

Formulating academic word lists of English reading tests for Indonesian undergraduate students

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Abstract

The present study aims to bridge the gaps in the scarcity of academic word lists by constructing specialised English reading test word lists and their significance in enhancing English as a Foreign Language students' abilities. In reading, students usually experience problems with so much vocabulary available. The International English Language Testing System (IELTS) with 32.819-word tokens was selected using AntFileConverter to formulate the academic word list. Subsequently, AntWordProfiler was utilised to compare the data with 250 words inside General Word List 1, 250 words outside General Word List 2 and the overall words outside Coxhead's Academic Word List. The 500 highest-frequency words established the Academic Word List for the English reading test. The constructed word list was formulated using several tools, i.e., Familizer+Lemmatizer, Cambridge Dictionary, Sketch Engine, and AntConc. To evaluate the significance of the word list, thirty students from second and third-year Indonesian undergraduate students majoring in English literature were segregated into control with regular materials and experimental groups with the specialised materials and taught using Graves' vocabulary principles for fourteen meetings in one academic semester. Eventually, the finding demonstrates that word list significantly affects Indonesian students' reading performance. It confirms that the formulated word list is suitable to be implemented for English reading test purposes. The score results show that students from the control and the experimental groups both improved, whereas the improvement in the experimental group is more significant. This suggests the need for academic word lists for students in the reading test.

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INTRODUCTION

Students need vocabulary knowledge to understand English discourse. The more students know or are familiar with the vocabulary, the more correct answers they will obtain in a test. Students who learn new vocabulary can be reached through sorted word lists. Notion (2001) states that the ability to know relevant and specific vocabulary will provide more effective learning than merely learning general words. Besides, learning instructions also affect the students' level of knowledge of vocabulary, especially academic vocabulary (Verhoeven & Perfetti, 2008). Furthermore, vocabulary mastery in academic contexts determines individuals' ability, understanding, and competence in their academic performance, requiring non-native English (NNE) students to be equipped with sufficient vocabulary knowledge by composing academic word lists (Cooper, 2000). Scholars conclude that frequency words formulated in an academic word list are significant in academic vocabulary and have motivated numerous productions of the academic word list from academic texts in multiple fields of science for years (Cooper, 2000). It is also suggested that teachers use the academic word list to help students comprehend specialised vocabulary (Hyland & Tse, 2007) since academic words are discipline-specific or cross-disciplined (Townsend et al., 2012). In addition, Hiebert (2005) affirms that specific vocabulary instruction is required to achieve a successful vocabulary teaching process.

The existing literature mentions that academic language is a significant topic of attention from scholars, researchers, practitioners, and policymakers, including academic vocabulary (Townsend et al., 2016). Creating the academic word list helps identify words that suit students from different profiles (Knoph et al., 2023). The academic word list is constructed by specifying high-frequency words in English and then scrutinising a range of academic texts to find words that are not included in the high-frequency words but have broad coverage and plausible frequency of occurrence (Nation, 2001), among the best are General Service List (GSL) composed by West (1953) and Coxhead's (2000) Academic Word List (AWL) are predominantly used a wide range of academic words helpful in underlying and studying the formulation of new academic word list across field of study. Nevertheless, there is a continuous effort to develop the word list for academic purposes, for instance, the new academic word list generated from the Corpus of Contemporary American English (COCA) (Gardner & Davies, 2014), the construction and evaluation of grammar patterns for high-frequency academic verbs (Ma & Qian, 2020) across disciplines (Deng, Liu & Wu, 2022; Green & Lambert, 2018). The latest study explores the effect of vocabulary learning strategy training on university students (Bayabel & Tahir, 2023). They find that the experimental group significantly improved vocabulary strategy use, suggesting implications for curriculum design in language instruction.

To help NNE students with their English in university, a construct with a specific, personalised and comprehensive word list is created to support the students learning English (Kwary & Jurianto, 2017; Masrai & Milton, 2021; Xue & S., 1984). A basic academic word list for engineering undergraduate students has also been developed by Ward (2009). The effort to construct a new academic word list to assist other disciplines and serve other purposes are also observed in the medical field from studies conducted by Wang et al. (2008) and Lei & Liu (2016), establishing higher coverage from medical academic vocabulary from medical research articles, financial (Li & Qian, 2010), agricultural science (Martínez et al., 2009), chemistry (Valipouri & Nassaji, 2013), nursing (Yang, 2015), environmental (Liu & Han, 2015) sciences. The scholars point out the crucial role of academic word lists on vocabulary enhancement in various disciplines and the urgency to develop word lists beyond the existing academic word list, given that there are previous studies where AWL lacks coverage in particular disciplines (Durrant, 2009). Considering that an academic word list is regarded as an indispensable component of vocabulary with suitable teaching methods, either implicit or explicit, is crucial for students' retention of technical and academic words (Alamri & Rogers, 2018).

While academic word lists have proliferated in many scientific disciplines, i.e., social, humanities, and natural sciences, there are limited studies on the formulation of academic words, especially in English reading tests, on how to teach the designed academic word lists to Indonesian students. It is crucial to perform English language tests, such as IELTS, if Indonesian students want to continue their studies at national universities or abroad, seek scholarships, and join student exchange programs. Moreover, Indonesian undergraduate students have enormous opportunities to continue their education and participate in student exchange programmes encouraged through various Indonesian government programmes, such as Freedom to Learn – Independent Campus

(Kementerian Pendidikan dan Kebudayaan 2024), which requires an English test. The existing literature demonstrates that word lists made for English tests produce 400 words aimed at EFL students, comprising word definitions, samples, parts of speech, usage tips, and reading exercises of TOEFL (Stafford-Yilmaz & Zwier, 2005). A study also describes that Japanese students gain grades through specialised TOEIC word lists (Bower & Rutson-Griffiths, 2016). The existing literature even describes that the control or the lack of academic vocabulary may be the single determinant factor of academic tests, including TOEFL (Gardner & Davies, 2014). Further, an empirical study discovered a strong positive correlation between academic reading, academic vocabulary, and grades in university students' IELTS performance (Warnby, 2024).

Besides presenting the academic word list, the present study implements the formulated word list following the vocabulary teaching strategies suggested by Graves (2016). It evaluates the success rate of whether the word list that has been designed is significantly able to help Indonesian EFL undergraduate students. Grave's vocabulary teaching principles utilised in this study are: 1) frequent, varied, and extensive language experiences, (2) teaching individual words, (3) teaching word-learning strategy, and (4) fostering word consciousness. An empirical study shows that providing English learning students with word-learning strategies is encouraging and statistically significant to students' vocabulary knowledge (Graves et al., 2018). The existing literature supports explicit academic vocabulary instructions, i.e., teaching word strategy and fostering word consciousness, which are crucial for bilingual students (Gallagher et al., 2019).

The literature suggests that academic vocabulary materials and teaching strategies are significant for higher-education students (Pauwels, 2012). Consequently, this study closes two existing literature gaps. First, insufficient studies formulate a new specialised word list, especially with materials sourced from IELTS reading, since the academic vocabulary is closely related to reading comprehension (Graves et al., 1987; Masrai & Milton, 2021). To close the existing research gap, it is necessary to conceptualise a new specialised word list referred to in this study as the Academic Word List for English Reading Test (AWLERT) using a corpus tool from data sourced from IELTS reading material. It is necessary to formulate AWLERT because it is aimed at students who focus on improving their skills and scores in English reading tests. Thus, students can focus more on learning vocabulary relevant to academic tests than general vocabulary. Second, the formulated AWLERT requires further investigation regarding the effectiveness of the formulated word list for Indonesian EFL students. Previous studies tested their word lists formulated to their specific fields. However, suitable English vocabulary teaching for Indonesian undergraduates remains scarce. Therefore, this study aims to address the subsequent research questions: (1) How is the academic word list for English reading tests formulated? and (2) How significant is the effect of the formulated academic word list for English for Indonesian EFL undergraduate students?

METHODS

This study uses mixed methods as an approach to collect data in the form of descriptions and numbers. Creswell (2013) explains that the mixed method is a key principle in collaborating qualitative and quantitative approaches to obtain comprehensive data and effective findings. The qualitative aspect involves observations and field notes, and student responses are recorded. Meanwhile, the quantitative aspect relates statistical calculation of the scores obtained by the students.

Formulating academic word list for English reading test

We designed AWLERT to fulfil the demand for an academic word list that can meet the needs of students of IELTS text reading skills according to Graves's (2016) vocabulary principles. Table 1 (see below) illustrates the steps and subsequent descriptions in formulating the intended word list to answer the first research question.

There are two major steps to construct AWLERT, as illustrated in Table 1. The first major step was data processing AWLERT. We collected the IELTS reading texts from 1 to 10 Cambridge practice test books from 1996 – 2015. Then, the sources were converted from .PDF into .TXT format using AntFileConverter 2.0.2 (Anthony, 2022). The converted data sources were inputted into AntWordProfiler version 2.1.0 (Anthony, 2023b) to obtain high-frequency words. Subsequently, the high-frequency words outside the GSL (West, 1953) and AWL (Coxhead, 2000) were selected carefully. We calculated the word tokens and the word types generated by AntWordProfiler 2.1.0 (Anthony, 2023b) to identify the number of all words and the word forms.

Then, we compared word tokens and word types presented in GSL_1 and GSL_2 and identified the words outside of them. Eventually, we formulated the 500 most frequent words of the class, i.e., noun, verb, adjective, and adverb, from 250 words from GSL_1 and 250 words obtained from GSL_2 to acquire the most familiar words.

Table 1. Steps in formulating AWLERT

Major Steps	Steps	Descriptions
Data Processing	Raw data	Collecting sources for AWLERT from IELTS reading text
	Source type	Conducting data conversion
	Data input	Using application, i.e., AntFileConverter version 2.0.2
	Word list comparison	Comparing with GSL and AWL
	Word tokens and types	Calculating word tokens and types
	Word comparison	Comparing GSL_1 and GSL_2
Word List Formulation	Word list formulation	Formulating 500 most frequent words
	Word family	Using Familizer + Lemmatizer
	Word list definition	Using Cambridge Dictionary
	Word list synonym	Using Sketch Engine for Language Learning
	Word list context	Using application, i.e., AntConc

The second major step was word list formulation. We completed each word in the word list with the word family utilising a software called Familizer + Lemmatizer (*Familizer + Lemmatizer*, 2023) to automatically classify more than one word containing one headword group with the same inflexions. Next, we completed the formulated AWLERT with a definition to identify the meaning of each headword, which provides an understanding of every word by employing the Cambridge Dictionary (Cambridge University Press & Assessment, 2024). Then, we completed AWLERT with synonyms of each word employing a software called Sketch Engine for Language Learning (SKELL) (Sketch Engine for Language Learning, 2021). Lastly, we added an example of each word's context in AWLERT using AntConc (Anthony, 2023a).

The completed AWLERT consisted of a list of vocabulary specifically intended to assist students in learning reading vocabulary for test purposes. We conducted the analysis by ensuring that the word list features have been compiled. These features include word family, definition, synonym, and context (see Table 3).

Participants and questionnaire for the teaching AWLERT

The populations of this study were second and third-year Indonesian university students majoring in English Literature at one of the authors' universities. The consideration of selecting university students is that the minimum age for taking the IELTS test is at least 16 years old, which applies globally. In the Indonesian context, the age is close to senior high school students who typically aim to take the test to get into the university. Besides, once the students graduate from university, they sometimes need to take the test to get a scholarship and continue studying abroad. Thirty students were selected with three considerations. First, students in this study had been studying for approximately two years in this English literature major to certify that they had passed introductory courses and possessed enough experience to acquire academic vocabulary during their study. Second, the students' experience performing English tests, primarily IELTS, to ensure the homogeneity of the students despite their differences in study years. Accordingly, the students who participated in this study were required to possess an IELTS score with the same level of 5. Third, the study participants were voluntary and adhered to ethical considerations. Thus, their activities in this study were not integrated into the course project or assignments.

The students were segregated into control and experimental groups, fifteen in each group. Furthermore, one of the authors taught the control and experimental groups for approximately 100 minutes per session in 14 meetings from September 2023 to January 2024. The control group control group received regular IELTS reading teaching. Conversely, the experimental group received treatment by presenting word lists from AWLERT and implementing Graves's vocabulary principles (2016).

In the control group, we collected pre-tests, observed the classroom within three monthly meetings, and obtained post-test scores. Meanwhile, in the experimental group, we also conducted a pre-test, taught academic vocabularies sourced from AWLERT by implementing Graves's vocabulary principles, observed the group within three meetings during a month, and gathered post-test scores. Subsequently, the students in the experimental group with the highest, lowest, and stable scores were invited to fill out the questionnaires and be interviewed. The eleven questionnaire indicators in this study were adopted from Graves (2016), and the authors developed eleven questions. All items are in the form of positive statements, which are intended to answer the second research question, as illustrated by Table 2.

Table 2. The indicators, question items and statement of the questionnaire

No.	Indicators	Question Items	Statement
1.	Accomplishing reading tasks.	The teacher explained to me how to understand and complete the IELTS reading task.	Positive
2.	Encouraging frequent, varied or extensive reading activity.	My teacher encouraged me to increase the intensity of reading.	Positive
3.	Teaching word-learning strategies.	My teacher clarified why vocabulary is important to learn, especially for understanding the IELTS reading passage.	Positive
4.	Fostering word consciousness.	My teacher described how to understand reading passages through the context and teaching vocabulary.	Positive
5.	Supporting students' understanding through teaching vocabulary.	My teacher presented the vocabularies that assisted me in comprehending the IELTS reading passage	Positive
6.	Teaching individual words.	The technique in teaching vocabulary helps me to understand IELTS reading passages.	Positive
7.	Teacher's performance in delivering material.	My teacher explained the word from the word list (definition, synonym, context, word class).	Positive
8.	Encouraging students' involvement.	My teacher encouraged me to ask questions if I did not understand the material.	Positive
9.	Reading is important.	I was really paying attention to this class.	Positive
10.	Learning vocabulary is important.	It was important for me to learn vocabulary in the IELTS reading class.	Positive
11.	Supporting the vocabulary teaching.	This teaching vocabulary could be continued.	Positive

Table 1 shows that each questionnaire indicator is represented by one question in the questionnaire. Each question contained positive statements. The questionnaire utilised in this study used four Likert scales ranging from 1 = "strongly disagree" to 4 = "strongly agree" (Mertler, 2014). The existing literature explained that the no-option scale may decrease data quality and can preclude meaningful opinions (Krosnick et al. 2002). Consequently, the neutral scale was excluded to facilitate a more significant judgment from the participants. Pearson's product-moment correlation coefficient was employed to determine the validity of the questionnaire. Using SPSS, each item's

score had a total score (r_{iT}) higher ($>$) than the r_{table} ($r_{table} = 0.361$) which were (0.514), (0.660), (0.606), (0.675), (0.652), (0.558), (0.610), (0.697), (0.462), (0.708), and (0.608). It is in accordance with the statement from Siregar (2013), who argued that a precise questionnaire indicated the correlation coefficient of product-moment > 0.3 (0.361). Thus, the correlation coefficient (r_{iT}) \geq table correlation (r_{table}) indicated that the questionnaire was valid. Further, a reliability test was also conducted to identify the instrument's accuracy and consistency. Cronbach's Alpha score higher than 0.6 indicates that questionnaire items were reliable or consistent in measuring the variables. The reliability score in this study was 0.834, indicating reliability.

After collecting the data, we compared the quantitative data from pre-test and post-test grades from control and experimental groups using statistical functions, including average, standard deviation and t-test. The average was obtained to explore the mean score of participants' pre-test and post-test in control and experimental groups. Further, the standard deviation was aimed at identifying the diversity of data. The data is diverse and heterogeneous if the standard deviation score is high. Conversely, if the standard deviation score is low, then the data is homogenous. A T-test measures the significance of AWLERT toward students' IELTS reading scores. The significant value of the t-test in this study was 0.05. Consequently, if the result of each deviation in the t-test formula exhibits < 0.05 , there is a significant positive enhancement in students' scores. Subsequently, we also performed interview data to explain the pre-test and post-test results.

FINDINGS AND DISCUSSION

Academic word list for English reading test

Ten sources of the IELTS reading test that were processed using AntWordProfiler have distinctive types and numbers of tokens, as illustrated in Table 3.

Table 3. The data source of the academic word list of English reading test

Name of File	Number of Types	Number of Token
IELTS 1	3499	20853
IELTS 2	3581	19200
IELTS 3	3774	21964
IELTS 4	3037	12981
IELTS 5	4145	21249
IELTS 6	3566	18645
IELTS 7	3947	21204
IELTS 8	3212	14857
IELTS 9	2996	13591
IELTS 10	3537	19615

Drawing from Table 3, each data file had an average of 3500-word types and 18000-word tokens. The highest number was from IELTS 5, comprising 4145 words based on the number of types and IELTS 3, involving 21964 based on the number of tokens. Subsequently, the lowest number was from IELTS 9, consisting of around 2996 words based on the number of types, and IELTS 4, containing 12981 words based on the number of tokens and comparing the results of word tokens and word types in the GSL_1, GSL_2, and the list outside of them. This step is to identify the number of words in the AWLERT that exist in both GSLs.

The word token in GSL_1 was 75.41%, becoming the highest percentage of AWLERT presence. Subsequently, the word tokens in GSL_2 were 6.77%, the lowest AWLERT presence. Moreover, the second position was from outside the GSL file, which was 17.82%. Furthermore, the most frequent word types used in the non-GSL_1 and GSL_2 were 64.94%, GSL_1 was the subsequent percentage of word types, and the most uncommon words were from GSL_2. Furthermore, the authors focused on the words listed in GSL_1 and GSL_2 to formulate the general vocabulary that appeared in the IELTS English tests.

Subsequently, 500 high-frequency words were taken from 250 words from GSL_1 and 250 words from GSL_2 by taking three steps. First, we omitted pronouns, prepositions, conjunctions, and interjections. Second, since we aimed for the highest-frequency words, we only selected the highest form of the same word family. Third, we selected only one form of the same word family. For example, three words exist in the AWLERT: *discovered*, *discovering*, and *discovery*. Fourth, we selected only the highest number used in the list. The example of the selection is shown in Figure 1.

Discover	(v) to find information, a place, or an object, especially for the first time, or something that had not been known before. [know, reveal] <i>Scientists are working to discover the links between the weather and human beings' moods and performance.</i> Discover Discovered Discoverer Discoverers Discoveries Discovering Discovers Discovery Rediscover Rediscovered Rediscoveries Rediscovering Rediscovers Rediscovery Undiscovered
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Figure 1. The example of word description in AWLERT

The significance of AWLERT for EFL undergraduate students

In the experimental group, students were taught vocabulary related to the Reading text topics. Comprehensive descriptions completed every word: first, a definition from the Cambridge dictionary that indicated the word classes (V for verb, N for Noun, Adj. for Adjective, and Adv. for Adverb). Second, a synonym was taken from Skell Sketchengine to recognise the word's other expression. Third, the context of the word was obtained from the sources processed by AntConc. The last was word family gathered from Familizer software to list both headwords and word members so there would not be a repetition of words explained by the teachers.

Subsequently, the pre and post-test scores in the control and experimental groups demonstrated an enhancement. The pre-test and post-test scores increase in the control and experimental groups. Every score in the pre and post-test had varied values. In the control group, the lowest correct number of pre-tests was 16, while the highest correct number was 28. The post-test score in the control group showed the lowest number, 14, and the highest number, 33. Moreover, some increasing and decreasing numbers were experienced in the control group. The lowest decreasing score was -3, which indicated a weakening value. Some factors, including the class's teaching and learning process, might influence it. Meanwhile, the most significant improvement was for about 5 points (22 in the pre-test to 33 in the post-test).

Meanwhile, the lowest pre-test score in the experimental group was also 16 correct answers, and the highest score was 29 correct answers. Meanwhile, the minimum post-test score was 19 correct answers, and the maximum score was 34 correct answers. In this group, there was no decreasing score. The stable score existed, i.e., 19 correct answers, while the highest increasing score happened for about 9 points from 18 correct answers, which became 27 correct scores.

The average pre-test score was 22.13, and 23.53 post-test scores were in the control group. Further, the standard deviation of the pre-test was 3.29212 and 5.01236 of the post-test in the control group. The deviation score in the control group was 2.52982, with the result of the t-test being 0.022243101. This number indicated a lower value than the standard of significant level, which was 0.05. Thus, a positive change happened in the pre-test and post-test scores in the control group. In addition, the average pre-test score was 22.2, which increased to 25.93 for the post-test score in the experimental group. Subsequently, the standard deviation of the pre-test was 3.83964 and 5.18881 in the experimental group. The deviation score in the experimental group was 2.40436, with the result of the t-test being 0.000031789. The t-test demonstrated a lower value than the significant standard (0.05). Moreover, it could be inferred that teaching and learning vocabulary improved students' outcomes.

Furthermore, the t-test deviation of the control and experimental groups was 0.015088186. The t-test results of the control and experimental classes indicated a lower value than the standard of a significant level of 0.05. However, the experimental group shows a lower value than the control class, indicating that AWLERT and Graves' vocabulary teaching promotes a more significant effect on students' IELTS reading enhancement. In order to validate more information, the researchers spread the questionnaires to the students in the experimental group. Validation and reliability tests were employed to test the questionnaire quality. Pearson's product-moment correlation coefficient was selected to correlate item and

total scores. The principle of a valid instrument was described by identifying the correlation coefficient and table correlation. If the coefficient of correlation (r_{IT}) \geq table correlation (table), the items in the questionnaire were valid, and the validation results had a total score (r_{IT}) higher ($>$) than the table correlation score (table = 0.361).

The reliability test shows if the questionnaire items consistently measured the variables, i.e., 0.834, a higher value than the cut-off score, which indicates that all items used to measure the variables were reliable in assessing them. In order to pursue comprehensive results, the researchers distributed a questionnaire related to the teaching and learning activity using AWLERT instructions in Reading class. There were 11 statements answered by 15 respondents in the experimental group. The coloured bars present the statements, and each answer has a score, i.e., Strongly Agree (score 4), Agree (score: 3), Disagree (score: 2), and Strongly Disagree (score: 1). Every statement has various responses. The highest score was accomplished by the tenth statement, which asked, "It was important for me to learn the vocabulary in the IELTS Reading class." All of the respondents answered the maximum score (Strongly Agree). Moreover, it indicates that the students realise they need to improve and are willing to learn vocabulary.

Further, the results of the questionnaire also prove that students frequently like methods during reading class. The first indicates "Encouraging frequent, varied or extensive reading activity", which corresponds to the statement in the questionnaire list, "My teacher encouraged me to increase the intensity of reading." Their answers indicate that the students agree and strongly agree with the statement. It has an average score for a total of about 3.60/4.00. Therefore, giving instructions to the students also holds a prominent role in motivating them to reach their best scores in reading.

In addition, Graves proposes other teaching elements with good intentions for students: "Teaching individual words and learning vocabulary is important." They cover this with the statement, "This teaching vocabulary could be continued in the next level." The percentage of this argument is 3.67/4.00. Consequently, it presents an innovative method for boosting students' understanding of vocabulary. The last statement referring to the highest positive responses is related to students' awareness of more vocabularies. It is presented through the statement, "It was important for me to learn the vocabulary in the IELTS Reading class." Based on Grave's indicators in learning Reading, it is stated that "word consciousness is essential in Reading skill". Moreover, the results of this teaching method delivered in the experimental group influenced the quantitative score and the improvement of students' awareness of learning vocabulary used in the reading tests.

Discussion

Vocabulary is an essential aspect of comprehending English. It aligns with the scholars' statement that vocabulary learning strategy training for university students significantly improves their vocabulary strategy use (Bayabel & Tahir, 2023). Students with a more extensive vocabulary tend to score higher when taking English tests. Thus, mastering specialised vocabulary, particularly academic word list terms, is more advantageous than merely learning general words (Notion, 2001). The effectiveness of vocabulary acquisition is influenced by the range of words students know and the instructional strategies employed, especially within academic settings (Verhoeven & Perfetti, 2008). The development of academic word lists, prioritising high-frequency terms with broad applicability, supports non-native English students in improving their academic performance (Cooper, 2000; Nation, 2001). The present study highlights the significance of AWLERT as the specialised academic vocabulary sourced from IELTS. Scholars such as Hyland & Tse (2007) and (Townsend et al. (2012) recommend the usage of the academic word list to help students comprehend specialised vocabulary. To address this call, the formulation of AWLERT has improved the students' reading ability when taught using Grave's vocabulary principles. This academic vocabulary is crucial for understanding IELTS reading texts, improving academic proficiency, and performing English language tests like IELTS. Therefore, the present study supports the existing literature on the importance of specialised academic vocabulary for English reading tests. Furthermore, this word list is tailored to support NNE students in mastering academic language. Thus, this study enriches the existing literature, creating an academic word list for NNE across disciplines (Deng, Liu & Wu, 2022; Green & Lambert, 2018).

This study adds to the body of literature by supporting the existing literature that demonstrates the importance of word lists that specifically created for English tests. In the study that includes EFL students who take the TOEFL test, 400 words were produced comprising word definitions, samples, parts of speech, usage tips, and reading exercises of TOEFL (Stafford-Yilmaz & Zwier, 2005). Similar to the

present study, the previous study also shows enhanced vocabulary knowledge among EFL students. Furthermore, when a similar study was conducted among Japanese EFL, they also improved their test grades when given specialised word lists specifically made for the TOEIC test (Bower & Rutson-Griffiths, 2016). Further, a similar study regarding the IELTS test also discovered a strong positive correlation between academic reading, academic vocabulary, and grades among university students' IELTS performance (Warnby, 2024). The success of formulating specific tests to help students take English tests is proven in several previous studies with different types of tests. It implies the significance of the academic word lists for test grade improvement.

Therefore, the present study strengthens the existing literature about academic word lists in academic texts that eventually benefit English reading tests. The development of AWLERTS contributes to the evolution of the specialised academic word list that enhances existing work, such as GSL composed by West (1953) and AWL by Coxhead (2000). Studies of academic word lists for English learning tests are also the milestone that support other previous studies that formulate word lists to help English students study specific fields, such as medical (Wang et al., 2008; Lei & Liu, 2016), financial (Li & Qian, 2010), agricultural science (Martinez et al., 2009), chemistry (Valipouri & Nassaji, 2013), nursing (Yang, 2015), environmental (Liu & Han, 2015) sciences. In addition to the benefit of academic word lists in providing students with material to learn vocabulary that is focused and specific to the field of study, the development of academic word lists to prepare for English tests and other assessments related to their field of study is still very much open.

Eventually, this study bridges the gaps in the availability of academic word lists designed to help students work on the reading section of the test for Indonesian undergraduate students. In accordance with the scholars' statement that acquiring specialised vocabulary, especially from the academic word list, is more beneficial than focusing solely on general vocabulary (Notion, 2001) and the effectiveness of vocabulary development is shaped by the breadth of words students know and the instructional approaches used, particularly in academic contexts (Verhoeven & Perfetti, 2008), this study provides evidence of the enhancement of the specifically formulated academic word list called AWLERT to the students' scores. AWLERT has successfully catered for the vocabulary needs of Indonesian EFL students, potentially improving their reading comprehension and test performance.

CONCLUSION

The quest for improving students' English tests, especially IELTS at the university level, remains open to discussion. In the Indonesian context, IELTS is an international English test often taken for various purposes, such as getting into a university and gaining scholarship opportunities. Thus, it becomes a pursuit of knowledge for Indonesian students as the test takers to comprehend this test to succeed. Accordingly, this study provides insights into how a formulated word list, along with suitable vocabulary teaching instruction, becomes favourable to the students' grade improvement. From the findings, this study provides two conclusions. First, the formulation of the English reading test, which we called AWLERT in this study, is practical by implementing several tools and producing a suitable word list for helping in the IELTS reading test. Thus, this study could be one of the sources to look up when identifying vocabulary in academic word lists. Second, IELTS test results when implementing AWLERT are significant. Previously, it could be challenging for Indonesian undergraduates to start learning vocabulary since there are many vocabularies in the English language, including academic and general word lists. AWLERT positively help students by enhancing their scores. Accordingly, this word list is beneficial for students and for the instructors.

Further, the study notes three limitations that are potential areas for future studies. First, the study involves Indonesian undergraduate students majoring in English literature. Therefore, verifying the findings with university students in other EFL countries and different majors is encouraged. Second, this study acknowledged the limitation of the participants, with only thirty students involved. Consequently, future researchers are encouraged to conduct the study with more participants. Third, since this study is centralised on reading sections of the IELTS, future studies could verify and strengthen the findings by conducting studies using another part of the tests or reading sections of different tests, such as the TOEFL test.

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