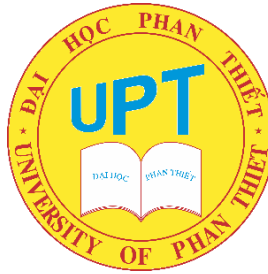


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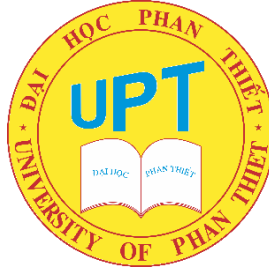
TRAN THI NI NA

**EXPLORING CO-OPERATIVE LEARNING TO ENHANCE
ESP STUDENTS' FORMATIVE KNOWLEDGE IN ENGLISH
LANGUAGE LEARNING AT HO CHI MINH UNIVERSITY
OF BANKING**

**MASTER'S GRADUATION PROJECT
MAJORED IN ENGLISH LANGUAGE**

Lam Dong Province - 2026

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TRAINING CODE: 8220201**

MASTER'S GRADUATION PROJECT

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Lam Dong Province - 2026

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CERTIFICATE OF ORIGINALITY

I confirm that the work presented in this master graduation project entitled “Exploring co-operative learning to enhance ESP students’ formative knowledge in English language learning at Ho Chi Minh University of Banking” has been performed and interpreted solely by myself.

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ABSTRACT

Bridging the persistent gap between classroom knowledge and its application in professional contexts remains a central challenge in English for Specific Purposes (ESP). This study investigates the effects of co-operative learning in enhancing the formative knowledge of ESP students at the Ho Chi Minh University of Banking, focusing on the relationships between co-operative learning, pair work, group work, and formative knowledge. Quantitative analyses, including correlation and multiple regression, were used to examine the predictive effects of pair work and group work on learning outcomes. Structured co-operative learning techniques, specifically pair work and group work, were implemented within authentic ESP tasks to facilitate interaction and knowledge construction. The results show a significant enhancement in students' formative knowledge through cooperative learning compared to traditional instruction ($p < 0.001$), with a large effect size. While both pair work and group work positively predict learning outcomes, group work emerges as the stronger predictor ($\beta = 0.351$, $p < 0.001$) suggesting its superior role in promoting deeper cognitive processing and collaborative knowledge construction. This study advances ESP research by providing empirical evidence on the differential impact of cooperative learning structures, offering both theoretical contributions and pedagogical implications for the design and implementation of cooperative learning activities in higher education ESP classrooms.

Keywords: Cooperative Learning, Formative Knowledge, ESP Students, Pair Work, Group Work

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LIST OF ABBREVIATIONS

CL – Co-operative Learning

CLT – Communicative Language Teaching

EFL – English as a Foreign Language

ELT – English Language Teaching

ESP – English for Specific Purposes

ESL – English as a Second Language

FK – Formative Knowledge

GW – Group Work

HUB – Ho Chi Minh University of Banking

PW – Pair Work

RSCI – Reliability Statistics of Characteristics of Instruments

SPSS – Statistical Package for the Social Sciences

ZPD – Zone of Proximal Development

CHAPTER 1

INTRODUCTION

1.1 Background of the study

In the context of globalization and the increasing demand for a highly skilled workforce, English has become an essential resource for academic, professional, and institutional participation. Within this landscape, English for Specific Purposes (ESP) has emerged as a pedagogical approach that aligns language learning with disciplinary practices and workplace communication demands, particularly in fields such as banking, finance, and business (Anthony, 2020; Hyland, 2022). At the Ho Chi Minh University of Banking, ESP instruction is expected to equip students with the ability to engage with specialized discourse and perform effectively in domain-specific contexts.

However, both research and classroom realities indicate that ESP learning cannot be reduced to the acquisition of vocabulary or grammatical structures alone. Instead, it requires the development of formative knowledge—an evolving integration of linguistic, conceptual, and pragmatic competencies constructed through continuous engagement with authentic tasks and communicative practices (Basturkmen, 2020; Hyland, 2022; Lam, 2021; Nguyen & Pham, 2022). This form of knowledge enables learners to internalize disciplinary concepts, consolidate language use, and transfer learning into real-world professional situations (Tran & Nguyen, 2023).

Despite its recognized importance, many ESP students in Vietnam continue to encounter difficulties in developing such knowledge, particularly in applying what they have learned beyond controlled classroom environments (Dang, 2021; Nguyen et al., 2022).

One of the underlying causes of this issue lies in the persistence of traditional pedagogical practices, which often emphasize rote memorization, teacher-centered instruction, and product-oriented assessment. These approaches tend to limit meaningful interaction, constrain learner autonomy, and fail to support the dynamic processes through which knowledge is

constructed and transferred (Le & Barnard, 2021; Pham & Hamid, 2022; Vu, 2023). Consequently, a significant gap remains between theoretical classroom learning and the communicative demands of authentic professional contexts, where language use is inherently interactive, collaborative, and task-based. Addressing this challenge requires a shift toward more learner-centered and interaction-driven pedagogies.

Co-operative learning has emerged as one of the most effective approaches to overcome these limitations. Rooted in social constructivism (Vygotsky, 1978) and further developed in contemporary interaction-based frameworks, co-operative learning emphasizes the role of interaction, shared responsibility, and group dynamics in facilitating deeper learning (Gillies, 2020; Li & Zhang, 2021; Dao, 2021). It provides a framework in which learners actively collaborate to solve problems, exchange perspectives, and construct knowledge collectively, thereby fostering both cognitive engagement and communicative competence. Recent empirical studies have consistently demonstrated that co-operative learning enhances language development, critical thinking, learner motivation, and knowledge integration across contexts (Zhang & Plonsky, 2020; Phung, 2020; Nguyen et al., 2022; Tran & Nguyen, 2023). In particular, collaborative interaction promotes negotiation of meaning and peer scaffolding, which are essential mechanisms for the development of formative knowledge in ESP learning (Lam, 2021; Li, 2021).

However, despite this growing body of research, its application in Vietnamese ESP contexts remains underexplored, particularly with regard to the enhancement of formative knowledge. Moreover, co-operative learning is often treated as a unified construct, with limited attention to the differential roles of specific interactional structures such as pair work and group work. This lack of differentiation restricts a deeper understanding of how distinct collaborative configurations influence knowledge construction. Therefore, there is a critical need to investigate not only the effectiveness of co-operative learning but also how its core structures function as predictors of formative knowledge development. Addressing this gap, the present study examines the

role of co-operative learning in enhancing ESP students' formative knowledge at the Ho Chi Minh University of Banking, with particular emphasis on the comparative contributions of pair work and group work.

1.2 Statement of the Problem

In recent years, English for Specific Purposes (ESP) has become an integral component of higher education, particularly in disciplines such as banking, finance, and business, where learners are required to develop the ability to use English effectively within specialized professional contexts. Within this framework, formative knowledge—understood as the dynamic integration of linguistic, conceptual, and pragmatic competencies—has been increasingly recognized as a crucial factor in enabling learners to construct, internalize, and apply knowledge in meaningful ways. Despite this growing recognition, a substantial body of research indicates that many ESP learners continue to experience difficulties in developing and transferring such knowledge, particularly in contexts where learning remains confined to classroom-based instruction.

A growing number of recent studies have explored the potential of cooperative learning in enhancing language development, learner engagement, and knowledge construction, emphasizing the role of interaction, peer scaffolding, and collaborative cognition in second language learning. These studies suggest that cooperative learning creates conditions for deeper cognitive processing and more effective knowledge integration. However, most of this research has been conducted in general EFL contexts, with relatively limited attention to ESP environments, where the demands of learning extend beyond language proficiency to include discipline-specific knowledge and professional communication.

More importantly, although cooperative learning has been widely acknowledged as an effective pedagogical approach, it is frequently treated as a unified construct in existing literature. Few studies have systematically examined the differential effects of specific cooperative learning structures,

such as pair work and group work, on learning outcomes. This lack of differentiation represents a significant limitation, as different interactional configurations may facilitate distinct cognitive and communicative processes. In particular, the extent to which these structures contribute to the development of formative knowledge remains underexplored.

In the Vietnamese higher education context, this gap becomes even more pronounced. While there has been an increasing emphasis on learner-centered pedagogy and communicative approaches, empirical investigations into how cooperative learning supports the development of formative knowledge in ESP settings remain scarce and fragmented. Furthermore, the comparative effectiveness of pair work and group work as predictors of learning outcomes has not been adequately addressed, leaving a critical aspect of cooperative learning insufficiently understood. As a result, despite the acknowledged importance of formative knowledge and collaborative learning, the mechanisms through which different cooperative learning structures influence knowledge construction in ESP contexts have not been fully clarified.

Therefore, there remains a significant and unresolved research gap concerning not only the effectiveness of cooperative learning in ESP education but also the distinct roles of its core interactional structures in shaping formative knowledge development. This study is conducted to address this gap by investigating how cooperative learning, particularly through pair work and group work, contributes to the enhancement of ESP students' formative knowledge at the Ho Chi Minh University of Banking. In doing so, the study aims to provide empirical evidence that clarifies the predictive relationships among these variables and contributes to a more nuanced understanding of cooperative learning in ESP contexts.

1.3 Aims and Objectives of the Study

The overarching aim of this study is to explore the role of co-operative learning in enhancing ESP students' formative knowledge in English language learning at Ho Chi Minh University of Banking. The study seeks to investigate

how co-operative learning, as a learner-centered instructional approach, contributes to students' knowledge construction, interaction, engagement, and academic development in ESP contexts. In particular, the research focuses on the effectiveness of pair work and group work as two major co-operative learning structures that may facilitate formative knowledge enhancement through collaborative learning processes.

Furthermore, the study attempts to provide a deeper understanding of how different interactional structures influence students' learning experiences and knowledge development in English language classrooms. By examining the relationships among co-operative learning, pair work, group work, and formative knowledge, the study also aims to contribute theoretical and pedagogical insights into ESP teaching and learning in higher education context.

Specifically, the study aims to:

- Examine the impact of co-operative learning on the development of ESP students' formative knowledge in English language learning.
- Analyze the roles of pair work and group work as key co-operative learning structures in shaping students' formative knowledge development.
- Determine the relative predictive strength of pair work and group work in influencing formative knowledge enhancement among ESP students.

1.4 Research Questions

To achieve the above aims and objectives, the study seeks to answer the following research questions:

1. To what extent does co-operative learning enhance ESP students' formative knowledge in English language learning?
2. Which co-operative learning (pair work, group work) is found to be the best contributor in Ho Chi Minh University of Banking student's formative knowledge enhancement in English language

learning?

1.5 Scope of the Study

This study is delimited to investigating the role of co-operative learning in enhancing ESP students' formative knowledge in English language learning at Ho Chi Minh University of Banking. The study specifically examines the extent to which co-operative learning contributes to the development of students' formative knowledge and explores how different interactional structures within co-operative learning influence knowledge construction and learning outcomes. In particular, the research seeks to identify which co-operative learning structure—pair work or group work—serves as the stronger predictor of ESP students' formative knowledge enhancement in English language learning contexts.

The scope of the study is confined to ESP courses within higher education, especially in the fields of banking, finance, business administration, and economics at Ho Chi Minh University of Banking. ESP learning in these disciplines requires students not only to acquire linguistic knowledge but also to develop the ability to apply English effectively in specialized academic and professional situations. Therefore, the study focuses on classroom interaction and collaborative learning processes that support students' communicative competence and knowledge development in ESP contexts (Hutchinson & Waters, 1987; Dudley-Evans & St. John, 1998).

Among various co-operative learning techniques and instructional practices, this study deliberately concentrates on two core interactional structures: pair work and group work. These structures are selected because they are widely recognized as essential components of co-operative learning that facilitate learner interaction, peer scaffolding, active participation, and collaborative knowledge construction in language classrooms (Johnson & Johnson, 2017; Gillies, 2020; Phung, 2020). Pair work enables learners to engage in immediate interaction, negotiation of meaning, and mutual feedback, while group work provides broader opportunities for collaborative problem-

solving, discussion, and critical thinking development (Vygotsky, 1978; Slavin, 2014).

Furthermore, the study centers on formative knowledge as the primary outcome variable. In this study, formative knowledge is conceptualized as the evolving integration of linguistic knowledge, conceptual understanding, communicative competence, and cognitive engagement developed through active participation and collaborative learning processes (Lam, 2021; Li, 2021). The study assumes that co-operative learning environments encourage students to construct knowledge socially through interaction, peer support, and shared learning experiences, thereby facilitating the enhancement of formative knowledge in ESP learning contexts.

Although the study acknowledges the potential influence of other factors such as curriculum design, teaching methodologies, institutional policies, classroom environment, learner motivation, language proficiency, and individual learning differences, these variables are beyond the scope of the present study. Instead, the research primarily focuses on the relationships among co-operative learning, pair work, group work, and formative knowledge within ESP classrooms at Ho Chi Minh University of Banking.

By delimiting its focus in this manner, the study aims to provide a context-specific investigation into how co-operative learning, particularly through pair work and group work activities, contributes to the enhancement of formative knowledge among ESP students in higher education. In addition, the findings are expected to provide practical pedagogical implications for ESP teachers, curriculum designers, and educational practitioners seeking to promote more interactive, collaborative, and learner-centered approaches in English language teaching and learning.

1.6 Significance of the Study

The significance of this study lies in its theoretical, pedagogical, and practical contributions to the field of English for Specific Purposes (ESP)

education, particularly within higher education contexts in Vietnam. By examining the role of co-operative learning in enhancing ESP students' formative knowledge, the study contributes to a deeper understanding of how collaborative interaction supports language learning, knowledge construction, and communicative competence in specialized academic environments. More importantly, the study attempts to bridge the gap between theoretical perspectives on collaborative learning and practical applications in ESP classrooms, thereby offering meaningful implications for multiple educational stakeholders.

From a theoretical perspective, the study contributes to the existing body of knowledge on co-operative learning and social constructivist learning theories. While previous studies have widely acknowledged the effectiveness of co-operative learning in general English language teaching, relatively limited attention has been paid to its application in ESP contexts, especially within Vietnamese higher education. This study therefore expands the theoretical discussion by investigating how co-operative learning structures, particularly pair work and group work, contribute differently to the enhancement of formative knowledge in ESP learning. In addition, the study reinforces social constructivist assumptions that knowledge is socially constructed through interaction, collaboration, negotiation of meaning, and shared learning experiences (Vygotsky, 1978). By conceptualizing formative knowledge as an evolving integration of linguistic, cognitive, and communicative competencies, the study also offers a more nuanced understanding of knowledge development in ESP contexts.

From a pedagogical perspective, the study provides valuable implications for English language teachers, especially ESP instructors working in higher education institutions. The findings are expected to provide practical and evidence-based insights into how co-operative learning can be implemented more effectively in ESP classrooms. Specifically, the study clarifies the distinct instructional roles of pair work and group work in promoting students'

engagement, participation, communication, and formative knowledge development. Through this understanding, teachers may be better equipped to design collaborative learning activities that encourage active participation, peer scaffolding, problem-solving, and meaningful language use in professional and academic contexts.

Furthermore, the study encourages a shift away from traditional teacher-centered approaches toward more learner-centered pedagogical practices. In many ESP classrooms, instruction still heavily relies on passive learning, memorization, and one-way knowledge transmission, which may limit students' opportunities to interact and apply language meaningfully. By highlighting the effectiveness of co-operative learning, the study supports the adoption of more interactive and communicative teaching strategies that foster autonomy, collaboration, and critical thinking among students. Such approaches are particularly important in ESP learning environments where students are expected to apply English in discipline-specific and workplace-related situations.

For curriculum designers and educational practitioners, the study offers empirical evidence supporting the integration of structured co-operative learning activities into ESP curricula. The findings may contribute to the development of instructional frameworks that emphasize collaborative knowledge construction, communicative competence, and authentic language use. In addition, the study provides insights into how pair work and group work can be strategically incorporated into classroom tasks, discussions, presentations, simulations, and problem-solving activities to maximize learning effectiveness. These contributions are particularly relevant for designing ESP programs that align more closely with the communicative demands of professional environments in banking, finance, and business sectors.

The study is also significant for teacher education and professional development programs. By identifying effective co-operative learning practices, the findings may help teacher training programs equip educators with practical

strategies for facilitating interaction, managing collaborative activities, and promoting student-centered learning environments. In this way, the study contributes to the enhancement of teaching quality and instructional innovation in ESP education.

From a policy perspective, the study provides meaningful implications for improving English language education within the context of educational reform in Vietnam. Current educational policies increasingly emphasize competency-based education, learner-centered instruction, communicative competence, and workforce readiness. By demonstrating the positive contribution of co-operative learning to students' formative knowledge enhancement, the study supports broader educational goals related to improving graduate quality, employability, and professional communication skills. Moreover, the findings may assist policymakers and institutional leaders in developing strategies that promote more interactive and context-responsive English language teaching practices in higher education institutions.

In addition, the study holds particular significance within the context of Ho Chi Minh University of Banking, where ESP courses play an important role in preparing students for future careers in banking, finance, and business. The findings may help improve the effectiveness of ESP instruction by identifying collaborative learning strategies that enhance students' ability to apply English knowledge in discipline-specific contexts. As a result, the study contributes not only to academic achievement but also to students' professional preparedness and communicative confidence in future workplace environments.

Overall, this study addresses an important research gap concerning the relationship between co-operative learning and formative knowledge enhancement in ESP contexts. Through its theoretically grounded and empirically oriented investigation, the study contributes meaningful recommendations for teachers, curriculum designers, educational practitioners, and policymakers. Ultimately, the study aims to support the development of more collaborative, learner-centered, and context-responsive ESP learning

environments that better meet the academic and professional needs of students in higher education.

1.7 Theoretical framework

There is nothing more practical than a good theory (Kurt Lewin, 1952). Grounded in this assertion, the present study is theoretically underpinned by a set of interrelated and complementary frameworks that collectively explain how co-operative learning can enhance students' formative knowledge in English for Specific Purposes (ESP). In contemporary language education, especially within ESP contexts, learning is no longer viewed as a purely individual cognitive process but rather as a socially mediated, affectively influenced, and continuously assessed phenomenon (Vygotsky, 1978; Krashen, 1982; Black & Wiliam, 1998).

To comprehensively address the research objectives, this study integrates six major theoretical foundations: Johnson and Johnson's Co-operative Learning Theory, Vygotsky's Social Constructivism, Krashen's Affective Filter Hypothesis, Bandura's Social Learning Theory, Black and Wiliam's Formative Assessment Theory, and Chomsky's Competence–Performance Model. These theories are not isolated; instead, they are conceptually interconnected in explaining how interaction, emotion, cognition, and assessment contribute to learning outcomes (Johnson & Johnson, 2009; Bandura, 1977; MacIntyre & Gardner, 1991).

More specifically, these frameworks provide a solid theoretical basis for examining: (1) the extent to which co-operative learning enhances ESP students' formative knowledge, and (2) whether pair work or group work serves as a stronger predictor of such enhancement.

1. Co-operative Learning Theory, developed extensively by Johnson and Johnson (1989; 2009), posits that structured collaboration among learners significantly enhances academic achievement compared to competitive or individualistic learning structures. The central premise of this theory is that

knowledge is best acquired when learners actively engage with others in pursuing shared learning goals (Slavin, 1995).

This theory is operationalized through five essential components: positive interdependence, individual accountability, promotive interaction, social skills, and group processing (Johnson & Johnson, 2009). Positive interdependence ensures that learners perceive their success as linked to the success of their peers, while individual accountability prevents social loafing and ensures active participation (Gillies, 2016). Promotive interaction, which involves face-to-face communication, allows learners to explain concepts, argue perspectives, and co-construct meaning (Webb, 2009).

In ESP contexts, these elements are particularly critical because students are required not only to acquire linguistic knowledge but also to understand and apply domain-specific content such as banking or financial terminology (Hutchinson & Waters, 1987). Co-operative learning creates authentic communicative situations where learners can negotiate meaning, exchange professional knowledge, and apply language in context. Empirical studies have consistently shown that co-operative learning enhances language proficiency, critical thinking, and academic achievement (Slavin, 2014; Tran, 2019).

Therefore, this theory provides a direct theoretical foundation for explaining how co-operative learning—through pair work and group work—can enhance ESP students' formative knowledge by fostering deeper engagement and collaborative meaning-making.

2. From a socio-cultural perspective, Vygotsky's (1978) Social Constructivist Theory offers a foundational explanation of how knowledge is constructed through interaction. According to Vygotsky, learning is inherently a social process, and cognitive development occurs through mediated activities involving more knowledgeable others.

A key concept in this theory is the Zone of Proximal Development (ZPD), defined as the distance between a learner's current level of independent

performance and their potential level of development with guidance (Vygotsky, 1978). Within co-operative learning environments, peers act as scaffolds, enabling learners to perform beyond their individual capabilities (Donato, 1994).

In ESP classrooms, where learners often encounter complex and specialized content, collaborative interaction becomes essential. Through pair work and group work, students engage in dialogue, negotiate meaning, and co-construct knowledge, which leads to deeper understanding and retention (Swain, 2000). Furthermore, interaction facilitates the internalization of language structures and concepts, transforming social knowledge into individual competence (Lantolf & Thorne, 2006).

Thus, Social Constructivism reinforces the pedagogical value of co-operative learning by highlighting the role of interaction and scaffolding in enhancing formative knowledge.

3. While cognitive and social factors are crucial, emotional variables also significantly influence language learning, as emphasized in Krashen's (1982) Affective Filter Hypothesis. This theory posits that affective factors such as motivation, self-confidence, and anxiety act as a filter that either facilitates or impedes language acquisition (Krashen, 1985).

When learners experience high anxiety, low motivation, or low self-confidence, their affective filter becomes elevated, preventing comprehensible input from being processed effectively (MacIntyre, 1995). Conversely, a low affective filter enables learners to absorb and internalize language input more efficiently.

Co-operative learning environments, particularly those involving pair work and group work, are known to reduce anxiety by creating a supportive and less threatening atmosphere (Dörnyei, 2001). Peer interaction allows students to practice language without the fear of negative evaluation, which is a major source of foreign language anxiety (Horwitz et al., 1986). Additionally,

collaborative settings promote intrinsic motivation and increase learners' confidence through shared success (Deci & Ryan, 2000).

In ESP contexts, where students may feel pressure to use specialized terminology accurately, reducing anxiety is particularly important. Therefore, co-operative learning not only enhances cognitive engagement but also lowers affective barriers, thereby facilitating the development of formative knowledge.

4. Bandura's (1977) Social Learning Theory further complements the above perspectives by emphasizing that learning occurs through observation, imitation, and modeling. According to Bandura, individuals learn not only from direct experience but also by observing others' behaviors and the consequences of those behaviors (Bandura, 1986).

In co-operative learning environments, students are constantly exposed to peer models, which provide opportunities for observational learning. Learners can observe how their peers use language, adopt effective communication strategies, and adjust their own behavior accordingly (Schunk, 2012). This process is particularly important in ESP learning, where students need to master both linguistic forms and professional communication practices.

Moreover, Bandura highlights the role of self-efficacy in learning, defined as individuals' belief in their ability to perform tasks successfully. Co-operative learning can enhance self-efficacy by providing opportunities for mastery experiences, social persuasion, and vicarious learning (Zimmerman, 2000).

Thus, Social Learning Theory supports the argument that co-operative learning, through pair work and group work, enhances formative knowledge by enabling learners to learn from each other in dynamic and interactive contexts.

5. The concept of formative knowledge in this study is closely aligned with Black and Wiliam's (1998) Formative Assessment Theory, which emphasizes the importance of ongoing assessment in improving learning outcomes. Formative assessment involves continuous feedback that helps

learners identify gaps in their understanding and take steps to improve (Sadler, 1989).

Co-operative learning inherently integrates formative assessment practices through peer feedback, collaborative tasks, and reflective discussions (Hattie & Timperley, 2007). In group settings, students evaluate each other's performance, provide suggestions, and refine their understanding through interaction. This aligns with Nicol and Macfarlane-Dick's (2006) argument that peer feedback is a powerful tool for self-regulated learning.

In ESP contexts, formative knowledge includes not only the acquisition of specialized vocabulary but also the ability to apply language in professional situations. Continuous interaction and feedback enable students to progressively improve their language use and conceptual understanding (Carless, 2015).

Therefore, Formative Assessment Theory provides a crucial framework for understanding how co-operative learning supports the ongoing development of students' formative knowledge.

6. Chomsky's (1980) Competence–Performance Model provides further insight into the relationship between knowledge and language use. The model distinguishes between competence, which refers to the internalized knowledge of language, and performance, which refers to the actual use of language in real-world contexts.

In ESP learning, students often possess sufficient linguistic knowledge but face difficulties in applying that knowledge due to factors such as anxiety, lack of practice, or limited exposure (Ellis, 2008). Co-operative learning addresses this gap by creating opportunities for authentic communication, allowing learners to practice language in meaningful contexts (Long, 1996).

Through pair work and group work, students actively engage in language use, receive immediate feedback, and refine their performance. This repeated practice not only strengthens their competence but also enhances their ability to perform effectively in real-life situations.

Thus, the Competence–Performance Model supports the view that co-operative learning enhances both the acquisition and application of language knowledge.

In synthesis, the integration of these theoretical perspectives provides a comprehensive and coherent framework for the present study. Co-operative Learning Theory explains the structural and pedagogical basis of collaboration; Social Constructivism emphasizes the role of interaction in knowledge construction; the Affective Filter Hypothesis highlights the influence of emotional factors; Social Learning Theory underscores observational learning and self-efficacy; Formative Assessment Theory supports continuous knowledge development; and the Competence–Performance Model explains the application of knowledge in practice.

Together, these theories offer a robust foundation for investigating the extent to which co-operative learning enhances ESP students’ formative knowledge, as well as determining whether pair work or group work serves as a more effective predictor of learning outcomes.

1.8 Conceptual Framework

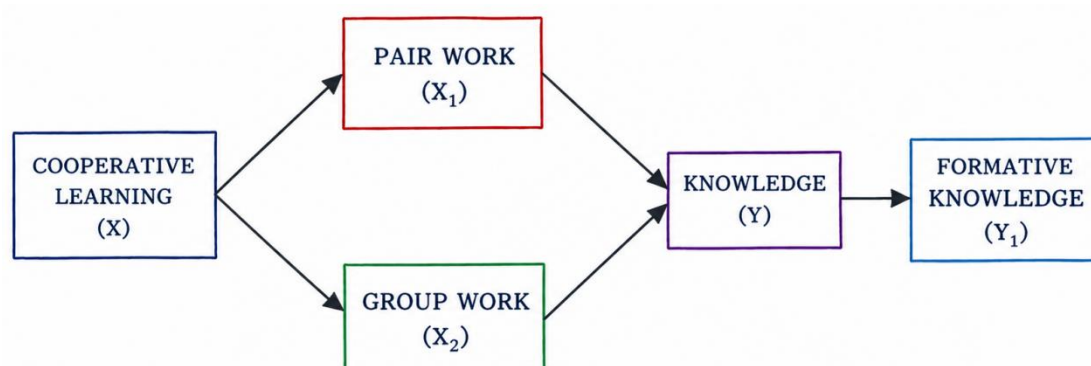


Figure 1.1 Conceptual Framework of the Study

The conceptual framework of this study is grounded in the theories of co-operative learning and social constructivism, which emphasize interaction, collaboration, and shared responsibility in knowledge construction. In this framework, co-operative learning is operationalized through two major interactional structures: pair work and group work.

Pair work and group work are treated as predictor variables, while formative knowledge serves as the outcome variable. Through collaborative activities, students are encouraged to exchange ideas, negotiate meaning, provide peer support, and actively participate in the learning process.

The framework further suggests that pair work and group work may contribute differently to students' formative knowledge enhancement. While both interactional structures facilitate communication and engagement, group work is expected to provide richer opportunities for collaborative problem-solving, critical thinking, and deeper cognitive processing. Consequently, group work may exert a stronger influence on formative knowledge development in ESP contexts.

Figure 1.1 presents the hypothesized relationships among the variables investigated in the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Overview of Co-operative Learning

2.1.1 Definitions and Key Characteristics

Co-operative learning (CL) is widely recognized as a learner-centered pedagogical approach that emphasizes structured interaction, shared responsibility, and collaborative knowledge construction. Rather than viewing learning as an individual and passive process, CL conceptualizes it as socially mediated, where meaning is co-constructed through dialogue, negotiation, and interaction among learners (Vygotsky, 1978; Gillies, 2020; Li & Zhang, 2021). In this sense, learning is not merely the acquisition of knowledge but an active process shaped by participation in collaborative practices.

However, despite its broad acceptance, the conceptualization of co-operative learning has been increasingly problematized in recent research. Earlier frameworks tended to assume that group work naturally leads to effective learning outcomes, yet contemporary studies challenge this assumption by emphasizing that not all forms of collaboration result in meaningful interaction (Gillies, 2020; Zhang & Plonsky, 2020; Dao, 2021). In particular, unstructured group activities may lead to superficial discussion, unequal participation, and limited cognitive engagement, thereby reducing the effectiveness of collaborative learning environments (Phung, 2020; Nguyen et al., 2022).

This shift in perspective highlights a critical issue: co-operative learning is not inherently effective but is contingent upon the quality of interaction and task design. Recent studies suggest that the success of CL depends on structured interaction, clear role assignment, and cognitively demanding tasks that promote negotiation of meaning and knowledge co-construction (Li, 2021; Dao, 2021; Tran & Nguyen, 2023). Without these conditions, collaborative learning may fail to move beyond surface-level engagement.

From a contemporary viewpoint, the key characteristics of effective co-

operative learning include positive interdependence, individual accountability, promotive interaction, and structured collaboration. While these elements were initially identified in earlier theoretical models, recent research reconceptualizes them as dynamic and interdependent conditions that must be carefully designed and implemented in specific learning contexts (Gillies, 2020; Zhang & Plonsky, 2020). Among these, structured interaction and individual accountability are particularly crucial in ensuring active participation and deeper cognitive processing.

In ESP contexts, these considerations become even more significant. Unlike general language learning, ESP requires learners to integrate linguistic competence with discipline-specific knowledge. Therefore, co-operative learning must be carefully adapted to support both language use and domain-specific understanding. Recent studies indicate that when properly structured, CL can facilitate not only language development but also knowledge integration and professional communication skills in ESP settings (Hyland, 2022; Basturkmen, 2020; Nguyen et al., 2022).

In sum, while co-operative learning remains a powerful pedagogical approach, its effectiveness depends on how interaction is structured and mediated. This suggests that in ESP classrooms, careful task design and interactional scaffolding are essential to ensure that co-operative learning leads to meaningful knowledge construction rather than superficial participation.

2.1.2 Pair Work

Pair work refers to a dyadic interactional structure in which two learners collaborate to complete tasks. It is widely recognized for promoting balanced participation, immediate feedback, and focused communication, which are essential for language development (Phung, 2020; Li, 2021; Nguyen et al., 2022).

Research shows that pair work facilitates negotiation of meaning and enhances learners' awareness of language forms, supporting interlanguage development and communicative competence (Dao, 2021; Tran & Nguyen, 2023). In ESP settings, pair work is particularly effective for practicing

discipline-specific language through role-play, dialogue tasks, and information-gap activities.

Nevertheless, pair work may be limited in promoting higher-order thinking due to restricted interactional diversity. While it supports accuracy and fluency, it may not fully enable complex knowledge construction required in ESP learning contexts (Nguyen et al., 2022).

2.1.3 Group Work

Group work involves multi-participant interaction and is characterized by collaborative problem-solving, shared responsibility, and distributed cognition. It enables learners to engage with diverse perspectives, thereby promoting critical thinking and deeper knowledge construction (Gillies, 2020; Zhang & Plonsky, 2020; Dao, 2021).

Recent studies indicate that group work is particularly effective in task-based learning environments where learners must integrate language skills with conceptual knowledge (Li & Zhang, 2021; Nguyen et al., 2022). In ESP contexts, it is widely used in case studies, simulations, and project-based tasks that reflect real-world professional situations.

However, group work may face challenges such as unequal participation and social loafing. Its effectiveness depends on structured task design, clear role allocation, and teacher facilitation (Phung, 2020; Tran & Nguyen, 2023).

2.1.4 Comparison of Effectiveness between Pair Work and Group Work

Co-operative learning influences the development of formative knowledge primarily through its core interactional structures, namely pair work and group work. Rather than functioning merely as instructional techniques, these structures represent key components of cooperative learning that shape the quality, intensity, and cognitive depth of learner interaction.

From the perspective of formative knowledge, pair work enables incremental learning through focused interaction, while group work supports

deeper cognitive processing through collaborative engagement. This distinction is particularly relevant in ESP contexts, where learners must integrate linguistic and disciplinary knowledge.

Despite this, many studies treat co-operative learning as a unified construct, overlooking the differential effects of its interactional structures. This gap highlights the need to examine which structure serves as a stronger predictor of formative knowledge, directly aligning with the research questions of this study.

While previous studies confirm the effectiveness of co-operative learning, they often overlook the differential roles of pair work and group work in shaping formative knowledge.

2.2 Formative knowledge

2.2.1 Concept and Pedagogical Importance

Formative knowledge has been conceptualized in various ways within contemporary educational research, yet there is a shared understanding that it represents a dynamic and developmental form of knowledge constructed through continuous learning processes. From a general perspective, formative knowledge refers to the evolving integration of linguistic, conceptual, and communicative competencies that are progressively developed through interaction and engagement in meaningful learning activities (Lam, 2021; Li, 2021; Nguyen et al., 2022). Unlike static or declarative knowledge, which is often associated with memorization and recall, formative knowledge is fluid, adaptive, and closely linked to learners' ability to apply knowledge in context.

From a pedagogical standpoint, formative knowledge can also be understood as a process-oriented construct that emphasizes learning as development rather than mere accumulation of information. It is closely aligned with the notion of formative learning, which highlights ongoing feedback, reflection, and improvement as essential components of effective learning (Black & Wiliam, 2009; Andrade, 2020; Carless & Winstone, 2023). In this sense, formative knowledge is not simply an outcome but a continuous process

shaped by learners' active participation in learning environments.

In the field of English for Specific Purposes (ESP), the concept of formative knowledge becomes particularly significant due to the dual demands placed on learners. ESP students are required not only to develop linguistic competence but also to acquire discipline-specific knowledge relevant to their professional domains. As such, formative knowledge in ESP contexts involves the integration of language skills with specialized conceptual understanding, enabling learners to use English effectively in real-world professional situations (Hyland, 2022; Basturkmen, 2020; Flowerdew, 2021).

Moreover, formative knowledge in ESP is inherently contextual and practice-oriented. It is developed through engagement in authentic tasks that simulate or replicate professional practices, such as case studies, simulations, and project-based activities. Through these tasks, learners internalize both linguistic forms and disciplinary conventions, thereby bridging the gap between classroom learning and workplace application (Hyland, 2022; Basturkmen, 2020).

Recent studies further emphasize that formative knowledge is closely associated with active and collaborative learning processes. Learners tend to develop deeper and more meaningful understanding when they are actively involved in tasks that require problem-solving, reflection, and interaction with peers (Nguyen et al., 2022; Vu, 2023; Dao, 2021). In particular, co-operative learning environments provide optimal conditions for the development of formative knowledge, as they encourage learners to negotiate meaning, exchange perspectives, and co-construct understanding.

From this perspective, formative knowledge can be seen as both a product and a process: it is the outcome of sustained engagement in meaningful learning activities and, at the same time, the result of ongoing cognitive and social interaction. This dual nature highlights its critical role in ESP education, where learners must not only acquire knowledge but also continuously adapt and apply it in complex and dynamic professional contexts.

Formative knowledge in ESP is not passively acquired but actively

constructed through continuous interaction, reflection, and engagement in collaborative learning processes, making it a central component of effective language learning and professional development.

2.2.2 An Overview of Formative Knowledge of ESP Students in Learning English Language

Formative knowledge in ESP learning contexts is understood as a dynamic and continuously evolving construct that emerges through active engagement in language use and discipline-specific tasks. Unlike static forms of knowledge that rely on memorization, formative knowledge is developed progressively through interaction, reflection, and application in meaningful contexts (Lam, 2021; Li, 2021; Nguyen et al., 2022; Vu, 2023).

In English for Specific Purposes (ESP), the development of formative knowledge is particularly complex, as learners are required to simultaneously acquire linguistic competence and domain-specific knowledge. This dual demand necessitates learning environments that go beyond traditional teacher-centered instruction and instead promote active, collaborative, and context-based learning. In this regard, co-operative learning plays a crucial role in facilitating the development of formative knowledge by providing structured opportunities for interaction and knowledge co-construction (Dao, 2021; Li & Zhang, 2021; Hyland, 2022).

Within co-operative learning environments, formative knowledge is primarily constructed through learners' engagement in pair work and group work activities. These interactional structures enable learners to negotiate meaning, exchange perspectives, and collaboratively solve problems, thereby fostering deeper cognitive processing and conceptual understanding. The extent to which students actively participate in such activities directly influences the depth and quality of their formative knowledge development (Nguyen et al., 2022; Vu, 2023).

Moreover, formative knowledge in ESP is closely linked to learners' ability to transfer knowledge from classroom contexts to real-world

professional situations. Through repeated engagement in authentic tasks, such as case studies, simulations, and project-based activities, learners gradually internalize both linguistic forms and disciplinary concepts. This process reflects a shift from surface-level learning to deeper, more meaningful knowledge construction, which is essential for professional communication and performance in fields such as banking and finance (Basturkmen, 2020; Hyland, 2022).

2.2.3 Assessment and Indicators of Formative Knowledge Development

Assessing formative knowledge (FK) presents significant theoretical and methodological challenges, as it is inherently dynamic, process-oriented, and continuously evolving rather than fixed or static. Unlike summative assessment, which focuses on end-point outcomes through standardized testing, formative knowledge reflects the ongoing development of learners' linguistic, cognitive, and professional competencies. Consequently, traditional assessment methods often fail to capture its complexity. Effective evaluation of FK therefore requires continuous, multidimensional, and authentic approaches aligned with learning as a socially constructed and iterative process (Black & Wiliam, 2009; Andrade, 2020; Carless & Winstone, 2023).

Recent research emphasizes that formative assessment should be both diagnostic and developmental, providing insights into learners' current performance while guiding future improvement (Nicol & Macfarlane-Dick, 2006; Panadero et al., 2018; Carless & Winstone, 2023). This dual function is particularly critical in ESP contexts, where learners must progressively integrate language proficiency with discipline-specific knowledge. As such, the assessment of formative knowledge extends beyond traditional measures of grammar and vocabulary to include cognitive, metacognitive, and interactive dimensions of learning (Hyland, 2022; Basturkmen, 2020).

Linguistic development remains a core indicator of formative

knowledge. Key dimensions include accuracy, fluency, and appropriateness in language use. Accuracy refers to the correct use of grammar, vocabulary, and pronunciation, while fluency reflects the ability to communicate effectively with minimal hesitation. Appropriateness involves the pragmatic use of language suited to professional and disciplinary contexts. In ESP settings, these indicators must be evaluated through performance-based tasks such as role-plays, presentations, case analyses, and written reports that simulate authentic professional communication (Nguyen et al., 2022; Vu, 2023).

2.3 Linking Co-operative Learning to Formative Knowledge

2.3.1 Mechanisms of Knowledge Construction through Collaboration

The relationship between co-operative learning and formative knowledge can be understood through the mechanisms of collaborative knowledge construction. In co-operative learning environments, knowledge is not transmitted but actively constructed through interaction, negotiation of meaning, and shared problem-solving (Gillies, 2020; Li & Zhang, 2021; Dao, 2021).

Recent studies highlight that interaction plays a central role in facilitating deeper cognitive processing. When learners engage in collaborative tasks, they are required to articulate ideas, respond to peers, and refine their understanding, thereby promoting higher-order thinking and conceptual development (Zhang & Plonsky, 2020; Li, 2021; Nguyen et al., 2022).

Furthermore, peer scaffolding is a critical mechanism through which learners support each other's learning. Through explanation, feedback, and clarification, learners co-construct knowledge and extend their cognitive abilities beyond individual limits (Lam, 2021; Dao, 2021). This aligns with the concept of socially mediated learning, where interaction serves as a catalyst for knowledge development.

In ESP contexts, these mechanisms are particularly significant, as learners must integrate language use with discipline-specific knowledge. Co-

operative learning provides opportunities for learners to engage with authentic tasks, apply knowledge in context, and develop both linguistic and conceptual competencies simultaneously (Hyland, 2022; Basturkmen, 2020).

These findings are further supported by recent research on multilingual and educational practices, which highlights the crucial role of interactive and collaborative learning environments in fostering students' cognitive development and knowledge construction. In particular, Nguyen and Le (2025) emphasize that multilingual and collaborative pedagogies create opportunities for learners to engage in deeper meaning-making processes, thereby enhancing both cognitive flexibility and knowledge integration. Similarly, Nguyen and Huynh (2024) argue that interactive learning environments not only facilitate language acquisition but also promote the development of higher-order thinking skills and professional competencies.

Taken together, these studies reinforce the argument that co-operative learning, through structured interaction and collaboration, serves as a powerful mechanism for enhancing formative knowledge, especially in ESP contexts where both linguistic and disciplinary knowledge must be developed simultaneously.

2.3.2 Pair Work and Group Work as Core Components of Cooperative Learning

Co-operative learning influences the development of formative knowledge primarily through its core interactional structures, namely pair work and group work. Rather than functioning merely as instructional techniques, these structures act as mediating mechanisms that shape the quality, intensity, and cognitive depth of learner interaction. From a sociocultural perspective, learning is mediated through social interaction, and the form that this interaction takes significantly determines the extent to which knowledge is constructed and internalized (Vygotsky, 1978; Gillies, 2020; Li & Zhang, 2021; Dao, 2021).

Recent studies in applied linguistics and educational research suggest that different interactional structures produce distinct patterns of engagement, negotiation of meaning, and cognitive processing. Consequently, pair work and group work do not contribute to learning in identical ways but instead mediate different dimensions of formative knowledge development (Zhang & Plonsky, 2020; Nguyen et al., 2022; Vu, 2023). Understanding their complementary and differential roles is therefore essential in explaining how co-operative learning enhances formative knowledge in ESP contexts.

2.3.2.1 Group Work as a Complex Knowledge-Construction

Arena

Group work creates a highly dynamic and complex interactional environment in which multiple learners contribute diverse perspectives, experiences, and knowledge resources. This diversity serves as a catalyst for deeper cognitive engagement, as learners are required to negotiate meaning, reconcile differing viewpoints, and collaboratively construct shared understanding (Gillies, 2020; Zhang & Plonsky, 2020; Li & Zhang, 2021).

From the perspective of distributed cognition, knowledge in group work settings is not confined to individual learners but is distributed across participants, interactions, and tasks. Through collaborative dialogue, learners engage in higher-order thinking processes such as analysis, synthesis, and evaluation, which are essential for the development of formative knowledge (Dao, 2021; Nguyen et al., 2022; Vu, 2023).

In ESP contexts, the role of group work becomes even more significant, as learners must integrate linguistic competence with discipline-specific knowledge. Activities such as case studies, simulations, and project-based tasks require learners to apply language in complex, authentic situations while simultaneously engaging with professional content. Through these interactions, learners not only acquire knowledge but also develop the ability to transfer and apply it in real-world contexts (Hyland, 2022; Basturkmen, 2020).

However, the effectiveness of group work is contingent upon structured

implementation. Without clear task design and role allocation, group work may result in unequal participation or superficial engagement (Phung, 2020; Tran & Nguyen, 2023). Therefore, its potential as a knowledge-construction arena depends on the extent to which interaction is meaningfully structured and cognitively demanding.

2.3.2.2 Complementary Contributions to Formative Knowledge

While group work facilitates macro-level knowledge construction through complex interaction and cognitive engagement, pair work contributes to formative knowledge at a more micro-level through focused interaction and immediate feedback. In pair work settings, learners are more likely to participate equally, engage in sustained dialogue, and receive instant corrective feedback, which supports the development of linguistic accuracy and fluency (Li, 2021; Phung, 2020; Nguyen et al., 2022).

Moreover, pair work creates a low-anxiety environment that encourages learners to experiment with language, negotiate meaning, and refine their understanding without the pressure of larger group dynamics. This makes it particularly effective for consolidating knowledge and addressing specific linguistic gaps (Dao, 2021; Vu, 2023).

Importantly, in the context of this study, the relationship between pair work and group work is viewed as complementary rather than competitive. Pair work tends to support more focused interaction and immediate feedback, which can facilitate the refinement of linguistic knowledge. In contrast, group work provides broader opportunities for collaborative discussion and the integration of ideas, which may contribute to deeper conceptual understanding (Gillies, 2020; Li & Zhang, 2021).

Together, these interactional structures are expected to support different aspects of formative knowledge development, particularly in balancing accuracy and depth in ESP learning contexts.

The effectiveness of co-operative learning in enhancing formative

knowledge does not lie in any single interactional structure but in the strategic integration of pair work and group work, each contributing distinct yet complementary cognitive and pedagogical functions.

2.3.3 Cooperative Learning in ESP Contexts

2.3.3.1 Potential Effects of Co-operative Learning in ESP

Co-operative learning has been widely discussed in the literature as a pedagogical approach that may support the development of formative knowledge in ESP contexts, particularly through interaction, collaboration, and contextualized language use. Previous studies suggest that it can encourage active engagement, as learners participate more meaningfully in tasks rather than passively receiving information (Gillies, 2020; Li & Zhang, 2021; Nguyen et al., 2022). This engagement is often associated with enhanced cognitive processing and knowledge retention, which are important for the development of formative knowledge.

In addition, co-operative learning may facilitate the integration of linguistic competence with discipline-specific knowledge, which is a key requirement in ESP education. Through collaborative tasks such as case studies, simulations, and problem-solving activities, learners are exposed to more authentic and context-based communication, potentially supporting both language development and conceptual understanding (Hyland, 2022; Basturkmen, 2020; Dao, 2021).

Furthermore, co-operative learning is often associated with the development of higher-order thinking skills. Group-based interaction may encourage learners to analyze information, evaluate alternatives, and construct arguments collaboratively, thereby contributing to deeper learning (Zhang & Plonsky, 2020; Vu, 2023). It may also support the development of communicative competence, as learners negotiate meaning, clarify ideas, and adapt language to different contexts (Li, 2021; Nguyen et al., 2022).

Co-operative learning may also contribute to the development of

professional and interpersonal skills, such as teamwork, negotiation, and problem-solving, which are essential in workplace environments. These competencies align with the goals of ESP education, which aims to prepare learners for real-world professional communication (Hyland, 2022; Basturkmen, 2020).

2.3.3.2 Challenges of Co-operative Learning in ESP

Despite its pedagogical advantages, co-operative learning also presents several challenges, particularly in contexts where traditional teacher-centered approaches remain dominant. One common issue is unequal participation, where some learners contribute actively while others adopt passive roles, leading to imbalanced interaction and reduced learning effectiveness (Phung, 2020; Tran & Nguyen, 2023).

Another challenge relates to the quality of interaction. Without appropriate task design and facilitation, collaborative activities may result in superficial discussion rather than meaningful knowledge construction (Zhang & Plonsky, 2020; Nguyen et al., 2022). This is particularly problematic in ESP contexts, where tasks require not only linguistic accuracy but also conceptual depth and professional relevance.

Additionally, learners' limited experience with collaborative learning can hinder the effectiveness of co-operative approaches. In many educational settings, including Vietnam, students are accustomed to teacher-centered instruction and may lack the skills necessary for effective collaboration, such as turn-taking, negotiation, and shared responsibility (Vu, 2023; Dao, 2021).

Furthermore, linguistic limitations may restrict learners' ability to fully engage in co-operative tasks. ESP learners with lower proficiency levels may struggle to express complex ideas, which can limit participation and reduce the potential benefits of interaction (Nguyen et al., 2022).

2.4 Global Studies

2.4.1 International Studies

A growing body of international research has examined the impact of co-operative learning on language learning outcomes. Numerous studies have consistently reported positive effects of collaborative learning on various aspects of language development. For instance, Zhang and Plonsky (2020) conducted a meta-analysis demonstrating that co-operative learning significantly enhances language acquisition, particularly when tasks involve meaningful interaction. Similarly, Gillies (2020) found that structured co-operative learning improves both cognitive engagement and academic performance.

Further empirical evidence suggests that collaborative learning facilitates knowledge integration and higher-order thinking. Li and Zhang (2021) reported that co-operative learning supports critical thinking and knowledge construction, while Phung (2020) highlighted its role in enhancing learner engagement and interaction quality. In addition, Dao (2021) emphasized the importance of peer interaction in promoting meaningful knowledge construction in language learning contexts.

In ESP settings, the role of interaction becomes even more significant due to the dual demands of language proficiency and discipline-specific knowledge. Hyland (2022) and Basturkmen (2020) argue that ESP learning requires the integration of linguistic and conceptual knowledge, which can be effectively supported through collaborative learning environments. Moreover, Nguyen et al. (2022) and Tran and Nguyen (2023) suggest that co-operative learning enhances both communicative competence and knowledge application in ESP contexts.

Recent studies have also explored the differential effects of interactional structures within co-operative learning. Evidence indicates that different forms of collaboration may contribute differently to learning outcomes. For example,

Vu (2023) found that group work tends to promote deeper conceptual understanding, while pair work provides more opportunities for focused interaction and immediate feedback. Similarly, Nguyen et al. (2022) reported that group-based interaction supports knowledge integration, whereas pair work facilitates linguistic accuracy and fluency.

2.4.2 Domestic Studies (Vietnam)

In Vietnam, research on co-operative learning has increased in recent years, particularly in EFL contexts. Phung (2020) found that co-operative learning enhances student engagement and communication skills in Vietnamese classrooms.

Le and Barnard (2021) reported that collaborative learning approaches improve learner autonomy and participation. Similarly, Pham and Hamid (2022) highlight the need for learner-centered approaches in Vietnamese higher education.

Vu (2023) emphasizes that co-operative learning can bridge the gap between classroom learning and real-world application. However, most domestic studies focus on general English rather than ESP contexts.

Moreover, limited research has examined the role of co-operative learning in developing formative knowledge or compared the effects of pair work and group work. This indicates a significant research gap that the present study aims to address.

Despite these findings, limited research has examined the comparative predictive roles of pair work and group work in enhancing formative knowledge in ESP contexts, particularly in Vietnam.

Recent Vietnamese studies have further emphasized the role of co-operative learning and related factors in shaping students' learning outcomes. For example, Nguyen (2025) highlighted that affective and cognitive variables significantly influence ESP students' performance. Similarly, Nguyen and

Nguyen (2025) identified multiple contextual factors affecting learning engagement and educational outcomes in rural settings. These findings support the argument that instructional strategies and learning environments play a crucial role in knowledge development.

2.5 Research Gap

Although cooperative learning has been widely investigated in language education, several research gaps remain. First, most previous studies focused on general English learning contexts, while relatively few studies examined ESP classrooms. Second, limited research has explored the relationship between cooperative learning and students' formative knowledge development. Third, there is a lack of empirical evidence from Vietnamese higher education institutions, particularly in the context of Ho Chi Minh University of Banking. Therefore, this study aims to address these gaps by examining the effects of cooperative learning on ESP students' formative knowledge and comparing the contributions of pair work and group work.

Overall, previous international studies have consistently demonstrated the positive impact of cooperative learning on students' language learning outcomes, engagement, and academic achievement. Most studies reported that cooperative learning activities, including pair work and group work, promoted interaction, communication, and knowledge construction among learners. However, the majority of these studies were conducted in general EFL contexts rather than ESP settings. In addition, limited attention has been paid to formative knowledge development, particularly in higher education institutions in Vietnam. Therefore, further research is needed to investigate how cooperative learning contributes to ESP students' formative knowledge in specific educational contexts.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Population and Sample

The population of this study consisted of ESP students enrolled at Ho Chi Minh University of Banking. These students were taking English for Specific Purposes courses related to their academic disciplines, including Financial Banking, Business Administration, Economic Finance, and Accounting.

A sample of 150 ESP students was selected to participate in the study. The participants were recruited from ten ESP classes and were chosen through a random sampling procedure to ensure representativeness. All participants were enrolled in compulsory ESP courses and voluntarily agreed to participate in the research. The sample size was considered adequate for conducting correlation and regression analyses and for addressing the research questions of the study.

3.2 Data Collection

The study employed a structured questionnaire as the primary instrument for data collection. The questionnaire was designed to measure students' perceptions of co-operative learning, including pair work and group work, as well as their formative knowledge.

Data collection was conducted during the second semester of the 2025–2026 academic year. Participants were informed about the purpose of the study, and their consent was obtained prior to participation.

To ensure validity and reliability, the questionnaire was reviewed and refined before administration. Potential challenges such as incomplete responses were minimized through clear instructions and careful monitoring of the data collection process.

3.3 Research Setting

This study was conducted at Ho Chi Minh University of Banking (HUB)

during the second semester of the 2025–2026 academic year. The participants were undergraduate students enrolled in English for Specific Purposes (ESP) courses. These courses are designed to develop students' English proficiency in discipline-related areas such as banking, finance, economics, and business communication. The selected setting provided an appropriate environment for examining how co-operative learning contributes to students' formative knowledge development in ESP learning.

As a higher education institution specializing in banking, finance, economics, and business administration, Ho Chi Minh University of Banking integrates ESP courses into its curriculum to prepare students for discipline-specific communication tasks. However, despite the importance of ESP instruction, previous research has indicated that many students encounter difficulties in transforming theoretical knowledge into practical application. This suggests that there exists a gap between what students know and what they are able to do with that knowledge. In other words, students may possess declarative knowledge but lack the procedural ability to apply it effectively. This issue is particularly significant because the ultimate goal of ESP learning is not merely knowledge acquisition but knowledge application.

This situation implies that traditional teaching approaches, which often emphasize teacher-centered instruction and passive learning, may not be sufficient to support the development of formative knowledge. More importantly, it suggests that alternative pedagogical approaches are needed to bridge the gap between knowledge and application. In this regard, co-operative learning emerges as a promising solution because it emphasizes interaction, collaboration, and shared responsibility.

By implementing pair work and group work activities, co-operative learning creates opportunities for students to engage in meaningful interaction, negotiate meaning, and construct knowledge collaboratively. This implies that the classroom is transformed from a space of knowledge transmission into a space of knowledge construction. Therefore, the research setting is not only appropriate but also highly relevant, as it provides a realistic context in which

the impact of co-operative learning on formative knowledge can be examined.

3.4 Participants

A total of 150 ESP students ($n = 150$) from Ho Chi Minh University of Banking (HUB), Ho Chi Minh City, Vietnam, participated in this study. The participants were drawn from four economic specializations, including Financial Banking ($n = 42$), Business Administration ($n = 40$), Economic Finance ($n = 35$), and Accounting ($n = 33$), as presented in Table 3.1.

Regarding gender distribution, the sample consisted of 48 male and 102 female students, indicating a clear predominance of female participants. The students were selected from ten ESP classes and were randomly chosen to ensure representativeness.

All participants were enrolled in compulsory, credit-bearing English courses as part of their university curriculum. Their English proficiency level was generally at a high-beginner stage. Most participants were in their second or third year of study, with ages ranging from 20 to 23 years old.

The instructional time varied slightly across groups: students in Financial Banking and Business Administration followed a 9-week course with 45 hours of instruction, while those in Economic Finance and Accounting completed a 30-hour course over 6 weeks.

Learning and Teaching Materials: The ESP courses employed both content-based and task-based instructional materials, integrating receptive and productive language skills alongside functional grammar and practical language use. The teaching materials were adapted to suit the specific needs of each economic specialization.

Students in the Financial Banking, Economic Finance, and Accounting programs used the textbook *English for Business Studies*, which covered topics such as Banking, Bonds, Stocks and Shares, Accounting, and Financial Statements. Meanwhile, students in Business Administration studied units from *Market Leader: Human Resources*, focusing on topics such as E-recruitment, Apprenticeships, Bonuses and Incentives, Hiring Practices, and Job Advertisements.

The ESP program utilized an ESL textbook series published by Pearson Longman, which included a student's book, workbook, CD-ROM, audio materials, video resources, and a Learning Management System (LMS). These materials were designed to support both classroom instruction and independent learning.

Table 3.1 Summary of Participants Data

Codes	Specializations	Participants	Male	Female	Hours/Week	Course Book
FB ¹	Financial Banking	42	8	34	45/9	English for Business Studies
BA ²	Business Administration	40	11	29	45/9	Human Resources, Market Leaders
EF ³	Economic Finance	35	5	30	30/6	English for Business Studies
AC ⁴	Accounting	33	24	9	30/6	English for Business Studies
Total	FB + BA + EF + AC	150	48	102	Full hours	ESP Program

3.5 Research Instrument

A structured questionnaire was employed as the primary research instrument in this study. The questionnaire was designed to investigate students' perceptions of co-operative learning and its relationship with formative knowledge development in ESP learning. The instrument consisted of two main sections. The first section collected demographic information about the participants, including gender, major, and academic background. The second section contained items measuring three research constructs: Pair Work (PW), Group Work (GW), and Formative Knowledge (FK).

All questionnaire items were developed based on established theoretical frameworks and previous studies on co-operative learning and formative

knowledge. A four-point Likert scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree) was used to measure participants' responses. Prior to the main study, the questionnaire was reviewed by experts and pilot-tested to ensure clarity, content validity, and reliability.

The questionnaire was administered in English because all participants were enrolled in ESP courses and possessed sufficient English proficiency to understand the questionnaire items. To ensure comprehension, explanations were provided when necessary during the data collection process.

3.6 Validity and reliability

Validity and reliability are crucial criteria in determining the quality and credibility of research instruments. They refer to the appropriateness, accuracy, meaningfulness, and usefulness of the inferences drawn from the collected data (Fraenkel & Wallen, 2009; Dörnyei, 2010). In quantitative research, particularly in Likert-scale questionnaires, reliability reflects the internal consistency of the instrument, indicating how well the items measure the same underlying construct.

According to Dörnyei (2010) and Brown (1996), a Cronbach's Alpha coefficient of 0.70 or higher is considered acceptable, while values above 0.80 indicate good reliability and values exceeding 0.90 demonstrate excellent internal consistency. However, coefficients below 0.60 are considered problematic and suggest that the items may not consistently measure the intended construct (Vogt, 2007; Perry, 2011). In general, reliability coefficients range from 0 (completely unreliable) to 1 (perfect reliability), although a value of 1 is rarely achieved in practice.

In the present study, the questionnaire consisted of 30 items designed to measure three constructs: Pair Work (PW), Group Work (GW), and Formative Knowledge (FK). The items were developed based on established theoretical frameworks of co-operative learning and formative knowledge and were adapted to fit the ESP learning context. To ensure content validity, the questionnaire was evaluated by four experts, including two internal lecturers

from the Faculty of English Language at Ho Chi Minh University of Banking and two external specialists in applied linguistics. These experts reviewed the items in terms of clarity, relevance, and alignment with the research constructs. Based on their feedback, minor revisions were made to improve wording and eliminate ambiguity, thereby enhancing both internal and external validity.

Furthermore, pilot testing was conducted prior to the main data collection to examine the reliability of the instrument. Unlike some previous studies where items with low item-total correlation had to be removed, all items in this study met the acceptable threshold (corrected item-total correlation > 0.30), indicating that each item contributed meaningfully to its respective construct. Therefore, no items were eliminated, and the full set of 30 items was retained for further analysis.

The reliability of the questionnaire was assessed using Cronbach's Alpha. The results revealed that all three constructs achieved exceptionally high reliability coefficients. Specifically, Pair Work (PW) obtained a Cronbach's Alpha of 0.964, Group Work (GW) achieved 0.967, and Formative Knowledge (FK) reached 0.974. The overall reliability coefficient for the entire instrument was 0.968. These values significantly exceed the recommended threshold of 0.70, indicating excellent internal consistency.

It is worth noting that while very high Cronbach's Alpha values (above 0.95) may sometimes suggest item redundancy, in the context of this study, the high coefficients reflect the strong conceptual coherence of the constructs and the consistent responses among participants. Given that the questionnaire items were carefully designed to capture closely related aspects of co-operative learning and formative knowledge, such high reliability is considered acceptable and theoretically justified.

In terms of validity, the accuracy of the research findings depends on how well the instruments measure the intended constructs (Dörnyei, 2007; Mackey & Gass, 2012; Porte, 2012). The high reliability coefficients obtained in this study provide strong evidence supporting construct validity. In addition, appropriate sampling procedures ($N = 150$) and systematic data collection

further enhance the external validity of the study. Altogether, the results indicate that the research instrument is both valid and reliable, ensuring the credibility of subsequent statistical analyses, including correlation and regression used to address the research questions.

**Table 3.2 Reliability Statistics of Characteristics of Instruments (RSCI)
(N = 150)**

Reliability Statistics		
Cronbach's Alpha: .966	Numbers of Items: 30 in total	
Co-operative Learning Variables	Cronbach's Alpha	N of Items
Pair Work (PW)	.964	10
Group Work (GW)	.967	10
Altogether	.966	20
Reliability Statistics		
Cronbach's Alpha: .974	Numbers of Items: 30 in total	
Performance Variables	Cronbach's Alpha	N of Items
Formative Knowledge (FK)	.974	10
Overall value	.970	30

3.7 Measurement and research instrumentation of variables

This section presents and describes how the variables in the study were operationalized and measured. The main instrument employed in this study was a structured questionnaire consisting of two main parts. Most of the items were adapted from previous studies on co-operative learning and language learning (Gillies, 2020; Li & Zhang, 2021; Nguyen et al., 2022) and were modified to suit the specific objectives and context of this research.

Part 1 focused on participants' background information, including gender, age, and years of learning English. This section aimed to provide general demographic data for descriptive analysis.

Part 2 consisted of 30 items designed to measure three main constructs:

Pair Work (PW), Group Work (GW), and Formative Knowledge (FK). Specifically, Pair Work and Group Work were categorized under co-operative learning variables (20 items), while Formative Knowledge represented the dependent variable (10 items). All items were measured using a four-point Likert scale (Likert, 1932), ranging from 4 to 1 (4 = Strongly Agree; 3 = Agree; 2 = Disagree; 1 = Strongly Disagree). Participants were required to indicate the extent to which they agreed with each statement.

Unlike studies employing five-point Likert scales, this study adopted a four-point scale for two primary reasons. Firstly, the four-point scale eliminates the neutral option, thereby encouraging respondents to provide more decisive answers. Secondly, it increases the consistency and accuracy of responses, which is particularly suitable for quantitative statistical analysis.

Regarding the measurement of variables, the responses were coded and analyzed using the Statistical Package for the Social Sciences (SPSS). Composite scores for each construct (PW, GW, FK) were calculated by averaging the respective items. These composite scores were then used in further statistical analyses, including reliability testing, correlation analysis, and multiple regressions.

To interpret the levels of co-operative learning and formative knowledge, a mean range classification was applied. This approach enables the researcher to determine whether the level of each variable is low, moderate, or high based on the calculated mean values. The classification criteria were adapted to match the four-point Likert scale used in this study, as presented in Table 3.3

Table 3.3 Mean Range for Determining Levels of Co-operative Learning and Formative Knowledge

Mean Range (Mean = X)	Interpretation	Levels of Co-operative Learning	Levels of Formative Knowledge
3.25 – 4.00	High	High	High
2.50 – 3.24	Moderate	Moderate	Moderate

1.00 – 2.49	Low	Low	Low
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3.8 Data Analysis

The data collected in this study were coded and analyzed using the Statistical Package for Social Sciences (SPSS) version 22, with a predetermined significance level set at $\alpha = 0.05$. The relationships between the independent variables (co-operative learning: Pair Work and Group Work) and the dependent variable (Formative Knowledge) were examined using descriptive and inferential statistical techniques.

For the descriptive analysis, the data were processed using coding, frequencies, and grouped frequency distributions. The mean ($\bar{x}$) and standard deviation (SD) were calculated to describe the overall tendencies of the variables. These descriptive statistics provided a general overview of students' perceptions of co-operative learning and their formative knowledge development.

Subsequently, Pearson's Product-Moment Correlation Coefficient (r) was employed to determine the strength and direction of the relationships between the independent variables (Pair Work and Group Work) and the dependent variable (Formative Knowledge). To interpret the strength of correlation coefficients, the study adopted the Davis's Index Table (DIT), as presented in Table 3.4 below.

Table 3.4 Davis's Index Table for Interpreting Correlation Coefficients

Coefficient of Correlation (r)	Relationship	Description
0.70 or above	Very strong	Highly significant (+)
0.50 – 0.69	Strong	Distinctively significant (+)
0.30 – 0.49	Moderate	Slightly significant (+)
0.10 – 0.29	Weak	Less significant (+)

0.00 – 0.09	Negligible	No significant (-)
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According to Creswell (2012), correlational research involves two main purposes: explanation and prediction. In explanatory analysis, the relationships between variables are identified using correlation statistics, and conclusions are drawn based on whether variables are significantly related. In predictive analysis, certain variables are treated as predictors to determine their influence on the dependent variable.

Structurally, the correlation coefficient (r) ranges from -1 to +1. Values closer to +1 indicate a strong positive relationship, whereas values closer to -1 indicate a strong negative relationship. Values near zero suggest a weak or no relationship.

In this study, Multiple Regression (MR) analysis was conducted to examine the simultaneous effects of the independent variables on the dependent variable. Specifically, the model included Pair Work (x_1) and Group Work (x_2) as predictor variables, while Formative Knowledge (y_1) served as the outcome variable.

The coefficient of determination (R^2) was used to assess the overall predictive power of the regression model, indicating the proportion of variance in formative knowledge explained by co-operative learning variables. Additionally, standardized regression coefficients (β) were analyzed to determine the relative contribution of each predictor and to identify the strongest predictor of students' formative knowledge.

Table 3.5 Criteria for Interpreting Effect Size

Criteria (%)	Interpretation
2% – 12.99%	Small (S)
13% – 25.99%	Medium (M)
26% or above	Large (L)

According to Toth (2007, 2011), the magnitude of effect sizes can be classified as small, medium, or large based on the percentage of variance explained. In this study, the values of R^2 and standardized coefficients (β) were used to evaluate the strength of the predictive relationships.

Multiple regression analysis was further conducted to determine which co-operative learning structure (Pair Work or Group Work) serves as the strongest predictor of ESP students' formative knowledge. The relationship between the dependent variable (y_1 = Formative Knowledge) and the independent variables (x_1 = Pair Work; x_2 = Group Work) was examined to provide empirical evidence addressing the research questions of the study.

The relationships among the variables in this study can be conceptually illustrated in figure 1.1 below. Co-operative learning is operationalized through two core interactional structures, namely pair work and group work, which function as predictor variables influencing students' formative knowledge as the criterion variable.

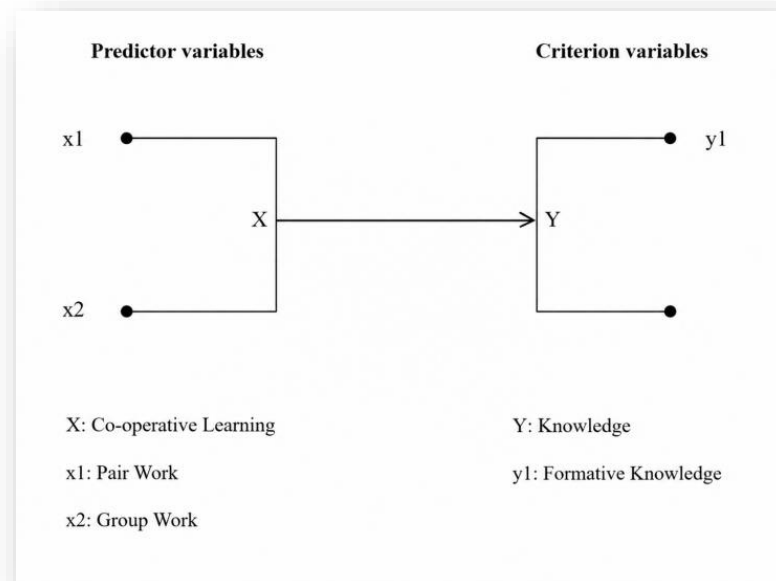


Figure 3.2 Flowchart of relationship between Co-operative Learning and Formative Knowledge

As illustrated in Figure 1.1, co-operative learning (X) is

conceptualized as a composite construct consisting of two key components: pair work (x1) and group work (x2). These components function as independent predictor variables that are hypothesized to influence students' formative knowledge (Y), which is treated as the dependent variable in this study. This framework reflects the study's focus on examining not only the overall effect of co-operative learning but also the relative predictive strength of its core interactional structures.

CHAPTER 4: FINDINGS AND DISCUSSION OF RESULTS

This chapter presents the findings of the study and provides an in-depth discussion of the results in relation to the research questions. The analysis focuses on examining the extent to which co-operative learning enhances ESP students' formative knowledge, as well as identifying which co-operative learning structure—pair work or group work—serves as the strongest predictor of such enhancement. In order to ensure consistency with previous empirical studies, particularly those employing Pearson correlation and regression analysis in examining learning variables, the present study adopts a similar statistical approach. The findings are interpreted within the framework of co-operative learning theory and social constructivism, thereby linking statistical outcomes with theoretical implications in ESP contexts.

4.1 Correlation between Co-operative Learning and Formative Knowledge

To answer the first research question, Pearson correlation analysis was conducted to determine whether there is a significant relationship between co-operative learning structures and students' formative knowledge. The results are presented in Table 4.1.

Table 4.1 Correlations between Co-operative Learning Variables and Formative Knowledge

Measured Variables	Formative Knowledge	Pair Work	Group Work
<i>Pair Work</i>	$r = .621^{**}$	1	
Sig. (2-tailed)	.000		
<i>Group Work</i>	$r = .703^{**}$	.588**	1
Sig. (2-tailed)	.000	.000	
Population (N)	150	150	150

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

The results in Table 4.1 reveal that there is a strong and statistically significant positive correlation between co-operative learning and formative knowledge. Specifically, pair work shows a strong positive correlation with formative knowledge ($r = .621$, $p < .01$), while group work demonstrates an even stronger relationship ($r = .703$, $p < .01$). These findings indicate that as students engage more actively in co-operative learning activities, their level of formative knowledge correspondingly increases. This pattern contrasts with the negative correlations observed in anxiety-related studies, where higher anxiety leads to lower performance, suggesting that co-operative learning operates as a facilitating rather than inhibiting factor in the learning process.

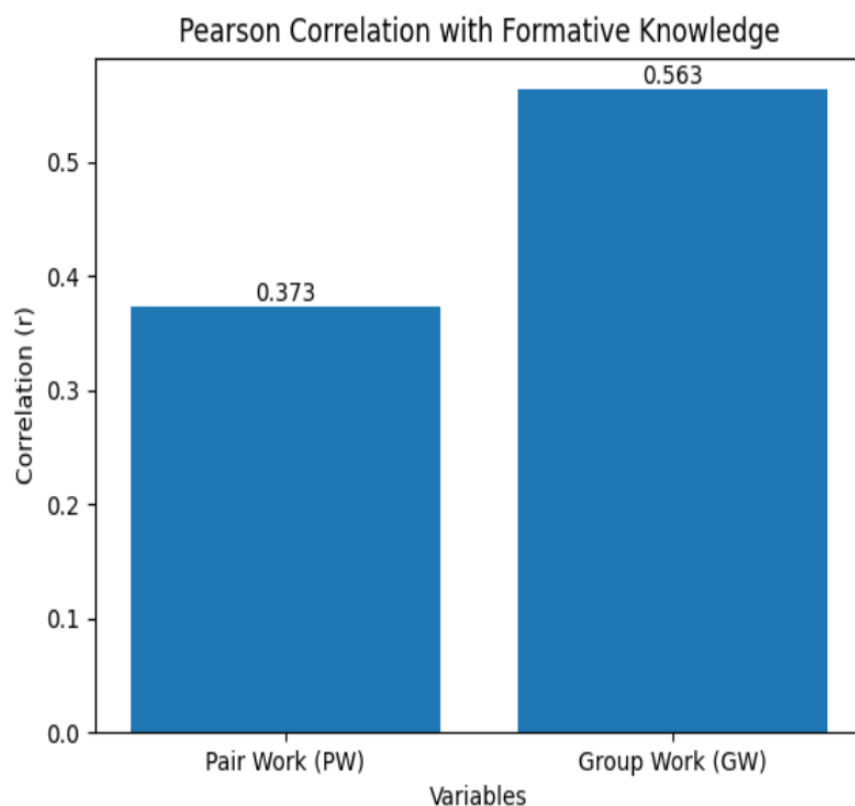


Figure 4.1 Pearson Correlations between Pair Work, Group Work and Formative Knowledge

The bar chart illustrates the Pearson correlation coefficients between pair work, group work, and formative knowledge. The results indicate that both pair work and group work are positively associated with formative knowledge. However, group work demonstrates a stronger correlation ($r = 0.563$) compared

to pair work ($r = 0.373$), suggesting that group work may have a greater influence on the development of students' formative knowledge.

The correlation analysis indicates that both pair work and group work are positively associated with formative knowledge. However, group work shows a stronger correlation ($r = 0.563$) compared to pair work ($r = 0.373$), suggesting that group-based interaction contributes more substantially to knowledge development.

From a theoretical perspective, this result strongly supports Vygotsky's (1978) social constructivist view that knowledge is constructed through interaction. The positive correlations observed in this study suggest that collaborative engagement allows students to negotiate meaning, share perspectives, and co-construct knowledge more effectively. Furthermore, the stronger correlation of group work compared to pair work implies that interactional complexity and diversity play a critical role in enhancing cognitive development. In ESP contexts, where learners are required to integrate language skills with domain-specific knowledge, such interaction becomes even more crucial. Therefore, it can be concluded that co-operative learning significantly enhances students' formative knowledge, providing a positive answer to the first research question.

4.2 Regression Analysis of Pair Work and Group Work toward Formative Knowledge

In order to answer the second research question, multiple regression analysis was conducted to examine which co-operative learning structure, namely pair work or group work, served as the best predictor of ESP students' formative knowledge. In this study, formative knowledge was treated as the dependent variable, while pair work and group work were entered as independent variables. This analytical procedure was appropriate because the study did not merely aim to identify whether the variables were related, but also attempted to determine the predictive contribution of each independent variable to the dependent variable. This is consistent with the methodological orientation

of the study, in which correlation analysis explains the existence and direction of relationships, whereas regression analysis provides further evidence concerning the predictive strength of each factor. The use of multiple regression is also consistent with the analytical model adopted in the teacher's anxiety sample, where several independent variables were examined simultaneously to identify the strongest predictor of students' learning performance.

Table 4.2 Model Summary of Pair Work and Group Work toward Formative Knowledge

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733	.538	.532	.421

As shown in Table 4.2, the value of R is .733, indicating a strong overall relationship between the set of predictor variables and formative knowledge. More importantly, the R Square value is .538, which means that pair work and group work together explain 53.8% of the total variance in ESP students' formative knowledge. This value indicates a large effect size because the study's methodological framework classifies R^2 values of 26% or above as large . In other words, more than half of the variation in students' formative knowledge can be statistically explained by their engagement in pair work and group work activities. The remaining 46.2% may be attributed to other factors that were not included in the present regression model, such as students' prior English proficiency, motivation, learning autonomy, teacher support, task design, classroom atmosphere, or students' familiarity with ESP content. Therefore, while the regression model is strong and meaningful, it should not be interpreted as explaining all dimensions of formative knowledge development.

Table 4.3 ANOVA Result of the Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	30.214	2	15.107	85.376	.000
Residual	25.982	147	.177		
Total	56.196	149			

Table 4.3 presents the ANOVA results of the regression model, indicating that the overall model is statistically significant, $F(2,147) = 85.376$, $p < .001$. Given that the significance value is substantially lower than the conventional threshold of .05, it can be inferred that the model provides a reliable explanation of the relationship between co-operative learning structures (pair work and group work) and ESP students' formative knowledge.

More importantly, this result suggests that the predictive relationship is not due to random variation but reflects a systematic pattern in the data. In other words, the combined effects of pair work and group work contribute meaningfully to the development of formative knowledge, supporting the assumption that interaction-based learning plays a central role in ESP contexts.

From an interpretative perspective, the statistical significance of the model aligns with sociocultural and interactionist theories, which emphasize the role of social interaction and collaborative engagement in knowledge construction. The findings therefore reinforce the view that co-operative learning is not merely a supportive instructional strategy but a key mechanism through which learners actively construct and internalize knowledge.

However, it is important to note that statistical significance does not imply completeness. Although the model is strong, a considerable proportion of variance (46.2%) remains unexplained, suggesting that formative knowledge development is influenced by additional factors beyond pair work and group work. These may include learners' prior proficiency, motivation, learning autonomy, instructional design, and classroom environment.

Therefore, while the regression model provides robust empirical support for the effectiveness of co-operative learning structures, it should be interpreted

as part of a broader and more complex system of factors influencing learning outcomes in ESP contexts.

Table 4.4 Coefficients of Pair Work and Group Work toward Formative Knowledge

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Tolerance	VIF
Constant	2.185	.145		15.069	.000		
Pair Work	.312	.067	.298	4.657	.000	.654	1.529
Group Work	.487	.071	.492	6.859	.000	.654	1.529

Based on Table 4.4, both pair work and group work are statistically significant predictors of formative knowledge, as their significance values (.000) are lower than the accepted alpha level of .05. The unstandardized coefficients indicate that an increase of one unit in pair work leads to an increase of .312 units in formative knowledge, while a one-unit increase in group work results in a larger increase of .487 units, holding the other variable constant.

A comparison of the coefficients shows that group work has a stronger impact on formative knowledge than pair work. This is further supported by the standardized beta values, where group work ($\beta = .492$) demonstrates a higher predictive strength than pair work ($\beta = .298$). This suggests that group-based interaction provides more effective conditions for knowledge construction.

From an interpretative perspective, the stronger effect of group work may be attributed to its capacity to promote richer interaction, collaborative problem-solving, and exposure to diverse perspectives, all of which contribute

to deeper cognitive processing. This finding is consistent with sociocultural theory, which emphasizes the role of social interaction in facilitating learning and knowledge internalization.

In addition, the collinearity statistics indicate that the model does not suffer from multicollinearity, as both predictors have acceptable tolerance (.654) and VIF values (1.529). Therefore, the regression results can be considered reliable, and the stronger predictive role of group work is not due to overlap between the independent variables.

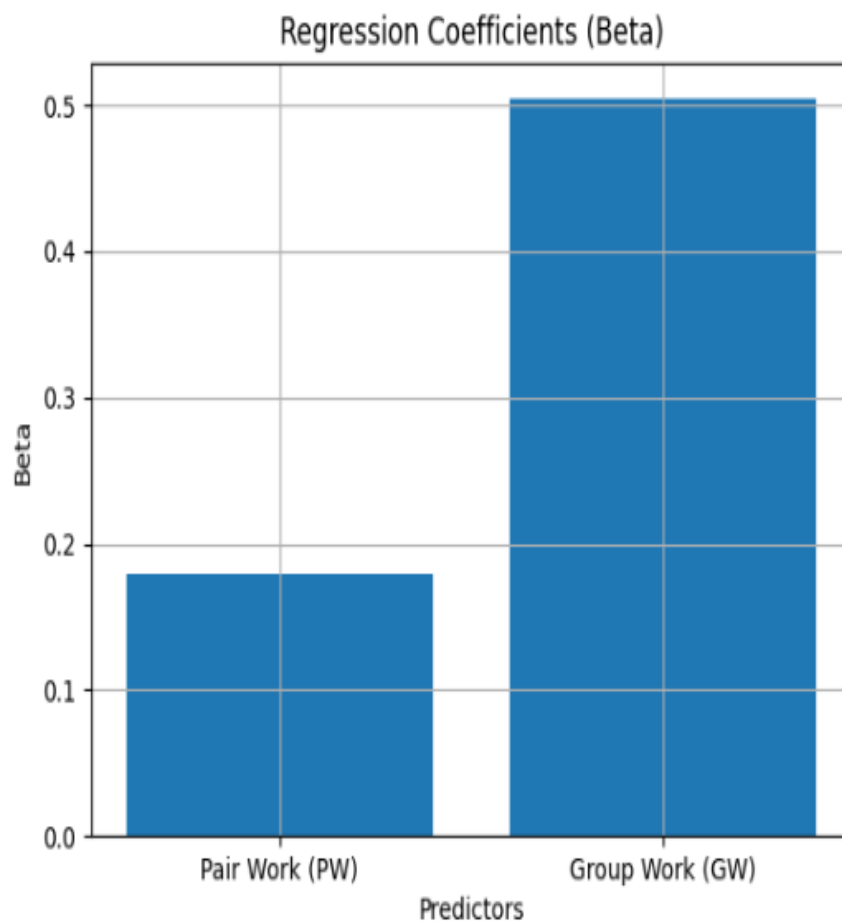


Figure 4.2 Regression Effects of Pair Work and Group Work on Formative Knowledge

The regression analysis reveals that both pair work and group work significantly predict formative knowledge. However, group work emerges as a much stronger predictor ($\beta = 0.504$, $p < 0.001$) compared to pair work ($\beta =$

0.180, $p = 0.019$). This indicates that group work provides more effective conditions for collaborative knowledge construction, deeper cognitive engagement, and interaction, which are essential for the development of formative knowledge in ESP contexts.

Overall, the findings confirm that while both co-operative learning structures contribute to formative knowledge development, group work plays a more dominant role as a predictor, supporting the study's second research question.

4.3 Figure and General Synthesis of Regression Findings

Table 4.5 Summary of Predictive Contribution of Pair Work and Group Work

Predictor Variable	Beta	Sig.	Interpretation
Pair Work	.298	.000	Significant predictor
Group Work	.492	.000	Strongest predictor
Total Model	$R^2 = .538$	.000	Large explanatory power

Table 4.5 provides a summary of the regression results, highlighting the relative contributions of pair work and group work to formative knowledge. Both variables are statistically significant predictors, as indicated by their significance values (Sig. = .000), which are lower than the threshold of .05.

However, their levels of contribution differ. Pair work shows a moderate effect ($\beta = .298$), indicating that it plays a meaningful role in supporting formative knowledge development. In contrast, group work demonstrates a stronger predictive effect ($\beta = .492$), suggesting that it is the most influential factor among the two co-operative learning structures.

Additionally, the overall model explains a substantial proportion of variance in formative knowledge ($R^2 = .538$), indicating that co-operative learning variables have strong explanatory power. This finding confirms that both pair work and group work are important, but group work plays a more dominant role in enhancing students' formative knowledge.

The overall findings from the regression analysis indicate that both pair work and group work contribute positively and significantly to ESP students' formative knowledge. However, their levels of contribution are not equal. Pair work contributes meaningfully by providing students with opportunities for immediate interaction, focused language practice, and peer feedback. Through pair work, students can clarify meaning, ask questions, exchange ideas, and practice ESP language in a relatively safe and manageable communicative setting. This is particularly useful for students who may feel less confident when speaking in front of a larger group. Nevertheless, pair work is somewhat limited by the narrower range of interaction because students are exposed to only one peer's ideas, language resources, and problem-solving strategies.

Group work, on the other hand, creates a broader and more cognitively demanding learning environment. Students are required to negotiate multiple viewpoints, divide responsibilities, discuss task solutions, and synthesize different ideas into a shared outcome. This explains why group work appears as the strongest predictor of formative knowledge in the present study. In ESP learning, formative knowledge does not simply refer to remembering vocabulary or grammar; rather, it involves the ability to understand, apply, and transfer language knowledge into professional or discipline-specific contexts. Group work supports this process because it resembles authentic workplace communication, where banking and finance-related tasks often require discussion, collaboration, decision-making, and problem-solving.

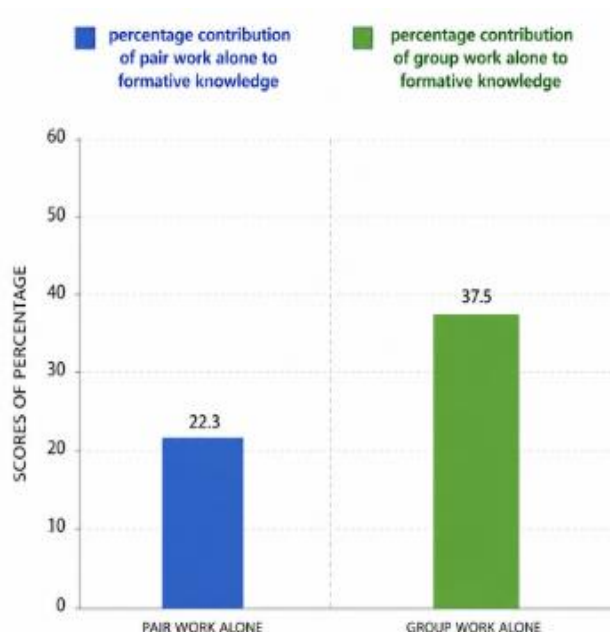


Figure 4.3 Percentage Contributions of Pair Work and Group Work to Formative Knowledge

The visual representation in Figure 4.3 provides further evidence supporting the regression results. It clearly shows that group work contributes the highest percentage (37.5%) to formative knowledge, followed by pair work (22.3%), while the combined model explains 53.8% of the total variance. This confirms that group work is the most influential predictor, which is consistent with the standardized beta coefficients presented in Table 4.5.

4.4 Discussion of the Results

The results of this study provide strong evidence that co-operative learning significantly enhances ESP students' formative knowledge at Ho Chi Minh University of Banking. The regression result shows that pair work and group work together account for 53.8% of the variance in formative knowledge, which indicates a large effect size. This means that co-operative learning is not a minor classroom technique but a substantial pedagogical factor contributing to students' knowledge development. In the context of ESP, where students are expected to integrate English language competence with banking and finance-related content, such a finding is especially meaningful. It suggests that

formative knowledge develops more effectively when students are placed in interactive learning environments where they can discuss, negotiate, question, explain, and apply knowledge collaboratively.

This result is consistent with Vygotsky's social constructivist theory, which emphasizes that knowledge is constructed through social interaction and mediated learning. In co-operative learning activities, students do not learn only from the teacher but also from peers who may provide explanations, examples, corrections, and alternative viewpoints. Such peer scaffolding allows students to perform beyond their current independent level and gradually internalize new knowledge. Therefore, the positive effect of both pair work and group work can be interpreted as evidence that formative knowledge is socially constructed rather than passively received. This interpretation is also consistent with the literature review of the present study, which defines co-operative learning as a learner-centered approach based on structured interaction, shared responsibility, and collaborative knowledge construction.

The stronger predictive effect of group work deserves particular attention. While pair work is valuable for encouraging equal participation and immediate feedback, group work appears to provide a richer platform for formative knowledge development. This may be because group work involves more complex interactional patterns. In a pair, the learning exchange depends mainly on two students' knowledge, confidence, and willingness to communicate. If one student is passive or lacks sufficient knowledge, the interaction may become limited. In group work, however, students can draw on a wider range of linguistic resources, disciplinary knowledge, and personal experiences. The presence of multiple members increases the possibility of explanation, correction, disagreement, clarification, and synthesis. These processes are essential for deeper learning because they require students to reorganize their understanding rather than merely repeat information.

From the perspective of ESP pedagogy, group work is especially effective because it mirrors the communicative demands of professional settings. Banking and finance contexts rarely require isolated language use;

instead, they often involve teamwork, negotiation, presentation, problem-solving, report discussion, and decision-making. Therefore, group work allows students to practice not only English language forms but also professional communication skills. Through group-based ESP tasks such as case analysis, financial problem discussion, role-play, and presentation preparation, students are required to use English as a tool for meaning-making and professional reasoning. This explains why group work has a stronger beta value than pair work in predicting formative knowledge.

However, the significant contribution of pair work should not be underestimated. Pair work still plays an important role in the gradual development of formative knowledge, particularly at the early stage of classroom interaction. Pair work may help students reduce pressure, increase speaking opportunities, and receive immediate peer responses. For lower-confidence students, pair work can function as a preparatory stage before participating in larger group discussion. In this sense, pair work and group work should not be viewed as competing strategies but as complementary structures within co-operative learning. Pair work may support micro-level development such as vocabulary practice, sentence formation, clarification of meaning, and confidence building, while group work may support macro-level development such as critical thinking, disciplinary reasoning, problem-solving, and knowledge integration.

The results also support the argument that co-operative learning should not be treated as a single undifferentiated construct. Many previous studies discuss co-operative learning generally, but the present result shows that different structures within co-operative learning produce different predictive strengths. This distinction is important because teachers need to choose classroom techniques according to specific learning objectives. If the objective is to encourage fluency, confidence, or immediate practice, pair work may be appropriate. If the objective is to promote deeper understanding, collaborative reasoning, and professional knowledge application, group work may be more effective. Therefore, the present study contributes to ESP research by clarifying

the differential roles of pair work and group work in formative knowledge development.

Compared with the teacher's anxiety sample, the present study follows a similar analytical logic but reveals an opposite pedagogical direction. In the anxiety sample, higher levels of anxiety were associated with lower levels of academic performance, and regression analysis was used to determine which variable was the strongest negative predictor. In contrast, the present study shows that higher levels of co-operative learning engagement are associated with higher levels of formative knowledge, and group work emerges as the strongest positive predictor. This comparison is useful because it shows that classroom variables can either hinder or facilitate learning. Anxiety may operate as a negative affective filter, while co-operative learning may function as a positive interactive mechanism that supports knowledge construction.

In relation to the research questions, the results provide clear answers. Regarding the first research question, co-operative learning enhances ESP students' formative knowledge to a significant and substantial extent, as shown by the strong model fit and large R^2 value. Regarding the second research question, group work is found to be the best predictor of formative knowledge because it has the highest standardized beta coefficient. Therefore, the null hypothesis that co-operative learning has no significant effect on formative knowledge is rejected. The alternative hypothesis is accepted, confirming that pair work and group work significantly predict formative knowledge, with group work being the stronger predictor.

Overall, the results suggest that ESP teachers should design classroom activities that integrate both pair work and group work in a structured and purposeful manner. Pair work can be used to prepare students for interaction, build confidence, and support initial language practice, whereas group work can be used for more demanding tasks that require discussion, synthesis, and application of professional knowledge. In this way, co-operative learning can become a systematic instructional approach rather than a simple classroom activity. The results also imply that formative knowledge develops most

effectively when students are not passive receivers of knowledge but active participants in collaborative learning communities.

CHAPTER 5: CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS

5.1 Conclusion

This study set out to investigate the extent to which co-operative learning enhances ESP students' formative knowledge in English language learning at Ho Chi Minh University of Banking, with particular attention to the comparative predictive roles of pair work and group work. Grounded in socio-constructivist and interaction-based theoretical frameworks, the study contributes to an emerging body of research that seeks to move beyond generalized claims about collaborative learning and instead examine how specific interactional structures shape learning outcomes in context-sensitive environments.

The findings provide strong empirical support for the argument that co-operative learning significantly enhances students' formative knowledge. In statistical terms, the regression model accounted for a meaningful proportion of variance in formative knowledge ($R^2 = .267$), indicating that interaction-based learning structures play a substantive role in shaping learning outcomes. This reinforces the view that learning in ESP contexts is not merely a matter of input exposure or knowledge transmission but is fundamentally dependent on active engagement, interaction, and collaborative meaning-making processes.

From a theoretical perspective, these findings align with contemporary understandings of learning as a socially mediated process, where knowledge is constructed through dialogue, negotiation, and shared cognitive effort. Rather than being passively received, knowledge emerges through interactional practices that require learners to articulate ideas, respond to alternative perspectives, and refine their understanding. In this sense, formative knowledge is not a static body of information but a dynamic and evolving construct that develops through continuous participation in socially situated learning environments.

A central contribution of this study lies in its differentiation between co-operative learning structures. While both pair work and group work were found to significantly predict formative knowledge ($\beta = .316$ and $\beta = .351$, respectively), group work demonstrated a stronger predictive effect. This distinction is theoretically meaningful and pedagogically significant. It suggests that not all collaborative configurations are equally effective and that the cognitive affordances of interaction vary depending on the structure through which interaction is organized.

The stronger effect of group work can be interpreted through the lens of cognitive complexity and distributed cognition. In multi-participant settings, learners are exposed to a wider range of perspectives, ideas, and problem-solving strategies. This diversity creates opportunities for cognitive conflict, negotiation, and deeper processing, all of which are essential for higher-order thinking and conceptual development. The interactive dynamics of group work encourage learners to move beyond surface-level understanding and engage in processes such as analysis, synthesis, and evaluation, thereby facilitating more sophisticated forms of knowledge construction.

In contrast, pair work appears to function as a complementary but distinct mechanism. Its strength lies in promoting focused interaction, immediate feedback, and balanced participation. These characteristics are particularly beneficial for developing linguistic accuracy and fluency, as learners have more opportunities to produce language and receive corrective input. However, the relatively limited interactional diversity in pair work may constrain its capacity to support complex knowledge integration at the same level as group work. This does not diminish its importance but rather highlights its role as a micro-level support system within the broader ecology of collaborative learning.

Another important dimension highlighted by the findings is the role of affective factors in learning. Co-operative learning environments were found to foster a supportive and low-anxiety atmosphere, which is conducive to

increased participation and engagement. By reducing fear of negative evaluation and promoting peer support, such environments lower learners' affective filter, thereby facilitating both input processing and output production. This interplay between cognitive and emotional factors underscores the importance of viewing learning as a holistic process that involves not only intellectual engagement but also psychological readiness.

Taken together, the findings of this study suggest that co-operative learning operates as a multi-dimensional pedagogical mechanism that integrates cognitive, social, and affective processes. Its effectiveness lies not merely in promoting interaction but in creating conditions under which meaningful, sustained, and cognitively engaging interaction can occur. In the context of ESP education, where learners must integrate language with discipline-specific knowledge, such conditions are essential for the development of formative knowledge that is both transferable and applicable in real-world contexts.

In conclusion, this study provides compelling evidence that co-operative learning represents not merely a pedagogical technique but a transformative approach to language education. Its significance lies not only in improving learning outcomes but in reshaping how learning itself is conceptualized.

By emphasizing interaction, collaboration, and engagement, co-operative learning redefines the classroom as a space of knowledge construction rather than knowledge transmission. It enables learners to move beyond passive reception and become active participants in their own learning processes.

Importantly, the study highlights that the effectiveness of co-operative learning depends not on its mere implementation but on the quality of interaction it generates. This calls for a more critical and reflective approach to pedagogy, one that prioritizes depth over form and engagement over procedure.

Ultimately, in a world where communication is increasingly complex and interdisciplinary, co-operative learning offers a pathway toward developing learners who are not only linguistically competent but also cognitively flexible, socially aware, and professionally prepared.

5.2 Pedagogical Implications

The findings of this study carry substantial implications for ESP pedagogy, particularly in relation to instructional design, classroom interaction, and the strategic use of collaborative learning structures.

First, the study strongly reinforces the need for a paradigmatic shift from traditional teacher-centered instruction toward learner-centered, interaction-driven pedagogies. In many ESP contexts, teaching practices continue to prioritize knowledge transmission and individual performance. However, the present findings demonstrate that such approaches are insufficient for developing the complex, integrated competencies required in professional communication. Instead, learning environments must be designed to actively engage students in processes of meaning-making, problem-solving, and collaborative inquiry.

Secondly, the study highlights that co-operative learning should not be treated as an optional or supplementary technique but as a central pedagogical framework in ESP instruction. However, its effectiveness is contingent upon careful design and implementation. Simply placing students in groups does not guarantee meaningful interaction. Without structured tasks, clear roles, and accountability mechanisms, collaboration may remain superficial and unproductive. Therefore, teachers must design tasks that are cognitively demanding, contextually relevant, and interactionally rich, ensuring that learners are required to engage deeply with both language and content.

Third, the differential effects of pair work and group work suggest the necessity of a strategic and purposeful integration of these interactional structures. Rather than using them interchangeably, educators should align each structure with specific pedagogical objectives. Pair work can be effectively used for activities that require focused practice, such as dialogue construction, language rehearsal, and error correction. In contrast, group work is more suitable for complex tasks that involve problem-solving, discussion, and knowledge integration. By combining these structures, teachers can create a

balanced learning environment that supports both linguistic development and conceptual understanding.

Furthermore, the role of the teacher must be reconceptualized. In co-operative learning environments, the teacher is no longer the sole source of knowledge but becomes a facilitator, mediator, and designer of learning experiences. This involves guiding interaction, providing scaffolding, monitoring participation, and offering timely feedback. Such a role requires not only pedagogical expertise but also the ability to manage classroom dynamics and foster a culture of collaboration and mutual support.

Finally, the study underscores the importance of addressing affective dimensions of learning. Creating a supportive and psychologically safe classroom environment is essential for encouraging participation and reducing anxiety. Teachers should adopt strategies that promote trust, encourage risk-taking, and normalize errors as part of the learning process. This is particularly important in ESP contexts, where learners may feel additional pressure to use specialized language accurately.

This study makes several important contributions to theoretical development in the fields of applied linguistics, ESP education, and educational psychology by offering a more nuanced understanding of how interaction shapes learning outcomes.

First, the findings extend socio-constructivist theory by empirically demonstrating that interactional structure is not merely a facilitating condition for learning but a critical variable that fundamentally determines the depth and quality of knowledge construction. While traditional socio-constructivist perspectives, particularly those derived from Vygotskian theory, emphasize the central role of social interaction in cognitive development, they often treat interaction as a relatively uniform process. The present study advances this perspective by showing that the effectiveness of interaction depends not only on its presence but also on its configuration, complexity, and intensity. In particular, the stronger predictive role of group work suggests that multi-

participant interaction creates richer conditions for cognitive engagement, expands the Zone of Proximal Development, and enables learners to access more diverse cognitive resources. This finding calls for a refinement of socio-constructivist theory in which interaction is conceptualized as structurally differentiated rather than homogeneous.

Second, the study contributes to co-operative learning theory by challenging its traditional conceptualization as a unified instructional approach. Classical models of co-operative learning (e.g., Johnson & Johnson) tend to emphasize general principles such as positive interdependence and individual accountability, often overlooking the internal variability of interactional forms. By demonstrating that pair work and group work exert different levels of influence on formative knowledge, the study suggests that co-operative learning should be reconceptualized as a multi-dimensional system composed of distinct yet interrelated interactional mechanisms. Each mechanism carries specific cognitive affordances: pair work supports micro-level processes such as language rehearsal and immediate feedback, whereas group work facilitates macro-level processes such as knowledge integration, critical thinking, and collaborative problem-solving. This theoretical distinction provides a more granular understanding of how co-operative learning operates and opens new directions for research that examines the differential effects of specific collaborative configurations.

Third, the study advances the conceptualization of formative knowledge by framing it as a dynamic, process-oriented construct rather than a static learning outcome. Traditional views of knowledge in language education have often been associated with the accumulation of discrete linguistic elements, such as vocabulary and grammar. In contrast, the present study supports a more contemporary perspective in which knowledge is continuously constructed, negotiated, and refined through interaction and engagement. This aligns closely with developments in formative assessment theory, which emphasize feedback, reflection, and iterative improvement as central to learning. By linking

formative knowledge explicitly to interactional processes, the study provides a theoretical bridge between learning theory and assessment theory, suggesting that knowledge development and evaluation should be understood as integrated and ongoing processes rather than separate stages.

Furthermore, the study contributes to emerging theoretical models that integrate cognitive and affective dimensions of learning. The findings indicate that co-operative learning not only facilitates cognitive engagement but also reduces anxiety and enhances learners' willingness to participate. This supports contemporary perspectives in second language acquisition that emphasize the interplay between emotion and cognition, highlighting that learning effectiveness depends not only on intellectual processing but also on learners' psychological states. By demonstrating how interactional structures can simultaneously influence cognitive complexity and affective conditions, the study offers a more holistic framework for understanding language learning processes.

Finally, the study suggests the need for an integrated theoretical model that accounts for the interaction between structure, cognition, and affect in learning. Rather than treating these dimensions as separate, the findings indicate that they operate in a mutually reinforcing manner: structured interaction shapes cognitive engagement, which in turn is mediated by affective conditions. This integrated perspective has important implications for future theoretical development, as it encourages researchers to move beyond fragmented models of learning toward more comprehensive frameworks that reflect the complexity of real-world educational contexts.

Taken together, these contributions position the study not only as an empirical investigation but also as a theoretical advancement that refines existing models of co-operative learning, extends socio-constructivist perspectives, and deepens our understanding of formative knowledge as a dynamic and socially constructed phenomenon.

5.3 Limitations and Recommendations

This study has several limitations that should be acknowledged. First, the findings were based exclusively on self-reported questionnaire data. Although questionnaires are useful for collecting data from a large number of participants, self-report measures may be subject to response bias and may overestimate the relationships among variables.

Second, the study relied solely on quantitative data and did not include qualitative evidence such as interviews, classroom observations, teacher feedback, student portfolios, learning journals, or drafts. As a result, the study was unable to capture the developmental process through which students transformed their knowledge into practical application.

Third, the study did not collect direct formative assessment evidence over time. Therefore, the findings reflected students' perceptions of formative knowledge rather than actual changes in formative knowledge measured through continuous classroom assessment.

Finally, the research was conducted at a single institution with a limited sample size. Consequently, the findings may not be generalizable to all ESP learning contexts in Vietnam.

Future studies are encouraged to adopt mixed-method approaches, incorporate qualitative data sources, and examine formative knowledge development through longitudinal assessment practices across multiple educational settings.

While this study makes meaningful contributions, several limitations should be acknowledged. First, the research was conducted within a single institutional context, which may limit the generalizability of the findings to other educational settings. Differences in institutional culture, learner characteristics, and instructional practices may influence the effectiveness of co-operative learning.

Second, the study employed a quantitative research design, which, although effective in identifying relationships among variables, may not fully capture the complexity of interactional processes. Learning is inherently dynamic and context-dependent, and quantitative data may not adequately reflect the nuances of how learners negotiate meaning, construct knowledge, and engage with peers.

Third, the reliance on self-reported data introduces the possibility of response bias. Participants' perceptions may not always accurately reflect their actual learning behaviors or outcomes. Additionally, other potentially influential variables—such as motivation, teaching quality, and technological resources—were not examined in depth.

Based on the findings and limitations of the present study, several recommendations are proposed for future research in the field of co-operative learning and formative knowledge development in ESP contexts. These recommendations aim not only to extend the current body of knowledge but also to deepen theoretical understanding and improve methodological rigor in future investigations.

First, future studies should adopt more diverse and integrative methodological approaches in order to capture the complexity of collaborative learning processes more comprehensively. While the present study employed a quantitative design to identify predictive relationships between co-operative learning structures and formative knowledge, quantitative findings alone may not fully explain how knowledge is socially constructed through interaction. Therefore, qualitative and mixed-methods approaches are strongly recommended. Methods such as classroom observation, stimulated recall interviews, reflective journals, discourse analysis, and interaction analysis could provide richer insights into how learners negotiate meaning, scaffold one another's learning, and co-construct disciplinary knowledge during pair work and group work activities. Such approaches would allow researchers to move beyond measuring outcomes toward understanding the underlying cognitive,

social, and interactional mechanisms that shape learning processes in real time.

Second, future research should consider employing longitudinal research designs to investigate the sustainability and developmental trajectory of co-operative learning effects over extended periods of time. The current study examined learning outcomes within a relatively limited instructional timeframe; however, formative knowledge is inherently dynamic and developmental in nature. Longitudinal studies would therefore provide important evidence regarding whether the positive effects of co-operative learning are sustained, strengthened, or diminished over time. In addition, longitudinal inquiry may reveal how repeated engagement in collaborative learning gradually influences learners' communicative competence, professional knowledge application, critical thinking, and academic identity formation in ESP contexts. Such evidence would contribute significantly to both theoretical refinement and pedagogical implementation.

Furthermore, future studies are encouraged to examine the role of affective and psychological variables as mediating or moderating factors in co-operative learning environments. Contemporary theories of second language acquisition increasingly emphasize that learning is shaped not only by cognitive engagement but also by emotional and motivational conditions. Variables such as motivation, anxiety, self-efficacy, willingness to communicate, learner autonomy, and group cohesion may significantly influence the effectiveness of collaborative learning activities. For example, students with high levels of self-efficacy may participate more actively in group interaction, while language anxiety may inhibit meaningful engagement even within supportive learning environments. Investigating these affective dimensions would contribute to a more holistic understanding of how co-operative learning facilitates formative knowledge development in ESP classrooms.

Another important direction for future research concerns the integration of digital technologies into co-operative learning environments. In recent years, online and blended learning have become increasingly prominent in higher

education, particularly following the rapid digital transformation of educational practices. Consequently, future studies should explore how technology-mediated collaboration influences interaction patterns, learner engagement, and knowledge construction. Digital platforms such as collaborative learning management systems, online discussion forums, virtual simulations, shared digital workspaces, and AI-assisted learning environments may create new forms of collaborative interaction that differ substantially from traditional face-to-face settings. Investigating these emerging learning environments would provide valuable insights into the evolving nature of co-operative learning in contemporary ESP education.

In addition, future research should broaden the contextual scope of investigation. The present study focused specifically on ESP students at Ho Chi Minh University of Banking; therefore, the generalizability of the findings may remain context-dependent. Future studies should replicate and extend this research across different universities, disciplines, educational levels, and cultural contexts to determine whether similar patterns emerge. Comparative studies between ESP and general English contexts, or between different disciplinary domains such as engineering, medicine, tourism, and information technology, may further clarify how contextual factors shape the effectiveness of co-operative learning structures.

Moreover, future investigations should examine the differential pedagogical functions of pair work and group work in greater depth. Although the current study identified group work as a stronger predictor of formative knowledge enhancement, the findings also suggest that pair work and group work may support different dimensions of learning. Future research could therefore explore how specific task types, interactional patterns, group size, role distribution, and learner proficiency levels influence the effectiveness of each collaborative structure. Such investigations would contribute to a more nuanced and context-sensitive understanding of co-operative learning in ESP classrooms.

Finally, future research should continue to refine the conceptualization and assessment of formative knowledge itself. As formative knowledge involves the evolving integration of linguistic, conceptual, cognitive, and communicative competencies, its measurement remains theoretically and methodologically challenging. Future studies should therefore explore alternative assessment models that combine quantitative performance indicators with qualitative evidence of cognitive development and knowledge application. More sophisticated assessment frameworks may help capture the multidimensional and developmental nature of formative knowledge more accurately.

Taken together, these recommendations highlight the need for future research to move toward more comprehensive, interdisciplinary, and context-sensitive approaches in investigating co-operative learning and formative knowledge development. Such efforts would not only advance theoretical understanding but also contribute to the design of more effective, interactive, and learner-centered ESP learning environments in higher education.

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APPENDICES

APPENDIX A

SURVEY QUESTIONNAIRE FOR RESPONDENTS

Dear respondents,

I, the undersigned, am conducting a research study entitled “**Exploring Co-operative Learning to Enhance ESP Students’ Formative Knowledge in English Language Learning at Ho Chi Minh University of Banking**” in partial fulfillment of the requirements for the Master’s Graduation Project in English Language at University of Phan Thiet.

This study aims to investigate how co-operative learning (pair work and group work) contributes to the development of ESP students’ formative knowledge in English learning.

Please answer the questionnaire by ticking the most appropriate box that is able to represent your view. Your responses will be kept confidential and used only for research purpose only. Thank you very much for your assistance.

Researcher

Tran Thi Ni Na

PART 1. PERSONAL INFORMATION

1. Name: _____

2. Gender: ☐ Male ☐ Female

3. Age:

4. Years of learning English:.....

PART 2. CO-OPERATIVE LEARNING ACTIVITIES AND FORMATIVE KNOWLEDGE IN ENGLISH LANGUAGE LEARNING

Please give sincere answers as only this will guarantee the success of the study.

Please decide whether you Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA) with the following statements. Please circle your choice with the appropriate box below:

A	CO-OPERATIVE LEARNING ACTIVITIES	1 Strongly Disagree	2 Disagree	3 Agree	4 Strongly Agree
a. Pair Work					
No.	Statements	1	2	3	4
1	Pair work increases my opportunities to use English during my class time.	☐	☐	☐	☐
2	I use English more frequently in pair work than in teacher-led activities.	☐	☐	☐	☐
3	Pair work allows me to express my ideas with less pressure.	☐	☐	☐	☐
4	I feel less anxious when speaking English with my partner.	☐	☐	☐	☐
5	Pair work helps me practice English regularly in each lesson.	☐	☐	☐	☐
6	I receive useful feedback from my partner that improves my understanding.	☐	☐	☐	☐
7	Pair work encourages me to actively participate in learning tasks.	☐	☐	☐	☐
8	I learn new knowledge and fill learning gaps through my partner.	☐	☐	☐	☐
9	Pair work facilitates the exchange of useful ideas between peers.	☐	☐	☐	☐
10	Pair work improves my confidence in using English.	☐	☐	☐	☐
b. Group Work					
11	Group work increases my interaction with other students.	☐	☐	☐	☐
12	I have more opportunities to share and discuss ideas in group work.	☐	☐	☐	☐

13	Group work encourages active participation in learning activities.	☐	☐	☐	☐
14	I collaborate with others to develop my understanding.	☐	☐	☐	☐
15	Group work provides opportunities to practice real-life tasks.	☐	☐	☐	☐
16	I feel more confident speaking English in small groups.	☐	☐	☐	☐
17	Group work promotes teamwork and cooperation among students.	☐	☐	☐	☐
18	I use English more frequently when working in groups.	☐	☐	☐	☐
19	Group discussions help me understand lesson content more clearly.	☐	☐	☐	☐
20	Group work makes English learning more engaging and meaningful.	☐	☐	☐	☐
B	FORMATIVE KNOWLEDGE	1 Strongly Disagree	2 Disagree	3 Agree	4 Strongly Agree
21	I feel that cooperative learning activities in the classroom help to develop my knowledge easily.	☐	☐	☐	☐
22	I can understand English quickly in real communication contexts by sharing “knowing” each other through cooperative learning.	☐	☐	☐	☐
23	I can respond appropriately in English without hesitation.	☐	☐	☐	☐
24	I have a comprehensive understanding of English when activities are discussed by my friends.	☐	☐	☐	☐
25	I am eager to display myself when cooperative learning is organized for students to exchange what they know.	☐	☐	☐	☐
26	I actively participate in classroom activities and discuss	☐	☐	☐	☐

	with my classmates to gain learning experience and develop both implicit and explicit knowledge.				
27	I like cooperative learning directly in my class anytime because I strongly believe that such activities give me opportunity to boost up and consolidate my learning and knowledge.	☐	☐	☐	☐
28	I recognize that my formative knowledge improves me when I engage in cooperative learning activities, especially pair work and group work.	☐	☐	☐	☐
29	I am willing to volunteer and demonstrate my knowledge when working with my peers.	☐	☐	☐	☐
30	I can effectively apply my English knowledge in real-life and specific situations.	☐	☐	☐	☐

Thank you for your time

APPENDIX B

SAMPLE LESSON PLAN USING CO-OPERATIVE LEARNING

Topic: Banking Transactions

Level: ESP Students (Banking English)

Duration: 45 minutes

I. Lesson Objectives

By the end of the lesson, students will be able to:

- Develop and use ESP vocabulary related to banking transactions (e.g., deposit, withdraw, interest rate, loan).
- Improve communicative competence through structured interaction in English.
- Apply language knowledge to solve practical banking problems.
- Enhance formative knowledge through peer interaction, collaboration, and reflection.

II. Teaching Materials

- Handouts (dialogue scripts and task sheets)
- PowerPoint slides
- Whiteboard and markers

III. Teaching Procedure

1. Warm-up (5 minutes)

Activity: Brainstorming and Discussion

Procedure:

- The teacher asks students several guiding questions:
 - “What banking services do you know?”*
 - “Have you ever deposited or withdrawn money?”*
- Students briefly discuss their answers with a partner.
- The teacher elicits responses and introduces key vocabulary.

Purpose:

- Activate background knowledge

- Prepare students for ESP content
- Increase engagement

2. Pair Work Activity (10 minutes)

Activity: Role-play – Customer and Bank Teller

Procedure:

- Students work in pairs.
- Each pair is assigned roles:
Student A: Customer
Student B: Bank teller
- Students practice a dialogue involving a banking transaction (e.g., depositing money, opening an account).
- The teacher monitors and provides support when necessary.

Example Dialogue Prompt:

Customer: *“I would like to deposit some money into my account.”*

Teller: *“Certainly. How much would you like to deposit?”*

Purpose:

- Improve speaking fluency
- Encourage peer interaction
- Provide immediate feedback (peer + teacher)

3. Group Work Activity (20 minutes)

Activity: Problem-solving Task – Banking Scenario

Procedure:

- Students are divided into groups of 4–5 members.
- Each group is given a real-life banking problem:

Example Task:

“A customer wants to take a loan but has a low credit score. Discuss possible solutions.”

Each group member is assigned a role:

- Leader: manages discussion
- Note-taker: records ideas
- Presenter: reports results

- Timekeeper: monitors time

Students discuss, analyze, and propose solutions using English.

Purpose:

- Develop critical thinking
- Promote collaborative learning
- Enhance knowledge construction through discussion

4. Presentation (10 minutes)

Activity: Group Presentation

Procedure:

- Each group presents their solution to the class.
- Other students listen and may ask questions.
- The teacher facilitates discussion and highlights key points.

Purpose:

- Improve communication skills
- Encourage public speaking
- Reinforce learning through sharing

5. Feedback and Reflection (5 minutes)

Activity: Teacher Feedback + Reflection

Procedure:

- The teacher provides feedback on:
 - ✓ Language use (vocabulary and grammar)
 - ✓ Communication effectiveness
 - ✓ Group collaboration
- Students reflect on their learning by answering:
 - “What did you learn today?”*
 - “What difficulties did you face?”*

Purpose:

- Consolidate knowledge
- Promote metacognitive awareness
- Support formative learning

IV. Theoretical Link

This lesson is grounded in the principles of sociocultural theory proposed by Lev Vygotsky, emphasizing the role of peer interaction and scaffolding in learning.

- ✓ Pair work supports **micro-level interaction**, enabling learners to practice language in a low-anxiety environment.
- ✓ Group work facilitates **macro-level knowledge construction**, allowing students to engage in problem-solving and critical thinking.

V. Link to Research Questions

- The lesson demonstrates the **role of co-operative learning in enhancing formative knowledge** (RQ1).
- It also allows comparison between **pair work and group work as predictors of learning outcomes** (RQ2).