

Navigating English-Medium Instruction: A Needs-Based Approach to Developing Targeted Vocabulary Intervention for ESL Post-Secondary Students

Nurhamizah Ishak^{1*}, Nooreen Noordin², Lilliatl Ismail³, Siti Salina Mustakim⁴

¹Academy of Language Studies, Universiti Teknologi MARA Melaka, 78000 Alor Gajah, Melaka, Malaysia

& Faculty of Educational Studies, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.

^{2,3,4}Faculty of Educational Studies, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.

ARTICLE INFO

Article history:

Received 20 July 2026
Revised 01 October 2026
Accepted 26 October 2026
Online first 30 October 2026
Published 31 October 2026

Keywords:

vocabulary intervention needs
analysis
English-medium instruction
tourism management
vocabulary enhancement
higher education
vocabulary constraints

DOI:

<https://doi.org/10.24191/gading.v29i2.950>

ABSTRACT

Vocabulary knowledge plays a crucial role in supporting students' academic success in English-medium higher education institutions (EMHEIs) and the career readiness, particularly in professional fields that involve frequent global communication in English, such as tourism management. However, empirical investigations into discipline-specific vocabulary constraints and learner-informed intervention designs at the post-secondary level in EM settings remain scarce. Addressing this gap, this study aimed to examine tourism management students' perceptions of their English language proficiency, identify vocabulary-related challenges encountered in English-medium learning environments, explore their preferences regarding English language learning activities, and determine their expectations for an effective vocabulary enhancement intervention. A quantitative needs-analysis survey was administered to 293 final-semester Tourism Management Diploma students, from five different UiTM campuses (UiTM Melaka, UiTM Pulau Pinang, UiTM Terengganu, UiTM Sabah, UiTM Sarawak) that offer the diploma programme. Descriptive statistical analyses revealed that despite recognising the vital importance of English, students perceived their vocabulary knowledge as inadequate to meet the linguistic demands of the programme. Crucially, respondents favoured embedding tourism-specific vocabulary instruction directly into existing English proficiency courses and advocated for this support to begin at the onset of their studies. Aside from providing empirical baseline data, this study advances EMI pedagogy by establishing concrete, learner-driven parameters, specifically regarding early intervention timing and integrated curricular delivery, which enables EMHEIs to bridge the divide between general English proficiency development courses that are compulsory to be taken by all students and their specialised professional career readiness needs.

1. INTRODUCTION

English is no longer merely a subject to be learned; it has become the primary medium through which disciplinary knowledge is delivered, discussed, and assessed in many universities today. The increasing adoption of English-medium instruction (EMI) in higher education worldwide has significantly reshaped

^{1*} Corresponding author. Nurhamizah Ishak. E-mail address: hamizahishak@uitm.edu.my

students' learning experiences. While this move aims to prepare students for international employment opportunities, it also introduces additional linguistic demands that many students are not fully prepared to meet. Among the various language-related challenges reported in EMI settings, vocabulary consistently ranks as one of the most significant (Malmström et al., 2025). Vocabulary knowledge underpins virtually all aspects of language use, influencing students' ability to understand lectures, interpret academic texts, engage in classroom discussions, and communicate disciplinary knowledge effectively.

In EMI settings specifically, students are expected to understand, acquire, and use specialised terminology, academic vocabulary, and discipline-specific professional expressions in English. Masrai et al. (2022) demonstrated that vocabulary knowledge was a particularly strong correlate of academic achievement among students enrolled in EMI programmes, underscoring its significance beyond general language competence. It is frequently assumed that vocabulary development occurs naturally through sustained exposure to English-medium content in lectures and learning materials (Webb et al., 2023). However, exposure alone does not necessarily guarantee sufficient or consistent vocabulary development among learners (Wei & Macaro, 2024; Reynolds et al., 2023; Reynolds et al., 2022). Accordingly, opportunities for explicit instruction, contextualised vocabulary practice, and systematic reinforcement remain necessary to complement exposure to disciplinary content, particularly for students with limited vocabulary knowledge.

The need for competent English communication and a strong command of discipline-specific vocabulary is particularly pronounced for tourism management students, for whom English serves not only as a medium of academic learning but also as a vital professional resource (Rahayu et al., 2025). Given the international and intercultural nature of the tourism industry, graduates are expected to communicate effectively in English with diverse stakeholders, including tourists, industry partners, and international colleagues. Consequently, tourism management students require language support that addresses both their immediate academic needs and the communicative demands of their future profession. However, the extent to which institutional EMI practices accommodate students' varying levels of English proficiency and their specific vocabulary-learning needs in preparation for industry expectations requires further examination (Kholidi et al., 2022). A context-specific investigation is therefore needed to establish how vocabulary instruction can better align students' language-learning needs with the disciplinary and professional demands of tourism management.

1.1 Problem Statement

English-related challenges in English-medium higher education institutions (EMHEIs) arise from the interaction between learners' linguistic resources and disciplinary demands. The transition from secondary to post-secondary education often requires students to move from general language use to discipline-specific academic discourse. Learners are expected to shift from understanding conversational English to processing dense academic vocabulary, complex sentence structures, and highly abstract concepts (Shousha, 2021). When students' underlying English proficiency is limited, their working memory resources may be consumed by literal translation of language rather than by the deeper cognitive processing required to comprehend disciplinary content, potentially leading to learning difficulties (Kamaşak et al., 2021). Consequently, less proficient students may experience greater difficulties understanding lectures, reading academic texts, participating in classroom discussions, and completing assessments. Macaro et al. (2018) further highlighted how insufficient language proficiency can constrain students' classroom participation and expression of disciplinary knowledge, creating barriers to fully benefiting from instruction delivered through English. These linguistic limitations also hinder students from fully demonstrating their actual disciplinary understanding, both verbally and in writing, despite their fairly good grasp of the subject matter.

This issue is particularly relevant in Malaysian EMHEIs, where students entering post-secondary programmes may differ not only in their levels of English proficiency but also in their prior exposure to academic English, shaped by diverse secondary schooling experiences. Kamaşak et al. (2021), for instance, found that students' academic-language difficulties at a Turkish English-medium university varied by

characteristics such as academic discipline, first-language background, and previous EMI experience. Although these findings originate from a different national context, they highlight the importance of considering differences in learners' linguistic backgrounds and educational experiences when examining their preparedness for EMI. The variation raises important questions about students' ability to engage with discipline-specific vocabulary, particularly in programmes that require them to acquire specialised terminology while simultaneously developing their English language competence.

Despite growing scholarly interest in vocabulary knowledge and development within EMI environments, the extent to which existing findings adequately represent the experiences of post-secondary students remains insufficiently established. Previous research has examined the relationship between vocabulary knowledge and academic achievement among university undergraduates (Masrai et al., 2022) and the development of academic vocabulary among postgraduate students in EMI programmes (Malmström et al., 2025), which provide important insights into vocabulary learning in higher education, but their findings cannot automatically be generalised to students enrolled in diploma-level programmes, whose disciplinary learning requirements, academic preparedness, and instructional contexts differ from those of degree-level students. Consequently, further investigation is necessary to better understand the vocabulary-related difficulties and instructional needs of diploma students, particularly those pursuing tourism management programmes in Malaysian EMHEIs.

Furthermore, existing research on EMI has examined language-related challenges and institutional approaches to language support, but the extent to which students' perspectives inform the design of vocabulary-focused interventions warrants further investigation (Dafouz & Smit, 2020; Pecorari & Malmström, 2018). Huang (2024) highlighted the importance of targeted, discipline-specific language scaffolding in supporting students' understanding and use of specialised vocabulary when engaging with academic content. Nevertheless, vocabulary support that does not adequately account for students' reported learning difficulties and instructional preferences will fail to address their specific academic and disciplinary needs. This concern is particularly pertinent to Tourism Management Diploma students, who must develop vocabulary knowledge for both academic learning and future professional communication. Hence, conducting a systematic, learner-informed needs analysis is essential for identifying students' vocabulary-related difficulties and determining a suitable approach to vocabulary instruction that responds to their learning experiences and disciplinary requirements.

Against this backdrop, the present study investigates Tourism Management Diploma students' perceptions of their English language proficiency, their preferred instructional approaches during general English proficiency development classes, the vocabulary constraints they experience in a Malaysian EMHEI (UiTM), and their expectations for an ideal vocabulary enhancement intervention. By foregrounding students' reported needs, learning experiences, and instructional preferences, the study seeks to provide an empirical basis to inform the future development of a student-centred vocabulary instructional module tailored to Tourism Management Diploma students in the Malaysian EMHEI context.

1.2 Research Questions:

1. What are Tourism Management Diploma students' perceptions of their English language proficiency in the context of learning and work readiness?
2. What are students' perceptions of the ideal implementation of an English language proficiency course in their English-Medium Higher Education Institution (EMHEI)?
3. What English vocabulary constraints do the students face in an EMHEI?
4. What are students' expectations of an ideal vocabulary instructional intervention module?

2. LITERATURE REVIEW

2.1 *Learner Preferences for English Language Proficiency Development Instruction in EMHEI*

Learners' instructional preferences should be considered when designing English-language proficiency development instruction in English-medium higher education institutions (EMHEIs), particularly when students must develop the linguistic competence required for academic participation alongside disciplinary learning. Nevertheless, instructional preferences should be distinguished from objectively assessed language needs and empirically demonstrated instructional effectiveness, as students' preferred learning arrangements may not necessarily produce the greatest proficiency gains. In Malaysia, Mohd Faisal and Mohd Said (2023), who surveyed 117 ESL Life Sciences Foundation students, reported students' favourable preference for web-based academic vocabulary resources that incorporate contextualised examples, accessible synonyms, multimedia, and varied learning exercises. These findings suggest that learners value comprehensible input and structured opportunities to practise unfamiliar language rather than relying exclusively on incidental exposure to vocabulary.

Beyond instructional materials, learners' preferences also reflect expectations regarding the academic relevance of English-language support. Santoso et al. (2024), drawing on questionnaire responses from 136 students across five Indonesian universities and interviews with students and language-centre staff, found that existing English for Academic Purposes (EAP) provision was perceived as insufficiently responsive to disciplinary language demands. Similarly, Galloway et al. (2024), examining EMI contexts in Japan and China, identified the need for English for Specific Purposes (ESP) and English for Specific Academic Purposes (ESAP) provision alongside greater institutional coordination. Taken together, these findings highlight two complementary dimensions of learner-responsive instruction, namely pedagogical accessibility, which concerns how language is presented and practised, and disciplinary relevance, which concerns its applicability to authentic academic communication.

A further dimension of learner preferences concerns the types of supplementary instruction and learning activities perceived as useful for developing proficiency in listening, speaking, reading, and writing. Galloway and Ruegg's (2020) research on academic and language support in EMI programmes in Japan and China demonstrated the importance of examining whether institutional support corresponds with students' language-development needs rather than assuming that the availability of supplementary provision is sufficient. Meanwhile, Wu et al.'s (2026) research on Business English undergraduates in a Chinese EMI programme revealed students' recommendations for conversational practice groups and English corners to provide authentic speaking opportunities and enhance confidence, as well as specialised writing seminars addressing essay organisation, academic writing strategies, referencing, and business-related texts. These findings indicate that learners may favour differentiated instructional activities according to the communicative demands of particular skills, with oral proficiency requiring opportunities for meaningful interaction and writing development benefiting from explicit guidance on academic genres and disciplinary conventions.

2.4 *Vocabulary Constraints among ESL Learners*

Vocabulary constraints among ESL learners extend beyond limited vocabulary size to encompass difficulties in recognising, retrieving, retaining, and appropriately using lexical items in academic and disciplinary contexts. Recent empirical studies highlight the multidimensional nature of these constraints, particularly the discrepancy between receptive and productive vocabulary knowledge. Wei and Macaro (2024), in a longitudinal study involving 114 Chinese university students, reported statistically significant but generally small gains in general and academic vocabulary during EMI courses. Although productive vocabulary knowledge remained considerably lower than receptive knowledge, productive vocabulary demonstrated greater improvement over the study period, suggesting that the two dimensions may develop at different rates. Similarly, Malmström et al. (2025) identified significant gains in receptive academic vocabulary among postgraduate EMI students in Sweden, particularly those with lower initial vocabulary knowledge.

While both studies demonstrate that EMI exposure can facilitate lexical development, their findings differ in the dimensions assessed and the extent of improvement observed. Notably, the comparatively modest gains reported by Wei and Macaro (2024) challenge the assumption that sustained exposure to English-medium content necessarily produces substantial vocabulary development. In contrast, Malmström et al. (2025) demonstrate that receptive academic vocabulary can improve considerably among certain learners. Nevertheless, neither study establishes that receptive vocabulary development necessarily translates into effective use of disciplinary vocabulary. Furthermore, differences in participants' educational levels, instructional contexts, and vocabulary assessment measures limit direct comparisons between the studies. Collectively, these findings suggest that vocabulary knowledge should not be conceptualised merely in terms of lexical recognition or overall vocabulary size but should also account for learners' ability to retrieve and apply vocabulary appropriately in academic communication.

Aside from lexical knowledge limitations, vocabulary-related difficulties may intersect with cognitive processing demands and affective barriers, further complicating ESL learners' engagement with academic content. Othman (2024), investigating Malaysian secondary-school students in EMI science classrooms, identified difficulties in comprehending unfamiliar scientific terminology, abstract concepts, and complex linguistic structures, suggesting that vocabulary-related challenges may intensify the cognitive demands of disciplinary learning. Similarly, Mohd Fisal and Mohd Said (2023) found that learners experienced difficulties applying academic vocabulary in productive language activities, particularly speaking and writing, despite reporting positive attitudes towards vocabulary learning. Both studies highlight vocabulary-related challenges in Malaysian educational contexts, but they differ in their emphases. Othman (2024) foregrounded lexical comprehension and associated cognitive difficulties, whereas Mohd Fisal and Mohd Said (2023) identified problems with productive vocabulary use and the need for more contextualised learning resources.

3. METHODOLOGY

This research employed a quantitative research approach. The main instrument used for data collection was a needs-analysis questionnaire comprising dichotomous (Yes/No) and 5-point Likert-scale closed-ended items. The questionnaire was systematically developed by researchers based on the latest literature review (see Farid et al., 2023; Pun & Jin, 2021; Othman, 2024; Sadeghi et al., 2022) and underwent multiple revision processes to ensure alignment with the constructs of ESL students' perceptions of their language proficiency, their perceptions regarding current English language instruction in their English-medium institution, English vocabulary constraints that they faced, their expectations of ideal English language instruction and ideal vocabulary instructional intervention module.

To minimise construct underrepresentation and irrelevance, the instrument draft was also assessed for face and content validity by a panel of four subject-matter experts in Teaching English as a Second Language (TESL). The experts evaluated items for clarity, academic relevance, and technical accuracy. Following their feedback, some items were reworded for better readability. The refined instrument was later assessed for internal consistency reliability in a pilot study involving 30 students who matched the target population's demographic characteristics. The questionnaire's statistical analysis yielded a Cronbach's Alpha coefficient of 0.80, exceeding the widely accepted threshold of 0.70 and indicating high internal consistency.

A stratified random sampling technique was used to select the study participants, who were final-semester Tourism Management Diploma students, from five different UiTM campuses (UiTM Melaka, UiTM Pulau Pinang, UiTM Terengganu, UiTM Sabah, UiTM Sarawak) that offer the diploma programme. The total number of final-semester students across these five campuses is 580. Based on the calculation made using the Cochran formula and the Raosoft software, the ideal and valid minimum sample size is 232 respondents. Hence, a minimum of 47 respondents from each campus is required to answer the questionnaire. Nevertheless, the final number of respondents who completed the questionnaire is 293 (UiTM Melaka = 76, UiTM Pulau Pinang = 63, UiTM Terengganu = 56, UiTM Sabah = 48, UiTM Sarawak = 50), exceeding the required minimum sample size of 232 students. The data collection process was

conducted via Google Forms and lasted three weeks. Data from closed-ended items were later analysed using descriptive statistics (percentages, means, and standard deviations). The means from the analysed data were later categorised into five levels (see Table 1).

Table 1. Mean range and Descriptions

Mean range	Level Description
1.00 – 1.80	Very low
1.81-2.60	Low
2.61-3.40	Moderate
3.41-4.20	High
4.21-5.00	Very high

4. RESULTS AND DISCUSSION

4.1 RQ1: What are the students' perceptions of their language proficiency in the context of learning and work readiness?

Table 2a. Self-perceived reading, writing, listening, and speaking skills as well as vocabulary knowledge in English language

	N	Mean	SD	Level
Self-perceived reading skill	293	3.73	0.669	High
Self-perceived writing skill	293	3.39	0.658	Moderate
Self-perceived listening skill	293	3.52	0.669	High
Self-perceived speaking skill	293	3.21	0.738	Moderate
Self-perceived vocabulary knowledge	293	2.86	0.675	Moderate

The respondents were found to have high confidence in their English language reading ($M=3.73$, $SD=0.669$) and listening skills mastery ($M=3.52$, $SD=0.669$), but moderate confidence in their English language writing ($M=3.39$, $SD=0.658$), speaking skills ($M=3.21$, $SD=0.738$) and vocabulary mastery ($M=2.86$, $SD=0.675$). This indicates that English language lecturers should devote more attention to writing, speaking, and vocabulary. Moreover, with vocabulary mastery ranked last in the respondents' perspective, this further validates the argument that these students need a vocabulary module intervention to enhance their vocabulary mastery.

Other previous quantitative research among university-level ESL learners (Ishak, 2025; Pun & Jin, 2021) has also found that reading and listening skills are consistently perceived as the areas in which ESL students feel most confident, as evidenced by their higher mean scores than the lower mean scores for perceived writing and speaking skills, and vocabulary mastery. Reading and listening are receptive activities that do not require student output; the content is already constructed for the learner, which makes students more confident in these skills as they only need to perform decoding (Hui & Godfroid, 2026; Wolf, et al., 2019). If students pay close attention to the reading materials, audio, or speeches while analysing the content's flow, they can comprehend the gist of the topic.

In contrast, speaking and writing, as productive skills, impose greater processing demands because the learner must encode and retrieve information from memory to produce a relevant response while simultaneously attending to spelling, pronunciation, and sentence structure (Li, 2023; Dewi et al., 2025). However, when comparing writing and speaking, ESL students tend to have more difficulty in speaking. Though writing is a productive activity, it is not a spontaneous one that requires students to think swiftly, without any opportunity to reverse their stance or correct their views in their essays or written responses. Students have adequate time to brainstorm and scribble down their thoughts before organising them into essays or written responses. They can recheck, proofread, and edit any parts or ideas they feel are irrelevant, under-elaborated, or grammatically incorrect.

This situation differs from speaking skills, which require not only full attention and thorough comprehension of the topics but also quick thinking and rapid output to ensure that the conversation, discussion, or presentation flows smoothly (Wang et al., 2024). Stuttering or long pauses will interrupt the

flow of the ongoing oral communication. The speakers must also ensure their thoughts are comprehensible to others, be willing to clarify their stands, and be responsible for the words and opinions they utter. Their thoughts cannot easily be retracted once shared with others due to the spontaneity and fast-paced nature of oral communication. In addition, any wrong pronunciation will cause confusion and misunderstanding among the audience.

As for vocabulary knowledge, aside from being pivotal for the execution of the four language skills of reading, listening, speaking, and writing, its insufficiency is the primary factor that impedes successful understanding and articulation of academic contents, as well as leading to high cognitive load and lexical avoidance habit while studying in EMI settings (Othman, 2024; Lei et al., 2023). In fact, vocabulary acquisition is a part of the lifelong learning process for ESL students. They must not only be active in learning, acquiring, and storing newly discovered words during reading and listening activities, but also be active in using these words frequently during writing and speaking activities. This action is necessary to ensure the newly stored vocabulary is consolidated into long-term memory rather than remaining in short-term memory and later disappearing entirely. Nevertheless, it is undeniable that vocabulary acquisition is difficult and challenging for ESL students. Simply memorising the definitions of newly learnt words is not enough for them; instead, they must be well-versed in the accuracy and appropriateness of word application in varied contexts.

Table 2b. Learning difficulties due to limitations in English proficiency

Responses	<i>f</i>	%
Yes	167	57
No	126	43
Total	293	100

More than half of the respondents ($f=167$, 57%) reported experiencing learning difficulties during their diploma studies due to limited English proficiency. This finding shows that English language proficiency affects the smoothness of the learning process and progress among ESL students in an English-medium higher education institution (EMHEI). Kohnke & Jarvis (2023) affirm that many ESL students can achieve basic, superficial comprehension during passive academic reading or listening, but they tend to encounter a “bottleneck” when engaging in active production of academic verbal and written output. Similarly, Kamasak et al.’s (2021) study on language-related challenges at an EMHEI found that a substantial proportion of undergraduates face ongoing learning barriers due to insufficient English proficiency. Their lack of linguistic foundation prevents them from keeping pace with university workloads independently. A systematic review by Lei et al. (2023) evaluating the determinants of academic success in EMHEI environments worldwide also confirmed that general English proficiency and vocabulary are among the dominant indicators of learning achievement.

Table 2c. Readiness to work in tourism management industry

Responses	<i>f</i>	%
Yes	107	36.5
No	186	63.5
Total	293	100

More than half of the respondents ($f=186$, 63.5%) reported that they are not ready to work in the tourism management industry, given their current English proficiency. This finding shows that, despite being in their final semester of diploma studies at an EMHEI and having undergone industry practical training, the respondents are aware that their English proficiency remains inadequate for working in the field. Similarly, Kurniarini et al. (2021) also found that more than half of tourism students demonstrated low English proficiency according to the ASEAN Common Competency Standards, indicating that insufficient language proficiency remains a common concern among tourism students.

Unreadiness to work due to language barriers highlights a distinct disconnect between academic English proficiency and the high-stakes, real-time, professional communicative demands of the tourism

management industry. Final-semester diploma students with average English proficiency in EMHEI may have survived academically, but it is far from sufficient to handle unpredictable customer-facing scenarios in the tourism industry. Furthermore, it will affect their ability to navigate professional interactions smoothly, as they are expected to use precise jargon, maintain professional telephone etiquette, and write specialised business documents in English.

Therefore, the respondents' perceived lack of readiness may reflect their awareness that industry demands for English communication exceed their current level of proficiency. These findings suggest that students may realistically assess their language limitations and, as a result, feel unprepared to enter the industry despite having completed practical training. Asmalı and Topkaya (2021) concur that tourism students who had completed industry internships displayed heightened awareness of workplace communication needs and stronger motivation to learn English.

As diploma students are free to work immediately upon graduation, some modifications and improvements must be made promptly to the existing English proficiency course syllabus in the respondents' EMHEI to improve their readiness to handle work matters in English. Thus, instead of exposing students only to typical English usage and content in everyday and academic settings, authentic workplace situations and content should also be included and tailored as classroom materials in the English proficiency course. Perhaps interactive writing simulations and spontaneous, immersive role-plays modelled on workplace situations, such as managing hotel check-in and planning several versions of travel itineraries for customers, can be conducted to train students' competence in English workplace communication. Implementing these activities and content will not only reduce students' inhibition when communicating in English but also encourage passive students to participate more actively in English lessons.

4.2 RQ2: What are students' perceptions of the ideal implementation of an English language proficiency course in their English-Medium Higher Education Institution (EMHEI)?

Table 3a. Enjoyment of learning the English language in tourism management topics compared to other topics during the English proficiency course

Responses	<i>f</i>	%
Yes	238	81
No	55	19
Total	293	100

238 (81%) respondents agree that they enjoy learning English more during English language proficiency classes when lecturers use tourism management topics than when they use other topics. This finding indicates that students in an EMHEI enjoy the learning process more when their English language lecturers use familiar, relatable, and meaningful content, especially topics drawn from their faculty courses. Incorporating content from students' fields of study into English proficiency classes not only improves students' academic performance but also prepares them for the demands of English-language workplace communication.

Similar findings have also been reported in previous studies by Shoozan et al. (2025) and Kartini et al. (2025), in which learners were more confident and actively engaged when instructional materials were explicitly aligned with their academic disciplines and future careers. Shoozan et al. (2025) revealed contextualised, industry-based English-learning activities that reflected real-life service scenarios and professional communication tasks, such as welcoming guests, handling complaints, and providing tourism information in the English lessons, are more preferred by the students due to their instrumental motivation drive to learn the language for concrete, practical purposes.

Likewise, Kartini et al. (2025) reported that the use of content-based instruction incorporating authentic hospitality and tourism materials created a professionally relevant learning environment that significantly increased students' perceived usefulness of English mastery and perceived career readiness. They no longer view English as an academic hurdle, but as a practical tool necessary for their future careers. Moreover, the

use of authentic materials enables students to improve their knowledge of specialised vocabulary widely used in professional communication in the tourism and hospitality industry.

Table 3b. Preferred format of activity

	N	Mean	SD	Rank
I like doing individual work	293	3.98	0.827	1
I like doing pair work	293	3.97	0.818	2
I like doing small group work	293	3.94	0.877	3
I like doing whole-class work	293	3.53	1.051	4

In the context of English proficiency class implementation, the majority of respondents reported preferring individual work most ($M=3.98$, $SD=0.827$), followed by pair work ($M=3.97$, $SD=0.818$) and small-group work ($M=3.94$, $SD=0.877$). Meanwhile, whole-class work ($M=3.53$, $SD=1.051$) is the least preferred format of activity.

The findings indicate that the students prefer tasks that emphasise their own thoughts and actions, without needing to rely on others to complete them. Ease and fairness probably contribute to their preference. In-class individual tasks allow students to work at their own pace and independently regulate their learning, which often increases their perceptions of autonomy and task ownership (Nihalani & Robinson, 2022). Research suggests that self-paced learning activities can support learner engagement and accommodate differences in learning speed among students (Nihalani & Robinson, 2022). However, it causes a discrepancy in completion time. Some students can finish the assigned task quickly and may feel bored while waiting for classmates who have not yet completed the task.

Next, the respondents still accept and enjoy doing pair work and small-group tasks when assigned, as shown by the slight differences in mean scores between these tasks and individual work. Although pair work and group work in class sometimes result in misunderstanding, frustration, disagreements, and arguments because students do not always share the same perspectives, the students may work faster than they do individually because they have more help available and complex topics become easier to understand through discussion (Wu et al., 2024). They could work more slowly, however, if the group does not function effectively, if some members dominate discussions, or if some students require extensive explanations and become highly dependent on others for assistance. Hence, ground rules and equitable task distribution should be established before pair and group work begins. Theoretically, when all members respect and follow agreed procedures, pair and group work can be beneficial not only intellectually but also emotionally, as students exchange ideas, share knowledge, and motivate one another, thereby improving academic performance and fostering a positive learning environment (Carr et al., 2024).

Meanwhile, whole-class work is not preferred because it requires cooperation, commitment, and coordination of everyone's time and effort to accomplish collective goals. Plus, students themselves are often wary of whole-class work due to the higher tendency for social loafing. Social loafing has consistently been identified as a challenge in large-group learning environments where individual contributions become less visible, and accountability is reduced (Luo et al., 2021).

Table 3c. Preferred type of activity

	N	Mean	SD	Level	Rank
I like oral delivery activities (peer presentation, readers' theatre, elevator pitch)	293	3.75	.880	High	5
I like interactive online quizzes (for example: Kahoot, Quizizz)	293	4.30	.733	Very High	2
I like pop quizzes	293	3.31	1.051	Moderate	9
I like analogue word games (for example: crossword puzzle, scrabble, boggle, bananagrams)	293	4.40	.717	Very High	1
I like physical games (for example: charades, Simon says, action storytelling)	293	4.02	.906	High	3
I like factual collaborative dialogue activity (for example: discussion and within group debate)	293	3.58	.960	High	7

I like role-based interaction tasks (for example: role-playing, interviewing friends)	293	3.91	.837	High	4
I like doing in-class project (for example: create two sets of adjective mind maps that best describe the two classmates seated nearest to you, narrative writing gallery walk)	293	3.68	.931	High	6
I like doing out-of class project (for example: create a portfolio of book reviews that you have read throughout the semester)	293	3.48	.858	High	8

Both analogue word games like Scrabble ($M=4.40$, $SD=0.717$) and interactive online quizzes like Kahoot ($M=4.30$, $SD=0.733$) showed a very high level of preference among the respondents. These findings indicate that students strongly favour learning activities that combine language practice with elements of enjoyment and challenge. The high preference for both activities suggests that students are more motivated when vocabulary learning is embedded within meaningful and engaging contexts rather than presented through conventional memorisation or drill-based approaches. This finding aligns with Krashen's Affective Filter Hypothesis (1985), which posits that language acquisition occurs more effectively when learners experience low anxiety and high motivation. By transforming vocabulary learning into a game-like experience, both analogue and digital activities create a low-stress environment that encourages participation and experimentation with language.

The popularity of analogue word games among students may be attributed to their fun, active-learning atmosphere. Games such as Scrabble, crossword puzzles, Boggle, and Bananagrams require students to retrieve vocabulary from memory, recognise spelling patterns, and engage in logical reasoning and creative thinking, as players must manipulate and generate suitable words from limited linguistic resources. Besides that, these games help students encounter new words. Due to the social nature of these cooperative word games, it also fosters communication, collaboration, and peer interaction. Thus, students who are previously reluctant to participate in traditional classroom activities may feel more comfortable engaging in language use through these word games. These findings are consistent with previous research showing that word-focused activities promote vocabulary acquisition through repeated exposure, retrieval practice, and meaningful interaction with language (Teng, 2025).

Similarly, the strong preference for interactive online quizzes such as Kahoot reflects students' positive perceptions of technology-enhanced and gamified learning environments. Digital quiz platforms typically incorporate game elements such as points, leaderboards, badges, timers, and immediate feedback, which increase learners' engagement and motivation. The instant feedback these platforms provide allows students to identify and correct errors immediately, thereby reinforcing learning. Furthermore, the competitive nature of online quizzes encourages sustained attention and active participation throughout the activity. Recent studies have demonstrated that gamified learning platforms can improve learners' vocabulary achievement, self-efficacy, motivation, and engagement in language learning contexts (Cancino & Viguera, 2024; Talapova & Abdusalamova, 2024).

The next most preferred activities were physical games such as charades ($M = 4.02$, $SD = 0.906$), role-based interaction activities such as interviewing friends ($M = 3.91$, $SD = 0.837$), and oral delivery activities such as elevator pitches ($M = 3.75$, $SD = 0.880$). Although all three activities received high levels of preference, the ranking appears to reflect increasing cognitive and linguistic demands. Physical games such as charades rely heavily on gestures, visual cues, and non-verbal scaffolding, which reduce the linguistic burden placed on learners and make participation less intimidating. Role-based interactions require students to engage in interpersonal communication and negotiate meaning with peers, demanding greater language production while still benefiting from the support of familiar social contexts. In contrast, oral delivery activities such as elevator pitches require learners to organise ideas, select appropriate vocabulary, and deliver messages publicly with minimal support. In other words, students appear most comfortable with activities that allow them to participate actively without feeling overwhelmed by language demands, while activities requiring more independent speaking and public presentation remain appealing but slightly less preferred.

Finally, pop quizzes ($M = 3.31$, $SD = 1.051$) were the least preferred activity, even though they still ranked moderately preferred by the students. This finding suggests that students are less receptive to assessment practices that involve unpredictability and evaluation pressure. Unlike game-based activities that frame mistakes as part of the learning process, pop quizzes often emphasise performance and accuracy, potentially increasing learners' anxiety. From the perspective of Krashen's Affective Filter Hypothesis (1985), unexpected testing situations may raise learners' affective filters, thereby reducing their willingness to participate and limiting language acquisition. Students may perceive pop quizzes as threatening because they require immediate retrieval of information under evaluative conditions, which can create stress and fear of failure.

Overall, the findings demonstrate that students exhibit stronger preferences for interactive, enjoyable language-learning activities. Activities that incorporate elements of play, collaboration, and gamification appear particularly effective in promoting engagement and motivation. Therefore, lecturers should consider integrating a wider range of game-based learning strategies and gamification elements into their instructional practices. These approaches can create more positive language learning experiences, increase students' willingness to participate, and ultimately support more effective vocabulary acquisition and language development.

4.3 RQ3: What English vocabulary constraints do the students face in an EMHEI?

Table 4a. Adequacy of existing English vocabulary knowledge

Responses	<i>f</i>	%
Yes	100	34
No	193	66
Total	293	100

More than half of the respondents ($f=193$, 66%) disagree that their existing vocabulary knowledge is adequate. This finding indicates that respondents' vocabulary knowledge remains inadequate even in the final semester of their diploma studies at an EMHEI. Despite the expectation that EMHEI students are consistently proactive in acquiring and learning English vocabulary throughout their studies, most ESL students, like the respondents, are not self-regulated learners, resulting in slower vocabulary growth.

The present finding is also consistent with recent EMI research showing that vocabulary development does not automatically occur simply through prolonged exposure to English-medium instruction. Malmström et al. (2025) reported that although EMI environments may contribute to improvements in certain aspects of language proficiency, gains in vocabulary knowledge are often uneven and slower than expected. Their findings suggest that vocabulary growth requires deliberate instructional support rather than passive exposure to English in academic settings. As the assumption that students will naturally acquire sufficient academic vocabulary merely by studying content subjects in English may not always hold, vocabulary development should be treated as a shared responsibility between students and EMHEI rather than solely as an individual learning task. EMHEI should provide systematic vocabulary enhancement activities and intervention programmes that explicitly target academic vocabulary, discipline-specific terminology, and productive vocabulary use.

Table 4b. Perceived Vocabulary Constraints in English-Medium Instruction (EMI)

Perceived Vocabulary Constraints in English-Medium Instruction (EMI)	N	Mean	SD	Level
Vocabulary Deficit	293	3.61	.402	High
Affective Barriers	293	3.54	.538	High
Cognitive Load	293	3.45	.512	High
Total	293	3.53	.473	High

Table 4c. Elaboration on Perceived Vocabulary Constraints in English-Medium Instruction (EMI)

Vocabulary Deficit	N	Mean	SD
VD1) I use the same “simple” words repeatedly in my assignments.	293	3.98	.673
VD2) I misunderstand exam questions because of one or two unknown words	293	3.37	.549
VD3) I feel my vocabulary knowledge is “passive” (I understand it, but can’t produce it).	293	3.92	.865
VD4) I lose marks on assignments because I use words incorrectly.	293	3.15	.384
VD5) I struggle to use academic vocabulary appropriately.	293	3.84	.536
VD6) I miss important information in the courses I take due to unfamiliar vocabulary.	293	3.23	.665
VD7) I struggle to use discipline-specific vocabulary (technical terms and jargon related to my specific major) accurately.	293	3.79	.772
Affective Barriers	N	Mean	SD
AB1) I avoid asking questions in class because I cannot find the right words.	293	3.55	.961
AB2) I avoid using newly learnt vocabulary for fear of making mistakes.	293	3.76	.783
AB3) I am always worried about whether I have used appropriate English vocabulary in an academic setting	293	3.88	.639
AB4) I believe my current vocabulary size is the biggest barrier to my grades.	293	3.19	.733
AB5) I feel that my vocabulary level makes me appear less intelligent than I am.	293	3.32	.568
Cognitive Load	N	Mean	SD
CL1) I find it hard to take notes during a real-time lecture because I am stuck on spelling a word correctly.	293	2.85	.844
CL2) I frequently switch to my first language when I lack vocabulary.	293	3.64	.495
CL3) I rely heavily on a translation app when revising my studies.	293	3.79	.537
CL4) I need additional guidance from the lecturer to acquire more vocabulary.	293	3.53	.662

Respondents experienced a high level of perceived vocabulary constraints in English-Medium Instruction (EMI) settings ($M = 3.53$, $SD = .473$). Among the three dimensions examined, Vocabulary Deficit recorded the highest mean score ($M = 3.61$, $SD = .402$), followed by Affective Barriers ($M = 3.54$, $SD = .538$) and Cognitive Loads ($M = 3.45$, $SD = .512$). These findings suggest that despite studying in an English-medium higher education environment, many students continue facing many English vocabulary-related challenges that affect their learning experiences.

The highest mean score in the Vocabulary Deficit category suggests that insufficient vocabulary knowledge remains the most significant challenge for students in the EMHEI context. This finding indicates that many students struggle not only to understand academic content but also to express their ideas effectively in English. The responses reveal several manifestations of this deficit, including a tendency to repeatedly use simple vocabulary in assignments, difficulties using academic and discipline-specific terminology appropriately, and the perception that their vocabulary knowledge is largely passive. In other words, students may recognise and understand many words when reading or listening, but they have difficulty retrieving and using them accurately in speaking and writing. These limitations are particularly problematic in EMI settings, where academic success depends heavily on students’ ability to engage with specialised texts, communicate disciplinary knowledge, and demonstrate understanding through written and oral tasks. As noted by Schmitt et al. (2024), vocabulary knowledge is a strong predictor of language proficiency and academic performance because it underpins both comprehension and communication. The prominence of vocabulary deficit in the present study, therefore, suggests that many students have yet to develop the breadth and depth of vocabulary required to meet the linguistic and academic demands of English-medium higher education.

The high level of affective barriers suggests that vocabulary constraints extend beyond linguistic limitations and have a substantial psychological impact on learners. The findings indicate that many students experience uncertainty and anxiety when using English in academic settings, particularly when they are unsure whether they have selected the appropriate vocabulary. This concern appears to affect their willingness to communicate; some students avoid asking questions in class because they cannot find the right words, while others hesitate to use newly learned vocabulary for fear of making mistakes. Such behaviours are problematic because they reduce opportunities for meaningful language use and vocabulary development. As Solhi (2024) argues, language anxiety and low self-confidence can diminish learners’ willingness to communicate, thereby limiting their engagement in language-learning opportunities. In EMI

classrooms, where students are expected to learn disciplinary content and communicate in English simultaneously, concerns about vocabulary accuracy may discourage active participation and increase reliance on familiar, safer language choices. As a result, students may become trapped in a cycle where limited vocabulary undermines confidence, and reduced participation further restricts opportunities to expand their vocabulary. These findings suggest that vocabulary enhancement initiatives should address not only lexical knowledge but also learners' confidence and willingness to experiment with new vocabulary in academic communication.

Although Cognitive Load recorded the lowest mean among the three dimensions, it remained at a high level, indicating that vocabulary-related processing continues to place substantial mental demands on students in EMI settings. The findings suggest that limited vocabulary knowledge affects not only comprehension but also the efficiency with which students perform academic tasks. For instance, some students reported difficulty taking notes during lectures because they became preoccupied with spelling unfamiliar words, which may cause them to miss subsequent information and disrupt their understanding of lecture content. Similarly, heavy reliance on translation applications during revision reflects the additional cognitive effort required to access and process academic materials. Rather than focusing solely on content learning, students must simultaneously allocate cognitive resources to decoding, verifying, and translating vocabulary. In EMI classrooms, where students are expected to process disciplinary content through a second language, vocabulary limitations thus create an additional cognitive burden that may hinder comprehension, note-taking, and overall academic performance.

Viewed cumulatively, the findings indicate that ESL students at EMHEI experience an interconnected, cyclical combination of lexical limitations, emotional barriers, and cognitive difficulties. For example, insufficient vocabulary knowledge may increase cognitive load during learning activities, thereby reducing confidence and increasing anxiety. Likewise, anxiety may discourage students from engaging in vocabulary-rich interactions that could facilitate vocabulary growth. In line with the findings, the intervention should not only develop vocabulary knowledge but also support learner confidence and reduce unnecessary cognitive burden.

4.4 RQ4: *What are students' expectations of an ideal vocabulary instructional intervention module?*

Table 5a. Need for more English vocabulary activities focusing on tourism management to be conducted during the first semester to smooth the diploma learning process

Responses	<i>f</i>	%
Yes	258	88
No	35	12
Total	293	100

More than three-quarters of the respondents ($f=258$, 88%) agree that they need more English vocabulary activities focusing on tourism management to be conducted during the first semester to smooth their diploma learning process. This finding shows that the respondents, ESL students in an EMHEI, look forward to improving their English vocabulary through activities that draw on content from their field of study. Indeed, the timing of intervention is significant; any intervention should begin as early as possible. Early-semester support can reduce the linguistic gap between students' existing vocabulary knowledge and the vocabulary demands of their courses. Without this support, learners may struggle to understand lectures, reading materials, and assessments, which can negatively affect both confidence and academic performance. EMI research indicates that vocabulary-related difficulties often persist unless institutions provide deliberate and sustained lexical support rather than assuming that vocabulary growth will occur automatically through content exposure alone (Malmström et al., 2025). Hence, the strong demand for tourism-focused vocabulary activities suggests that students recognise the need for targeted lexical preparation to engage more effectively with their programme from the beginning of their studies.

Table 5b. Delivery Medium and Thematic Vocabulary Focus for The Vocabulary Module

Medium of delivery	<i>f</i>	%
Integrated into existing English classes (e.g., 15 mins during a lecture).	210	71.67
A standalone intensive workshop (e.g., 2 full days).	51	17.4
A self-paced online portal with weekly check-ins.	32	10.92
TOTAL	293	100
Thematic vocabulary grouping		
By Topic: (e.g., All words related to “Transportation” or “Food”).	187	63.82
By Role: (e.g., “Content Word, Function Word”).	61	20.82
By Frequency: (e.g., The most common 500 words used in university).	45	15.36
TOTAL	293	100

Most respondents agree that the ideal implementation of a vocabulary instructional intervention is by integrating it into existing English classes; for example, allocating approximately 15 minutes during a lecture. This is because embedding vocabulary learning within regular classroom instruction allows students to encounter, practise, and apply new vocabulary in meaningful contexts without increasing their overall academic workload. Integrated vocabulary instruction also enables immediate reinforcement of newly learned words through ongoing classroom activities and discussions, which promotes deeper processing and retention. Recent research has shown that learners generally respond positively to vocabulary instruction integrated into communicative and content-based learning activities, as it strengthens vocabulary acquisition while maintaining relevance to course objectives (Wei & Li, 2024). Moreover, regular exposure to vocabulary through short, consistent instructional sessions aligns with the principles of distributed learning, which has been found to support long-term vocabulary retention more effectively than isolated learning episodes (Kim & Webb, 2023).

Meanwhile, the execution of the module through a standalone two-day intensive workshop or a self-paced online portal with weekly check-ins is less preferred, likely due to concerns about sustainability, motivation, and the module’s immediate relevance to students’ ongoing learning experiences. Intensive workshops often concentrate a large amount of information within a short period, which may overwhelm learners and limit opportunities for repeated practice and consolidation. Likewise, self-paced online learning requires a high degree of self-regulation and learner autonomy, which many students may find difficult to maintain consistently over time. Previous studies have shown that language learners often prefer structured and teacher-guided instruction over independent learning modes because regular interaction, feedback, and accountability support sustained engagement and learning progress (Stratton, 2023). In addition, research on vocabulary learning has consistently highlighted the importance of repeated encounters and ongoing practice over time rather than relying solely on intensive short-term interventions (Serrano, 2022; Kim & Webb, 2023). Consequently, students may perceive integrated classroom-based implementation as a more practical, manageable, and effective approach for developing vocabulary knowledge throughout their studies.

For thematic vocabulary selection and exposure, the majority prefer vocabulary presented by topic, which makes it easier for students to understand and memorise. This is because thematic clustering allows learners to build stronger semantic networks, enabling them to map new words onto existing conceptual frameworks, which enhances both the speed of lexical access and the ability to differentiate between related terms (Schmitt, 2010; Othman, 2024). Meanwhile, other thematic vocabulary selection and exposure categories, namely via category-function or frequency, are less preferred due to the lack of immediate contextual relevance to the students’ specific fields of study and the difficulty in mentally organising disparate words that share a grammatical function but lack a cohesive narrative or topical link (Pun & Jin, 2021).

Table 5c. Students' Preferences and Learning Support Needs for the Implementation of the Vocabulary Module

Vocabulary Input Preferences	N	Mean	SD	Level
VIP1) I prefer learning vocabulary when it is presented in meaningful contexts.	293	3.98	.734	High
VIP2) I prefer learning vocabulary that is based on real-life situations.	293	3.34	.825	Moderate
VIP3) I prefer learning vocabulary presented through visual support (images, videos).	293	4.35	.669	Very High
VIP4) I prefer learning vocabulary that is drawn from the courses that I am currently taking.	293	4.22	.721	Very High
Scaffolding Needs	N	Mean	SD	Level
SN1) I need step-by-step instructions to complete vocabulary enhancement tasks.	293	3.85	.846	High
SN2) I need support, such as word lists or prompts, during vocabulary enhancement activities.	293	3.30	.327	Moderate
SN3) I learn vocabulary better when lecturers model vocabulary use.	293	3.79	.838	High
SN4) I learn vocabulary better through collaborative learning before continuing with independent work.	293	3.58	.497	High
Discipline-specific Vocabulary Needs	N	Mean	SD	Level
DV1) I need help understanding specialised vocabulary (terminologies and jargon) in my field of study.	293	4.32	.818	Very High
DV2) I need more examples of collocations (word combinations) commonly used in my field of study.	293	4.28	.729	Very High
Vocabulary Retention	N	Mean	SD	Level
VR1) I forget newly learnt vocabulary if it is not frequently reused during lessons.	293	3.84	.921	High
VR2) I need repeated practice to better remember the vocabulary.	293	3.72	.654	High
VR3) I need repeated exposure to the same vocabulary across multiple lessons to better remember it.	293	3.68	.379	High
VR4) I need to see the same vocabulary applied in different contexts to remember it better.	293	3.16	.586	Moderate

4.5 Vocabulary Input Preference

The findings indicate that students prefer vocabulary instruction input that is contextualised, visually supported, and connected to their academic studies. The strongest preference was observed for learning vocabulary through visual support such as images and videos ($M = 4.35$), followed by vocabulary drawn from their current courses ($M = 4.22$). These results suggest that students value learning environments that make vocabulary more concrete, accessible, and immediately relevant to their academic needs. The particularly strong preference for visual support is consistent with recent empirical evidence (see Zhang & Zhang, 2024; Alwadei & Mohsen, 2023; Bisson et al., 2015), indicating that visual representations can reduce the abstractness of unfamiliar words and facilitate meaning making, particularly among ESL/EFL learners. Bisson et al. (2015) assert that multimodal vocabulary instruction integrating visual and verbal information improves vocabulary learning, comprehension, and retention more effectively than text-only approaches, as it allows learners to process verbal information alongside complementary non-verbal information. Zhang and Zhang (2024) revealed that multimodal input containing additional non-verbal information yielded greater productive vocabulary gains than verbal-only input, albeit the researchers also cautioned that the benefit depended substantially on learners' comprehension of the input. Similarly, Alwadei and Mohsen (2023) found that EFL learners who received vocabulary instruction through infographics significantly outperformed those receiving conventional instruction in both vocabulary recognition and production, with the advantage remaining evident at delayed testing.

The strong preference for course-related vocabulary further indicates that students recognise the importance of learning words that can be applied directly to their studies, rather than learning vocabulary in isolation. Equally important is the high preference for vocabulary drawn from students' current courses ($M = 4.22$), which indicates that relevance to disciplinary learning is almost as important to students as the mode through which vocabulary is presented. This finding strengthens the case for integrating vocabulary instruction with students' existing academic content rather than treating vocabulary as a separate language

component disconnected from their field of study. For the vocabulary intervention, therefore, the implication is not merely to make vocabulary instruction more visual but to combine authentic, course-related content with carefully selected multimodal input, allowing students to encounter target vocabulary repeatedly in contexts that resemble the academic and professional situations in which they are expected to use it.

4.6 Discipline-Specific Vocabulary Needs

The very high level of needs recorded under discipline-specific vocabulary, namely the need to understand specialised words ($M = 4.32$) and to be exposed to the collocations commonly used in their field of study ($M = 4.28$), reflects students' awareness that academic success in English-medium higher education institutions depends not only on general English proficiency but also on mastery of discipline-specific vocabulary. Knoph et al. (2024) affirm that higher education students are expected to engage in disciplinary discourse and interpret technical concepts using this discipline-specific vocabulary. However, acquiring discipline-specific vocabulary is often challenging because they occur less frequently in everyday English communication and require contextual understanding before learners can apply them accurately. The relevance of discipline-specific vocabulary is further demonstrated by Huang's (2024) study of EMI classrooms, in which instructors frequently attended explicitly to disciplinary vocabulary, and, subsequently, students demonstrated improvement in their disciplinary vocabulary mastery. In brief, the findings highlight the importance of systematically embedding discipline-specific vocabulary in any future vocabulary intervention.

4.7 Scaffolding Needs

The results also reveal a strong preference for instructional support during vocabulary learning. Students reported high ratings for scaffolding in the form of step-by-step guidance ($M = 3.85$), lecturer modelling of vocabulary use ($M = 3.79$), and collaborative learning before independent practice ($M = 3.58$). These findings suggest that students do not view vocabulary acquisition as a fully autonomous process but rather as one that benefits from structured support and expert guidance. These findings align with Vygotsky's sociocultural perspective on learning, which emphasises the role of scaffolding in helping learners perform tasks that would otherwise be difficult to accomplish independently. When learners are given sufficient support in performing tasks that may be beyond their current independent capability, they will gradually assume greater responsibility as their competence develops. Similarly, Thuratham (2024) revealed that structured scaffolding can improve language learning outcomes and that students respond positively to systematic support.

Meanwhile, Abdulaal et al. (2024) found that both instructor and peer scaffolding produced significantly better outcomes in lexical processing and reading comprehension than conventional instruction without additional scaffolding. Notably, the peer-scaffolding group outperformed the instructor-scaffolding group, suggesting that effective support need not remain teacher-dependent and can progressively involve learners in collaborative meaning-making. This is particularly relevant to the present finding because students' high preference for lecturer modelling should not be interpreted as a desire for continuous teacher explanation. Modelling can function as the initial scaffold through which teachers demonstrate how vocabulary is pronounced, interpreted in context, combined with other words, and used appropriately before students practise the same processes with peers and eventually independently.

Overall, these findings suggest that the respondents' preference for guidance, modelling and collaboration reflects a legitimate pedagogical need rather than learner dependence. For the proposed vocabulary intervention, a vocabulary module that gradually moves learners from guided practice to independent application may be particularly suitable for diploma students. Thus, instructional activities in the intervention should be explicitly scaffolded at the beginning, modelled by the lecturer, practised collaboratively, and progressively transferred to individual performance. This sequencing would also allow learners with weaker English proficiency to receive sufficient support without unnecessarily constraining

more proficient learners, making scaffolding a mechanism for developing independence rather than a permanent form of teacher assistance.

4.8 Vocabulary Retention Challenges

Another notable finding concerns students' awareness of their own difficulties with vocabulary retention. Respondents acknowledged that they frequently forget newly learned vocabulary when it is not reused during lessons ($M = 3.84$), and that they require repeated practice ($M = 3.72$) and repeated exposure across lessons ($M = 3.68$) to remember vocabulary effectively. This finding is theoretically and empirically important because lexical knowledge develops incrementally: learners may recognise a word immediately after instruction but remain unable to retrieve or use it accurately after a delay. The finding also suggests that students understand vocabulary learning as a process requiring continual reinforcement rather than one-time exposure. This perception is strongly supported by other studies on vocabulary acquisition and recycling (see Uchihara et al., 2019; Qu et al., 2024), which consistently demonstrate that repeated encounters with words are necessary for long-term retention and productive use.

A meta-analysis by Uchihara et al. (2019) discovered that students do not necessarily require additional repetition of the same vocabulary within a specific exercise format to strengthen retention. Instead, they need strategically distributed opportunities to retrieve and use target vocabulary across different contexts. In practical terms, previously taught target vocabulary could reappear later in a listening task, a collaborative problem-solving activity, an oral presentation, or an impromptu spelling bee. Meanwhile, Qu et al. (2024) found that combining retrieval practice on previously learned words with other vocabulary recall techniques, like keyword mnemonics or flashcards, enhanced retention more effectively than restudy or retrieval practice alone, demonstrating that the quality of repeated processing influences retention. All in all, vocabulary knowledge develops incrementally through multiple encounters distributed over time. Hence, the findings reinforce the need for systematic vocabulary retrieval and recycling mechanisms within the proposed intervention to ensure stable retention of existing vocabulary knowledge.

5. PRACTICAL IMPLICATIONS FOR THE TARGETED VOCABULARY INTERVENTION (MODULE) DEVELOPMENT

The findings of this study provide important empirical insights into the development of a targeted vocabulary intervention module for Diploma in Tourism Management students in an English-medium higher education institution (EMHEI). Given the respondents' perceived inadequacy in vocabulary (66%), learning difficulties associated with limited English proficiency (57%), and lack of readiness for employment in the tourism industry (63.5%), the proposed module should prioritise vocabulary knowledge that supports both academic learning and professional communication. Specifically, the module should systematically address receptive and productive vocabulary knowledge, encompassing general, academic, and discipline-specific vocabulary. Particular emphasis should be placed on improving students' ability to retrieve and use vocabulary accurately and appropriately, as their reported difficulties extend beyond word recognition to the productive application of vocabulary in academic and professional contexts.

In terms of instructional content, the respondents' strong preferences for tourism-related topics (81%), visually supported vocabulary input ($M = 4.35$), and vocabulary drawn from their current academic courses ($M = 4.22$) suggest that the module should incorporate contextualised, discipline-relevant, and multimodal authentic materials. Tourism brochures, travel guidebooks, hotel websites, promotional videos, and travel vlogs could serve as meaningful sources of vocabulary input that reflect students' academic and prospective workplace communication needs. Furthermore, the high demand for support in understanding specialised terminology ($M = 4.32$) and discipline-specific collocations ($M = 4.28$) indicates that vocabulary instruction should extend beyond isolated word meanings to include lexical relationships, common word combinations, and contextual usage. Despite most respondents preferring vocabulary organised by topic, word selection should also consider frequency, communicative usefulness, and relevance to academic and occupational contexts to ensure systematic vocabulary development.

Regarding instructional activities, the strong preferences for analogue word games ($M = 4.40$) and interactive online quizzes ($M = 4.30$) support the inclusion of gamified learning activities that promote vocabulary recognition, retrieval, and application. These could be complemented by role-playing, collaborative discussions, and simulated tourism-related interactions to strengthen productive vocabulary use. Nevertheless, these activities should be systematically aligned with specific learning outcomes rather than incorporated solely for enjoyment. Equally important, the respondents' preferences for step-by-step guidance ($M = 3.85$), lecturer modelling ($M = 3.79$), and collaborative practice before independent work ($M = 3.58$) suggest that the module should adopt a progressively scaffolded instructional sequence. This could involve explicit vocabulary introduction, lecturer modelling, guided and collaborative practice, and independent application, allowing students to gradually develop confidence and autonomy in vocabulary use.

Vocabulary retention should also be a central consideration in the module's design. Respondents reported difficulties remembering newly learned vocabulary without frequent reuse ($M = 3.84$) and expressed a need for repeated practice ($M = 3.72$) and exposure across lessons ($M = 3.68$). Accordingly, the module should incorporate systematic vocabulary recycling and retrieval practice through varied activities and contexts. For instance, vocabulary initially introduced through reading or audiovisual materials could subsequently be reinforced through quizzes, contextualised writing, discussions, and oral communication tasks. These distributed learning opportunities could strengthen vocabulary retention while facilitating the transition from receptive recognition to productive use. In addition, supportive feedback and low-stakes practice should be incorporated to address students' reported affective barriers, particularly their fear of using unfamiliar vocabulary inaccurately.

Finally, the module's implementation should reflect respondents' preference for early and curriculum-integrated vocabulary instruction. The strong support for introducing tourism-focused vocabulary activities during the first semester (88%) and embedding short instructional segments within existing English classes (71.67%) suggests that a structured, approximately 15-minute vocabulary session could be integrated regularly into the English proficiency curriculum. This approach would provide sustained opportunities for vocabulary exposure, practice, and consolidation without requiring a separate intensive course. Overall, the findings support the development of a contextualised, multimodal, scaffolded, and systematically reinforced vocabulary intervention module that addresses students' perceived lexical needs while strengthening the connection between academic language learning and future professional communication. However, the module's effectiveness in improving vocabulary mastery and retention would need to be established through subsequent empirical evaluation.

Table 6. Proposed Specification for the Targeted Vocabulary Intervention Module

Component	Proposed Specification
Target learners	<ul style="list-style-type: none"> • First-semester Diploma in Tourism Management students.
Vocabulary coverage	<ul style="list-style-type: none"> • General, academic, discipline-specific terms and collocations.
Content & themes	<ul style="list-style-type: none"> • Tourism-related and current semester's course topics. • Topic selection is informed by usefulness and frequency.
Learning resources	<ul style="list-style-type: none"> • Authentic multimedia: brochures, guides, hotel websites, videos and vlogs.
Learning tasks	<ul style="list-style-type: none"> • Word games, interactive quizzes, role-play and simulations.
Delivery	<ul style="list-style-type: none"> • About 15-minute regular sessions embedded in English courses
Intended outcomes	<ul style="list-style-type: none"> • Lexical breadth, depth, retention, productive use and readiness for professional communication.

6. CONCLUSION

This study set out to examine Diploma in Tourism Management students' perceptions of their English language proficiency, expectations for an ideal implementation of an English language proficiency development course in an English-medium higher education institution (EMHEI), the vocabulary constraints they experience, and their expectations of an effective vocabulary intervention. On the whole, the findings reveal a consistent pattern in which students recognise the importance of English for both

academic success and future employability, yet most of them continue to perceive limitations in their language proficiency. The findings further revealed students' concerns about the adequacy of their vocabulary knowledge and the vocabulary-related challenges they face while learning at EMHEI, ranging from vocabulary deficits to affective barriers and cognitive load. Another important finding is students' inclination towards targeted vocabulary intervention and a strong preference for contextualised, discipline-relevant vocabulary instruction. Students also appear to favour visually rich vocabulary instruction that is explicitly scaffolded and reinforced through repeated exposure. In this regard, researchers propose a structured in-class vocabulary instruction intervention module embedded in an English proficiency development course for first-semester Diploma in Tourism Management students. Future studies may extend this work by evaluating the module's effectiveness across different institutions, disciplines, and learner populations to establish its broader applicability and impact.

7. ACKNOWLEDGEMENTS

The authors would like to express their appreciation to the Faculty of Hotel and Tourism Management of UiTM and to all the respondents who participated in the survey. No external and internal financing was provided to this research.

8. CONFLICT OF INTEREST STATEMENT

The authors declare that this research was carried out without any personal gain, commercial or financial conflicts.

9. AUTHORS' CONTRIBUTIONS

All authors contributed substantially to the preparation, drafting, and submission of the manuscript for publication. **Nurhamizah Ishak:** carried out the research and wrote the manuscript. **Nooreen Noordin, Lilliati Ismail, and Siti Salina Mustakim:** supervised the research, reviewed the findings, and provided guidance on the overall organisation of the manuscript.

10. DECLARATION OF THE USE OF GENERATIVE AI

Statistical Package for the Social Sciences (SPSS, IBM) was used for statistical data analysis and interpretation. Grammarly (Grammarly Inc.) was used to assist with grammar checking, spelling correction, and language refinement. ChatGPT (GPT-6, OpenAI) was used solely to assist with sentence restructuring and to improve the clarity and readability of the manuscript. The authors reviewed and verified all outputs and take full responsibility for the accuracy, integrity, and final content of this work.

11. DATA AVAILABILITY/SUPPLEMENTARY MATERIALS

The dataset used and analysed in this study is available from the corresponding author upon reasonable request.

12. ETHICS STATEMENT

The study was conducted in accordance with the protocol that was approved by the Ethics Committee of Universiti Teknologi MARA [Approval ID: REC/07/2021 (MR/547)]. Written informed consent was obtained from all participants prior to their inclusion in the study.

13. REFERENCES

Abdulaal, M. A.D., Shaalan, I. E. A. W., Alenazi, M. H., Alharbi, W. M., & Abuslema, N. F. M. A. (2024). A sociocultural perspective on the impact of instructor versus peer scaffolding upon lexical digesting and reading perception. *SAGE Open*, 14(2). <https://doi.org/10.1177/21582440241257915>

- Alwadei, A. M., & Mohsen, M. A. (2023). Investigation of the use of infographics to aid second language vocabulary learning. *Humanities and Social Sciences Communications*, 10, 108. <https://doi.org/10.1057/s41599-023-01569-2>
- Asmalı, M., & Zehir Topkaya, E. (2021). ESP course in retrospect: A comparative study of needs between pre and post-internship experience students in the school of tourism. *Mehmet Akif Ersoy Üniversitesi Eğitim Bilimleri Enstitüsü Dergisi*, 9(11), 107-141. <https://izlik.org/JA58HZ83XS>
- Bisson, M.-J., van Heuven, W. J. B., Conklin, K., & Tunney, R. J. (2015). The role of verbal and pictorial information in multimodal incidental acquisition of foreign language vocabulary. *Quarterly Journal of Experimental Psychology*, 68(7), 1306–1326. <https://doi.org/10.1080/17470218.2014.979211>.
- Cancino, M., & Viguera, C. (2024). The impact of a gamified approach on vocabulary learning and vocabulary self-efficacy: Evidence from a Chilean primary EFL school. *Revista de Lingüística y Lenguas Aplicadas*, 19, 33–43. <https://doi.org/10.4995/rlyla.2024.19932>.
- Carr, S. E., Wilson, T. E., Slone, S. A., Karanja, L. W., & Osterhage, J. L. (2024). Assigned group work is associated with increased student motivation and perceptions of belonging in an asynchronous online physiology laboratory course. *Advances in Physiology Education*, 48(3), 593–602. <https://doi.org/10.1152/advan.00064.2024>
- Dafouz, E., & Smit, U. (2020). ROAD-MAPPING English medium education in the internationalised university. *Palgrave Macmillan*. <https://doi.org/10.1007/978-3-030-23463-8>
- Dewi, P.W.R., Arimbawa, G.P.A., Putra, H.S., Oya A., Candiasa, I.M., & Susilawati, A. (2025). Cognitive Load in English as a Foreign Language Speaking Competency of Vocational High School Students. *International Journal of Language Education*, 9 (1), pp. 37-57. Doi: <https://doi.org/10.26858/ijole.v1i1.71702>
- Farid, M. F., Parveen, S., & Iqbal, A. (2023). Students Perceptions Regarding English as a Medium of Instruction and its Effects on Their Learning at the University Level. *Global Educational Studies Review*, VIII(I), 485–495. [https://doi.org/10.31703/gesr.2023\(viii-i\).42](https://doi.org/10.31703/gesr.2023(viii-i).42)
- Galloway, N., Sahan, K., & McKinley, J. (2024). English for specific purposes in surging English-medium instruction contexts. *Journal of English-Medium Instruction*, 3(2), 236–259. <https://doi.org/10.1075/jemi.23011.gal>
- Galloway, N., & Ruegg, R. (2020). The provision of student support on English medium instruction programmes in Japan and China. *Journal of English for Academic Purposes*, 45, Article 100846. <https://doi.org/10.1016/j.jeap.2020.100846>
- Huang, J. C. (2024). Language-related episodes in EMI: Types and the effects on students' vocabulary development. *Language and Education*, 38(3), 364–380. <https://doi.org/10.1080/09500782.2023.2221218>
- Hui, B. and Godfroid, A. (2026), Listening, Reading, or Both? Rethinking the Comprehension Benefits of Reading-While-Listening. *Language Learning*, 76, 311-351. <https://doi.org/10.1111/lang.12721>
- Ishak, N. (2025). Out-of-class English language learning and use among post-secondary Malaysian students. *International Journal of Language Education*, 9(1), 132–148. <https://doi.org/10.26858/ijole.v1i1.71711>
- Kamaşak, R., Sahan, K., & Rose, H. (2021). Academic language-related challenges at an English-medium university. *Journal of English for Academic Purposes*, 49, 100945. <https://doi.org/10.1016/j.jeap.2020.100945>
- Kartini, K., Sulaiman, I., Muhayyang, M., & Mustari, S. H. (2025). Bridging language learning and industry practice: Content-based instruction in hospitality ESP classrooms. *Research and Innovation in Applied*

- Linguistics*, 4(1). <https://doi.org/10.31963/rial.v4i1.5992>. Retrieved from: <https://jurnal.poliupg.ac.id/index.php/RIAL-EJ/article/view/5992>
- Kholidi, M. A., Azhan, N. A. S., & Ariawan, S. (2022). Needs analysis of English language use in tourism industry in Selangor, Malaysia. *LSP International Journal*, 9(1), 69–84. DOI: 10.11113/lspi.v9.18285. Retrieved from: <https://journals.utm.my/lsp/index>
- Kim, S. K., & Webb, S. (2023). Does spaced practice have the same effects on different second language vocabulary learning activities? Fill-in-the-blanks versus flashcards. *The Modern Language Journal*, 107(4), 944–964. <https://doi.org/10.1111/modl.12879>
- Knoph, R. E., Lawrence, J. F., & Francis, D. J. (2024). The dimensionality of lexical features in general, academic, and disciplinary vocabulary. *Scientific Studies of Reading*, 28(2), 142–166. <https://doi.org/10.1080/10888438.2023.2241939>
- Kohnke, L., & Jarvis, A. (2023). Addressing language and study skills challenges in online undergraduate EMI courses. *Education Sciences*, 13(9), 958. <https://doi.org/10.3390/educsci13090958>
- Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. Longman. Retrieved from: https://www.sdkrashen.com/content/books/sl_acquisition_and_learning.pdf
- Kurniarini, N. N. Y., Waluyo, U., & Yusra, K. (2021). Assessing tourism students' English proficiency competence based on ASEAN Common Competency Standard. *Yavana Bhasha: Journal of English Language Education*, 4(2), 98–108. DOI:10.25078/yb.v4i2.2766
- Lei, F., Li H., Yiganmu, A. (2023). Determinants of students' academic success in English as a medium of instruction (EMI) classes: A systematic review. *Heliyon*, 9(10), e20421. DOI: <https://doi.org/10.1016/j.heliyon.2023.e20421>. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S2405844023076296>
- Li, S. (2023). Working memory and second language oral production: A five-year systematic review. *Lecture Notes in Education Psychology and Public Media*, 22, 35–44. <https://doi.org/10.54254/2753-7048/22/20230213>
- Luo, Z., Marnburg, E., Øgaard, T., & Okumus, F. (2021). Exploring antecedents of social loafing in students' group work: A mixed-methods approach. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 28, 100314. <https://doi.org/10.1016/j.jhlste.2021.100314>
- Macaro, E., Curle, S., Pun, J., An, J., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching*, 51(1), 36–76. <https://doi.org/10.1017/S0261444817000350>
- Malmström, H., Pecorari, D., & Shaw, P. (2025). Development of academic vocabulary knowledge during English-medium instruction. *Ibérica*, 49, 157–180. <https://doi.org/10.17398/2340-2784.49.157>
- Masrai, A., El-Dakhs, D. A. S., & Yahya, N. (2022). What predicts academic achievement in EMI courses? Focus on vocabulary knowledge and self-perceptions of L2 skills. *SAGE Open*, 12(2), 1–13. <https://doi.org/10.1177/21582440221101044>
- Mohd Fisal, F. A., & Mohd Said, N. E. (2023). ESL pre-university learners' needs analysis for web-based English academic vocabulary learning resource. *International Journal of Learning, Teaching and Educational Research*, 22(4), 195–216. <https://doi.org/10.26803/ijlter.22.4.12>
- Nihalani, P. K., & Robinson, D. H. (2022). Balancing collaboration and cognitive load to optimise individual and group desirable difficulties. *Journal of Educational Computing Research*, 60(2), 335–362. <https://doi.org/10.1177/07356331211035188>
- Othman, J. (2024). Academic Vocabulary Learning in EMI Classrooms: Challenges and Strategies. *Arab World English Journal*, 15(2), 3–18. <https://doi.org/10.24093/awej/vol15no2.1>
- Pecorari, D., & Malmström, H. (2018). At the crossroads of TESOL and English medium instruction. *TESOL Quarterly*, 52(3), 497–515. <https://doi.org/10.1002/tesq.470>

- Pun, J., & Jin, X. (2021). Student challenges and learning strategies at EMI universities in Hong Kong. *PLOS ONE*, 16(5), e0251564. <https://doi.org/10.1371/journal.pone.0251564>
- Qu, K., Liu, T., Qiao, Y., & Wang, P. (2024). The facilitative effect of the keyword mnemonic on L2 vocabulary retrieval practice. *Heliyon*, 10(3), Article e25212. <https://doi.org/10.1016/j.heliyon.2024.e25212>
- Rahayu, N., Sembiring, V. A., Leonandri, D., Sugeng, N. W., & Dewi, T. R. (2025). Exploring hotel industry perspectives on English language proficiency. *KnE Social Sciences*, 10(29), 551–560. <https://doi.org/10.18502/kss.v10i29.20296>
- Reynolds, B. L., Xie, X. S., & Pham, Q. H. P. (2022). Incidental vocabulary acquisition from listening to English teacher education lectures: A case study from Macau higher education. *Frontiers in Psychology*, 13, Article 993445. <https://doi.org/10.3389/fpsyg.2022.993445>
- Reynolds, B. L., Xie, X. S., & Pham, Q. H. P. (2023). The potentials for incidental vocabulary acquisition from listening to computer science academic lectures: A higher education corpus-based case study from Macau. *Frontiers in Psychology*, 14, Article 1219159. <https://doi.org/10.3389/fpsyg.2023.1219159>
- Sadeghi, K., Sağlık, E., Mede, E., Samur, Y., & Comert, Z. (2022). The effects of implementing gamified instruction on vocabulary gain and motivation among language learners. *Heliyon*, 8(11), e11811. <https://doi.org/10.1016/j.heliyon.2022.e11811>
- Santoso, W., Hamied, F. A., & Muslim, A. B. (2024). University students' attitudes towards English medium instruction and academic language support: A view from Indonesia. *Indonesian Journal of Applied Linguistics*, 14(1), 79–92. <https://doi.org/10.17509/ijal.v14i1.70385>
- Schmitt, N., Nation, I. S. P., & Kremmel, B. (2024). Current perspectives on vocabulary learning and teaching. *Language Teaching*, 57(1), 21–42. Retrieved from: <https://www.cambridge.org/core/journals/language-teaching>.
- Schmitt, N. (2010). *Researching vocabulary: A vocabulary research manual*. Palgrave Macmillan. <https://link.springer.com/book/10.1057/9780230293977>
- Serrano, R. (2022). A state-of-the-art review of distribution-of-practice effects on L2 learning. *Studies in Second Language Learning and Teaching*, 12(3), 355–379. <https://doi.org/10.14746/ssl.t.2022.12.3.2>. Retrieved from: <https://pressto.amu.edu.pl/index.php/ssl/article/view/35602>
- Shoozan, A., Mohamad, M., & Mohamad Zahidi, A. (2025). A needs analysis for English for specific purposes speaking skills development for tourism front-liners: Targets, challenges and learning preferences. *International Journal of Learning, Teaching and Educational Research*, 24(8), 1058–1075. <https://doi.org/10.26803/ijlter.24.8.47>
- Shousha, A. I. (2021). Language difficulties faced by Saudi diploma students at King Abdulaziz University: A case study. *Arab World English Journal*, 12(2), 142–157. <https://doi.org/10.24093/awej/vol12no2.10>
- Solhi, M. (2024). The impact of EFL learners' negative emotional orientations on (un)willingness to communicate in in-person and online L2 learning contexts. *Journal of Psycholinguistic Research*, 53(26). <https://doi.org/10.1007/s10936-024-10071-y>.
- Stratton, J. M. (2023). Implicit and explicit instruction in the second language classroom: A study of learner preferences in higher education. *Die Unterrichtspraxis/Teaching German*, 56, 103–117. <https://doi.org/10.1111/tger.12263>
- Talapova, A. K., & Abdusalamova, A. M. (2024). The effectiveness of the digital game Kahoot on vocabulary acquisition. *World Scientific Reports*, 8. Retrieved from: <https://ojs.scipub.de/index.php/WSR/article/view/4858>

- Teng, M. F. (2025). Exploring self-regulated vocabulary learning strategies, proficiency, working memory and vocabulary learning through word-focused exercises. *The Language Learning Journal*, 53(1), 22–39. <https://doi.org/10.1080/09571736.2023.2267575>.
- Thuratham, W. (2024). Enhancing English conditional sentences among EFL undergraduates through scaffolding techniques. *Issues in Language Studies*, 13(1), 145–165. <https://doi.org/10.33736/ils.5712.2024>
- Uchiyara, T., Webb, S., & Yanagisawa, A. (2019). The effects of repetition on incidental vocabulary learning: A meta-analysis of correlational studies. *Language Learning*, 69(3), 559–599. <https://doi.org/10.1111/lang.12343>
- Wang, W., Rezaei, Y.M., & Izadpanah, S. (2024). Speaking accuracy and fluency among EFL learners: The role of creative thinking, emotional intelligence, and academic enthusiasm. *Heliyon*, 10(18):e37620. DOI: 10.1016/j.heliyon.2024.e37620. Retrieved from: <https://pubmed.ncbi.nlm.nih.gov/39328575/>
- Webb, S., Uchiyara, T., & Yanagisawa, A. (2023). How effective is second language incidental vocabulary learning? A meta-analysis. *Language Teaching*, 56(2), 161–180. <https://doi.org/10.1017/S0261444822000507>
- Wei, R., & Li, Y. (2024). Effects of integrated form-focused instruction on vocabulary learning for Chinese English learners. *Interactive Learning Environments*, 32(10), 6477–6495. <https://doi.org/10.1080/10494820.2023.2266478>. Retrieved from: <https://www.tandfonline.com/doi/full/10.1080/10494820.2023.2266478>
- Wei, M., & Macaro, E. (2024). Vocabulary learning in EMI courses: A longitudinal study of Chinese university students over a term. *System*, 126, Article 103479. <https://doi.org/10.1016/j.system.2024.103479>
- Wolf, M. C., Muijselaar, M. M. L., Boonstra, A. M., & De Bree, E. H. (2019). The relationship between reading and listening comprehension: Shared and modality-specific components. *Reading and Writing*, 32(7), 1747–1767. doi:10.1007/s11145-018-9924-8.
- Wu, T., Tang, X., Wong, S., Chen, X., Shaffer, C. A., & Chen, Y. (2024). The impact of group discussion and formation on student performance: An experience report in a large CS1 course. *arXiv*. <https://doi.org/10.48550/arXiv.2408.14610>
- Wu, C., Budzenski, M., & Li, A. W. (2026). Business English students' experiences and perceptions of English-medium instruction in China: Benefits, challenges, and corresponding support. *SAGE Open*. <https://doi.org/10.1177/21582440261419899>
- Zhang, P. & Zhang, S. (2024). Multimedia enhanced vocabulary learning: The role of input condition and learner-related factors. *System*, 122, 103275. <https://doi.org/10.1016/j.system.2024.103275>



© 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY-NC-ND) license (<http://creativecommons.org/licenses/by/4.0/>).

About the Authors

Nurhamizah Ishak is currently pursuing a PhD in Teaching English as a Second Language (TESL) at the Faculty of Educational Studies, Universiti Putra Malaysia. She also serves as a senior lecturer at the Academy of Language Studies, Universiti Teknologi MARA Melaka, Malaysia. She holds a B.Ed. TESL (Hons), and a M.Ed. in Management and Leadership from Universiti Teknologi MARA Shah Alam. Her research interests include English Language teaching and second language acquisition. She can be contacted at hamizahishak@uitm.edu.my.

Nooreen Noordin, PhD is an Associate Professor at the Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia. She holds a Ph.D. in Pedagogy. Her research interests include content-based second language instruction, technology-enhanced language learning, learning styles, and motivation. Her email is noreen@upm.edu.my.

Lilliati Ismail, PhD is an Associate Professor at the Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia. She holds a Ph.D. in TESL. Her research interests include instruction, task-based language teaching, and language assessment. She can be reached via email at liliati@upm.edu.my.

Siti Salina Mustakim, PhD is an Associate Professor at the Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia. She holds a Ph.D. in Educational Measurement. Her research interests include curriculum development, educational measurement, and program evaluation. She can be contacted at mssalina@upm.edu.my.