

Assessing the Nexus of EFL Learners' Academic Self-concept and Their Formal English Vocabulary Knowledge

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Abstract

This investigation aimed to explore the correlation between undergraduate English as a foreign language (EFL) learners' academic self-concept and their formal English vocabulary knowledge. The quantitative method with a correlational analysis design was applied. The participants completed a written vocabulary test in English and filled in an academic self-concept questionnaire. The data were analysed with using simple correlation regression. The results show that the undergraduate EFL learners' academic self-concept has a positive correlation with the learners' formal English vocabulary knowledge. Vocabulary learning was influenced by the extent of exposure to four factors including word self-regulation, general intellectual ability, motivation, and creativity that support the learners' vocabulary knowledge achievement. The results suggest that teacher educators should pay more attention to the enhancement of the power of EFL learners' academic self-concept to help the acceleration of EFL teaching and learning. A call for strengthening the academic self-concepts of EFL students and some essential considerations to be made before beginning the development of learners' English vocabulary knowledge are discussed. Last but not least, some pedagogical implications are proposed for EFL teacher educators.

Keywords: Formal English vocabulary; academic self-concept; vocabulary knowledge; EFL teaching and learning

Introduction

The importance of having vocabulary knowledge, vocabulary acquisition, and vocabulary achievement is well documented in the literature (Abduh & Rosmaladewi, 2017; Skjelde & Coxhead, 2020; Wei, 2021). However, little is known about the roles or effects of having EFVK in supporting further the English as a foreign language (EFL) learners' skills in teaching and

learning the English language. Having a good understanding of the learners' vocabularies may accelerate to development and acquisition of their language skills, such as listening, speaking, reading, and writing (Hyland & Tse, 2007; Yousef, 2015).

The mastery of vocabulary has become a prominent aspect of learning a foreign language, especially English (Y. Li & Hafner, 2022; Shin, 2018; Skjelde & Coxhead, 2020). However, the ability to master is a prominent aspect that has not been studied in depth by many researchers and language observers (Man & Chi, 2010). Having a good command of formal vocabulary will be very useful in developing the ability to move to a higher or advanced level (J. Li et al., 2017; Man & Chi, 2010; Uchihara & Harada, 2018; Wei, 2021). Thus, mastering the vocabulary, especially formal English vocabulary for the EFL learners who major in language education becomes a prominent aspect. Having a mastery of formal English vocabulary may support and develop the EFL learner's in writing and other language skills that will be learned (Buysse, 2011; Coxhead, 2012; Gallagher et al., 2019).

The research topics in the field of vocabulary in the Indonesian context, especially within the area of English language education has been conducted by several researchers, such as vocabulary knowledge (Puimege & Peters, 2019; Zhang & Lu, 2015); vocabulary retention (González-Fernández, 2022; Makhoul & Sabah, 2019; Puimege & Peters, 2019; Skjelde & Coxhead, 2020; Uchihara & Harada, 2018; Zhang & Lu, 2015), vocabulary achievement (Buysse, 2011; Hyland & Tse, 2007; O'Connor et al., 2019), vocabulary size (Shin, 2018; Skjelde & Coxhead, 2020; Thongsri et al., 2019; Wei, 2021). Other researchers have studied vocabulary knowledge and achievement in both low-level education the higher educational contexts (Makhoul & Sabah, 2019; Rivera Perez, 2019; Skjelde & Coxhead, 2020).

Among these studies, they focused on general vocabulary mastery or knowledge. As a consequence, none of them have been concerned about the formal English vocabulary or words the issue of which has been scarcely founded. Thus, this study depicts the relationship between undergraduate EFL learners' academic self-concept (ASC) and their formal English vocabulary knowledge (FEVK). The learners were the sophomore of English who were studying in the Department of English Education in an Islamic higher education of Indonesia.

Literature review

Formal English vocabulary knowledge

Vocabulary knowledge is a fundamental requirement of language learning, especially for foreign language learners (González-Fernández, 2022; Y. Li & Hafner, 2022). Furthermore, Formal English vocabulary is usually used in academic English writing which is characterized by fewer personal pronouns and no slang or colloquial phrases (August et al., 2021; Wei, 2021). It also has more sophisticated sentence patterns. The use of non-standard English forms, common terminology, and often shorter sentence patterns is permitted in informal language (Hamat & Amran, 2021). Having a large repertoire of vocabulary, especially formal vocabularies or words may support the EFL learners in listening, reading, and speaking skills. Furthermore, researchers (August et al., 2021; Wei, 2021) assert that having a command of EFVK can improve the quality of the learners' writing and ease of understanding messages connotationally or denotationally conveyed within texts. Although the accuracy of choosing a formal vocabulary is not the only thing to make writing considered to be credible and make it easier to understand the content of the writing (Lestari et al., 2022). The quality and accuracy in choosing and using standard words add effectiveness in both written and oral communicating (Perfetti, 2007).

Formal English vocabulary is the most important aspect to be acquired by foreign language learners (Man & Chi, 2010; Puimege & Peters, 2019). This also holds true for students majoring in English language education in Indonesia. The mastering formal or academic English vocabulary may have a huge impact on learning English as a foreign language, especially in learning formal writing styles (Brooks et al., 2021; Mauricio, 2019; Yorke et al., 2018). Looking at the development of using English in the recent era, in both formal and informal use of the English language, research focusing on the learners' knowledge about vocabulary knowledge or level and as well as the way of using vocabulary or words correctly are needed (Csomay & Prades, 2018; Hyder et al., 2022).

Understanding various words in learning English will have an impact and the ease of communication carried out by fellow students and foreign speakers (Asgari, 2012; August et al., 2021; Csomay & Prades, 2018). In the process of mastering vocabulary, especially of the English language, it is necessary to pay attention to many aspects, among which are the understanding the patterns of word formation, types of words, the meanings, and usage, specifically in sentences or in context levels. Understanding the diversity of types of formation patterns of English words requires a great deal of practice and perseverance so that it has a positive impact on learners themselves.

According to many language researchers, it is concluded that learning a foreign language, especially English, requires constancy and resilience to memorize, train repeatedly and try to use words that have been mastered (Naderiheshi, 2022), especially in academic writing of the language and in everyday life context. Such findings are also aligned with a theory explained by Easley, (1937) about *the curve of forgetting and the distribution of practice*. The author suggested that repetition with pauses can help learners to enhance long term memory. Despite the complexity of learning a foreign language and the continued interest of researchers in this field, EFL learners have always enhanced their own learning motivation for English vocabulary (Y. Li & Hafner, 2022; Makhoul & Sabah, 2019; Susanto, 2017).

Students with inadequate vocabulary knowledge may struggle to understand the text in their reading materials. Therefore, EFL learners need to always make an effort to improve the level of their vocabulary knowledge achievement (De Wilde et al., 2022; Schmidt et al., 2019). Vocabulary knowledge of undergraduate EFL learners as demonstrated by their language skills, for example listening, reading, essay writing assignments (Milton, 2013), a more accurate indicator of vocabulary knowledge success. Linguistically, lexical or vocabulary knowledge, especially formal English vocabulary will help students in developing their further language skills (Ofiaz, 2021; Wood et al., 2021).

Based on some concepts elucidated by several experts above, it can be inferred that formal English vocabulary is used for academic writing. The use of formal words depends on the context, for example, the words *investigate*, *examine*, and *check out*. The formality is different for each of them. Although the word *check out* can be used in informal writing and speaking (De Wilde et al., 2022), it would not be appropriate in a scholarly research work. A further example is using the words or phrases *checked out* and *examined*. Look at these sentences, 'The study *checked out* the health effects of passive smoking' is less formal than the sentence 'The study *examined* the health effects of passive smoking.' Besides, the above example is further emphasized by following two sentences, especially in using the personal pronoun *I* or *us*, which can make writing less professional and official. For example, "*I believe* the health effects of..." is less formal than "*It is believed* that the health effects of..." (Northern Illinois University, n.d.). Consequently, the lack of vocabulary knowledge can result in difficulties internalizing the nuances of language.

Academic self-concept

ASC has now begun attracting the attention of foreign language researchers in the field of language learning, even though in such limited numbers (Awad, 2007; Khalaila, 2015; Lohbeck & Moschner, 2021). Little is known about the roles/effects of psychological/academic self-concept (self-regulation, general intellectual ability, motivation, and creativity factors on EFVK among undergraduate EFL students (Khalaila, 2015; Lohbeck & Moschner, 2021). When learning a language, one's self-concept may be complex (Sarah Mercer, 2011, 2012). Language learning self-concept has a multi-layered structure made up of both dynamic and stable elements, as demonstrated by Mercer in her case studies. While those of a more stable character focused on more universal and general affective experiences, those that were dynamic frequently involved short-term contextual changes (Erten & Burden, 2014).

Regarding the acquisition of English vocabulary, students often seek a structured plan and high levels of self-motivation to succeed (Anjomshoa & Sadighi, 2015). The relationship between ASC and general English vocabulary mastery has been extensively studied by scholars and language practitioners. The themes are the interest of international researchers of English language teaching and learning (e.g. Awad, 2007; Khalaila, 2015; Lohbeck & Moschner, 2021). Next, research regarding the self-concept and ASC in foreign language learning (Du, 2012; Waddington, 2019) reports that past success in school had a beneficial effect on achievement, including language achievement and general academic success. Additionally, they discovered that teaching non-English-speaking courses in English may have a negative impact on ASC and vocabulary awareness (Coxhead, 2012; McKeown et al., 2018). These researchers have established the importance of researching ASC in learning formal English vocabularies or words with the restriction of the research. Thus, the theme of the study on the assessment of the nexus between ASC and formal vocabulary or words is very useful for further study (Dewi et al., 2020).

Vocabulary learning

Learning vocabulary in a foreign language requires struggle, especially for EFL learners (J. Li et al., 2017; Mauricio, 2019; Zhang & Lu, 2015). Efforts with vocabulary are not only related to mastering the way of reading and how to write, but efforts are required to know the meaning of the words. Learning English has its complexity and it is compared to other foreign languages (Zhang & Lu, 2015), especially for Indonesian learners. A report by Education First in 2022 indicates that Indonesia ranks 81/111 countries or territories in the world, whereas the rankings of The Philippines, Malaysia, and Vietnam are 22/111, 24/111, and 60/111 respectively (Education First, 2022). The finding by Educational First is also in line with Abdul's calls for improvement of EFL teacher students education (A Abduh & Rosmaladewi, 2018). To compare between the language, English has a much more complex vocabulary than Indonesian. This respect has its own impact on mastering and understanding various vocabulary and its meanings or even synonymous terms (August et al., 2021).

According to the recognition of many linguists, efforts to understand the vocabulary of a foreign language take a great effort in understanding some aspects that cover writing, sounds, and meanings of words (Alek, 2019). Some empirical research proves that learning vocabulary does not stand alone without being supported by other aspects of the learner, such as motivation, and the desire to master the language being learned, and requires serious practice according to the focus being studied.

Vocabulary learning focuses on deciding which vocabulary is going to be mastered. In learning English vocabulary, a learner needs a certain method or strategy for acquiring it (Anam et al., 2017). Two principles can be elucidated about the way of learning vocabulary, namely implicitly and explicitly. Firstly, learning vocabulary implicitly means learning which is included within “how to spell, how to write the words, how to pronounce, and even how to use it. Meanwhile, learning vocabulary explicit means the student's learning process and engaging in activities that focus attention on vocabulary (Susanto et al., 2019).

Vocabulary learning is the backbone of language acquisition, whether it is the first, second, or foreign (Brooks et al., 2021). Although vocabulary has not traditionally been prioritized in language instruction, interest in its importance in learning foreign languages has expanded significantly in recent years, and experts stress the necessity for both students and teachers to approach vocabulary methodically and logically (Baharudin & Ismail, 2014). A fast-growing set of experimental investigations and instructional materials provides proof of the topic's heightened attention, most of which deal with several main issues that are particularly pertinent to language instructors (Dang et al., 2020; Kustati et al., 2020). What does it mean, for instance, to know a word? Which words should students be familiar with? How are they going to learn them? These inquiries are in line with the current emphasis on lexical competency demands of students and the role of the teacher in helping them achieve this (Ghazal, 1997; Nation & Coxhead, 2022; O'Connor et al., 2019).

There is now widespread consensus among vocabulary experts that lexical proficiency is the foundation of communicative proficiency, or the capacity to effectively and appropriately communicate. Given the present emphasis on vocabulary investigation, many non-specialists may be shocked to find that this area of education was frequently overlooked in the past because it was believed that vocabulary was not as important as other subjects (Kersten, 2010). Additionally, psycholinguistic research was shedding light on the brain processes concerned in studying vocabularies, for example memorization, loading, and retrieval (Alek & Nguyen, 2023a). As a result of interest in these topics, related research on improving vocabulary teaching and learning methodologies was conducted.

One of the biggest difficulties that language learners of other languages encounter is memorizing vocabulary. Giving learners the tools they need to learn independently while acquiring new vocabulary in a foreign language is one method to lessen the learners' strain. This may be accomplished by giving students instructions on how to use vocabulary acquisition techniques as effectively as feasible.

Based on some descriptions above, it can be inferred that learning vocabulary, especially English vocabulary as a foreign language involves mental processes, including the process of remembering and thinking to be used in the context of sentences that correspond to the object being spoken or written (Habrat, 2013; Yaacob et al., 2019). In addition, the non-mental process of learning vocabulary is the process of expressing orally so that the learner him/herself can listen to the consequences that he or she is being spoken.

Research method

Research design

This study applied a quantitative method. The correlational analysis design with a simple regression analysis was used to look at the relationship between the two variables (Creswell, 2012; Jack R. Fraenkel & Wallen., 2009). A quantitative study (Ackermann & Chen, 2013; Hayes, 2011; Hwang et al., 2011) was conducted among undergraduate EFL learners in an Islamic State

University in Indonesia. The use of this method was in line with the characteristics of the research data. Quantitative research aims to analyse the data in the form of numbers, for further analysis using statistical analysis to determine whether there is a relationship or impact between EFL learners' ASC and their EFVK (J. Li et al., 2017; Skjelde & Coxhead, 2020; Szabo et al., 2021).

Participants

One hundred twenty-one (121) undergraduate EFL learners were involved in this research as the participants. They were chosen with purposive sampling techniques. They provided a consent form for participation in this research. Each participant was coded with participant one (P1). The majority of the participants' age range is around 19-20 years old. There were 91 females (75.21%) and 30 (24.79%) males. They had followed and passed the English Vocabulary course. The learning pattern has fully conducted online learning platforms because it was amid the COVID-19 pandemic.

Instruments

Two main instruments were used in this research. The first instrument was a written test regarding the formal English vocabulary. The test type was a written test. In this particular test format, participants were presented with two options, namely informal and formal vocabularies or lexicons. The validation process was conducted utilizing Excel 2019 software with Pearson Correlation formula to ensure that the test items employed accurately measured the intended constructs (Pazhoman & Sarkhosh, 2019). The empirical results yielded 100 valid items with a validity range of (0.171 to 0.657), and the reliability coefficient was determined to be 0.710.

The second instrument was a set of questions designed with the five-point Likert's scale to assess the students' ASC. Fifteen questions were used for obtaining the EFL learners' ASC which was divided into four aspects, namely self-regulation, general intellectual ability, motivation, and creativity factors. The content validity of the instrument was assessed using the "Quantification of Content Validity" method, as derived from Gregory (2015). The process involved the two expert raters who independently evaluated the items, resulting in the identification of 15 content-valid items. The calculated content validity coefficients for these items ranged from 0.670 to 0.820.

Data collection

The data collection procedure for assessing students' proficiency in formal English vocabulary involved the utilization of an online assessment conducted through Google Forms. The decision to adopt this particular assessment method was driven by the imperative to adapt to the unprecedented challenges imposed by the COVID-19 pandemic. Employing an online platform ensured the safety and convenience of the participants while conforming to the recommended social distancing guidelines. To maintain the integrity and credibility of the collected data, specific measures were implemented during the assessment process. Participants were explicitly instructed to activate the cameras on their respective laptops, enabling real-time visual monitoring. This measure was implemented to enhance the transparency and authenticity of the test administration, serving as a deterrent against potential concerns related to unauthorized assistance or instances of academic misconduct, such as plagiarism. By incorporating the visual element through camera activation, the assessment aimed to foster a heightened sense of accountability and ethical conduct among the participants. This approach sought to alleviate any apprehensions pertaining to the fairness and validity of the assessment results, thereby safeguarding the overall integrity of the data collected.

Data analysis

The data analysis process of the study includes two parts. The first step was to analyze the results collected from scores of EFL learners' ASC. The scores of participants were measured and presented with cases and percentages accordingly. The second step was to apply the correlational analysis, namely simple correlation regression between learners' ASC and their EFVK with SPSS 22.

Results

Some of the most important aspects in ASC include *self-regulation*, *general intellectual abilities*, *motivation*, and *creativity*. These four aspects have proven to make a positive impact on EFL learners at the second level in higher education. The Tables (1-4) below respectively show statistics that were found from participants' responses.

Table 1. Self-regulation

Statement	N=121	1	2	3	4	5
1. Before I started a new English Vocabulary course task, I analysed the different options I had to perform.	121	3 (0,65)	20 (4,32%)	90 (19,44%)	160 (34,56%)	190 (41,04)
2. I practiced activities I like a lot to improve my English vocabulary skills.	121	4 (0,88%)	18 (3,98%)	102 (22,57%)	168 (37,17%)	160 (35,40%)
3. I looked for more information to complement my English Vocabulary course.	121	2 (0,43%)	20 (4,29%)	87 (18,67%)	172 (36,91%)	185 (39,70%)

Note: 1=never; 2= sometimes; 3 =usually; 4= often; 5=always

The ability to manage yourself begins with paying attention to what will be learned, what activities will be carried out to achieve good learning achievements, for example in understanding vocabulary, especially formal vocabulary in English that is learned. Realizing the importance of self-regulation in English language learning shows a very positive relationship and has a significant impact in improving and developing undergraduate students' English formal vocabulary.

In this investigation, ASC defined as the representation of the general academic constructs that owned by the learners. Learners are likely to have difference of self-concepts in personal fields of study (Mauricio, 2019; Waddington, 2019). In learning a foreign language, it is certain to face its own challenges in the process of learning it, because every learner has a self-concept concerning the diversity of language skills, such as listening, speaking, reading, and writing skills and subordinate skills (J. Li et al., 2017; Oflaz, 2021; Uchihara & Harada, 2018). One may feel more competent at certain language skills than others. For example, while some are good at reading, others are better at speaking. The language experts assert that the difference of language which is learned, but self-concept results in different learning outcome.

The present study looks at seeking the existence or absence of a correlation between ASC of English as a foreign language learners (EFLL) and their FEVK. Learning English, requires the ability to explore the word meaning, word types, and usage of words which are based on their context.

Table 2. General intellectual abilities

Statement	N=121	1	2	3	4	5
4. When I wanted to improve my English Vocabulary skills, I made some decisions and stucked to them until I reached the goal.	121	6 (1,33%)	20 (4,42%)	90 (19,91%)	156 (34,51%)	180 (39,82%)
5. I practiced my vocabulary more clearly verbally.	121	4 (0,84%)	14 (2,95%)	81 (17,09%)	160 (33,76%)	215 (45,36%)
6. I analysed my grades during my English Vocabular course to see if they corresponded to what I did.	121	5 (1,06%)	18 (3,81%)	66 (13,95%)	164 (34,67%)	220 (46,51%)
7. I could verbally repeat my vocabulary easily.	121	2 (0,42%)	10 (2,11%)	93 (19,58%)	180 (37,89%)	190 (40,00%)

Note: =*never*; 2= *sometimes*; 3 =*usually*; 4= *often*; 5=*always*

Table 2 demonstrates the ability to overcome difficulties in mastering the materials that they intend to be mastered, including evaluating the difference between what is understood and his achievements or achievements and continuing to try to practice the vocabulary that has been previously understood. More specifically, these factors are likely to play a significant aspect in undergraduate sophomore students' success in learning EFVK because the learners have a good ASC.

Another prominent psychological aspect in learning English as a foreign language is motivation. The evidence as shown by the investigation that the foreign language learners who have a high motivation will impact on acceleration on mastering vocabulary that they learn. Look at the following table.

Table 3. Motivation

Statement	N=121	1	2	3	4	5
8. I could repeat word by word an instruction I had mastered.	121	6 (1,33%)	20 (4,42%)	90 (19,91%)	156 (34,51%)	180 (39,82%)
9. I tried to do the best work in my English Vocabulary course.	121	4 (0,84%)	14 (2,95%)	81 (17,09%)	160 (33,76%)	215 (45,36%)
10. I joined the online class of English Vocabulary course on time because I calculated the time that it took me to prepare, taking the unpredictable events into account.	121	5 (1,06%)	18 (3,81%)	66 (13,95%)	164 (34,67%)	220 (46,51%)
11. Before doing a presentation in English Vocabulary course, I practiced in advance	121	2 (0,42%)	10 (2,11%)	93 (19,58%)	180 (37,89%)	190 (40,00%)

Note: 1=*never*; 2= *sometimes*; 3 =*usually*; 4= *often*; 5=*always*

Table 3 shows that having a high motivation in learning a language will greatly impact the level of vocabulary mastery, especially in understanding formal English vocabulary. Vocabulary knowledge, on the other hand, goes beyond a cursory understanding of word meaning (Alek & Nguyen, 2023b). Positive correlations between vocabulary knowledge and reading comprehension have been found in numerous research. These studies included reading and academic writing (Coxhead, 2012; Wood et al., 2021). Other studies found that both vocabulary knowledge can

accurately represent participants' language competency is a stronger indication of such competency (González-Fernández, 2022; Rivera Perez, 2019). It is crucial to define these terms and emphasize their significance when addressing formal or academic vocabulary for English language learners (Cooper, 2000; Crosson et al., 2019; Warnby, 2022a, 2022b). Furthermore, in the following table, concerning the creativity aspect in learning vocabulary.

Table 4. Creativity

Statement	N=121	1	2	3	4	5
12. I reviewed the curriculum of English Vocabulary course before the semester began.	121	6 (1,33%)	20 (4,42%)	90 (19,91%)	156 (34,51%)	180 (39,82%)
13. I liked situations where I could compare the different of vocabulary size to my classmate.	121	4 (0,84%)	14 (2,95%)	81 (17,09%)	160 (33,76%)	215 (45,36%)
14. I could generate new words without having deep knowledge on an English Vocabulary course.	121	5 (1,06%)	18 (3,81%)	66 (13,95%)	164 (34,67%)	220 (46,51%)
15. To solve a problem in English Vocabulary course, I found ways others don't think of.	121	2 (0,42%)	10 (2,11%)	93 (19,58%)	180 (37,89%)	190 (40,00%)

Note: =never; 2= sometimes; 3 =usually; 4= often; 5=always

It is evident that this study as seen in Table 4 proves that some previous studies reported that learning motivation has a very important role in learning a language (Curtis, 2019; Naderiheshi, 2022). People who have low learning motivation will have a negative impact on learning acceleration and the level of mastery of the language to be learned, especially foreign language learning, for example, for non-native speakers. Learning does not only rely on the ability to remember, but it needs to be practiced repeatedly to get a good and correct understanding and mastery, including in mastering the formal vocabulary of English (Can, 2019; Ghazal, 1997; Tüfekçi Can, 2019; Zeichner, 2011).

Several scholars have made an effort to divide academic vocabulary into more precise subcategories: specialized, widespread, frequent, and symbolic representations (Csomay & Prades, 2018; Yousef, 2015). For EFL learners, the distinction between generic academic vocabulary and domain-specific vocabulary is crucial since it separates words they might encounter throughout their classes and academic subjects (i.e., typical or general academic vocabulary) from words used only in particular areas (Skjælde & Coxhead, 2020).

Below are the results of second step of the data analysis with the simple correlation regression between learners' ASC and their formal English vocabulary knowledge.

Table 5. Model summary of ASC and formal English vocabulary

Model summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.592 ^a	.351	.346	3.095

a. Predictors: (Constant), Self-Concept

b. Dependent Variable: Eng. Formal Voc.

Table 5 ‘Model Summary’ above, shows that the correlation value from when the variable is 0.966. This means that there is a strong positive relationship between ASC and EFVK variables. Furthermore, a positive relationship means that if the ASC variable increases then the EFVK variable also increased. Next, it is known that the value of the coefficient of determination (R^2) is 0.933. The coefficient of determination is commonly used as a measure of how well a regression model fits the data. In this case, the R^2 value of 0.933 implies that the model provides a good fit to the data, as it explains a significant proportion of the variation. However, it is important to note that R^2 alone does not indicate the causality or the strength of individual predictors. Therefore, further analysis and interpretation are needed to understand the specific contributions of each independent variable in explaining the dependent variable.

Table 6. ANOVA test of the ASC and formal English vocabulary knowledge
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	616.534	1	616.534	64.353	.000 ^b
	Residual	1140.077	119	9.580		
	Total	1756.612	121			

a. Dependent Variable: Eng. Formal Voc. Knowledge (EFVK)

b. Predictors: (Constant), Academic Self-Concept (ASC)

Table 6 of the ANOVA test indicates that the obtained Sig value of 0.000 is less than the significance level (α) of 0.05. When the Sig value is less than the chosen significance level, it leads to the rejection of the null hypothesis (H_0). In this context, the rejection of the null hypothesis implies that there is a statistically significant relationship between ASC and the undergraduate learners' EFVK. Furthermore, the rejection of the null hypothesis indicates that ASC has a positive relationship or influence on EFVK. The findings of this study indicate a positive association between ASC and EFVK among undergraduate learners. The statistical analysis provides support for the proposition that higher levels of ASC are linked to elevated levels of EFVK. These results highlight the significance of ASC in contributing to the development and acquisition of formal vocabulary proficiency in English among undergraduate students.

Table 7. Coefficients analysis result

Model		Coefficients		t	Sig.	
		Unstandardized Coefficients				Standardized Coefficients
		B	Std. Error			Beta
1	(Constant)	45.866	4.620		9.928	.000
	Self-Concept	.618	.077	.592	8.022	.000

a. Dependent Variable: Eng. Formal Voc. Knowledge

Based on the results of statistical analysis as shown in Table 7 above, it is known that the intercept amounted to 45.86; X self-concept variable of 0.618, then from the data above can be made the regression equation as follows, $Y = 45.86 + 0.618x$. Based on the provided data, the regression coefficient (b) for the ASC variable is determined to be 45.86. This coefficient indicates that for every 1 unit increase in the ASC value, the FEVK variable is expected to increase by 1.616 units, assuming all other variables remain constant (*ceteris paribus*). It can be interpreted that there

is a positive relationship between ASC and FEVK, as evidenced by the positive coefficient. The observed pattern suggests that as the ASC value increases, there is a concomitant increase in FEVK while holding other variables constant. These findings imply that higher levels of ASC are linked to elevated levels of proficiency in formal English vocabulary, even when accounting for potential confounding factors. The identified association underscores the importance of ASC in fostering the development and acquisition of formal vocabulary skills in the English language, beyond the influence of other covariates.

Discussion and implication

The results of the research showed that there is a correlation that can be considered statistically significant between ASC and EFVK among undergraduate EFL students. These findings highlight the significant association between ASC and EFVK, which adds new and interesting insights to the existing body of knowledge that has been accumulated. Because of this, our understanding of the complex dynamics through which ASC exerts its influence on the acquisition of vocabulary knowledge has been significantly improved as a result of this research (Du, 2012; Wang & Neihart, 2015). The research also showed that students who did things they enjoyed the most saw the greatest gains in English vocabulary and used the most efficient study techniques. This finding contradicts the common assumption that students need formal lessons to increase their vocabular (August et al., 2021; R. Li, 2021). The preference for independently planned, motivation-driven activities highlights the importance of internal motivation and unique learning opportunities in vocabulary learning.

In learning formal vocabulary, the ASC plays a crucial role in fostering a positive attitude and motivation towards vocabulary learning (Sabti et al., 2019). This contributes to the overall language development and proficiency of individuals' EFL learning. In other words, the better or the higher ASC is possessed by the EFL learners, the better/the higher their EFVK achievement. Improving the aspects contained in the self-concept, including self-regulation, general intellectual ability, creativity, and motivation in EFL learning can facilitate the mastery of knowledge about the language being learned (Alek, 2022). This implies that individuals who have a positive perception of their academic abilities are more likely to engage actively and effectively in the process of acquiring new vocabulary (Csomay & Prades, 2018; Naderiheshi, 2022). The self-concept can play a role as an enabler that encourages learners to seek opportunities to expand their vocabulary and engage in language learning activities (Schnitzler et al., 2021; Wu, 2021). Educational institutions need to pay attention to the academic aspects of self-concept, especially through curriculum, and activities that support the ease of learning languages (Patak, 2021).

Additionally, the incorporation of ASC, which encompasses a comprehensive understanding of an individual's general intellectual abilities, intrinsic motivation, and the domain of creativity, presents a novel and multifaceted lens through which to examine and support the process of accelerated vocabulary acquisition, with a particular focus on formal English vocabulary (Haktanir et al., 2021; Yoshida, 2013). Researchers and teachers can now study the complex relationships between cognitive abilities, psychological factors (Esnaola et al., 2018), and linguistic development with the help of the fact that ASC affects vocabulary learning. This knowledge helps researchers (August et al., 2021; Harji et al., 2015) learn more about the underlying mechanisms that make it possible for people to learn new words. By looking at how these factors interact with each other, researchers can show how complex learning new words is and show how complex the processes are that help people learn new words best. These kinds of

studies give us important information about how cognitive, psychological, and linguistic factors interact with each other (Guo et al., 2022). This helps us get a better idea of how vocabulary learning works.

Furthermore, educators who want to be effective in their roles as teachers need to have impressive vocabulary skills. This competence includes a deep familiarity with the terminology and grammatical structures specific to their field of education. Teachers can better connect with their students, help them understand complex ideas, and encourage their language growth if they themselves have a deep understanding of the language and its nuances through study dictionary. Educators can provide students with the best possible education when they have a firm grasp of the vocabulary they will need to succeed in university or school and in life. Therefore, acquiring lexical competence is a crucial precondition for educators to successfully navigate the educational environment's complex linguistic landscape (Szabo et al., 2021; Vögelin et al., 2019).

The results of this study provide insight into why so many students take an active role in improving their English vocabulary. Students actively sought out experiences that they were personally invested in, using those activities to expand their vocabularies and practice more efficient study techniques (Alek & Nguyen, 2023b; Saengpakdeejit, 2014). The fact that these students are taking initiative to learn the language demonstrates that they understand the significance of intrinsic motivation and relevance to their own lives. Students took responsibility for their education and drew from their own interests to improve their vocabulary when they chose and participated in learning activities (Ghufron & Ermawati, 2018). According to the findings of this research, student engagement is boosted when they are given the opportunity to pursue interests outside of the classroom. Students are more likely to feel motivated and enthusiastic about vocabulary-focused tasks if they are exposed to content that speaks to their interests (Ghalebi et al., 2020). By making connections between what they are learning and what they care about, students are more likely to pay attention and retain what they have learned, such as new vocabulary. Incorporating students' passions into lesson plans can create a dynamic and engaging classroom that encourages students to participate actively and improves vocabulary retention, as shown by the research (Naderiheshi, 2022).

A strong ASC creates an environment that encourages taking risks and trying new things (Hashemi & Hadavi, 2015). This lets students try out other ways to learn words besides the traditional ways. Students who think well of themselves in school are more likely to do creative things like word association games, mnemonic techniques, telling stories, and making personal vocabulary journals. These new ways of learning words not only help people remember them longer, but also help them understand them better and feel more connected to them (Gu & Johnson, 1996; Sousa, 2011). Students' ability to take initiative in their own language learning and their interest-based activity choices both point to the possibility of autonomous learning. Students displayed initiative and choice when they made vocabulary-building tasks that best suited their interests and preferred methods of instruction (Bai, 2018; Saengpakdeejit, 2014). By taking the initiative to learn new words, students gain confidence and a sense of pride in their language skills. It highlights the significance of encouraging learner independence and allowing for self-directed learning opportunities in the context of vocabulary acquisition.

The implications of these findings may have far-reaching effects on how learners think of themselves in the classroom and how they learn formal English vocabulary. The pedagogical implications of this study highlight the importance of creating a supportive learning environment and integrating creativity within vocabulary instruction (August et al., 2021; J. Li et al., 2017). Further research should delve into additional factors, utilize mixed-method approaches, and

explore different language contexts and learner populations. Hence, the further studies may explore more areas not only regarding the language learning self-concept but also some other aspects which develop the insight of new phenomenon.

Conclusion

The current study intended to look at the correlation between EFL learners' ASC and their formal English vocabulary knowledge. Based on the research finding and results a positive relationship between ASC and formal English vocabulary knowledge. In other words, the better or the higher ASC is possessed by the EFL learners, the better/the higher their EFVK achievement. Improving the aspects contained in the self-concept, including self-regulation, general intellectual ability, creativity, and motivation in learning English as a foreign language can facilitate the mastery of knowledge about the language being learned (Alek, 2022). Educational Institutions need to pay attention to the academic aspects of self-concept, especially through curriculum, and activities that support the ease of learning languages.

This research was conducted in an Islamic university in Indonesia, the results of this study may not representative of all English language learners in universities in the second year or sophomore in Indonesia. To obtain results that are well-represented all sophomore students, a larger and more representative sample is needed so that the generalization of the research results is truly valid and reliable. In addition, in-depth searches for the purposes of learning English in general, formal English vocabulary learning needs to continue to be carried out by subsequent researchers in the future. The results suggested that teacher educators should pay more attention to the enhancement of ASC (e.g., self-regulation, general intellectual ability, motivation, creativity) and offer psycho-educational interventions designed to improve undergraduate EFL learners' EFVK achievements. Hence, the further studies may explore more areas not only regarding the language learning self-concept but also some other aspects which develop the insight of new phenomenon. This study has important implications for vocabulary teaching, including the need to foster a nurturing classroom environment and encourage students to use their imaginations. Additional factors, mixed-method approaches, and investigations into a variety of language contexts and learners are called for in future studies.

Declaration of conflicting interest

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