

Exploring the Role of Online Group Interaction in Reducing Speaking Anxiety Among ESL Undergraduates

*Raja Nur Hidayah binti Raja Yacob, Anis Idayu binti Aziz

Akademi Pengajian Bahasa, Universiti Teknologi MARA Cawangan Kelantan, Malaysia

*Corresponding Author

DOI: <https://doi.org/10.47772/IJRISS.2026.102100082>

Received: 09 July 2026; Accepted: 14 July 2026; Published: 25 July 2026

ABSTRACT

Speaking anxiety remains a common challenge among English as a Second Language (ESL) undergraduates, affecting their confidence and willingness to communicate in English. As online learning becomes increasingly prevalent in higher education, online group interaction has emerged as a promising approach to creating a more supportive learning environment. This study explored the role of online group interaction in reducing speaking anxiety among ESL undergraduates. Guided by Bandura's Social Cognitive Theory and the Community of Inquiry framework, the study employed a convergent mixed-method design involving 84 ESL undergraduates from a Malaysian public university. Quantitative data were collected using a structured questionnaire and analysed using descriptive statistics, while qualitative data from open-ended survey questions were analysed using thematic analysis. The findings revealed that participants experienced a moderate level of speaking anxiety. Among the three dimensions of online group interaction, Teaching Presence recorded the highest mean, followed by Social Presence and Cognitive Presence, highlighting the importance of lecturer facilitation, peer support, and collaborative learning. The qualitative findings further revealed that online group interaction increased speaking confidence, fostered a supportive learning environment, encouraged collaborative learning, and reduced communication apprehension, although challenges related to vocabulary and fear of making mistakes remained. The study highlights the value of incorporating structured online group interaction into ESL instruction to promote students' confidence and oral communication.

Keywords: (speaking anxiety; online group interaction; ESL undergraduates; mixed-method research; Social Cognitive Theory; Community of Inquiry)

INTRODUCTION

English is a global language that plays an important role in international aspects including communication, education, business, and technological advancement (Crystal, 2003). For this reason, higher education institutions act as platforms to promote global competitiveness among university students and make them aware that English proficiency has become increasingly essential, particularly in countries where English is taught as a second language (ESL). Among the fundamental of English language skills, speaking is viewed as one of the most important skills as it allows students to share ideas, participate in academic discussions, and prepare the students for future professional environments (Richards, 2008). This shows the importance of developing effective oral communication skills among the ESL students in order to succeed academically and professionally.

Despite its importance, speaking in the target language remains a challenging task for many ESL learners (Ch'ng, Chan & Noor Ain, 2025). Numerous studies have shown that learners frequently experience anxiety when communicating orally in a second language. Ahmad & Awang Hashim (2023) state that Malaysian ESL undergraduates believe speaking skills is the most anxiety-provoking language skills. Not only that, Aziz & Kashinathan (2021) state that many Malaysian employers are not satisfied with their new employees, especially the fresh graduates due to lack of communication skills, as they are hardly able to communicate

their ideas effectively, especially in company business presentations. Recent studies in Malaysia have reported that communication apprehension and fear of negative evaluation are among the most significant factors affecting undergraduates' willingness to speak in English (Ch'ng et al., 2025; Sapuan et al., 2025). Such anxiety often discourages learners from participating actively in speaking activities and consequently limits their opportunities to develop oral proficiency.

Alternatively, the advancement of educational technology and the widespread implementation of online learning have transformed language learning environments and created new opportunities for interaction and collaboration (Dhawan, 2020). The integration of digital technology into education has significantly changed the way students learn and interact. Within this context, online group interaction has gained considerable attention as a collaborative learning approach that promotes active participation and peer support (Johnson & Johnson, 2009). Activities such as breakout room discussions, online collaborative projects, and peer interaction on various learning platforms provide learners with opportunities to negotiate meaning and practise speaking in smaller groups, with the purpose to potentially less intimidating environments and potentially reduce speaking anxiety among the ESL undergraduates.

Comparatively, little attention has been given to understanding how online group interaction may contribute to reducing speaking anxiety among ESL learners, particularly in higher education settings. Furthermore, there is a lack of mixed-method studies that comprehensively examine students' experiences and perceptions regarding the role of online group interaction in alleviating speaking anxiety, especially within the Malaysian ESL context. This gap highlights the need for further investigation into the potential of online group interaction as a supportive learning approach for reducing speaking anxiety among ESL undergraduates.

This study is deemed necessary in determining the level of speaking anxiety among ESL undergraduates, identifying the dimensions on online group interaction that help reduce speaking anxiety, and also exploring the ESL undergraduates' perceptions of online group interaction in reducing speaking anxiety. Thus, there are three research questions formulated for this study:

1. What is the level of speaking anxiety among ESL undergraduates?
2. Which dimensions of online group interaction help reduce speaking anxiety?
3. How do ESL undergraduates perceive the role of online group interaction in reducing speaking anxiety?

Therefore, this study is highly significant to provide insights into strategies that may alleviate speaking anxiety among the students, provide guidance for the educators for designing supportive online speaking activities, support the higher education institutions on the integration of collaborative online learning, and contribute literature reviews on online group interaction and ESL speaking anxiety for the future research.

LITERATURE REVIEW

English Language Speaking Anxiety

Effective oral communication is an essential component of English language proficiency, enabling learners to express ideas, participate in academic discussions, and engage in professional communication. According to Horwitz, Horwitz, and Cope (1986), Among the four language skills, speaking is often regarded as the most challenging because it requires learners to process language spontaneously while managing linguistic and psychological demands. Consequently, many English as a Second Language (ESL) learners experience speaking anxiety, which negatively affects their confidence and willingness to communicate.

Horwitz et al. (1986) also viewed speaking anxiety as a component of foreign language classroom anxiety, encompassing three key dimensions: communication apprehension, fear of negative evaluation, and test anxiety. Among these, communication apprehension and fear of negative evaluation have been consistently identified as the primary factors influencing ESL learners' willingness to communicate orally. MacIntyre &

Gardner (1994) stated that English speaking anxiety refers to the feelings of tension, nervousness, worry, or apprehension experienced when learners are required to communicate orally in the target language.

Numerous studies showed that speaking anxiety in the target language negatively influences students' oral participation, confidence level, fluency, and overall communicative competence (Young, 1991; Liu & Jackson, 2008). A study from MacIntyre (1999) stated that students experiencing high levels of anxiety tend to avoid classroom discussions, hesitate before speaking, and produce shorter and less complex utterances. In Malaysian higher education, English speaking anxiety continues to be a common issue despite students having learned English for many years. Recent studies have found that many Malaysian ESL undergraduates continue to experience considerable speaking anxiety due to fear of making grammatical and pronunciation mistakes, fear of negative evaluation, and communication apprehension, all of which reduce learners' willingness to communicate in English (Ahmad & Hashim, 2023; Mahmud et al., 2023; Ch'ng et al., 2025)." Taken together, previous studies consistently indicate that speaking anxiety is a multidimensional construct influenced by learners' psychological, linguistic, and social factors. While communication apprehension and fear of negative evaluation remain dominant sources of anxiety, learners' confidence is also shaped by the learning environment and opportunities for interaction. These findings indicate that reducing speaking anxiety remains an important challenge in improving English oral communication among university students.

Online Group Interaction

Online group interaction refers to collaborative communication and learning activities conducted through digital platforms that allow learners to exchange ideas, solve problems, and construct knowledge collectively regardless of physical location (Hrastinski, 2009). The increasing adoption of online learning environments, particularly following the COVID-19 pandemic, has transformed how students interact with their peers and instructors (Dhawan, 2020). Platforms such as Microsoft Teams, Zoom, Google Meet, and learning management systems have enabled students to participate in synchronous and asynchronous discussions, breakout room activities, peer feedback sessions, and collaborative projects. In the Malaysian context, students generally perceived online speaking activities as beneficial because they provided flexibility and opportunities to participate in English communication despite some technological and interactional challenges (Nik Fauzi et al., 2022).

Compared with traditional face-to-face classrooms, online group interaction may provide a less threatening environment for language learners because students often experience reduced pressure when communicating in smaller groups (Garrison et al., 2000). Online collaborative learning encourages peer support, shared responsibility, and active engagement, which can enhance learners' confidence and motivation (Johnson & Johnson, 2009). Studies have suggested that online discussions provide learners with additional time to organise their thoughts, rehearse language use, and receive constructive feedback from peers, thereby contributing to improved speaking confidence and learning engagement (Miao & Ma, 2022; Guo et al., 2022). These collaborative interactions also strengthen learners' sense of social presence, which encourages active participation and meaningful communication in online learning environments. These characteristics suggest that online group interaction may serve not only as a collaborative learning strategy but also as a supportive environment that helps alleviate learners' speaking anxiety by reducing communication pressure and increasing opportunities for meaningful interaction.

Social Cognitive Theory

The present study is underpinned by Social Cognitive Theory (SCT), developed by Bandura (1986, 1997, 2011), which emphasises that learning occurs through the reciprocal interaction of personal factors, behaviour, and environmental influences. According to SCT, individuals acquire knowledge and behaviours by observing others, engaging in social interaction, and reflecting on their own experiences. A central concept of the theory is self-efficacy, which refers to individuals' beliefs about their capability to perform specific tasks successfully (Bandura, 1997). Higher self-efficacy resulted in a greater motivation and persistence in learning, while lower self-efficacy causing avoidance and lack of effort.

Within ESL learning contexts, learners with higher speaking self-efficacy are more likely to participate actively in communication activities despite making mistakes. Conversely, learners with lower self-efficacy often experience greater speaking anxiety and avoid opportunities to speak (Schunk & Pajares, 2002). Online group interaction may strengthen students' self-efficacy by providing opportunities to observe peers, receive encouragement, practise speaking in supportive groups, and gradually develop confidence through repeated successful communication experiences. Therefore, Social Cognitive Theory provides an appropriate theoretical explanation for understanding how online group interaction may influence students' speaking anxiety.

Community of Inquiry Framework

The Community of Inquiry (CoI) framework was originally proposed by Garrison, Anderson, and Archer (2000). More recently, Aderibigbe (2021) integrated the CoI framework with Bandura's Social Cognitive Theory to explain learners' participation and collaborative engagement during online group interaction. At first, Garrison et al. (2000) explains meaningful learning experiences in online environments through the interaction of three interdependent elements: social presence, cognitive presence, and teaching presence.

Social presence refers to learners' ability to project themselves as real individuals and establish trusting relationships with others within an online learning community. Cognitive presence concerns learners' ability to construct meaning through sustained reflection and collaborative inquiry. Teaching presence encompasses instructional design, facilitation, and guidance provided by educators to support meaningful learning experiences (Garrison et al., 2000).

For the present study, social presence is particularly relevant because supportive peer interaction can reduce learners' fear of negative evaluation and encourage greater participation in English communication activities. Likewise, teaching presence helps create a psychologically safe environment that promotes active engagement, while cognitive presence encourages learners to construct knowledge collaboratively through discussion and problem-solving. Together, these three elements provide a useful framework for understanding how online group interaction may contribute to reducing speaking anxiety among ESL undergraduates.

Building on this framework, Aderibigbe (2021) incorporated Bandura's Social Cognitive Theory to explain the psychological processes that influence learners' participation during online group interaction. While the CoI framework explains the characteristics of an effective online learning environment, Social Cognitive Theory emphasises that learners develop confidence and self-efficacy through observation, peer interaction, and reciprocal engagement with their learning environment. Aderibigbe argued that online group interaction enables learners to observe peers, receive constructive feedback, and participate in collaborative learning, thereby strengthening their confidence and willingness to communicate. The integration of these perspectives provides a more comprehensive explanation of how online group interaction may contribute to reducing speaking anxiety among ESL learners.

Past Studies

Recent studies continue to identify speaking anxiety as one of the most significant challenges faced by ESL learners. A study by Chan et al. (2012) involved a large scale of Malaysian tertiary students (700 participants) which examined communication apprehension, fear of negative evaluation and test anxiety, reported the participants experienced moderate speaking anxiety. Later, Sim et al. (2020) also found the Malaysian university students faced moderate speaking anxiety. Rahmat (2021) reported that fear of negative evaluation and lack of confidence were the main contributors to speaking anxiety among Malaysian university students.

Next, Ahmad and Hashim (2023) found that Malaysian undergraduates experienced considerable anxiety in online English learning due to communication apprehension and fear of making mistakes. Similarly, Mahmud et al. (2023) reported that online learning environments did not eliminate language anxiety, as many students continued to experience nervousness when communicating in English despite learning through digital platforms. Ch'ng et al. (2025) further observed that public speaking anxiety negatively influenced students' confidence and willingness to participate in classroom discussions. These findings suggest that while online learning offers valuable opportunities for communication, speaking anxiety is still exist.

Research on online group interaction has generally reported positive effects on student engagement, collaborative learning, and language development. Miao and Ma (2022) found that meaningful online interaction enhanced students' learning engagement by strengthening social presence and promoting active participation in online learning environments. Similarly, Guo et al. (2022) reported that collaborative online discussions facilitated social knowledge construction and encouraged students to engage more actively with their peers through meaningful interaction. Interestingly, Nik Fauzi et al. (2022) reported that although Malaysian higher institution students viewed online speaking activities positively, they still preferred face-to-face interaction for certain speaking tasks due to limitations in communication and interaction especially when required to speak online.

Although previous studies have examined speaking anxiety and online collaborative learning separately, limited research has investigated how online group interaction contributes to reducing speaking anxiety among Malaysian ESL undergraduates using a convergent mixed-method approach. Existing Malaysian studies have largely focused on learners' speaking anxiety in face-to-face classrooms or on students' perceptions of online learning, engagement, and academic performance rather than investigating how online group interaction influences learners' confidence to communicate in English.

More recent local studies have reported that online collaborative learning enhances student engagement and interaction; however, these studies primarily examined learning outcomes and learner satisfaction instead of affective factors such as speaking anxiety. Furthermore, most previous studies employed quantitative survey designs, with limited attention given to learners' personal experiences and perceptions through qualitative inquiry. Consequently, there remains a lack of mixed-method studies that integrate quantitative measures of speaking anxiety with qualitative insights into students' experiences of online group interaction in Malaysian higher education. Addressing this gap, the present study adopts a convergent mixed-method approach to examine the level of speaking anxiety, identify the dimensions of online group interaction that support anxiety reduction, and explore ESL undergraduates' perceptions of their online learning experiences.

Conceptual Framework

Figure 1 shows the conceptual framework of this study that proposes **online group interaction** influences **English speaking anxiety** among ESL undergraduates. Online group interaction, which includes activities such as breakout room discussions, peer collaboration, and online group tasks, provides learners with opportunities to practise speaking English in a more supportive and less threatening environment. Through these interactions, students are able to communicate with peers, exchange ideas, and receive feedback, which may help them feel more comfortable and confident in using English. This study therefore assumes that increased engagement in online group interaction can contribute to a reduction in learners' speaking anxiety, particularly in terms of fear of making mistakes, fear of negative evaluation, communication apprehension, and low self-confidence.

This relationship is supported by **Social Cognitive Theory** (Bandura, 2011) and the **Community of Inquiry framework** (Garrison et al., 2000). Social Cognitive Theory explains that learners develop confidence and reduce anxiety through observation, interaction, and successful communication experiences, which enhance their self-efficacy. Meanwhile, the Community of Inquiry framework emphasises that meaningful online learning occurs when learners experience strong social presence, allowing them to feel connected and supported by their peers. These theories suggest that online group interaction which serves as the independent variable, can create a collaborative and supportive learning environment that encourages participation and reduces speaking anxiety (dependent variable) among ESL learners. Thus, the framework proposes that meaningful online interaction contributes to reducing learners' speaking anxiety by enhancing confidence, promoting peer support, and increasing opportunities for communication.

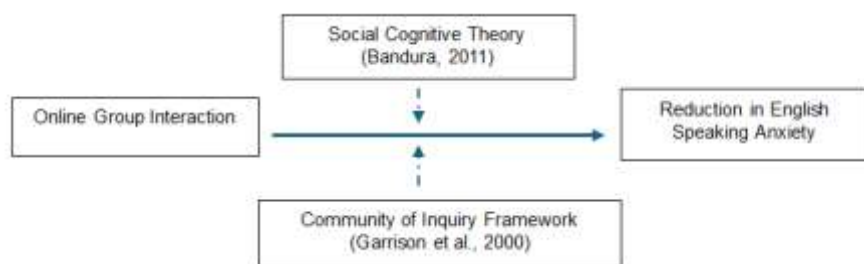


Figure 1: The Conceptual Framework of The Role of Online Group Interaction in Reducing English Speaking Anxiety

METHODOLOGY

This study employed a convergent mixed-method research design to explore the role of online group interaction in reducing speaking anxiety among ESL undergraduates. Quantitative and qualitative data were collected simultaneously using a single online questionnaire. The participants comprised 84 ESL undergraduates from a Malaysian public university who enrolled in pre-requisite English courses for three to four semesters, and were selected through purposive sampling based on their experience in participating in online group interactions, such as online discussions, collaborative tasks, and breakout room activities. This approach enabled the researchers to examine the level of speaking anxiety, identify the dimensions of online group interaction that support anxiety reduction, and gain insights into students' perceptions of their learning experiences.

The questionnaire consisted of four sections. Section A gathered demographic information, while Section B measured speaking anxiety using items adapted from the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986) and supported by He (2017). Section C measured online group interaction based on Bandura's Social Cognitive Theory (Bandura, 2011) and the Community of Inquiry Framework (Garrison et al., 2000), as adapted by Aderibigbe (2021). Section D comprised four open-ended questions to explore participants' perceptions of online group interaction in reducing speaking anxiety. The distribution of questionnaire items is presented in Table I.

Table 1: Distribution of Items

Section	Construct	Dimensions	No of items	Source
A	Demographic Profile	Gender, Semester, Programme, Online Learning Experience	5	Researcher
B	Speaking Anxiety	Communication Apprehension (SA1-SA4)	4	Horwitz et al. (1986); He (2017)
		Fear of Negative Evaluation (SA5-SA8)	4	
		Lack of Speaking Confidence (SA9-SA12)	4	
C	Online Group Interaction	Social Presence (SP1-SP5)	5	Garrison et al. (2000); Aderibigbe (2021)
		Cognitive Presence (CP1-CP5)	5	
		Teaching Presence (TP1-TP5)	5	
D	Open-ended Questions	Students' Perceptions	4	Researcher

All close-ended items were rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), as shown in Table 2. The mean or 'the average' was used to analyse the overall result of the respondents. Mean scores were interpreted using the following scale: **1.00–2.33 (Low)**, **2.34–3.66 (Moderate)**, and **3.67–5.00 (High)** (Chua, 2021).

Table 2: The 5-point of Likert scale & Speaking Anxiety Level Indicator

Scale	Mean	Descriptive Equivalent	Mean	Indicator of Speaking Anxiety Level
5	4.01 -5.00	Strongly Agree (SA)	3.67 – 5.00	High
4	3.01 -4.00	Agree (A)	2.34 – 3.66	Moderate
3	2.01 -3.00	Neutral (N)		
2	1.01 -2.00	Disagree (DA)	1.00 – 2.33	Low
1	0.01 -1.00	Strongly Disagree (SDA)		

A reliability analysis was conducted using Cronbach's alpha to determine the internal consistency of the questionnaire. As shown in Table 3, the overall instrument recorded a Cronbach's alpha coefficient of 0.915, indicating excellent reliability. The reliability coefficients for the four constructs ranged from 0.833 to 0.948, all of which exceeded the recommended minimum value of 0.70 (Nunnally & Bernstein, 1994). These results indicate that the questionnaire is reliable and suitable for the present study.

Table 3: Reliability Analysis of the Research Instrument

Construct	No. of Items	Cronbach's Alpha
Speaking Anxiety	12	0.948
Social Presence	5	0.833
Cognitive Presence	5	0.905
Teaching Presence	5	0.883
Overall	27	0.915

The quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS) Version 28 to generate descriptive statistics, including frequencies, percentages, means, and standard deviations, to address Research Objectives 1 and 2 (Section B and Section C). Responses to the open-ended questions (Section D) were analysed using thematic analysis to identify recurring themes related to participants' perceptions of online group interaction, thereby addressing Research Objective 3.

FINDINGS AND DISCUSSION

A) Findings for Demographic Profile

A total of 84 ESL undergraduates participated in this study. Table 4 shows the most significant data for demographic profile of the participants including the majority of the respondents were female (73.8%), while 26.2% were male. Most respondents were under 20 years old (79.8%), and almost half of them (44.0%) had participated in online learning for two semesters. In terms of their interest in learning English during online classes, 38.1% reported that they found English somewhat enjoyable, while 27.4% indicated that they enjoyed

it very much. Additionally, 61.9% of the respondents were taking the English course for the first time, means that they have passed the pre-requisite courses during the first enrolment.

Table 4: Findings for Demographic Profile

Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	22	26.2
	Female	62	73.8
Age	Under 20	67	79.8
	21–23	17	20.2
Semesters involved in online learning	One semester	7	8.3
	Two semesters	37	44.0
	Three semesters	8	9.5
	More than three semesters	32	38.1
Enjoyment of English during online classes	Not Really Enjoy	3	3.6
	Neutral	26	31.0
	Somewhat Enjoyable	32	38.1
	Enjoy Very Much	23	27.4
Number of times taking the course	First time	52	61.9
	Second time	11	13.1
	Third time	21	25.0

B) Findings for Research Question 1 (What is the level of speaking anxiety among ESL undergraduates?)

The findings in Table 5 indicate that ESL undergraduates experienced a moderate level of speaking anxiety during online group interaction ($M = 3.05$). Among the twelve items, SA11 ("I become nervous when I cannot express my ideas clearly") recorded the highest mean score ($M = 3.46$), suggesting that learners' anxiety was primarily associated with their inability to communicate ideas effectively rather than merely speaking in English. Conversely, SA10 ("I avoid speaking English whenever possible") recorded the lowest mean ($M = 2.48$), indicating that most respondents were generally willing to participate despite experiencing anxiety. This suggests that although students continued to experience nervousness when communicating in English, the online collaborative learning environment may have alleviated some of their anxiety.

These findings are consistent with He (2017) reported that foreign language learners generally experience moderate speaking anxiety and that supportive learning environments help reduce communication apprehension. Similarly, Horwitz et al. (1986), suggested that communication apprehension and fear of negative evaluation are the primary sources of foreign language speaking anxiety, which remain evident even when learners become more accustomed to speaking activities. The present finding therefore suggests that online group interaction may reduce, but not completely eliminate, speaking anxiety among ESL undergraduates.

Table 5: Findings on Speaking Anxiety Level

Item	Mean	SD	Interpretation
SA1	3.14	1.09	Moderate
SA2	3.04	1.15	Moderate
SA3	3.12	1.19	Moderate
SA4	3.06	1.19	Moderate
SA5	3.08	1.27	Moderate
SA6	2.82	1.23	Moderate
SA7	3.23	1.18	Moderate
SA8	2.81	1.29	Moderate
SA9	3.18	1.21	Moderate
SA10	2.48	1.16	Moderate
SA11	3.46	1.17	Moderate (Highest)
SA12	3.13	1.24	Moderate
	Overall M=3.05		

C) Findings for Research Question 2 (Which dimensions of online group interaction help reduce speaking anxiety?)

The Social Presence dimension in Table 6 recorded a high overall mean ($M = 3.92$). The highest-rated item was SP3, indicating that supportive classmates encouraged respondents to participate more actively in English discussions. This finding reflects the importance of peer support in reducing learners' anxiety and aligns with the Community of Inquiry framework, which emphasises social presence as an essential element in fostering a safe and collaborative online learning environment. Students felt more comfortable communicating in smaller online groups where they could receive encouragement from classmates without fear of being judged. This finding is consistent with Garrison et al. (2000), who identified social presence as an essential component of successful online learning because it promotes trust, collaboration, and a sense of belonging among learners. Likewise, Aderibigbe (2021) found that positive peer interaction enhances learners' confidence and engagement during online collaborative activities. These findings suggest that supportive peer relationships contribute to creating a psychologically safe environment for practising spoken English.

Table 6: Findings on Online Group Interaction Dimension (Social Presence)

Item	Mean	SD	Interpretation
SP1	3.90	0.89	High
SP2	3.99	0.87	High
SP3	4.18	0.84	High (Highest)

SP4	3.77	1.00	High
SP5	3.74	0.93	High
	Overall M=3.92		

The Cognitive Presence dimension in Table 7 also recorded a high level ($M = 3.90$). The highest mean was observed for CP2, indicating that discussing ideas with group members improved respondents' confidence in speaking English. This suggests that collaborative discussions provide opportunities for learners to rehearse ideas and construct meaning before communicating, supporting Garrison et al. (2000), who described cognitive presence as learners' ability to construct meaning through sustained reflection and collaborative inquiry. Similarly, Bandura (2011) emphasised that learning occurs through observation, interaction, and shared experiences, suggesting that collaborative online discussions enhance both language learning and learners' confidence in oral communication.

Table 7: Findings on Online Group Interaction Dimension (Cognitive Presence)

Item	Mean	SD	Interpretation
CP1	3.85	0.87	High
CP2	4.01	0.78	High (Highest)
CP3	3.90	0.86	High
CP4	3.83	0.79	High
CP5	3.92	0.79	High
	Overall M=3.90		

Teaching Presence dimension, as shown in Table 8, recorded the highest-rated dimension of online group interaction ($M = 4.15$). Specifically, TP1, which relates to lecturers creating a supportive environment for online discussions, recorded the highest mean ($M = 4.26$). This finding highlights the importance of lecturer facilitation in reducing speaking anxiety. Respondents appreciated clear instructions, constructive feedback, and continuous encouragement throughout online discussions. This finding agrees with Garrison et al. (2000), who argued that teaching presence plays a central role in designing, facilitating, and directing meaningful learning experiences in online environments. Correspondingly, Aderibigbe (2021) reported that effective instructional support encourages active participation and strengthens learners' confidence during collaborative online learning. These findings indicate that lecturer guidance remains a critical factor in helping ESL undergraduates overcome speaking anxiety.

Table 8: Findings on Online Group Interaction Dimension (Teaching Presence)

Item	Mean	SD	Interpretation
TP1	4.26	0.70	High (Highest)
TP2	4.14	0.73	High
TP3	4.12	0.83	High
TP4	4.11	0.78	High

TP5	4.14	0.78	High
	Overall M=4.15		

Overall, all three dimensions of online group interaction were perceived positively by the respondents. Teaching Presence obtained the highest mean score, followed by Social Presence and Cognitive Presence. This suggests that while peer interaction and collaborative learning contribute to reducing speaking anxiety, the lecturer's role in designing, facilitating, and supporting online learning activities remains the most influential factor.

D) Findings for Research Question 3 (How do ESL undergraduates perceive the role of online group interaction in reducing speaking anxiety?)

After analysing all 84 responses using Braun and Clarke's (2006) six-phases thematic analysis, four major themes emerged; theme 1: Increased Speaking Confidence, theme 2: Supportive Learning Environment, theme 3: Collaborative Learning Experience, and theme 4: Remaining Challenges and Suggestions.

Theme 1: Increased Speaking Confidence

The most prominent theme that emerged from the responses was increased speaking confidence. Most participants perceived online group interaction as a less intimidating environment that encouraged them to communicate in English. Many respondents explained that speaking in smaller groups reduced their nervousness and enabled them to participate more actively. For example, Participant 2 commented, *"I feel more confident because my friends support me,"* while Participant 18 noted that *"Online discussions reduce my nervousness."* Similarly, Participant 4 claimed that *"Because we don't meet face to face, I become more confident when talking in English."* These responses suggest that online group interaction provides a psychologically safe learning environment that promotes confidence and reduces communication apprehension.

This finding complements the quantitative result that respondents reported only **a moderate level of speaking anxiety** ($M = 3.05$) and supports He (2017), who mentioned that learners become more willing to speak when they perceive the learning environment as supportive and less threatening. It also aligns with Bandura's (2011) Social Cognitive Theory, which proposes that repeated successful learning experiences and positive social interactions contribute to learners' self-efficacy. The present study demonstrates that online group interaction provides students with opportunities to practise speaking in a less intimidating environment, thereby strengthening their confidence.

Theme 2: Supportive Learning Environment

The next theme that is also outstanding among the responses was supportive learning environment. This theme highlights the importance of peers where the participants repeatedly mentioned that they felt comfortable having supportive classmates, nobody laughed at mistakes and small groups interaction reduced pressure. These ideas can be seen from comments gained from Participant 15: *"Peer interaction makes me feel more comfortable,"* Participant 24: *"Breakout room discussions help because there are fewer people,"* Participant 33: *"Friends encourage me to speak,"* and the comment from participant 47: *"I don't feel embarrassed when speaking with my own group."*

This finding supports Garrison et al.'s (2000) concept of **Social Presence**, which emphasises learners' ability to project themselves socially and emotionally within an online learning community. Similarly, Aderibigbe (2021) observed that supportive peer interaction promotes learner engagement and confidence during online collaborative learning. The participants' responses suggest that encouragement from peers helps reduce fear of negative evaluation, one of the major sources of speaking anxiety identified by Horwitz et al. (1986).

Theme 3: Collaborative Learning Experience

Another emerging theme that was noticeably important across the open-ended instruments is collaborative learning experience. This is seen as the students perceived online group interaction as a valuable learning experience. Some common responses such as 'sharing ideas', 'practising speaking', 'learning vocabulary' and 'exchanging opinions' prove that the participants regarded online group interaction was a medium to expand their learning experience collaboratively. To be more specific, participant 9 said "We can share more ideas." While participant 37 mentioned that "I learn new words from my friends.". Moreover, participant 51 noted that "Group discussion allows everyone to practise speaking.", and participant 60 claimed that "Collaborative projects make me communicate more."

These findings correspond closely with the **Cognitive Presence** dimension, which obtained a high mean score ($M = 3.90$). They also support Bandura's (2011) proposition that learning occurs through observation, collaboration, and social interaction with others. Students' experiences of sharing ideas and learning new vocabulary through discussion demonstrate how collaborative learning contributes to language development. Likewise, Garrison et al. (2000) argued that meaningful learning occurs when learners engage actively in collaborative inquiry, which is reflected in the participants' perceptions of online group interaction.

Theme 4: Remaining Challenges and Suggestions

This is another noteworthy theme to be discussed. Many participants are discovered to admit that online interaction reduces anxiety although they still experienced few challenges in speaking the target language, especially in online learning context.

Issues such as having limited vocabularies, pronunciation problems, fear of grammatical mistakes, and unstable internet connection are explained through their responses. For instance, participant 6 directly admitted "*I have difficulty with my vocabulary.*", next, participant 1 confessed that "*Pronunciation is still difficult.*", and participant 54 commented "*Sometimes the Internet connection interrupts the discussion.*".

Apart from the challenges, participants also used this opportunity to suggest their needs to the lecturers. Providing more speaking activities, creating a supportive atmosphere, encouraging participation, and giving constructive feedback are among the suggestions voiced out in the responses. To be clear, participant 8 suggested "*Lecturers should create a non-judgemental learning environment.*", next, participant 13 recommended the lecturers to "*Give us more opportunities to practise speaking.*", and not to forget, the request from participant 21 to "*Correct our mistakes politely.*"

Although online group interaction contributes positively to reducing speaking anxiety, learners continue to face linguistic and technical challenges such as vocabulary limitations, pronunciation difficulties, and fear of making mistakes. These findings indicate that online interaction alone is insufficient unless it is accompanied by effective instructional support, reinforcing the importance of **Teaching Presence**, which recorded the highest mean score ($M = 4.15$).

These findings are consistent with Horwitz et al. (1986), who identified communication apprehension and fear of negative evaluation as persistent barriers to oral communication in a second language. Similarly, He (2017) suggested that although supportive learning environments can reduce anxiety, linguistic competence remains a significant factor influencing learners' confidence in speaking English.

E) Integration of Quantitative and Qualitative Findings

As this study employed a convergent mixed-method research design, the quantitative and qualitative findings were integrated to provide a more comprehensive understanding of the role of online group interaction in reducing speaking anxiety among ESL undergraduates. The integration demonstrates how the qualitative themes complement and explain the quantitative results, thereby strengthening the overall interpretation of the findings. Table 9 presents the joint display of the integrated findings.

Table 9: Joint Display of Integrated Findings

Quantitative Findings	Qualitative Findings	Integrated Interpretation
Speaking anxiety was at a moderate level (M = 3.05).	Students generally felt more confident during online group discussions but still experienced vocabulary limitations and fear of making mistakes.	Online group interaction alleviates speaking anxiety, although linguistic challenges remain for some learners.
Teaching Presence recorded the highest mean (M = 4.15).	Students appreciated lecturers' encouragement, clear instructions, and constructive feedback.	Lecturer facilitation is a key factor in creating a supportive online environment that reduces speaking anxiety.
Social Presence was high (M = 3.92).	Students valued peer encouragement and felt more comfortable speaking in small groups.	Positive peer interaction promotes confidence and reduces fear of negative evaluation.
Cognitive Presence was high (M = 3.90).	Students reported learning new vocabulary, organising ideas, and improving communication through discussion.	Collaborative learning supports language development and increases confidence in speaking English.

The integrated findings indicate that the qualitative data reinforce the quantitative results. While the quantitative findings revealed that respondents experienced a moderate level of speaking anxiety, the qualitative responses explained that online group interaction helped alleviate anxiety by creating a supportive and less intimidating learning environment. Students highlighted that encouragement from lecturers and peers, opportunities to exchange ideas, and collaborative learning activities increased their confidence to communicate in English. Nevertheless, several participants acknowledged that vocabulary limitations, pronunciation difficulties, and fear of making mistakes continued to hinder their oral participation. These findings suggest that online group interaction contributes positively to reducing speaking anxiety but does not eliminate all sources of anxiety, particularly those associated with learners' linguistic competence.

The integration of the quantitative and qualitative findings provides strong evidence that online group interaction contributes positively to reducing speaking anxiety among ESL undergraduates. The quantitative findings demonstrated moderate speaking anxiety and high perceptions of Social Presence, Cognitive Presence, and Teaching Presence, while the qualitative findings explained how these dimensions influenced students' confidence through peer support, collaborative learning, and lecturer facilitation. These findings are consistent with Bandura's (2011) Social Cognitive Theory, which highlights the role of social interaction in developing learners' self-efficacy, as well as the Community of Inquiry framework (Garrison et al., 2000), which emphasises the complementary roles of social, cognitive, and teaching presence in promoting meaningful online learning experiences.

CONCLUSION

This study explored the role of online group interaction in reducing speaking anxiety among ESL undergraduates using a convergent mixed-method research design. Guided by Bandura's Social Cognitive Theory and the Community of Inquiry framework, the study examined the level of speaking anxiety experienced by students, identified the dimensions of online group interaction that contributed to reducing speaking anxiety, and explored students' perceptions of their online learning experiences.

The quantitative findings revealed that ESL undergraduates experienced a **moderate level of speaking anxiety**, suggesting that although anxiety remains a common challenge, it is not overwhelming within online

group interaction settings. Among the three dimensions of online group interaction, **Teaching Presence** recorded the highest mean score, followed by **Social Presence** and **Cognitive Presence**, indicating that lecturer facilitation, peer support, and collaborative learning all play important roles in creating a supportive environment for speaking English.

The qualitative findings complemented the quantitative results by revealing that students generally perceived online group interaction as beneficial in increasing their speaking confidence, reducing nervousness, and encouraging active participation. Participants also highlighted the importance of supportive peers, collaborative discussions, and constructive lecturer feedback in helping them feel more comfortable communicating in English. Nevertheless, some students continued to experience challenges related to limited vocabulary, pronunciation, fear of making mistakes, and occasional technological issues, suggesting that online group interaction alone cannot completely eliminate speaking anxiety.

Moreover, the integrated findings demonstrate that online group interaction provides a supportive learning environment that encourages ESL undergraduates to participate more confidently in English-speaking activities. The findings also support Bandura's Social Cognitive Theory and the Community of Inquiry framework, illustrating how interaction with lecturers and peers contributes to the development of learners' confidence, engagement, and willingness to communicate in English.

Despite its contributions, this study has several limitations. First, the study was conducted with 84 ESL undergraduates from a single Malaysian public university using purposive sampling. Consequently, the findings may not be generalisable to all ESL undergraduates or to learners in different institutional and cultural contexts. Second, the study relied on self-reported questionnaire responses, which may be influenced by participants' personal perceptions and response bias. Although the questionnaire demonstrated high internal consistency, self-reported data may not fully reflect students' actual speaking behaviours during online group interaction. Finally, the qualitative component employed open-ended survey questions rather than interviews or focus group discussions. While the responses provided valuable insights into students' experiences, interviews could have yielded richer and more detailed explanations by allowing researchers to probe participants' responses further.

Therefore, future studies could involve a larger and more diverse sample drawn from multiple universities to enhance the generalisability of the findings. Comparative studies involving public and private higher education institutions or learners from different proficiency levels may also provide a broader understanding of speaking anxiety across different learning contexts. In addition, future research may consider incorporating **semi-structured interviews or focus group discussions** alongside questionnaires to obtain richer qualitative data and gain a more comprehensive understanding of students' experiences. Finally, future studies could investigate the effectiveness of different online collaborative learning strategies, such as peer mentoring, project-based learning, or artificial intelligence-assisted language learning, in promoting speaking confidence and reducing speaking anxiety in various educational settings.

All in all, this study demonstrates that online group interaction plays a meaningful role in supporting ESL undergraduates as they develop confidence in speaking English. Although it does not completely eliminate speaking anxiety, it provides opportunities for learners to communicate in a supportive and collaborative environment where lecturer guidance and peer encouragement foster greater willingness to participate. As higher education continues to embrace digital and blended learning, creating purposeful online group interactions may serve as an effective pedagogical approach to promoting students' oral communication skills while addressing the affective challenges associated with second language learning.

ACKNOWLEDGEMENTS

The authors would like to extend our greatest appreciation to the Head of Academy of Language Studies, UiTM Kelantan Branch for supporting the completion of this paper. Our heart felt gratitude also specifically goes to the Lecturer-in-Charge (LiC) of each subject and also all participants. Lastly, we would also like to thank the reviewers and editors for their valuable feedback.

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