction between knowledge sharing and hiding. Therefore, we propose Hypothesis (1) as follows:

H1. *Sharing knowledge has a significant positive impact on team performance.*

2.3 Charismatic Leadership and Team Performance

Hazzam and Wilkins (2023) aimed to identify lecturers' charismatic leadership enables student engagement, ultimately impacting student learning and satisfaction in the USA. The study highlighted that lecturer charismatic leadership significantly correlates with cognitive, emotional, and behavioral engagement. The pronounced influence of lecturer charismatic leadership on emotional engagement suggests that these lecturers can foster positive emotions and mutual respect, engaging students in meaningful interactions and enjoyable learning activities. Therefore, we propose Hypothesis (2) as follows:

H2. *Charismatic leadership has a positive impact on team performance*.

2.4 Individual Skills and Team Performance

Rosendahl Huber et al. (2020) found some support for the hypothesis that balanced cognitive skills promote venture performance in a team setting, but only if the skill balance comes from the combination of individuals that each have within-person skill balance. Moreover, Sabri and Abu-Atiah (2020) revealed that teamwork Knowledge, Skills, and Ability had a significant relationship with team performance and effectiveness. Therefore, we propose Hypothesis (3) as follows:

H3. *Individual skills have a positive impact on team performance*.

2.5 Communication Quality and Team Performance

Van Zoonen, Sivunen, and Blomqvist (2023) suggest that communication between employees and their supervisors and coworkers plays a crucial role in establishing a shared understanding of trust relationships. In remote work settings, a lack of such communication processes may lead to the erosion of trust relationships (Ajzen and Taskin, 2021) (Taskin, Parmentier, and Stinglhamber, 2019). According to Tsai and Compeau (2021), formal communication plays an important role as a managerial influence mechanism that influences an employee's evaluation of a new IT system favorably when it is the anticipation stage. Therefore, we propose Hypothesis (4) as follows:

H4. *Intra-team communication quality has a positive impact on team performance.*

2.6 Team Synergy and Team Performance

Chen et al. (2021) conducted a study examining how identity conflict and identity synergy among employees with multiple team memberships may influence their innovative performance. The findings suggest that when multiple identities are more similar to each other, each identity is more likely to enhance the performance of the other identities, thereby contributing to the effectiveness of identity management. Therefore, we propose Hypothesis (5) as follows:

H5. *Team synergy has a positive impact on team performance.*

2.7 Performance Objectives and Team Performance

From the moment a team is formed, team achievement goals and team performance are likely to influence each other. Performance-approach goals are anticipated to enhance sports team performance as they provide a shared objective that unites team members in their collective effort to outperform the competition. Existing team-level studies that distinguish between team performance-approach and avoidance goals mostly suggest positive outcomes for team performance-approach goals and negative outcomes for team performance-avoidance goals (Van Mierlo and Van Hooft, 2020). Therefore, we propose Hypothesis (6) as follows:

H6. *Performance objectives has a positive impact on team performance*.

2.8 Using Resources and Team Performance

The instrumental value offered by work-oriented social media is complemented by the expressive value provided by socialization-oriented social media, contributing to firms' ability to derive business value from IT investments. Song et al. (2019) discovered that work-oriented social media and socialization-oriented social media act as complementary resources, creating synergies that enhance team and employee performance. Therefore, we propose Hypothesis (7) as follows:

H7. *Using of resources has a positive impact on team performance.*

2.9 Innovation and Team Performance

The study conducted by Park et al. (2021) has shown that at the team level an excessively high level of creative self-efficacy can affect negatively on innovation performance. While high creative self-efficacy at an individual level might influence positively performance by boosting motivation and self-confidence as well as at the team level, an overly high creative self-efficacy might cause problem such as overconfidence, a lack of critical awareness and an increase in commitment. These factors can adversely impact creative processes and team dynamics, ultimately hindering innovation performance. Therefore, we propose Hypothesis (8) as follows:

H8. *Innovation has a significant impact on team performance*.

2.9 Knowledge Sharing and Team Performance Through Using Resources and Innovation

Knowledge sharing acts as a catalyst for effective resource utilization (Singh *et al.*, 2021) and innovation (Kremer, Villamor and Aguinis, 2019) within a team, ultimately leading to enhanced team performance. It fosters an environment where information flows freely, creativity flourishes, and the collective intelligence of the team is harnessed to drive success. Open innovation requires integration of both inward and outward knowledge transfer to benefit from

the amalgamation of SMEs' renewed problem-solving capabilities, knowledge, and new opportunities in dynamic markets (Singh *et al.*, 2021). Relationships crossing organizational boundaries, physical barriers, or hierarchical levels can, like networks, provide unique information and diverse perspectives to individuals completing tasks at work (Kremer, Villamor and Aguinis, 2019). Therefore, we propose Hypothesis (9) as follows:

H9a. *Using resources plays a mediating role of the impact of knowledge sharing on team performance.*

H9b. *Innovation plays a mediating role of the impact of knowledge sharing on team performance.*

2.10 Charismatic Leadership and Team Performance Through Team Synergy and Performance Objectives

Charismatic leadership influences team performance by fostering team synergy (Ernst *et al.*, 2022) through a shared vision, motivating individuals, and creating a positive team culture. Additionally, it contributes to performance objectives by setting clear goals, inspiring commitment, and cultivating effective communication and collaboration within the team (Tuan, 2020). Therefore, we propose Hypothesis (10) as follows:

H10a. *Team synergy plays a mediating role of the impact of charismatic leadership on team performance.*

H10b. *Performance objectives plays as a mediating role of the impact of charismatic leadership on team performance.*

2.12 Individual Skills and Team Performance Through Team Synergy, Charismatic Leadership, Performance Objectives, and Innovation

Individual skills impact team performance by contributing to team synergy, aligning with charismatic leadership (Tuan, 2020), supporting performance objectives (Tuan, 2020), fostering innovation (Aina and Atan, 2020), enabling effective collaboration (Wibowo *et al.*, 2020), and promoting adaptability. Skilled behavior should not be sought solely within the individual athlete but rather that the emergence of skilled performance and learning is distributed across the athlete–opponent interaction (Krabben, Orth and van der Kamp, 2019). Team members are more likely to respond strongly to charismatic leadership as a source of resources when there is a low compatibility or fit between employees' attributes (knowledge, skills, and values) and a workplace environment, which is because charismatic leadership can help team members develop structural and social resources as well as lessen job demands that can be a hindrance during the job crafting process (Tuan, 2020). According to Aina and Atan (2020), career management is crucial because it helps individuals enhance their qualifications, which in turn promotes sustainability and development at the organizational level, which suggests that career management practices have a significant impact on improving organizational performance and sustainability. Hard skills, soft skills, organizational learning, and innovation capabilities have a positive and significant effect on lecturer performance. This means that the more positive the hard skills and soft skills the lecturers have, the lecturers' performance will also increase (Wibowo *et al.*, 2020). Therefore, we propose Hypothesis (11) as follows:

H11a. *Team synergy plays a mediating role of the impact of individual skills on team performance.*

H11b. *Charismatic leadership plays as a mediating role of the impact of individual skills on team performance.*

H11c. *Performance objectives plays as a mediating role of the impact of individual skills on team performance.*

H11d. *Innovation plays as a mediating role of the impact of individual skills on team performance.*

From this literature, the paper proposes a research model as follows:

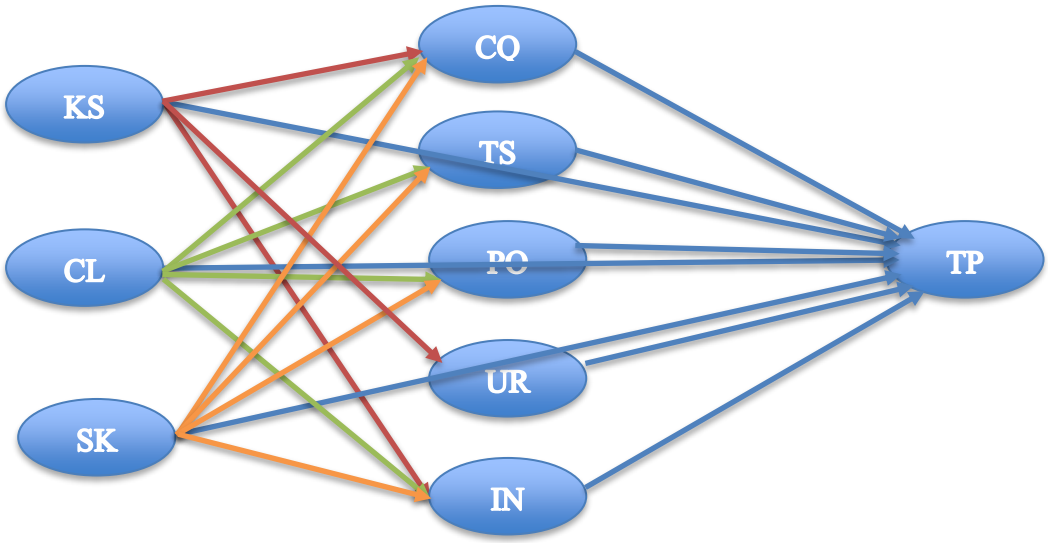

Fig. 1: Proposed Research Model.
Source: Authors' Own Source Extracted from Smart PLS.

3. Research Methodology

3.1 Variables Measurement

The dataset utilized in this study contains 22 variables and their measurement is displayed in Table 1.

Table 1. Variable's Description

Variable	Code	Measurement	Literature review
Knowledge Sharing (KS)	KS1	I am ready to transfer any information that may be useful for the team's work.	(Bartol *et al.*, 2009)
	KS2	I inform others in the workgroup about emerging developments that could enhance the efficiency of their work.	
	KS3	I actively seek useful information to share with the team.	
	KS4	I am ready to support others in my team, enabling them to benefit from my expertise.	
	KS5	I contribute innovative ideas in my field of expertise that can benefit the work of our team.	
	KS6	I regularly put forward beneficial proposals for the team.	
Intra-team Communication Quality (CQ)	CQ1	Communication between the team members is clear and to the main point.	(González-Romá and Hernández, 2014)
	CQ2	The forms of communication between the team members are diverse and appropriate to each situation (eg: face-to-face meeting, text message, online).	
	CQ3	The team members communicate with each other on time.	
	CQ4	The communication between the team members has a coherent sequence	
	CQ5	The communication between the team members is effective.	
Charismatic	CL1	My team manager is responsible for the team's work.	Romá and

Variable	Code	Measurement	Literature review
Leadership (CL)	CL2	My team manager has vision and orientation for the team's development.	Hernández, 2014)
	CL3	My team manager shows enthusiasm for what I usually have to do	
	CL4	My team manager enhances my optimism about the future	
	CL5	My team manager believes in and transmits the importance of our mission	
	CL6	My team manager is charismatic and leads the team effectively	
Team Synergy (TS)	TS1	There is a common sense of purpose for this team	(Bateman, Colin Wilson and Bingham, 2002)
	TS2	Members are clear about their roles within the team	
	TS3	Morale within the team is high	
	TS4	There is effective communication within the team	
	TS5	All individuals perform to the best of their ability within the team	
	TS6	The team is highly valued by other parts of the organization (or clients if a solo operation).	
Performance Objectives (PO)	PO1	The team is aware of the business objectives of the organization and is committed to achieving them	(Bateman, Colin Wilson and Bingham, 2002)
	PO2	The team is involved in agreeing how work activity targets are set.	
	PO3	There are clear financial targets established for the teams' activities	
	PO4	There are targets for levels of work activity for the team	
	PO5	There are regular reports on how the team is meeting its targets	
Skills (SK)	SK1	Resources are identified and made available for staff training	(Bateman, Colin Wilson and Bingham, 2002)
	SK2	Team members are competent to perform a range of jobs within the team	
	SK3	There is a willingness to be flexible and perform other roles and jobs within the team	
	SK4	There is a formal system in place to identify staff development and training needs	
	SK5	All members of the team are adequately trained and are competent to do the professional aspects of their jobs	
	SK6	Training is highly valued within the team	
Use of Resources (UR)	UR1	We ensure that we make the maximum practical use of our buildings and equipment	(Bateman, Colin Wilson and Bingham, 2002)
	UR2	The team has the resources in needs to do the job and meet the targets it has been set	
	UR3	We ensure that all the necessary systems for monitoring and controlling the use of resources are in place	
Innovation (IN)	IN1	Members of the team are encouraged to try new work methods or introduce new services	(Bateman, Colin Wilson and Bingham, 2002)
	IN2	The team is involved from the outset in new developments relating to their services or products	
	IN3	Problems relating to services or products are quickly identified	
	IN4	Once identified the team is quick to address the problem	
	IN5	Problem solving is seen as an opportunity for learning and growth	
	IN6	Innovation is rewarded within the team	
Team Performance (TP)	TP1	All team members have successfully achieved the assigned performance objectives.	(Rousseau and Aubé, 2010)
	TP2	All team members have completed their tasks with a high level of quality.	
	TP3	All team members have consistently adhered to deadlines in accomplishing their objectives.	
	TP4	All team members have demonstrated cost-effectiveness by efficiently managing expenses.	
	TP5	All team members have operated with productivity and efficiency.	

Source: Authors' Own Source.

3.2 Data Collection and Selection

The data scrutinized emanated from students enrolled in tertiary education programs in Vietnam. A total of 400 survey questionnaires were dispatched, resulting in a return of 334 completed surveys, equating to an 83.5% response rate. Subsequent to this step, responses featuring missing or illogical values were excluded, culminating in a final sample size of 252 completed surveys.

3.3 Methodology

The Partial Least Square Structural Equation Model (PLS-SEM) method is used to find suitable models that allow the use of multiple indicators for a given latent variables, analyze causal relationships between the observed variables, and model evaluation variances in the variables that have been observed.

Step 1: Assessing the outer model. There is five steps involved in evaluating reflective constructs: The steps included in this process are as follows: (1) calculate the loadings and their p-value, (2) estimate indicator reliability, (3) examine internal consistency reliability, (4) obtain the average variance extracted (AVE), (5) use HTMT to verify the discriminant validity (Hair et al., 2020).

Step 2: Assessment of the structural (inner) model. The actions listed below are suggested by recent guidelines (Hair et al., 2020) for evaluating the structural model: (1) determine whether the model is collinear; (2) analyze the pathways' size and importance; (3) determine the coefficient of determination (R2); (4) use the PLS-predict approach to examine the model's out-of-sample predictive power. To validate that the model performs better than the other empirical models, the research might choose to take an optional extra step and assess various model specifications based on theory and study settings. We go into further depth about these in the paragraphs that follow.

Step 3: Report model fit indices. The proponents of model-fit indices, such as the Goodness-of-fit index (GoF), standardized root means square residual (SRMR), the geodesic distance (dG), and the Euclidean distance (dL), are dubious about establishing cut-off values to identify the structural model misfit due to the instability of their performance in identifying misspecification in the context of PLS-SEM.

4. Results

4.1 Variable Descriptive

There were 400 questionnaires sent out for the survey in all, 252 qualified responses remained after the unqualified votes were filtered out. According to Ngo, Hoang and Tran (2023), the number of samples utilized in the PLS path model's most complex regression should be roughly ten times the number of independent variables. According to this fundamental guideline, the minimum sample size that may be obtained is equal to ten times the greatest number of pointing devices that can be used to point at every latent variable that is part of the PLS path model. This guideline offers a general framework, but the statistical power of the estimations should be taken into consideration when determining the minimum sample size required. Our sample size is appropriate as a result. In the sample of 252 responses gathered, females constituted 76.59%, males accounted for 22.62%, and the remaining 0.79% identified

with other genders. In terms of educational attainment, 3.17% of respondents held postgraduate degrees (Master's or Ph.D.), while the majority possessed undergraduate degrees at 92.86%. High school graduates represented 3.17%, and those with other educational backgrounds constituted 0.40%. Regarding age distribution, individuals below 18 years constituted 1.19%, while the majority fell within the 18 to 25 age group at 94.84%. Respondents aged 26 to 35 made up 3.17%, and those over 45 accounted for 0.40%. In terms of marital status, the majority were single at 95.64%, married individuals comprised 1.59%, divorced individuals were at 0.79%, and other marital statuses made up 1.98%. Regarding the surveyed locations, the majority were in Ho Chi Minh City at 91.27%, Bien Hoa City at 3.17%, Can Tho City at 1.98%, and each of Hanoi, Nha Trang, and Da Nang cities at 0.4%. Other locations constituted 2.38%. Concerning group work experience, those with 2 years of experience constituted 3.17%, 3 years at 25.80%, 4 years at 48.41%, and 5 years at 22.62%.

4.2 Outer Model Assessment

Table 2 displays the Variance Inflation Factor (VIF) values and outer loadings for all items, accompanied by their respective p-values. These metrics are utilized to evaluate the construct reliability and convergent validity of the measurement model. It is noteworthy that the outer loadings of all indicators surpass 0.7 and demonstrate statistical significance at the 0.000 level, in accordance with the criteria stipulated by Hair *et al.* (2019), thereby affirming the acceptability of the indicators.

Table 2. VIF and Outer Loadings of the Measurement Model.

Construct	Variables	Outer loadings	P values	VIF	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CL	CL2	0.720	0.000	1.600	0.852	0.859	0.894	0.629
	CL3	0.764	0.000	1.673				
	CL4	0.814	0.000	1.968				
	CL5	0.808	0.000	1.972				
	CL6	0.846	0.000	2.210				
CQ	CQ1	0.712	0.000	1.361	0.815	0.823	0.878	0.645
	CQ3	0.803	0.000	1.840				
	CQ4	0.860	0.000	2.113				
	CQ5	0.827	0.000	1.844				
IN	IN1	0.785	0.000	1.719	0.805	0.805	0.872	0.631
	IN2	0.805	0.000	1.929				
	IN3	0.821	0.000	1.848				
	IN4	0.763	0.000	1.552				
KS	KS2	0.821	0.000	1.273	0.633	0.649	0.844	0.730
	KS3	0.884	0.000	1.273				
PO	PO1	0.764	0.000	1.675	0.815	0.820	0.871	0.575
	PO2	0.781	0.000	1.712				
	PO3	0.709	0.000	1.467				
	PO4	0.741	0.000	1.683				
	PO5	0.791	0.000	1.743				
SK	SK1	0.777	0.000	1.835	0.874	0.877	0.905	0.613
	SK2	0.806	0.000	2.090				
	SK3	0.787	0.000	2.015				
	SK4	0.721	0.000	1.657				
	SK5	0.789	0.000	2.020				
	SK6	0.811	0.000	2.120				

Construct	Variables	Outer loadings	P values	VIF	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
TP	TP1	0.794	0.000	1.698	0.837	0.837	0.891	0.671
	TP2	0.826	0.000	1.859				
	TP3	0.836	0.000	1.953				
	TP4	0.817	0.000	1.906				
TS	TS3	0.825	0.000	1.736	0.798	0.804	0.868	0.622
	TS4	0.754	0.000	1.613				
	TS5	0.807	0.000	1.667				
	TS6	0.761	0.000	1.454				
UR	UR1	0.856	0.000	1.547	0.699	0.717	0.832	0.623
	UR2	0.751	0.000	1.426				
	UR3	0.754	0.000	1.258				

Source: Authors' Own Source.

To assess indicator reliability, Table 3 provides the R-square results. All R2 values exceed 0.5, meeting the acceptable threshold and signifying that each item explains at least 50% of the variance within the construct.

Table 3. R-Square of Constructs.

	R-square	R-square adjusted
CQ	0.608	0.605
IN	0.539	0.535
PO	0.550	0.546
TP	0.710	0.703
TS	0.579	0.577
UR	0.596	0.594

Source: Authors' Own Source.

In the subsequent analysis, we evaluate the internal consistency reliability of the constructs by employing Cronbach's alpha and Composite Reliability (CR), as outlined in Table 2. Cronbach's alpha values exceeding 0.7 are considered acceptable, in accordance with the criteria set forth by Hair *et al.* (2019). The CR value, being less stringent than Cronbach's alpha, serves as the upper limit, while the Cronbach's alpha value functions as the lower limit (Hair et al., 2018).

To gauge the degree to which items within a specific construct positively correlate and share a substantial amount of variance, the Average Variance Extracted (AVE) is utilized. A rule of thumb suggests that values of 0.50 or higher indicate convergent validity of the construct. Table 2 reveals that all AVE values for the constructs surpass 0.5. Mathematically, a value of 0.50 signifies a sufficiently significant relationship between the variances of the items and their presumed construct, with the mean values of the factor loadings of the items being 0.708 or higher.

In order to assess the conceptual distinctiveness of the construct from others in the study, we employ discriminant validity through Heterotrait-Monotrait (HTMT) ratios. All HTMT values fall below the 0.90 threshold (refer to the Appendix), indicating that each theoretical construct in the model is unidimensional. This implies that each construct measures a uniquely different concept and exhibits only minimal overlap in variances (Hair et al., 2022a).

4.3 Inner Model Assessment

Ensuring the absence of high correlations among the constructs is crucial to avoid methodological and interpretation issues, as these correlations can pose challenges for the PLS-SEM algorithm in estimating models with highly correlated predictor constructs. Similar to multiple regression, the

algorithm faces difficulties when dealing with predictor constructs that are nearly identical (highly correlated) in terms of meaning and construct scores. Table 2 indicates that all Variance Inflation Factor (VIF) values are below 3.0, signifying the absence of collinearity in the model.

Moving forward, we evaluate the path coefficients' size and importance. Paths in PLS-SEM are usually standardized, although p-values are not produced by the analysis automatically (Hair et al., 2013; 2022a). Therefore, in order to compute p-values and bias-corrected confidence intervals, bootstrapping—which makes use of standard errors—is required. To guarantee stability in outcomes, a bootstrap technique of 5,000 (or perhaps 10,000) iterations is advised, with the bias-corrected confidence approach being preferred.

Path coefficients in the inner model are standardized values. In the context of educational research, path coefficients (β) ranging from 0 to 0.10, 0.11 to 0.30, 0.30 to 0.50, and > 0.50 are indicative of weak, modest, moderate, and strong effect sizes. Table 4 illustrates that, while KS, CL, and SK do not exhibit statistically significant effects on TP, the remaining variables, including CQ, TS, PO, UR, and IN, all exert significant and positively correlated effects on TP, with correlation coefficients of 0.137**, 0.182**, 0.210***, 0.134**, and 0.167** respectively. These path coefficients in the structural model, ranging from 0.11 to 0.30, suggest modest effect sizes.

Table 4. Direct and Indirect Paths.

Paths	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Hypothesis 1 to 9					
KS -> TP	-0.004	-0.005	0.043	0.101	0.920
CL -> TP	0.091	0.092	0.064	1.430	0.153
SK -> TP	0.086	0.081	0.074	1.170	0.242
CQ -> TP	0.137	0.134	0.066	2.081	0.037
TS -> TP	0.182	0.187	0.077	2.363	0.018
PO -> TP	0.210	0.208	0.067	3.146	0.002
UR -> TP	0.134	0.135	0.053	2.534	0.011
IN -> TP	0.167	0.169	0.070	2.389	0.017
Hypothesis 10a, 10b					
KS -> UR -> TP	0.059	0.060	0.027	2.230	0.026
KS -> IN -> TP	0.042	0.042	0.020	2.155	0.031
Hypothesis 11a, 11b					
CL -> TS -> TP	0.070	0.071	0.030	2.348	0.019
CL -> PO -> TP	0.061	0.060	0.024	2.488	0.013
Hypothesis 12a, 12b, 12c, 12d					
SK -> TS -> TP	0.082	0.086	0.041	2.001	0.045
SK -> CQ -> TP	0.057	0.055	0.028	1.986	0.047
SK -> PO -> TP	0.092	0.092	0.033	2.787	0.005
SK -> IN -> TP	0.076	0.077	0.034	2.214	0.027

Source: Authors' Own Source.

To gauge the coefficient of determination, the next step is to evaluate the R2 value in the results, which shows how much of the variance in the results can be attributed to the predictor

constructs. R2 values ranging from 0 to 0.10, 0.11 to 0.30, 0.30 to 0.50, and > 0.50 indicate weak, modest, moderate, and strong explanatory power, respectively (Hair et al., 2019a). In Table 3, the R2-square values are presented, all of which surpass 0.5, signifying strong explanatory power.

Moving forward, in order to determine out-of-sample prediction power and get proof of external validity in contexts with comparable research designs, we assess the PLSpredict metrics. This involves examining prediction metrics and comparing the Root Mean Square Error (RMSE) for each indicator of achievement.

According to the analysis, all indicators show reduced RMSE prediction errors for the indicators of the outcome (refer to Table 5 below). The PLS model demonstrates superior predictive power compared to the naïve Linear Model (LM) benchmark, suggesting robust predictive capabilities and a credible claim of external validity in similar contexts.

Table 5. PLS Predict Results.

	Q^2predict	**PLS-SEM_RMSE**	**PLS-SEM_MAE**	**LM_RMSE**	**LM_MAE**
CQ1	0.352	0.550	0.366	0.543	0.356
CQ3	0.246	0.723	0.486	0.683	0.446
CQ4	0.471	0.534	0.357	0.533	0.354
CQ5	0.429	0.534	0.359	0.515	0.342
IN1	0.308	0.686	0.479	0.615	0.396
IN2	0.303	0.568	0.365	0.566	0.363
IN3	0.364	0.697	0.401	0.621	0.400
IN4	0.327	0.659	0.379	0.573	0.378
PO1	0.274	0.684	0.392	0.600	0.386
PO2	0.339	0.548	0.347	0.543	0.339
PO3	0.259	0.607	0.399	0.602	0.395
PO4	0.236	0.637	0.409	0.636	0.404
PO5	0.404	0.626	0.404	0.625	0.397
TP1	0.349	0.549	0.349	0.546	0.343
TP2	0.414	0.550	0.349	0.553	0.348
TP3	0.414	0.546	0.359	0.540	0.350
TP4	0.306	0.627	0.416	0.626	0.404
TS3	0.390	0.552	0.364	0.548	0.358
TS4	0.206	0.691	0.462	0.687	0.453
TS5	0.400	0.690	0.390	0.618	0.389
TS6	0.386	0.678	0.378	0.599	0.376
UR1	0.127	0.679	0.435	0.629	0.406
UR2	0.107	0.774	0.461	0.689	0.460

Source: Authors' Own Source.

As an additional step, we compare the theoretical model with competing alternative models with various specifications. According to Alamer (2022) and Hair et al. (2019), the model that displays lower values for the Bayesian Information Criterion (BIC) in the outcome variable suggests reduced measurement errors and need to be kept. In the original model, the BIC was lower compared to the competing model, suggesting that the original model is retained over the alternative. Consequently, the findings affirm that the constructs of KS, CL, SK, CQ, TS, PO, UR, and IN have successfully and substantially predicted team performance.

In conclusion, the final results are presented in Figure 2 below:

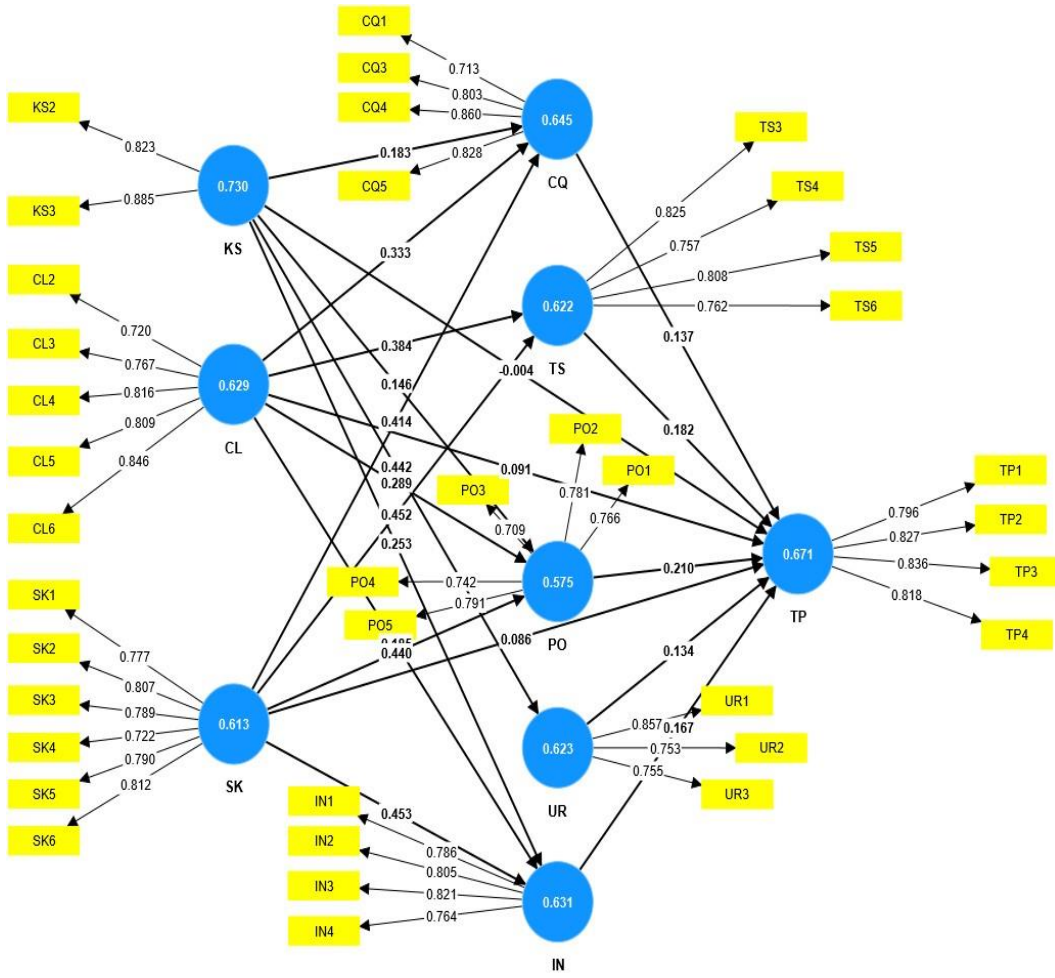

Fig. 2. Research Result Model.
Source: Authors' own Source Extracted from Smart PLS.

4.4 Discussion

Knowledge sharing and Team performance. The dissemination of knowledge does not influence the effectiveness of teamwork, a result that contradicts the conclusions reached by (Shan et al., 2023, Yao et al., 2023). This discrepancy can be primarily attributed to the composition of the surveyed participants, predominantly comprising university students. Their collaborative efforts are primarily directed towards tasks associated with the segmented knowledge units within their academic subjects. Moreover, the widespread availability of knowledge on the internet creates a conducive environment wherein each team member can independently seek information through various tools.

Charismatic leadership and Team performance. Leaders may not have wielded adequate influence to directly affect team effectiveness, a result that deviates from the findings of (Hazzam and Wilkins, 2023). This discrepancy could be attributed to the nature of tasks within

team activities, which are not excessively complex and mostly involve straightforward assignments. As a result, the workload is evenly distributed among team members. Furthermore, the time allocated for completing team tasks may not impose significant pressure or may be too relaxed for each individual. Consequently, leaders tend to delegate tasks and synthesize results without the need for a specific, detailed, and intricate plan to highlight individual contributions.

Individual skills and Team performance. The discernible impact of team members' skills on team effectiveness is not evident, and several contributing factors may explain this outcome, which diverges from the findings of (Rosendahl Huber et al., 2020, Sabri and Abu-Atiah, 2020). One potential explanation for this could be that the tasks within team activities do not genuinely require the application of each individual's complex skill set. As a result, the recognition and evaluation of the impact of each member's skills may not be sufficiently emphasized.

Communication quality and Team performance. The quality of communication within a team profoundly impacts the team's performance and success. Effective communication ensures the clear and transparent conveyance of information, addressing core issues, fostering understanding and trust, reducing the risk of misunderstandings, and mitigating arising tensions. Appropriate communication content, methods, and channels assist in identifying optimal solutions to the presented challenges. This result aligns with the findings of (Van Zoonen, Sivunen, and Blomqvist, 2023, Tsai and Compeau, 2021).

Team synergy and Team performance. The robustness of a team is a critical factor for the effectiveness of team activities, exerting various positive influences on teamwork. Firstly, team strength contributes to building team spirit and commitment to a common goal. When individuals collaborate and share a unified objective, they feel supported and motivated by the entire team. Team strength is also reflected in the distribution of responsibilities and tasks based on each member's capabilities, enhancing overall performance and alleviating pressure on individual team members. This, in turn, fosters a positive, collaborative, and cohesive work environment, thereby enhancing team effectiveness. This result aligns with the findings of (Chen et al., 2021).

Performance Objectives and Team performance. The objectives of team activities play a pivotal role in shaping and maintaining a positive work environment, thereby influencing the effectiveness of team activities. Having a common goal helps define the team's direction. When individuals align with a shared objective, they feel supported and motivated by each other, enhancing team spirit and performance. Objectives contribute to creating motivation for each team member; when individuals have a clear and meaningful goal, they feel more interested and committed to contributing and achieving that goal. This result aligns with the findings of (Van Mierlo and Van Hooft, 2020).

Using resources and Team performance. Effectively leveraging resources is also a multifaceted factor that brings numerous positive aspects to team effectiveness. Modern infrastructure and ample resources can create favorable conditions for teamwork, encouraging team members to generate new ideas and innovative working methods. The use of modern and appropriate tools, coupled with high-quality resources, helps reduce work time, optimize processes, and enhance the overall productivity of the team. Modern tools and resources contribute to improving communication within the team, fostering an environment conducive to sharing, support, and mutual learning. This outcome aligns with the findings of (Song et al., 2019).

Innovation and Team performance. Innovation can positively impact team effectiveness and is often closely associated with creativity. When a team encourages and supports innovation, members are free to express new ideas and unique working methods. This can enhance creativity, generating novel solutions to the team's challenges. Innovation also helps the team stand out in its field of activity, increasing their value within the organization and even in the market. Innovation enables teams to become more flexible and adaptable to change, optimizing work processes and leading to more effective and time-saving collaboration. This outcome aligns with the findings of (Park et al., 2021).

Knowledge sharing and Team performance through Using resources and Innovation. The mediating effect of "Using resources" on the relationship between "Knowledge sharing in teams" and "Team performance" suggests that the impact of knowledge sharing is not direct but is influenced by the availability, accessibility, and utilization of resources within the team. The effective use of resources acts as a bridge, enhancing the positive effects of knowledge sharing on overall team performance. Similarly, the mediation of innovation in the relationship between knowledge sharing in teams and team performance implies that the influence of knowledge sharing on team performance is not direct but is mediated or explained by the level of innovation within the team. This outcome aligns with the findings of (Singh et al., 2021, Kremer, Villamor and Aguinis, 2019).

Charismatic leadership and Team performance through Team Synergy and Performance Objectives. Team synergy acts as a mediator in the relationship between charismatic leadership and team performance by channeling the inspirational and motivational aspects of charismatic leadership into collective, collaborative efforts within the team. The combined effects of charismatic leadership and team synergy contribute to a more cohesive, motivated, and high-performing team. Similarly, performance objectives act as a mediator in the relationship between charismatic leadership and team performance by translating the inspirational and motivational aspects of charismatic leadership into actionable goals and fostering a goal-oriented and high-performance culture within the team. The establishment and pursuit of performance objectives contribute significantly to realizing the positive impact of charismatic leadership on team performance. This outcome aligns with the findings of (Ernst et al., 2022, Tuan, 2020).

Skills and Team performance through Team Synergy, Charismatic Leadership, Performance Objectives, and Innovation. Individual skills within a team are often diverse, and team synergy involves harmonizing and integrating these diverse skills to create a collective impact greater than the sum of individual contributions. When team members work cohesively and leverage each other's skills, it enhances overall team performance. Under charismatic leadership, individual skills are directed towards common goals and objectives, as charismatic leaders inspire and motivate team members to work towards a shared vision. The leader's ability to align individual skills with a compelling vision contributes to improved team performance. Performance objectives provide a structured framework for utilizing individual skills towards specific goals. Clear objectives guide team members in applying their skills in a targeted manner, ensuring that collective efforts are aligned with overarching team objectives and enhancing overall team performance. Moreover, individual skills, when applied creatively, contribute to innovative solutions and approaches. Innovation involves thinking beyond conventional boundaries and leveraging diverse skills to address challenges. The creative application of individual skills, fostered by an innovative culture, enhances the team's capacity for problem-solving and positively impacts team performance. Each of these factors (team synergy,

charismatic leadership, performance objectives, and innovation) contributes to a holistic and synergistic team environment. The combined effect of these mediating factors ensures that individual skills are not only utilized but optimized within the team context, leading to enhanced team performance. The presence of these mediating factors creates a feedback loop for continuous improvement. As individual skills contribute to team performance, the feedback received through team synergy, charismatic leadership, performance objectives, and innovation allows for ongoing refinement and optimization of individual contributions. This outcome aligns with the findings of (Tuan, 2020, Aina and Atan, 2020, Wibowo et al., 2020).

Table 4 Summaries the Research's Results

Table 4. Results' Summary.

Hypothesis	Literature Review	Expected sign	Result	Theory
H1. Sharing knowledge has a significant positive impact on team performance.	(Shan et al., 2023, Yao et al., 2023)	(+)	Not Supported	Cognitive load theory
H2. Charismatic leadership has a positive impact on team performance.	(Hazzam and Wilkins, 2023)	(+)	Not Supported	Social learning theory
H3. Individual skills have a positive impact on team performance.	(Rosendahl Huber et al., 2020, Sabri and Abu-Atiah, 2020)	(+)	Not Supported	Belbin role theory
H4. Intra-team communication quality has a positive impact on team performance.	(Van Zoonen, Sivunen, and Blomqvist, 2023, Tsai and Compeau, 2021)	(+)	Supported	Cognitive load theory
H5. Team synergy has a positive impact on team performance.	(Chen et al., 2021)	(+)	Supported	Belbin role theory
H6. Performance objectives has a positive impact on team performance.	(Van Mierlo and Van Hooft, 2020)	(+)	Supported	Similarity-attraction theory
H7. Using of resources has a positive impact on team performance.	(Song et al., 2019)	(+)	Supported	Knowledge-based theory
H8. Innovation has a significant impact on team performance.	(Park et al., 2021)	(+/-)	Supported	Knowledge-based theory
H9a. Using resources plays a mediating role of the impact of knowledge sharing on team performance.	(Kremer, Villamor and Aguinis, 2019)	Mediate	Supported	Cognitive load theory
H9b. Innovation plays a mediating role of the impact of knowledge sharing on team performance.	(Singh et al., 2021)	Mediate	Supported	Cognitive load theory
H10a. Team synergy plays a mediating role of the impact of charismatic leadership on team performance.	(Tuan, 2020)	Mediate	Supported	Similarity-attraction theory
H10b. Performance objectives plays as a mediating role of the impact of charismatic leadership on team performance.	(Ernst et al., 2022)	Mediate	Supported	Similarity-attraction theory
H11a. Team synergy plays a mediating role of the impact of individual skills on team performance.	(Krabben, Orth and van der Kamp, 2019)	Mediate	Supported	Similarity-attraction theory
H11b. Charismatic leadership plays as a mediating role of the impact of individual skills on team performance.	(Tuan, 2020)	Mediate	Supported	Social learning theory
H11c. Performance objectives plays as a mediating role of the impact of individual skills on team performance.	(Aina and Atan, 2020)	Mediate	Supported	Similarity-attraction theory
H11d. Innovation plays as a mediating role of the impact of individual skills on team performance.	(Wibowo et al., 2020)	Mediate	Supported	Belbin role theory

Source: Authors' Own Source.

5. Conclusion

5.1 Theoretical Contribution

Determining the factors influencing team effectiveness not only provides factual information but also contributes to the expansion and enrichment of theories. According to Cognitive Load Theory (Van Merriënboer and Sweller, 2005), research has demonstrated that conveying a substantial amount of information can present challenges for remembering and deeply understanding that information. However, enhancing the quality of communication processes and efficiently utilizing resources can facilitate a smoother information-sharing process, improve absorption, and positively impact team performance.

In the context of Social Learning Theory (Bandura, 1973), research suggests that for tasks with simple content and minimal activity, the role of the group leader may not be prominently displayed and may not directly affect team performance. However, charismatic leadership can influence the teamwork skills of members. This expands our understanding of how to support learning and apply skills to enhance team performance.

Concerning Belbin role theory (Belbin, 2011), research contributes to affirming how the number of roles each member undertakes will affect team performance. In simple group activities with few tasks, each member playing a single role may not clearly demonstrate individual skills for effective teamwork. Conversely, if individuals take on too many roles without possessing high skills, it may overwhelm them and reduce team effectiveness. The research indicates that an optimal number of roles for each member, coupled with reasonable interaction among members, will mobilize individual and collective strengths to improve team effectiveness.

In the case of Similarity-Attraction Theory (Byrne, 1971), research affirms that a clearly defined and unified common goal directly and indirectly affects team performance through various mediating factors. High similarity in common goals maximizes the deployment of other factors such as individual skills and leadership skills for continuous innovation, thereby enhancing team effectiveness.

Regarding Knowledge-Based Theory (Spender, 1996), research has revealed how knowledge influences team effectiveness. Knowledge is considered a crucial resource in every team activity. Therefore, regular and reasonable knowledge sharing, coupled with continuous innovation, will positively impact team performance.

5.2 Managerial Implication

The results of this study have managerial implications for higher education administrators.

For Lecturers. It is crucial to develop a plan to support the teamwork skills of students. Conducting effective training sessions on content and methods of teamwork is recommended. Alternatively, dedicating a brief period at the beginning of each course (around 20-35 minutes) to provide essential knowledge and foundational skills for teamwork is beneficial. Subsequently, creating conditions to assign teamwork tasks corresponding to course subjects or study topics is essential. Supporting students in developing activity plans, providing regular reports and feedback, and timely adjustments contribute to enhancing teamwork effectiveness. Additionally, evaluating the process and outcomes of team activities through a grading system serves as motivation for active participation.

For University Leadership. University leaders must recognize that teamwork skills are a crucial aspect of student development during their academic journey. Establishing policies that support the development of teamwork skills is necessary. Providing necessary facilities such as meeting rooms, discussion spaces, tools, necessary equipment, and internet access for students to work collaboratively is vital. Encouraging and financially supporting student research projects is essential. Creating opportunities for students to participate in specialized scientific workshops, seminars to share experiences with scientists, businesses, or students from other universities is encouraged. Moreover, developing short-term training programs that grant certificates in soft skills, like programs on 5S/Safety, Life Skills, is advisable, as some universities have already implemented.

5.3 Conclusion

The research results indicate that there are five factors directly influencing the teamwork effectiveness of students, including: the quality of communication within the group, the strength of the team, the goals of group activities, the utilization of resources, and innovation. Additionally, three factors impact teamwork effectiveness through intermediary conditions: knowledge sharing, charismatic leadership, and the skills of team members.

The article presented experimental results to assess the influencing factors on teamwork effectiveness by describing the interplay of variables with each other and their impact on teamwork effectiveness. Utilizing Smart PLS data analysis tools ensured the reliability of measurements, matrix analysis, and linear structural model testing comprehensively. This approach accurately evaluated the research hypotheses and proposed an improved research model that is completer and more aligned with reality.

5.4 Limitation and Future Research

This study has certain limitations. Firstly, the survey primarily targeted university students, neglecting other groups such as graduates or individuals engaged in industrial work. Secondly, the survey focused predominantly on the Southeast region of Vietnam and did not extend to other areas. For future research endeavors, we plan to address these limitations. The study will be conducted on a broader scale, encompassing diverse regions across Vietnam and potentially including predominantly online exchange groups, where members are geographically dispersed or from different nationalities. The research subjects will be more representative, including students from various universities and different academic disciplines, both graduates and those actively involved in team-related activities within companies and enterprises.

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