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Gender-Based Differences in Receptive Vocabulary Knowledge: A Study of an English Achievement Test Performance among EFL Saudi Undergraduate Students

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Abstract

This study aimed to investigate gender disparities in English receptive vocabulary performance among Saudi undergraduates studying English as a foreign language (EFL), based on an English achievement test. The students who completed the test were undergraduates at a Saudi college, enrolled in several diploma programs, and studied English as a compulsory general subject. These students were at the pre-intermediate level of English proficiency. A total of 881 test papers (419 males and 462 females) were analyzed. An independent t-test was used to analyze gender disparities across four distinct versions, A-D, of the same English achievement test, concentrating just on the vocabulary items. A total of 40 vocabulary questions were analyzed; each version had 10 vocabulary questions. The findings revealed no statistically significant differences between genders in English receptive vocabulary knowledge across 30 questions in all four versions; however, significant variances were identified in 10 questions. Males excelled in three questions from version A, but girls excelled in seven questions from versions B, C, and D. Potential reasons for the contradictory findings may stem from vocabulary content, gender familiarity with vocabulary, test design, and learning strategies.

Keywords: EFL, receptive vocabulary, gender, English achievement test

1. Introduction

"Without grammar, very little can be conveyed; without vocabulary, nothing can be conveyed" (Thornbury, 2002, p. 13). Vocabulary is the key basis for acquiring a language. It is a fundamental element of linguistic competence and all facets of language acquisition (Lessard-Clouston, 2021). Acquiring a language involves mastering its lexicon and using its vocabulary. Vocabulary is important for mastering receptive skills (i.e., reading and listening). The ability to understand what others say and read relies heavily on one's vocabulary. Also, vocabulary is crucial for enhancing productive skills (i.e., writing and speaking). The capacity to choose and utilize suitable vocabulary according to context would enable learners to articulate their ideas, feelings, and intentions with clarity in both written and spoken communication (Folse, 2023). According to Nation (2022), vocabulary knowledge is essential for text comprehension and successful communication, since learners cannot completely grasp spoken or written discourse without familiarity with most of its terminology. The need for vocabulary in language learning is underscored since inadequate vocabulary may lead to misunderstandings, frustration, and limited engagement with the content. However, learning vocabulary is a complicated process. Nation (2022) highlights that mastering vocabulary is more than just memorizing them in isolated terms; it is a matter of using them functionally in different contexts. EFL students often face challenges when the context is unknown or when words include different interpretations influenced by educational, cultural, and social factors (Milton & Hopwood, 2023). Factors that can affect the effectiveness of vocabulary learning include individual differences, learning strategies, motivation, teaching methods, and gender.

As gender is concerned, it is a contentious topic that significantly influences language learning. Generally, research exhibits inconsistency on which gender excels in acquiring a target language, with other studies indicating that gender has no significant impact on second or foreign language learning. In Saudi Arabia, education is segregated for religious and cultural reasons, which leads to the issue of whether girls and boys acquire English vocabulary similarly. Do they have the same challenges and use the same strategies to learn vocabulary? Analyzing gender disparities in EFL contexts may provide significant insights into the distinct approaches used by male and female learners in language acquisition and how these differences may influence pedagogical strategies, educational outcomes, and classroom interactions. Comprehending these distinctions can assist educators in customizing their instructional approaches to meet the specific requirements and preferences of male and female students, hence enhancing overall educational achievements.

Considering the possible relationship between gender and the acquisition of vocabulary, it is therefore important to assess the extent to which male and female students learn vocabulary effectively. Milton & Hopwood (2023) point out that assessing English vocabulary knowledge is necessary for refining language instruction, catering to learners' individual requirements, and enhancing their communication skills. In EFL contexts, many vocabulary assessments are formed based on achievement tests. For example, the vocabulary size test (VST) designed by Nation and Bleger (2007), the Oxford English Vocabulary Level Test, and the Cambridge English Vocabulary Test are tests to assess learner knowledge of vocabulary at different levels. Hadi (2017) highlights the importance of vocabulary tests as a tool to measure student

vocabulary proficiency. Csaba et al. (2021) assert that achievement tests help educators assign strengths and weaknesses and consequently suggest remedial strategies. In Saudi Arabia, an English achievement test, which includes vocabulary, serves as a primary assessment tool, particularly for vocabulary knowledge assessed through multiple-choice questions. Investigating gender differences in English achievement tests can help identify gaps and areas where specific support may be needed. Accordingly, do Saudi students have challenges in their English vocabulary knowledge? Are there any differences between genders in learning their English vocabulary? These questions lead to a prompt investigation into the research problem, which is concerned with Saudi EFL students learning English vocabulary.

2. Research Problem

Due to the importance of learning English as a global language, the Saudi government pushed the Ministry of Education to make it a compulsory subject from year 1 to year 12. However, based on my experience as a professor, EFL Saudi students struggle with learning vocabulary. I have noticed that they face challenges in learning the target words, including issues with pronunciation, spelling, long-term memorization, and appropriate usage in various contexts. As a professor at a university, most, if not all, the English tests are multiple-choice questions, and students have challenges in answering vocabulary questions. Instead of having knowledge of the target words, many students mostly depend on guessing while answering multiple-choice tests. Such a challenge, which may be related to poor memory and limited application across various settings, is a problem underlying the mechanisms of language learning and interaction.

Studies in the Saudi context reinforce these observations, with Al-Seghayer (2023) and Al-Wossabi (2024) noting that students often have issues with vocabulary due to memorizing it in isolation without developing the ability to use it functionally. Salem (2019) adds that as a result, students experience short-term retention rather than long-term mastery. Additionally, Al-Bidawi (2018) and Alqarni (2019) argue that students' reliance on word-for-word translation hinders their ability to acquire vocabulary contextually, limiting their overall vocabulary knowledge. Alshammari (2020) points out that many EFL Saudi students graduate from secondary schools with a low level of vocabulary because their exposure to English in educational settings is significantly restricted, since English courses are designed primarily to be studied as a topic rather than as a skill to be developed.

In this study, while both male and female students follow similar curricula and assessments, it is unclear whether they experience the same challenges with receptive vocabulary acquisition. Previous EFL studies suggest mixed findings: females tend to excel in general vocabulary tasks through context-based strategies (Alhaysoni, 2017; Arianti et al., 2022), whereas males may perform better in domain-specific areas like business or technology (Al-Shibel, 2021; Aye & Bartan, 2012). Given the gender-segregated education system in Saudi Arabia, the present study seeks to determine whether gender differences influence receptive vocabulary acquisition and whether males and females face distinct challenges when engaging with vocabulary on achievement tests.

While a few studies have examined gender-based differences in receptive vocabulary acquisition in the Saudi context (e.g., Alqarni, 2019), none have focused specifically on gender differences through achievement tests. Thus, the present study is an attempt to address this gap in the existing literature by examining whether there are significant differences in receptive vocabulary knowledge between male and female EFL learners in Saudi Arabia, as measured by achievement tests, the results of which are more indicative of actual academic performance in the real world.

3. Research Question

Are there any statistically significant differences in English receptive vocabulary performance between EFL Saudi male and female students based on an English achievement test?

4. Literature Review

4.1 Gender Differences in Receptive Vocabulary Learning

Gender differences in English language learning, especially in learning vocabulary, have been investigated in second language acquisition (SLA), with mixed findings across studies. Although some studies have found no statistically significant differences in vocabulary acquisition, other studies have suggested that one gender performs better than the other. For example, several research studies indicate that men outperform females in receptive vocabulary performance tasks (Kavanoz & Varol, 2019; Alqarni, 2019). Only one Saudi study, conducted by Alqarni in 2019, examined gender differences in receptive vocabulary among 71 Saudi English major university students, using a vocabulary level test. He discovered that both males and females fell short of the requisite vocabulary proficiency as EFL learners. Additionally, he identified statistically significant disparities between genders, favoring men. In contrast, several research studies indicated that girls surpass men in English receptive vocabulary (Duy & Nguyen, 2019; Llach & Gallego, 2012). Using a vocabulary level test to examine the vocabulary levels of 500 Vietnamese EFL 12th graders from high schools, Duy & Nguyen (2019) found statistically significant differences between males and females in receptive vocabulary, with a preference for females. However, significant variations between genders in receptive vocabulary are not essential, since other research has revealed no notable disparities (Alonso, 2013; Kavanoz & Varol, 2019; Fontecha, 2014). For example, Kavanoz & Varol (2019) evaluated 249 EFL Turkish students from a middle school between the ages of 11 and 14 using a vocabulary level test. Their English receptive vocabulary showed no statistically significant variances across gender. These results suggest that further investigation is needed to understand the possible reasons for the existing or non-existent gender variation in vocabulary learning among EFL students.

4.2 Factors Affecting Gender Differences in Receptive Vocabulary Learning

4.2.1 Learning Strategies and Exposure to Communicative Environments

Several studies have consistently demonstrated that compared to males, females tend to achieve higher scores in receptive vocabulary tasks. Female learners achieved higher than their male counterparts as they applied context-based cognitive strategies, such as repetition, word associations, and contextual guessing. These strategies are especially helpful in reading and remembering the meanings of words, leading to performance on vocabulary tests (Arianti et al. 2022). Notably, studies done in the Saudi context validate this finding, indicating that Saudi females utilize contextualization strategies and are more proficient in vocabulary tasks (Alhaysoni, 2017; Alqarni, 2019).

Furthermore, females' higher level of exposure to communication channels and social media, where language is more emotively expressive and socially oriented, has also facilitated their learning more vocabularies. Platforms that engage students in everyday conversational language use introduce students to vocabularies on social interactions, emotional expression, and everyday contexts, all of which enhance receptive vocabulary (Riyantika et al., 2024; Sihombing et al., 2024). By so doing, access to social media content in daily language and social communication can serve an influential role in the performance of vocabulary acquisition in females to do well in tests that target general, socially oriented vocabulary. However, this tendency is not applicable to all word kinds. While females outperform in context-dependent vocabulary tasks, males may excel in tasks that need technical or domain-specific vocabulary.

4.2.2 Technical and Domain-Specific Vocabulary

Several studies have highlighted that male learners tend to have a higher performance than females in case the vocabulary tested was technical, specialized, or domain-specific, as in business and technology domains. Research by Al-Shibel (2021), Aye & Bartan (2012), Akhrib & Nedjai (2021), and Arianti et al. (2022) shows that males, especially in technical and professional fields, consistently demonstrate better vocabulary performance. This can be attributed to their exposure to specialized vocabulary, which is parallel to their academic specializations or intended professional careers, especially considering their current or intended work in professions demanding specific skills and language. It is also pertinent that cognitive styles of males and females are different. For example, men use rote memorization and direct word recognition approaches, which are effective for remembering precise vocabulary (Sihombing et al. 2024; Arianti et al. 2022; Montero-SaizAja, 2021; Okyar, 2021). The strategies are in line with their tendency toward practicality and action-oriented tasks (Ridha et al., 2024), enabling better predictions on tests of domain-specific vocabulary. These studies reveal that male and female students show varying levels of involvement and understanding based on how well the material resonates with their interests and experience. Nonetheless, when both sexes are provided with equivalent educational resources and standardized assessments, gender differences in vocabulary proficiency could be less evident.

4.2.3 Identical Assessments and Gender-Neutral Vocabulary

Despite the observed gender differences in some studies, a range of evidence has found no substantial gender differences in receptive vocabulary, especially when it comes to generic vocabulary acquired under context-independent circumstances. In such cases, male and female

learners often demonstrate similar proficiency levels. According to Ellis (2021), this alignment happens when both genders receive the same curriculum, textbooks, and assessment methods. Research conducted in the Saudi context, such as Alharthi (2024) and Almusharraf & Alotaibi (2021), reinforces this conclusion. While Alharthi (2024) focused on college students' perceptions of their challenges in English writing (including vocabulary), Almusharraf & Alotaibi (2021) examined gender-based writing errors committed by EFL Saudi university students. Both studies revealed no significant gender differences in vocabulary knowledge, indicating that both genders received the same learning materials and assessments. The homogeneity of educational experiences—where both male and female students share the same textbooks, curriculum, and standardized assessments—likely contributes to the absence of gender disparities, as both groups acquire and reinforce vocabulary in similar ways.

Moreover, the nature of vocabulary tests is crucial to whether gender differences will emerge. Tests that measure basic word recognition and quite simple tasks such as multiple-choice questions or synonym finding are unlikely to reveal gender differentials, since men and women learners use similar cognitive strategies for such tasks. Such tasks require neither deep processing nor elaborate interpretations, suggesting that performance from both genders would be comparable (Masoumi & Sadeghi, 2020). Both female and male students tend to do equally well when the assessed vocabulary is neutral and nonspecialized, as they should use basic cognitive processes like memory or recognition to answer the questions (Sotoudehnama & Asadian, 2011). These findings concur with other studies revealing that while no gender differences can be found on simple word tasks, there are gender differences when tests include more complex processing, such as context use of vocabulary or sentence production. In such cases, females are more likely to use more context-sensitive strategies, such as word associations and interpretation through context (Arianti et al., 2022; Montero-Saiz-Aja, 2021; Al-Harbi & Ibrahim, 2018). Conversely, boys tend to excel in tasks focused on action-oriented vocabulary, as their applied methods of learning correspond with the technical or domain-specific knowledge being tested (Arianti et al. 2022; Alsowat, 2022). Overall, these findings underscore the significance of test design and context in influencing the manifestation of gender disparities in vocabulary knowledge, while highlighting that both males and females can attain comparable performance on neutral and clear tasks, but not necessarily on those that are complex or specialized.

The findings of the aforementioned studies show that gender difference in EFL receptive vocabulary is generally accounted for by the type of vocabulary tested and the used learning strategies. Males excel in tests involving technical or specialized vocabulary, for instance, technology or business vocabulary. Females outperform in tests involving general, context-dependent vocabulary, utilizing strategies like word association and context-based guessing. However, when both genders recieve the same learning materials and standardized tests, several studies have found no differences in their vocabulary scores. The findings underscore the importance of the tested vocabulary type as well as the learning strategy type each gender employs in order to determine their performance on receptive vocabulary tests. Despite such significant findings, very little work exists on specifically how achievement tests generate gender differences in receptive vocabulary, specifically in Saudi Arabia.

4.3 Research Gap

The current study aims to fill the research gap in the existing literature regarding gender differences in receptive vocabulary acquisition among Saudi EFL learners, particularly in the contexts of achievement tests, which has been largely overlooked. Various Saudi studies on the development of vocabulary differ with respect to how gender effects on vocabulary acquisition are measured, e.g., with respect to learning strategies (e.g., Alhaysony, 2020; Alshammari, 2020). While some studies have examined gender differences on a standardized test measure of receptive vocabulary size (e.g., Alqarni, 2019), none have specifically investigated receptive vocabulary size in relation to achievement tests, as is attempted in the present study. This distinction is significant because achievement tests are more representative of academic performance, offering a comprehensive view of students' vocabulary knowledge in an educational context. Moreover, whereas most of these studies have concentrated on bachelor's degree students (Alhaysony, 2017; Alqarni, 2019), the present study examines diploma students, who have previously attracted less research focus. Such emphasis provides an opportunity to explore gender differences in vocabulary development at a critical point of educational transition, when students are being prepared for either the next stage of their education or the workforce. Moreover, none of the Saudi studies mentioned above focus on achievement testing, specifically to measure receptive vocabulary, which creates the need to conduct the current study. Therefore, the study adds to the literature by assessing differences between genders in terms of receptive vocabulary among Saudi EFL learners through achievement tests, which is a topic that has not been adequately examined in previous research.

5. Method

The data were gathered via an English achievement exam (English 3) at the pre-intermediate level, administered to EFL Saudi diploma students at an applied college in Saudi Arabia. The participants were enrolled in several diploma programs at a Saudi college and studied English as a compulsory general subject. It is important to note that all students, regardless of their program, were enrolled in the same English course, which ensured that they had similar exposure to both the language and the test content.

The test consisted of four versions (A, B, C, and D), with each version distributed to different groups of students. version A was completed by 113 male students and 118 female students, version B by 113 male students and 119 female students, version C by 96 male students and 108 female students, and version D by 97 male students and 117 female students. Each test version contained 40 questions across five parts: listening, reading, grammar, vocabulary, and conversational response questions. The vocabulary part, central to the current study, is intentionally designed to assess students' performance in English receptive vocabulary. The vocabulary part comprises 10 multiple-choice questions. Each question corresponded to one of the 10 units covered in the English course, with each unit concentrating on a certain thematic topic. The thematic units are about workplaces, such as products and services, customer services, employment, travel, orders, selling, the environment, entertaining, performance, future trends, and time. The vocabulary section's questions were carefully crafted to assess

students' ability in receptive vocabulary knowledge by selecting appropriate words depending on context.

It is a discrete-point multiple-choice vocabulary test with four options (A-D) available for every question, of which only one is the correct answer. The vocabulary section of the test is comprehensive, as it tests students' knowledge of the words studied during the course. For example, a question assessing the definition of a word asked students to choose the correct answer from the four options: **"……**means a group or system of connected things: a—network, b—profile, c—picture, d—comment**"** (see Appendix A for the 40 vocabulary questions).

The test-takers were college students pursuing various diploma courses like human resources, information technology, and marketing. They are aged 18 and 19. They have similar backgrounds and began studying the English language in the third year of elementary school. The college students study three English courses from elementary to pre-intermediate (120 hours for each course). A total of 881 students answered four different versions of the exam question—A, B, C, and D. The study sample included all students' test papers, 419 males and 462 females.

5.1 Test Validity and Reliability

To determine the test's content validity, eight professors who teach the same course (English 3) and have expertise in TESOL and Applied Linguistics reviewed and assessed the test. They assessed the clarity and comprehensiveness of the questions, indicating that they covered all the units taught in the course. For test reliability, the analysis demonstrated acceptable internal consistency for test versions A to D; Cronbach's Alpha values were 0.708 for version A, 0.724 for version B, 0.732 for version C, and 0.711 for version D. All values exceed the conventional threshold of 0.70, indicating satisfactory reliability for research purposes. The consistency across tests suggests uniform measurement quality, though none reach the higher thresholds (>0.80) often associated with robust scales. This may be due to the moderate number of items (10 per test), as reliability tends to increase with scale length.

5.2 Data Analysis

The researcher of the present study gathered the student papers for analysis after the college professors had evaluated them. The data was analyzed using SPSS version 30. To investigate gender differences in vocabulary, the researchers utilized inferential statistics such as the independent-sample T-test as well as descriptive data such as frequency percentages, means, and standard deviations. All statistical analyses were conducted with a significance level of 0.05.

6. Results and Discussions

The sample analyzed consisted of 419 male and 462 female test papers. A Chi-Square Goodness-of- Fit test was employed to explain the minor discrepancy in group sizes. The results showed no significant differences across the four test versions (A, B, C, and D). For version A, the Chi-Square value was 0.108 ($p = 0.742$); for version B, it was 0.155 ($p = 0.694$);

for version C, it was 0.833 (p = 0.362); and for version D, it was 1.695 (p = 0.193). This suggests no statistically significant variation in the count of male and female test papers across all the test versions. As such, the sample sizes are similar, and any observed variances in test results are unlikely to be the consequence of group size variations. This ensures that the comparison of gender variations in receptive vocabulary is based on comparable groups.

Descriptive statistics were utilized in the analysis of the four test versions, which assessed predominantly general workplace vocabulary with a combination of everyday words and phrases applicable to a range of work settings. The results show that both male and female students have problems in their vocabulary knowledge. In general, the tests were answered poorly by both sexes, and the mean scores of all the questions were low (see Appendix A for the results of the four test versions A-D). The students had problems recalling and recognizing the vocabulary exposed in the test. These observations are consistent with Al-Seghayer's (2023) and Al-Wossabi's (2024) findings that the Saudi students have difficulty with mastery of English words when they are presented in isolation without functional use in diverse contexts. These problems, along with Alshammari's (2020) observation of limited exposure to English, could be accountable for the general challenge in the vocabulary knowledge of the learners.

The main research question addressed in this study was: are there any statistically significant differences in English receptive vocabulary performance between EFL Saudi male and female students based on an English achievement test? The results showed complicated patterns of gender disparities across all four test versions. While no significant differences were found in 30 questions across all test versions, significant differences were discovered in 10 questions. Specifically, the results showed that there are no significant differences between males and females in their English receptive vocabulary in 30 questions from all four test versions. The questions are (Q1, 3, 4, 5, 6, 8, and 10) from version A, (Q1, 2, 3, 5, 6, 7, 8, 9, and 10) from version B, (Q1, 4, 5, 6, 7, 9, and 10) and (Q2, 3, 4, 5, 6, 8, and 10) from version D (see Appendix B for the results of the versions A, B, C, and D in Tables 1, 2, 3, and 4). The results of the present study align with those of Kavanoz and Varol (2019) and Fontecha (2014), who showed no differences between men and females in the acquisition of English vocabulary. Nonetheless, the present investigation identified some notable exceptions. On version A, male students excelled over female students on three questions (Q2, Q7, and Q9), corroborating the findings of Alqarni (2019) and Alonso (2013). Conversely, female students had superior performance on certain issues in version B "Q4," version C "Q2, 3, and 8," and version D "Q1, 7, and 9," which aligns with the findings of Duy & Nguyen (2019) and Llach and Gallego (2012). After comparing the findings of the current study with those of the reviewed study, what are the potential explanations for the notable differences in the current study's results?

The non-substantial disparities in 30 questions may result from both male and female students possessing comparable degrees of exposure to and understanding of the target words. Also, the vocabulary tested seemed to be familiar to the participating students, since it was general and non-specialized. The test design and question type may have also contributed to the lack of significant differences in most questions. However, the notable differences in performance on 10 questions might be attributed to varying degrees of familiarity with particular words and the use of vocabulary learning strategies. These potential reasons are discussed below.

The absence of significant differences in performance on 30 questions suggests that male and female students had similar levels in their understanding of basic workplace vocabulary and similar educational backgrounds. This similarity might be attributed to their shared exposure to the same textbook, curriculum, assessments, and standardized tests. Such an explanation is supported by further studies conducted in the Saudi context, namely those of Alharthi (2024) and Almusharraf & Alotaibi (2021), which found that no gender differences existed between Saudi males and females regarding their English writing, including vocabulary, as their participants had similar experiences in having learned the same curriculum and faced identical assessments. Ellis (2021) further supports this idea, indicating that when there is little variation between male and female students in terms of age, education level, and language experience, there is less room for statistical testing to find significant differences in vocabulary knowledge. The homogeneous exposure, in this study, likely resulted in similar responses overall, reducing any gender-related disparities in vocabulary knowledge.

Another possible explanation for the non-significant differences in performance on the 30 questions is that they likely centered on common, neutral vocabulary frequently encountered in everyday contexts or professional environments (e.g., terms such as "network," "deadline," "book," "factory," or "solve"). These terms are broadly applicable and do not implicitly prefer one gender over another. The tested terminology might simply be commonplace and non-technical. Recent research has also shown that when it comes to generic or situation-independent vocabulary, male and female students usually do about the same (Sotoudehnama & Asadian, 2011). This is because generic vocabulary knowledge is often gender-neutral, especially when it comes to terms used in professional or academic settings. Such findings align with those of the present study, which suggested that both genders were likely exposed to the same vocabulary when learning English at their applied college. The simplicity of the word recognition and lookup types of performance in the present study is consistent with prior work by Masoumi & Sadeghi (2020), who argue that this type of design is unlikely to reveal considerable gender differences.

The fact that the test consisted of multiple-choice questions may have reduced any potential gender effect in performance. If questions are simple and do not require in-depth analysis or prior knowledge, there may not be any performance gender gap. One or more of the four exams may prioritize measuring basic recognition or memory over evaluating more advanced skills such as context or interpretation. For example, queries that directly probed the meaning of a term, such as “What does ‘reduce’ mean?” were less likely to expose gender inequalities as both male and female students have presumably acquired these words in the classroom. When compared to more straightforward tests like word matching or basic memory, a study by Masoumi & Sadeghi (2020) reveals that gender differences are more noticeable in tasks that require deep language processing or critical thinking. These results corroborate the lack of statistical significance observed in the present study, as the vocabulary test questions probably measured general knowledge, which is something that people of both sexes can do well.

However, what are the possible explanations for the significant differences observed in the performance of the 10 questions? These questions may have pertained to concepts or settings that are gender-specific, resulting in varying degrees of exposure or familiarity between boys

and girls. For instance, male students might be more accustomed to terms like "press" (Q2), "fast" (Q7), and "pool" (Q9) that pertain to business, technology, or sports, while female students might be more familiar with terms like "version B, Q4 ("profile"), version C, Q3 ("access"), and version C, Q8 ("solution") that pertain to social media, communication, or problem-solving. This variation in exposure might explain the gender discrepancies in particular items. Such an explanation is consistent with research on gendered experiences in language learning and vocabulary acquisition. For instance, studies have shown that female EFL students are more attuned to language pertaining to communication, media, and problem-solving (Arianti et al. 2022; Alhaysoni, 2017; Riyantika et al. 2024; Sihombing et al. 2024), in contrast to male students' familiarity with technical words connected to, for example, business and technology (Alsowat, 2022; Aye & Bartan, 2012; Al-Shibel, 2021). Males and females may experience various kinds of language usage on a daily basis, and the disparity in exposure would reflect the gendered distinctions in socialization.

Continued from this point, gendered exposure to particular words could impact students' familiarity with, as well as their use of, words, meaning that the participating male and female students could require different cognitive strategies when acquiring and using new vocabulary. For example, the male students demonstrated stronger performance on objective or technical terms like "press" (Q2 of version A) and "fast" (Q7 of version A), which are associated with action-oriented or practical tasks that may align more closely with male cognitive processing preferences. In contrast, the females scored higher on questions requiring nuanced or contextual understanding, such as "profile" (Q4 of version B) and "solution" (Q8 of version C), indicating a pattern of utilizing integrated and contextual strategies, especially in domains relating to social or abstract ideas. The connection between gender differences in vocabulary performance and the strategies used for acquisition and application has been noted in recent research. For instance, studies suggest that males often depend on rote memorization or straightforward word recognition (Sihombing et al., 2024; Arianti et al., 2022; Montero-SaizAja, 2021), while females tend to adopt analytical strategies, such as interpreting word meaning based on context or its relation to other words (Sihombing et al., 2024; Arianti et al., 2022; Montero-SaizAja, 2021). These observed differences, in the current study, emphasize the complexities of language learning and vocabulary acquisition, indicating that different exposure and learning experiences lead to differences in vocabulary knowledge, even within the framework of a single test.

7. Conclusion

The present study sheds light on the relationship between gender and receptive vocabulary performance in an EFL context. The lack of substantial disparities in performance on 30 vocabulary questions indicates that when educational resources and experience are similarly shared, male and female students exhibit comparable levels of vocabulary knowledge. These findings highlight the importance of making educational content more accessible for all in order to address the vocabulary knowledge disparities. On the other hand, the notable gender disparities observed in 10 vocabulary questions suggest that gendered exposure and cognitive

strategies are important considerations for understanding vocabulary development. These findings underscore the role of socialization and context in vocabulary knowledge, as differences in prior experiences may lead to differences in familiarity and performance.

An implication for language instruction and assessment is that educators should take context and exposure into account when developing curricular designs, making sure their students are exposed to a diverse range of vocabularies. In addition, inclusion of exercises that utilize different cognitive skills, such as critical thinking and contextual applications, might enhance our understanding in terms of the assumed gender differences in processing deficits and learning techniques. Furthermore, investigating the impact of diverse pedagogical methods and implementing focused interventions to address gender disparities in vocabulary proficiency may provide effective strategies for improving language learning outcomes. Incorporating varied populations and using more complex task designs would augment our comprehension of the interaction between gender, exposure, and cognitive processes in vocabulary acquisition.

References

Al-Bidawi, S. A. (2018). Vocabulary learning strategies (VLSs) preferred by Saudi EFL students. *English Language Teaching, 11*(12), 211–220.

Alharthi, M. (2024). Gender differences in English writing among Saudi EFL diploma students. *Journal of the Faculty of Education in Zagazig, 39*(139), 469–495.

Alhaysoni, M. (2017). Language learning strategies use by Saudi EFL students: The effect of duration of English language study and gender. *Theory and Practice in Language Studies, 7*(1), 18–28.

Al-Harbi, J., & Ibrahim, E. H. (2018). Vocabulary learning strategies of Saudi English major students: Strategy use and gender. *International Journal of Engineering & Technology, 7*(3), 21–26.

Almusharraf, N., & Alotaibi, H. (2021). Gender-based EFL writing error analysis using human and computer-aided approaches. *Educational Measurement: Issues and Practice, 40*(2), 1–12.

Alqarni, I. R. (2019). Receptive vocabulary size of male and female Saudi English major graduates. *International Journal of English Linguistics, 9*(1), 111–119.

Al-Seghayer, K. (2023). The newfound status of English in 21st-century Saudi Arabia. *International Journal of Linguistics, 15*(4), 82–103.

Al-Shibel, A. G. (2021). Gender differences in classroom interactions and preferences. *Journal of Language and Linguistic Studies, 17*(Special Issue 1), 534–552.

Al-Sowat, H. H. (2022). The mediating roles of gender and academic field in the relationship between vocabulary knowledge and reading comprehension of EFL students. *Universal Journal of Educational Research, 10*(2), 146–159. https://doi.org/10.13189/ujer.2022.100204

Alonso, A. (2013). Receptive vocabulary size of secondary Spanish EFL learners. *Revista de Lingüística y Lenguas Aplicadas,* 8(2), 1-13. https://doi.org/10.4995/rlyla.2013.1180

Al-Wossabi, S. A. N. (2024). College English teaching in Saudi Arabia: Challenges and solutions. *World Journal of English Language, 14*(1), 535–544. https://doi.org/10.5430/wjel.v14n1p535

Arianti, W., Hamid, R., & Arianti, S. (2022). Male and female students' learning strategies in mastering English vocabulary. *English Language Teaching Methodology, 2*(2), 131–143.

Akhrib, M., & Nedjai, F. (2021). The effects of situational and perceived interest on EFL reading comprehension: A gender-based study at the University of Algiers 2. *Arab World English Journal, 12*(1), 480–497. https://dx.doi.org/10.24093/awej/vol12no1.31

Aye, S., & Bartan, Ö. (2012). The effect of topic interest and gender on reading test types in a second language. *The Reading Matrix, 12*(1), 1–12.

Csaba, Z., Szabo, U., Stickler, L., & Adinolfi, A. (2021). Predicting the academic achievement of multilingual students of English through vocabulary testing. *International Journal of Bilingual Education and Bilingualism, 24*(10), 1531–1542.

Duy, V. V., & Nguyen, C. N. (2019). An assessment of vocabulary knowledge of Vietnamese EFL learners. In *Proceedings of the 20th English in Southeast Asia (ESEA) Conference*, National Institute of Education—Nanyang Technological University https://kuleuven.limo.libis.be/discovery/fulldisplay?docid=lirias2894740&context=SearchWebhook&vid=32KUL_KUL:Lirias&lang=en&search_scope=lirias_profile&adaptor=SearchWebhook&tab=LIRIAS&query=any,contains,LIRIAS2894740&offset=0%3Flim

Ellis, R. (2021). *Understanding second language acquisition* (2nd ed.). Oxford University Press.

Folse, J. D. (2023). *Academic word lists*. University of Michigan Press.

Fontecha, F. (2014). Motivation and gender-related variation in EFL vocabulary acquisition in primary education. *ES. Revista de Filología Inglesa, 35*, 89–112.

Hadi, A. (2017). Significance of vocabulary in achieving efficient learning. *American Scientific Research Journal for Engineering, Technology, and Sciences, 29*(1), 271–285.

Kavanoz, S., & Varol, B. (2019). Measuring receptive vocabulary knowledge of young learners of English. *Porta Linguarum, 32*, 7–22.

Llach, M. P., & Gallego, M. (2012). Vocabulary knowledge development and gender differences in a second language. *Estudios de Lingüística Inglesa Aplicada, 12*, 45–75.

Lessard-Clouston, M. (2021). *Teaching vocabulary* (rev.). Cambridge University Press.

Masoumi, G., & Sadeghi, K. (2020). Impact of test format on vocabulary test performance of EFL learners: The role of gender. *Language Testing in Asia, 10*(2). https://doi.org/10.1186/s40468-020-00099-x

Milton, J., & Hopwood, J. (2023). *Vocabulary in the foreign language curriculum*. Routledge.

Montero-Saiz, A. (2021). Gender-based differences in EFL learners' language learning strategies and productive vocabulary. *Theory and Practice of Second Language Acquisition, 7*(2), 83–107.

Nation, I. S. P. (2022). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press.

Nation, P., & Bleger, B. (2007). *Vocabulary and language teaching*. Cambridge University Press.

Okyar, H. (2018). Vocabulary learning strategies of Turkish EFL learners: A focus on gender. *Journal of English Teaching, 7*(1), 43–54.

Ridha, M., Sinar, T. S., & Zein, T. T. (2024). Gender-based differences in EFL writing: Linguistic features in Indonesian high school students' narratives. *ELSYA: Journal of English Language Studies, 6*(3), 278–294. https://doi.org/10.31849/elsya.v6i3.22528

Riyantika, H., Hanafi, A., & Aini, S. (2024). Vocabulary learning strategies in learning new words for EFL learners based on gender differences. *Jurnal Penelitian Teknologi Informasi dan Sains, 2*(3), 1–9.

Salem, A. A. (2019). A Sage on a Stage, to Express and Impress: TED Talks for improving oral presentation skills, vocabulary retention, and its impact on reducing speaking anxiety in ESP settings. *English Language Teaching, 12*(6), 146–160.

Sihombing, S., Astiantih, S., & Karimuddin. (2024). Gender-based differences in vocabulary learning strategies among English department students at a state university in Indonesia. *MASIKOLA: Journal of Pedagogy, Andragogy, and Heutagogy in Language Learning, 1*(1), 1–20. https://journal.usn.ac.id/index.php/MASIKOLA/article/view/66

Sotoudehnama, E., & Asadian, M. (2011). Effect of gender-oriented content familiarity and test type on reading comprehension. *The Journal of Teaching Language Skills, 3*(2), 155–178. https://doi.org/10.22099/JTLS.2012.388

Sturm, B. W. (2003). The information and reading preferences of North Carolina children. Retrieved January 28, 2025, from http://www.ala.org/ala/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume62003/readingpreferences.htm

Thornbury, S. (2002). *How to teach vocabulary*. Longman.

Appendix A: The 40 vocabulary questions from versions A, B, C and D

Version A

Choose the correct answer: a), b), c), or d):

1. The Managing Director works in the _____
a) head office
b) factory
c) sales office
d) R & D center

2. _____ the red button to stop the printer.
a) Log in
b) Press
c) Work
d) Take

3. _____ means: to make something smaller in size or quality.
a) Attach
b) Sign
c) Upload
d) Reduce

4. A _____ means: a group or system of connected things.
a) network
b) profile
c) picture
d) comment

5. _____ means: to say good things about something to help sell it.
a) Organize
b) Check
c) Promote
d) Develop

6. Ahmad is kind and helpful. He is _____.
a) careful
b) friendly
c) energetic
d) practical

7. DHL is a _____ delivery company. It delivers in 24 hours.
a) fast
b) slow
c) local
d) bad

8. Do you _____ with colleagues or alone?
a) make
b) develop
c) work
d) find

9. I like to swim in the _____
a) pool
b) bank account
c) internet access
d) breakfast

10. I take _____ if I want to relax.
a) some time off
b) a department store
c) an annual conference
d) tight schedules

Appendix A: The 40 vocabulary questions from versions A, B, C and D

Version B

Choose the correct answer: a), b), c), or d):

1. An IT technician can _____ the computer to the projector.
a) post
b) connect
c) print
d) download

2. Log in with your username and _____.
a) password
b) screen
c) button
d) account

3. _____ means: to add a document to an email.
a) Attach
b) Sign
c) Upload
d) Reduce

4. A _____ means: a description of a person or an organization.
a) network
b) profile
c) picture
d) comment

5. _____ means: to communicate with someone.
a) Develop
b) Check
c) Contact
d) Promote

6. She is kind and helpful. She is _____.
a) practical.
b) friendly.
c) imaginative.
d) experienced

7. _____ hotels offer very low prices.
a) Budget
b) Expensive
c) Mid-range
d) Five-star

8. Do you _____ with colleagues or alone?
a) make
b) develop
c) work
d) find

9. We _____ meetings with the manager every week.
a) attend
b) solve
c) make
d) contact

10. The word _____ means: a final date.
a) solution
b) problem
c) deadline
d) decision

Appendix A: The 40 vocabulary questions from versions A, B, C and D

Version C

Choose the correct answer: a), b), c), or d):

1. An IT technician can _____ the computer to the projector.
a) post
b) connect
c) print
d) download

2. We make our products in the _____.
a) research and development center
b) sales office
c) factory
d) distribution center

3. You need to _____ the internet to log in.
a) access
b) send
c) select
d) charge

4. You need to send your _____ to apply for a job.
a) contract
b) invoice
c) receipt
d) CV

5. You must _____ the order and confirm that all items are correct.
a) support
b) check
c) develop
d) employ

6. There were no mistakes in her report because she was very _____ .
a) careful
b) imaginative
c) friendly
d) wide

7. Five-star hotels such as Sofitel are very ____ .
a) fast
b) cheap
c) expensive
d) mid-range

8. Maha can find a _____ for every problem!
a) project
b) promotion
c) meeting
d) solution

9. The word _____ means: a final date.
a) solution
b) problem
c) deadline
d) decision

10. I need _____ to relax.
a) some time off
b) a department store
c) an annual conference
d) tight schedules

Appendix A: The 40 vocabulary questions from versions A, B, C and D

Version D

Choose the correct answer: a), b), c), or d):

1. In the _____, we design new products.
a) factory
b) head office
c) distribution center
d) research and development center

2. Log into your account with your ___and ___.
a) text message / battery.
b) username / password
c) button / link
d) app / money

3. _____ means: to make something smaller in size or quantity.
a) Attach
b) Print
c) Reduce
d) Sign

4. _____ means: to make a note giving your opinion on something.
a) Build
b) Comment
c) Join
d) Follow

5. We want to _____ our company and make it bigger and more successful.
a) produce
b) attach
c) develop
d) deliver

6. Jennifer has new and exciting ideas. She is _____.
a) careful
b) friendly
c) patient
d) imaginative

7. We use a/an _____ technology to build our systems.
a) patient
b) experienced
c) up-to-date
d) energetic

8. We _____ meetings with the manager every week.
a) attend
b) solve
c) make
d) contact

9. I would like to _____ a room for the night.
a) attend
b) book
c) print
d) reduce

10. The word _____ means: a final date.
a) solution
b) problem
c) deadline
d) decision

Appendix B

Table 1. Comparison of Male and Female Performance on Tests A1-A10

Test	Male (N=113)		Female (N=118)		t-test	P-value
	Mean	SD	Mean	SD		
A1	0.619	0.488	0.559	0.499	0.926	0.355
A2	0.549	0.500	0.407	0.493	2.171	**0.031***
A3	0.478	0.502	0.381	0.488	1.482	0.140
A4	0.513	0.502	0.398	0.492	1.758	0.080
A5	0.398	0.492	0.390	0.490	0.130	0.897
A6	0.575	0.497	0.610	0.490	-0.538	0.591
A7	0.566	0.498	0.424	0.496	2.181	**0.030***
A8	0.522	0.502	0.508	0.502	0.207	0.836
A9	0.513	0.502	0.356	0.481	2.431	**0.016***
A10	0.442	0.499	0.407	0.493	0.547	0.585

Table 2. Comparison of Male and Female Performance on Tests B1-B10

Test	Male (N=113)		Female (N=118)		t-test	P-value
	Mean	SD	Mean	SD		
B1	0.611	0.490	0.593	0.493	0.269	0.788
B2	0.549	0.500	0.593	0.493	-0.682	0.496
B3	0.407	0.493	0.466	0.501	-0.902	0.368
B4	0.460	0.501	0.610	0.490	-2.302	**0.022***
B5	0.531	0.501	0.517	0.502	0.212	0.832
B6	0.611	0.490	0.602	0.492	0.138	0.890
B7	0.398	0.492	0.373	0.486	0.394	0.694
B8	0.487	0.502	0.542	0.500	-0.844	0.400
B9	0.212	0.411	0.305	0.462	-1.612	0.108
B10	0.381	0.488	0.364	0.483	0.252	0.801

Appendix B:

Table 3. Comparison of Male and Female Performance on Tests C1-C10

Test	Male (N=95)		Female (N=108)		t-test	P-value
	Mean	SD	Mean	SD		
C1	0.389	0.490	0.500	0.502	-1.584	0.115
C2	0.379	0.488	0.602	0.492	-3.235	**0.001****
C3	0.232	0.424	0.546	0.500	-4.851	**0.000****
C4	0.505	0.503	0.565	0.498	-0.846	0.398
C5	0.474	0.502	0.602	0.492	-1.835	0.068
C6	0.505	0.503	0.444	0.499	0.863	0.389
C7	0.421	0.496	0.472	0.502	-0.729	0.467
C8	0.442	0.499	0.593	0.494	-2.156	**0.032***
C9	0.537	0.501	0.593	0.494	-0.797	0.426
C10	0.453	0.500	0.417	0.495	0.514	0.608

Table 4. Comparison of Male and Female Performance on Tests D1-D10

Test	Male (N=97)		Female (N=116)		t-test	P-value
	Mean	SD	Mean	SD		
D1	0.402	0.493	0.560	0.498	-2.320	**0.021***
D2	0.474	0.502	0.509	0.502	-0.498	0.619
D3	0.485	0.502	0.560	0.498	-1.101	0.272
D4	0.485	0.502	0.578	0.496	-1.355	0.177
D5	0.330	0.473	0.440	0.498	-1.646	0.101
D6	0.619	0.488	0.595	0.493	0.351	0.726
D7	0.216	0.414	0.397	0.491	-2.903	**0.004****
D8	0.433	0.498	0.552	0.499	-1.730	0.085
D9	0.227	0.421	0.388	0.489	-2.583	**0.010***
D10	0.588	0.495	0.569	0.497	0.273	0.785

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