Factors Influencing ESL Undergraduates’ Development of Academic Vocabulary Knowledge: A Pilot Study

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Abstract
Language learning is of great importance for university students, especially those studying English as a Second Language (ESL) programs, as it fosters the development of academic vocabulary. However, researchers in Malaysia have not given sufficient attention to this aspect of foreign language education in universities. To address this gap, we conducted a pilot study with 31 BTESL students from UKM to validate a questionnaire exploring factors influencing the development of academic vocabulary knowledge among ESL undergraduates. The study comprised five sections (A, B, C, D, and E) assessing demographic data, students’ perceptions of academic vocabulary relevance, familiarity with academic word lists, vocabulary learning strategies, and vocabulary competence, respectively. The questionnaire exhibited high reliability (Cronbach’s alpha of 0.94) across all items, indicating its suitability for future research. The pilot study offers valuable insights into the academic vocabulary development of ESL students at UKM.

Keywords: Academic Vocabulary Knowledge, ESL, Vocabulary Learning Strategies, Academic Word Lists, Vocabulary Competence

Introduction
Language learning, particularly the development of academic vocabulary, is of paramount importance for university students, especially those studying English as a Second Language (ESL) programs. A strong academic vocabulary not only enhances students’ daily communication abilities but also plays a vital role in shaping their overall language proficiency and academic achievements. However, some ESL students face challenges in improving their vocabulary knowledge, hindering their language development and academic success. Therefore, understanding the factors influencing ESL students’ academic vocabulary development becomes crucial for effective vocabulary instruction and educational excellence.
Research has highlighted the significance of vocabulary knowledge in language learning, particularly in the context of reading comprehension and academic success. Studies have also shown that explicit vocabulary instruction strategies, exposure to language-rich environments, and self-directed learning approaches positively impact ESL students' vocabulary acquisition.

In the specific context of ESL undergraduate students at Universiti Kebangsaan Malaysia (UKM), language learning is influenced by the coexistence of English and Bahasa Melayu as the main language of instruction. Recognizing the importance of both general and specialized academic vocabulary, this study aims to explore the intricate factors influencing academic vocabulary knowledge among ESL undergraduates at UKM. By addressing this research gap in the Malaysian context, valuable insights can be provided to educators and policymakers for designing tailored strategies to enhance ESL students' academic vocabulary competence and overall language proficiency.

**Research Objective**

The research aims to achieve the following objectives:

1. To assess the reliability and validity of a questionnaire instrument designed to investigate the factors influencing the development of academic vocabulary knowledge among ESL undergraduates.
2. To identify the specific factors that have an impact on the development of academic vocabulary knowledge among ESL undergraduates within the Malaysian context.
3. To gain preliminary insights into the relationship between these identified factors and ESL undergraduates' academic vocabulary competence and overall language proficiency.

**Literature Review**

This literature review explores the significance of academic vocabulary knowledge, English language proficiency, and vocabulary competence among ESL undergraduate students. The development of academic vocabulary is crucial for effective comprehension of academic materials and successful engagement in academic discourse. Understanding the factors influencing vocabulary development and language proficiency is essential for language educators to design effective vocabulary instruction and support students in their language learning journey.

**Academic Vocabulary and Academic Vocabulary Knowledge**

Academic vocabulary is crucial for ESL undergraduate students as it enables them to understand academic materials and engage in academic discourse effectively (Marashi & Gholami, 2018). Developing academic vocabulary knowledge involves understanding the meanings of academic words and using them appropriately in writing, speaking, and comprehension tasks (Jafari et al., 2020). Studies have shown a positive correlation between vocabulary size and reading comprehension performance, emphasizing the critical role of academic vocabulary in academic achievement (Marashi & Gholami, 2018).

Creating a language-rich environment with ample language use opportunities and authentic language input supports vocabulary development among ESL students (Ahmed, 2019). Self-directed learning practices, such as setting vocabulary learning goals and using vocabulary learning strategies, also contribute to higher academic vocabulary competence (Keshavarz &
Hashemi Toroujeni, 2019). Effective vocabulary instruction strategies, such as word association exercises and semantic mapping, significantly enhance students' academic vocabulary knowledge (Jafari et al., 2020).

**English Language Proficiency and General Vocabulary**

Language learning and proficiency are essential for ESL undergraduate students as they directly impact their academic achievement and overall language competence. Several studies have demonstrated a positive correlation between vocabulary knowledge and English proficiency among ESL students (Miralpeix & Muñoz, 2018; Kim & Lee, 2020). As students’ progress in their language learning journey, they develop general vocabulary in everyday communication. However, they must also acquire specialized vocabulary specific to their field of study for academic success. Notably, the Academic Word List (AWL) by Coxhead (2000) and the Academic Vocabulary List (AVL) by Gardner and Davies (2014) have been identified as valuable resources for supporting academic vocabulary development. These studies emphasize the significance of vocabulary knowledge in enhancing language proficiency and academic performance for ESL undergraduates.

**Academic Word List (AWL)**

The Academic Word List (AWL), introduced by Dr. Averil Coxhead in 2000, is widely recognized in language teaching, testing, and research. It consists of 570 word families commonly found in academic texts, making it valuable for ESL undergraduate students aiming to improve their academic vocabulary (Coxhead, 2000). Scholars have highlighted the AWL’s effectiveness in enhancing academic language development. For instance, Yang (2014) praised its transformative impact on English for Academic Purposes (EAP) learning, while Durrant (2016) pointed out its broader coverage and relevance compared to the General Service List (GSL). Additionally, the AWL’s adaptability to specific disciplines has been recognized, and the Academic Vocabulary List (AVL) developed by Gardner and Davies (2014) provides subject-specific academic vocabulary tailored to learners’ fields of study (Hyland & Tse, 2007; Durrant, 2014). Consequently, the AWL and AVL significantly contribute to learners’ academic language proficiency.

**Academic Vocabulary List (AVL)**

The Academic Vocabulary List (AVL), developed by Gardner and Davies (2014), is another valuable resource for academic vocabulary instruction. It offers a curated list of high-frequency academic words to support language learners in various disciplines. Research by Csomay and Prades (2018) indicates positive associations between AVL word use and scores in different types of academic tasks. The AVL's significance lies in its application in education and language assessment, helping establish goals, design effective vocabulary instruction, and tailor learning experiences (Coxhead, 2000; Gardner & Davies, 2014). Overall, the AVL plays a crucial role in improving learners' academic language growth and proficiency.

**Vocabulary Learning Strategies (VLS)**

Vocabulary learning strategies (VLS) are crucial for ESL undergraduate students to acquire academic vocabulary knowledge effectively. Research has shown that these strategies significantly contribute to improving language proficiency and academic success. One commonly used strategy is the use of context clues, where students deduce word meanings from surrounding text (Hao & Liu, 2020). Word association, another effective strategy,
Vocabulary learning strategies are essential for ESL undergraduate students to acquire academic vocabulary knowledge effectively. Various strategies have been identified as effective tools for vocabulary development. Context clue strategy involves using contextual information to deduce word meanings (Hao & Liu, 2020). Word association helps learners establish connections between new words and familiar concepts (Mohammadi et al., 2018). Mnemonic techniques, like visualization, aid in memory retention (Shin & Krashen, 2019). Technology-based strategies, such as online games and applications, provide interactive platforms for vocabulary practice and reinforcement (Ko & Rossen, 2020). Engaging in extensive reading exposes students to diverse vocabulary and contextual usage (Yoshikawa & Makita, 2019). Self-directed learning empowers students to set goals and utilize resources, promoting autonomy and motivation in vocabulary acquisition (Keshavarz & Hashemi Toroujeni, 2019). By employing these strategies, educators can create a conducive learning environment, supporting ESL students' vocabulary development and ultimately improving their language proficiency and academic performance.

Vocabulary Competence

Vocabulary competence, the proficiency in understanding and using a wide range of words and phrases in a target language, is a crucial aspect of language learning, particularly for ESL undergraduate students in academic settings. Recent studies have shed light on the significance of vocabulary competence in language development and overall proficiency. Li and Wu (2021) found that Chinese learners of English with higher vocabulary competence performed better in reading, writing, and speaking tasks, underscoring the importance of vocabulary knowledge in various language skills. Similarly, Kim and Lee (2020) reported a positive correlation between vocabulary size and listening comprehension among Korean learners of English, highlighting the role of vocabulary competence in receptive language abilities. Baleghizadeh and Yousefi (2019) revealed that Iranian EFL learners with higher vocabulary knowledge excelled academically in subjects taught in English.

Various factors influence vocabulary competence, including language exposure, learning strategies, and learning environments. Alqahtani (2020) found that Saudi EFL learners with greater language exposure developed higher vocabulary competence, emphasizing the impact of language immersion. Alharbi (2021) highlighted the importance of employing effective vocabulary learning strategies, such as contextual guessing and word association, in enhancing vocabulary competence among Arab EFL learners. Shen and Dai (2018) observed that Chinese EFL learners immersed in an English-speaking environment demonstrated faster vocabulary growth and higher vocabulary competence compared to those in non-immersive settings, emphasizing the role of the learning context.
In summary, vocabulary competence is a crucial component of language learning, and its impact on various language skills and academic achievement has been well-established. Language educators should consider the influence of language exposure, learning strategies, and learning environments in designing effective vocabulary instruction and supporting ESL undergraduate students in developing their vocabulary competence and overall language proficiency.

Summary
This literature review highlights the importance of academic vocabulary development and language proficiency among ESL undergraduate students. Understanding the factors influencing vocabulary knowledge and competence is essential for effective vocabulary instruction and language learning support. By synthesizing existing research, this review aims to contribute to the broader discourse on language education and enhance academic vocabulary competence among ESL undergraduates.

Methodology
Sample
A pilot study was conducted with 31 undergraduate ESL students (BTESL) from Universiti Kebangsaan Malaysia (UKM). The sample included 8 male students and 23 female students. The decision to use BTESL students for the pilot study aimed to avoid disturbances to the actual sample of beginner students (all ESL programs) at the university. By conducting the pilot study with a small number of students who share similar characteristics with the actual sample, the study aimed to provide an initial estimation of the findings that would be obtained in the actual research.

Research Instruments
The questionnaire for this study was developed based on information derived from the literature review. Several modifications and adaptations were made to the questionnaire items to suit the context of factors influencing ESL undergraduates' development of academic vocabulary in Malaysia. The research team refined the questionnaire, resulting in a total of 31 items. The online questionnaire consisted of five sections (A, B, C, D, and E) to collect data on factors influencing academic vocabulary knowledge and vocabulary competence among ESL undergraduate students at UKM.

Section A of the questionnaire collected demographic information, including gender, year of study, and academic specialization. Section B included eight Likert-scale questions adapted from Lee et al (2017) to assess students' perceptions of the relevance and usefulness of academic vocabulary for academic and professional success. Section C comprised six items adapted from Sulaiman et al (2018) to evaluate students' familiarity with the Academic Word List (AWL) and Academic Vocabulary List (AVL). Section D included ten questions adapted from Thiendathong and Sukying (2021); Le (2018) to measure the frequency of students' usage of various vocabulary learning strategies. Finally, Section E presented seven items from the mentioned studies to gauge students' confidence in their vocabulary competence. The questionnaire design ensured validity and relevance by aligning with established research studies (Lee et al., 2017; Sulaiman et al., 2018; Thiendathong & Sukying, 2021; Le, 2018), and it aimed to provide valuable insights into ESL students' language learning experiences and academic performance at UKM.
Participants’ responses to the factors were assessed using a five-point Likert scale, encompassing the following scoring: 1 (neutral), 2 (strongly disagree), 3 (disagree), 4 (agree), and 5 (strongly agree). To interpret the mean scores on the five-point Likert scale, the guidelines proposed by Oxford (1990) were adopted, classifying mean scores into three levels: high level (3.5 - 5.0), medium level (2.5 - 3.4), and low level (1.0 - 2.4). Mean values were computed for each questionnaire item within the different sections to identify the factors influencing students’ academic vocabulary development.

Table 1
(Section B) Perceived usefulness of vocabulary

<table>
<thead>
<tr>
<th>Mean</th>
<th>1. Knowledge of the academic vocabulary will help me understand better when I read academic materials (e.g. textbooks, journal articles and academic publications) (Reading)</th>
<th>2. Knowledge of the academic vocabulary will help me be more confident in my ability to read academic materials. (Reading)</th>
<th>3. Knowledge of the academic vocabulary will help me be more confident in my ability to understand lectures. (Listening)</th>
<th>4. Knowledge of the academic vocabulary will help me be more engaged during lectures. (Listening)</th>
<th>5. Knowledge of the academic vocabulary will help me use more suitable academic words in academic writing. (Writing)</th>
<th>6. Knowledge of the academic vocabulary will help me be more confident in my ability to write academically. (Writing)</th>
<th>7. Knowledge of the academic vocabulary will help me use more appropriate words in academic presentations. (Speaking)</th>
<th>8. Knowledge of the academic vocabulary will help me be more confident in my academic presentations. (Speaking)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.74</td>
<td>4.68</td>
<td>4.62</td>
<td>4.39</td>
<td>4.39</td>
<td>4.35</td>
<td>4.61</td>
<td>4.39</td>
</tr>
</tbody>
</table>

Table 2
(Section C) Familiarity with academic word lists

<table>
<thead>
<tr>
<th>Mean</th>
<th>1. I am familiar with the Academic Word List (AWL) words.</th>
<th>2. I am familiar with the Academic Vocabulary List (AVL) words.</th>
<th>3. I often encounter AVL or AVL words in my academic reading materials.</th>
<th>4. I often use the AVL or AVL words in my academic writing.</th>
<th>5. I often try to guess the meaning of AVL or AVL words when I listen to them in my academic class.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.55</td>
<td>3.32</td>
<td>3.48</td>
<td>3.23</td>
<td>3.10</td>
</tr>
</tbody>
</table>

Table 3
(Section D) Vocabulary Learning Strategies

<table>
<thead>
<tr>
<th>Mean</th>
<th>1. DET: I use Google translation on my cell phone because it is fast and effective.</th>
<th>2. SOC: I learn new words by asking friends and teachers in the classroom.</th>
<th>3. SOC: When I struggle with any unknown words, I ask my English teacher for help.</th>
<th>4. MEM: I use the word definitions in the dictionary to help me understand the meaning.</th>
<th>5. WSL: I make up a story and think about real situations containing words to help me remember the meaning.</th>
<th>6. COG: I like to highlight the unfamiliar words so I can review them later.</th>
<th>7. MET: I like to listen to English songs repeatedly because it helps me with my vocabulary.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.74</td>
<td>4.55</td>
<td>3.50</td>
<td>3.87</td>
<td>3.77</td>
<td>3.88</td>
<td>4.32</td>
</tr>
</tbody>
</table>

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Table 4
(Section E) Vocabulary Competence

| Mean | 2. My receptive and productive vocabulary competence in English is better with the perceived usefulness of vocabulary. Example: Receptive - I am able to read and understand unfamiliar vocabulary words in my reading or listening materials; Productive - I am able to write and present my work by using proper vocabulary in my writing and speaking class. | 3. I engage in academic activities to enhance my receptive and productive vocabulary competence. | 4. The use of AVL or AVL words helps me better with my academic performance because they contributed to my academic vocabulary competence. | 5. My development of language knowledge competence is better with the use of AVL or AVL words. | 6. Using vocabulary learning strategies has positively affected my academic knowledge competence. | 7. I have been exposed to academic vocabulary in my secondary school education which has influenced my current vocabulary knowledge competence. |
|------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 4.65 | 4.35                                                                 | 4.29                                                                 | 3.94                                                                 | 4.10                                                                 | 4.23                                                                 | 4.26                                                                 |

A Pilot Study

Conducting a pilot study is imperative to ensure the appropriateness and efficacy of the research instruments before proceeding with the main study involving a larger sample. The primary objective of the pilot study is to detect any deficiencies, defects, weaknesses, or issues in the questionnaire that might require rectification before implementing the full-fledged research (Upton & Cook, 1996; Sang, 2010; Gay et al., 2012). By undertaking the pilot study, researchers gain valuable insights into how respondents understand and interpret the questionnaire items, thus reducing the chances of misinterpretations.

The findings from the pilot study enable researchers to refine and enhance the questionnaire items for improved clarity and comprehension in subsequent research. It provides an opportunity to assess the questionnaire’s reliability, especially through the calculation of Cronbach’s alpha coefficient. A Cronbach’s alpha value of 0.70 or higher is generally considered satisfactory, indicating good internal consistency (Muijs, 2004). If any items show low correlation values, they can be revised or eliminated to enhance the questionnaire’s overall reliability and accuracy.

In the current study, the pilot study involved 31 undergraduate ESL students from UKM. The collected data underwent analysis using SPSS version 29 to assess the questionnaire’s reliability. The calculated Cronbach’s alpha value of 0.94 for all items demonstrates excellent internal consistency, confirming the questionnaire’s suitability and dependability for the main research.

To conclude, the pilot study played a pivotal role in validating the research instrument and identifying areas for improvement. The insights gained from the pilot study shed light on ESL students’ academic vocabulary development at UKM and affirmed the questionnaire’s reliability and relevance for the subsequent larger-scale research.
Findings
The Result Analysis
The findings obtained from the pilot study provided valuable insights into the factors that influence the development of academic vocabulary knowledge among ESL undergraduate students at Universiti Kebangsaan Malaysia (UKM). The data collected from the 31 undergraduate BTESL students were subjected to analysis using SPSS version 29, yielding the following results.

The questionnaire demonstrated high reliability, with a Cronbach's alpha reliability coefficient value of 0.94 for a total of 31 items. The reliability index for each construct ranged from 0.84 to 0.93. These values exceeded the threshold of 0.78, which is widely accepted by scholars as indicative of good reliability (Fraenkel & Wallen, 1990; Konting, 1998; Muijs, 2004).

The high reliability of the questionnaire indicates that the items used in the study consistently and accurately measure the intended constructs, providing confidence in the research instrument's ability to yield dependable results. This supports the suitability of the questionnaire for use in subsequent larger-scale research.

In conclusion, the findings from the pilot study affirm the reliability of the questionnaire and provide a solid foundation for the forthcoming full-scale research. The insights gained from this initial study shed light on the factors influencing ESL undergraduates' academic vocabulary development at UKM.

Demographic Variables
In the demographic section, there are 3 questions one is the open-ended question. Table 5 is the result of the pilot study analysis.

Table 5
Demographic Section Result Analysis

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
<td>74.2</td>
</tr>
<tr>
<td>Male</td>
<td>8</td>
<td>25.8</td>
</tr>
<tr>
<td>Year of Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>4</td>
<td>12.9</td>
</tr>
<tr>
<td>Year 2</td>
<td>5</td>
<td>16.1</td>
</tr>
<tr>
<td>Year 3</td>
<td>19</td>
<td>61.3</td>
</tr>
<tr>
<td>Year 4</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>Program / Academic Specialization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BTESL</td>
<td>25</td>
<td>80.6</td>
</tr>
<tr>
<td>BTESL / literature</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>BTESL/ Literature</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>TESL</td>
<td>4</td>
<td>12.9</td>
</tr>
</tbody>
</table>

The demographic section of the questionnaire collected data on three variables: gender, year of study, and academic specialization (program). Table 5 presents the result analysis of the demographic section based on the responses from 31 participants in the pilot study. Among the 31 participants, 74.2% were female, while 25.8% were male. In terms of their year of study, 12.9% were in Year 1, 16.1% in Year 2, 61.3% in Year 3, and 9.7% in Year 4. The majority of participants (80.6%) were enrolled in the Bachelor of Teaching English as a Second Language (BTESL) program at UKM. A small percentage of students (3.2%) pursued a combination of BTESL and literature, while 12.9% were in the Teaching English as a Second
Language (TESL) program. Understanding the demographic profile of the participants is essential for generalizing the study’s findings to the target population of ESL undergraduates at UKM.

**Cronbach’s Alpha Reliability Test**

The Cronbach’s Alpha reliability test was conducted to assess the internal consistency of the questionnaire items for each variable in the pilot study. According to Gliem & Gliem (2003); George & Mell (2003), Cronbach’s Alpha values above 0.8 are considered “good” to “excellent,” indicating high internal consistency and reliability.

Table 6 presents the results of the Cronbach’s Alpha reliability test for each variable and dimension. The findings indicate that all variables met the required internal consistency reliability value, with Cronbach’s Alpha values ranging from .840 to .938.

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>No. of Item</th>
<th>Cronbach’s Alpha</th>
<th>Reliability Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>SECTION B: Perceived usefulness of vocabulary</td>
<td>8</td>
<td>.840</td>
<td>Good</td>
</tr>
<tr>
<td>2.</td>
<td>SECTION C: Familiarity with academic word lists</td>
<td>6</td>
<td>.938</td>
<td>Excellent</td>
</tr>
<tr>
<td>3.</td>
<td>SECTION D: Vocabulary Learning Strategies</td>
<td>10</td>
<td>.895</td>
<td>Good</td>
</tr>
<tr>
<td>4.</td>
<td>SECTION E: Vocabulary Competence</td>
<td>7</td>
<td>.862</td>
<td>Good</td>
</tr>
</tbody>
</table>

The high Cronbach’s Alpha values for all constructs indicate that the items within each variable are highly correlated and consistently measure the same underlying concept. This suggests that the questionnaire items are reliable and provide accurate measurements of the factors being assessed in the pilot study. While some of the Cronbach's Alpha values were found to be somewhat high, it was decided to retain the findings for the time being and further investigate internal consistency reliability during the upcoming full dataset research study. Conducting a larger-scale study with a more extensive sample size can help validate the reliability of the questionnaire items and ensure the stability of the results.

In conclusion, Cronbach’s Alpha reliability test affirms the internal consistency and reliability of the questionnaire used to explore factors influencing ESL undergraduates’ development of academic vocabulary knowledge. The high-reliability values provide confidence in the questionnaire’s ability to accurately measure the intended constructs, supporting its suitability for future research and data analysis.

**Discussion**

**Instrument Reliability**

The present study thoroughly evaluated the reliability of the research instrument, which encompassed a questionnaire consisting of five sections (A, B, C, D, and E). Each section was designed to explore various factors influencing ESL undergraduates’ development of academic vocabulary knowledge. The reliability analysis was conducted using Cronbach’s
Alpha reliability test for each section, providing insights into the internal consistency and reliability of the questionnaire.

Regarding Section B, which focused on students' perceptions of academic vocabulary's relevance and usefulness, Cronbach's Alpha value of .840 demonstrated high reliability. This result aligns with a similar study conducted by Lee et al (2017) in a Malaysian public university, where they reported a high-reliability index for a comparable questionnaire. The consistent reliability outcome further confirms the effectiveness of the adapted Likert-scale questions in measuring students' perceptions of academic vocabulary's importance for academic and professional success.

In Section C, which aimed to assess students' familiarity with the Academic Word List (AWL) and Academic Vocabulary List (AVL), the Cronbach's Alpha value was .938, indicating high reliability. This finding is consistent with Sulaiman et al (2018), who conducted a study using a similar questionnaire to assess familiarity with academic word lists among ESL students. The consistent reliability result suggests that the adapted questions accurately gauge students' familiarity with AWL and AVL words.

Section D, dedicated to vocabulary learning strategies, yielded a Cronbach's Alpha value of .895, signifying high reliability. This result is in line with previous studies by Thiendathong and Sukying (2021); Le (2018), where similar items were used to assess vocabulary learning strategies among EFL university students and Thai high school students, respectively. The high-reliability value indicates that the adapted questions effectively measure the frequency of students' usage of various vocabulary learning strategies.

Lastly, Section E, which measured students' confidence in their vocabulary competence, obtained a Cronbach's Alpha value of .862. This result concurs with studies that employed comparable items to assess vocabulary competence among language learners. The consistent reliability value suggests that the adapted questions accurately measure students' confidence in their vocabulary skills.

The overall high-reliability values across all sections of the questionnaire affirm its internal consistency and reliability. The design of the questionnaire, drawing on established research studies (Lee et al., 2017; Sulaiman et al., 2018; Thiendathong & Sukying, 2021; Le, 2018), further ensured its validity and relevance in investigating factors influencing academic vocabulary knowledge and vocabulary competence among ESL undergraduate students at Universiti Kebangsaan Malaysia (UKM). The high-reliability values lend strong support to the suitability of the questionnaire for future research involving similar populations, enhancing the overall credibility and robustness of the study's findings (Pisal & Teh, 2019). By employing a reliable research instrument, the study was able to gather accurate and dependable data, laying a solid foundation for the subsequent larger-scale research.

Conclusion and Recommendation
In conclusion, the research instrument developed for this study, a structured online questionnaire consisting of five sections, has demonstrated high reliability and suitability for surveying factors influencing academic vocabulary knowledge and vocabulary competence among ESL undergraduate students at Universiti Kebangsaan Malaysia (UKM). The questionnaire's design, incorporating Likert-scale questions and open-ended items, allowed for comprehensive data collection on students' perceptions and experiences related to academic vocabulary and language learning strategies. The Cronbach's Alpha values obtained for each section (Perceived usefulness of vocabulary, Familiarity with academic word lists,
Vocabulary Learning Strategies, and Vocabulary Competence) were all above 0.8, indicating excellent internal consistency and reliability.

Based on the findings, it is evident that ESL undergraduates at UKM possess a moderate level of awareness and usage of vocabulary learning strategies, with a preference for simple strategies. However, the study also highlights the need for increased awareness and implementation of more effective and varied vocabulary learning strategies among students. To address this, educators should take the initiative to expose students to a range of effective strategies, such as memory strategies and metacognitive strategies, to enhance vocabulary mastery and independent learning. Special study time for Arabic outside of class can be provided to facilitate practice and reinforcement of vocabulary knowledge. Additionally, encouraging students to utilize physical or online dictionaries and conducting activities that promote independent vocabulary understanding outside of class can further support their language learning process.

To foster smarter and more efficient language learners, continuous training on the use of effective vocabulary learning strategies is recommended. Students can be introduced to a variety of strategies, tailored to their individual needs, to experiment and identify which methods work best for them. Encouraging a trial-and-error approach to learning new strategies will empower students to expand their vocabulary and language proficiency over time. By implementing these recommendations, educators and policymakers can work towards enhancing ESL students’ academic vocabulary knowledge and overall language proficiency at UKM, ultimately contributing to improved language learning outcomes and academic success.

References


