

Research Article

**Gender Disparities in the Influence of vocabulary size on Reading Comprehension among Iranian male and female EFL Learners**

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**Abstract**

Acquiring a new language necessitates adeptness in mastering its lexicon. Language learners must possess a broad lexicon to decipher texts in their target language effectively. Reading comprehension reigns supreme among the array of skills imperative for foreign language learners, influenced by myriad factors, including vocabulary breadth. This study endeavors to scrutinize the impact of vocabulary breadth on the reading comprehension of Iranian male and female learners of English as a Foreign Language (EFL). Engaging 80 EFL learners at the intermediate level, the study employed the Vocabulary Levels Test (Nation, 1990) to gauge learners' lexical proficiency and the Reading Comprehension Test (TOEFL version, 2004) to assess their reading acumen. Utilizing a Two-way ANOVA for the data analysis, the findings underscored the substantial positive influence of expansive lexicon on reading comprehension. Notably, gender differentials in reading comprehension were not discerned among the participants. These findings carry implications for language pedagogy, assessment practices, educator preparation, and curriculum development.

**Keywords:** vocabulary size, reading comprehension, male, female, EFL learners

**Introduction**

Lexical comprehension stands as the building block of linguistic competence, recognized by scholars and educators alike as a fundamental cornerstone of second language attainment (Yuksel, 2010). The importance of vocabulary knowledge extends beyond mere word recognition; it encompasses the ability to comprehend and effectively utilize language in

various contexts. Proficiency in lexical grasp is deemed indispensable for effectively utilizing a secondary language, necessitating learners to cultivate expansive lexicons and aspire to ambitious vocabulary acquisition targets (Schmitt, 2008). The importance of lexical resources in language learning for three decades has been discussed (Ellis, 1994; Gass, 1995; Nation, 2000). The knowledge of the lexicon is perceived as an essential requirement for comprehending a second or foreign language (Swan & Walter, 2017). Due to this significant role of lexicon, various strategies for learning vocabulary have been suggested accordingly.

Within the framework of linguistic acquisition, vocabulary assumes paramount significance, serving as the primary conduit of semantic expression (Ghaedi & Shahrokhi, 2016). Harmon et al. (2009) underscore the imperative of learners' lexical expansion for their overall linguistic adeptness. In the domains of English as a second language (ESL) and English as a foreign language (EFL) instruction, vocabulary acquisition assumes a central role across all linguistic modalities, encompassing listening, speaking, reading, and writing proficiencies (Nation, 2011). Vocabulary is one of the fundamental components of language competency and serves as the cornerstone for effective communication in both receptive and productive skills (Schmitt, 2020). Robust vocabulary skills can infer the meanings of new words through reading more effectively than those with limited vocabulary knowledge (Cunningham & Stanovich, 1998).

Schmitt (2008) accentuates the need for learners to cultivate substantial lexicons to effectively engage with a secondary language, advocating for establishing and pursuing rigorous vocabulary acquisition goals. Regarding frequency-based lexical acquisition, it is widely posited that both native and non-native language learners acquire vocabulary following its prevalence and dispersion (Nation, 2006). Namely, acquiring and mastering vocabulary facilitates linguistic communication and contributes significantly to cognitive development and academic achievement (Vermeer, 2001). Research indicates that a rich vocabulary enhances learners' ability to comprehend complex texts, infer meanings from context, and express themselves precisely and clearly (Anderson & Freebody, 1981). Furthermore, vocabulary proficiency is closely linked to overall language proficiency and academic success across various disciplines (Graves, 2006).

In addition to its impact on language skills, vocabulary knowledge plays a crucial role in intercultural communication and social integration (Chen & Masgoret, 2018). Proficiency in the vocabulary of a second language allows individuals to navigate diverse linguistic and cultural contexts, fostering cross-cultural understanding and cooperation (Gass & Selinker, 2008). Therefore, effective communication in English requires understanding macro-skills—listening, speaking, reading, and writing—and micro-skills such as grammar and vocabulary (Nation, 2011). Given the multifaceted significance of vocabulary acquisition, educators must adopt comprehensive and practical instructional approaches to support learners in developing robust lexical repertoires. This involves employing diverse teaching strategies such as explicit vocabulary instruction, contextualized learning activities, and extensive reading programs (Nation, 2013). Furthermore, fostering an environment that encourages regular vocabulary practice and engagement with authentic language materials can enhance learners' motivation and autonomy in vocabulary learning (Cameron, 2001). As Schmitt (2000) notes, vocabulary knowledge significantly impacts communication effectiveness.

Overall, the profound importance of vocabulary acquisition transcends mere linguistic competence, encompassing cognitive, academic, intercultural, and social dimensions. By prioritizing vocabulary instruction and implementing effective pedagogical practices, educators can empower learners to achieve lexical proficiency and succeed in their language learning endeavors. Similarly, Chen and Zhang (2023) highlighted the significant impact of vocabulary knowledge on English reading comprehension. They examined the effect of vocabulary depth knowledge on reading comprehension among learners with higher and lower proficiency levels. Likewise, Kremmel et al. (2023) found a robust link between vocabulary knowledge and performance on reading comprehension. Fraser et al. (2021) investigated the interaction between vocabulary knowledge and how this knowledge can enhance reading comprehension. Herman and Leeser (2022) examined the relationship between lexical coverage, or the percentage of words that can be recognized, and their effect on different types of reading comprehension in Spanish learners.

However, in the Iranian context, many students face reading comprehension challenges, hindering their academic success. Vocabulary size is one of the significant factors that play a vital role in reading comprehension; however, the specific impact of vocabulary on reading proficiency among Iranian EFL learners remains underexplored. Moreover, gender differences may influence reading comprehension within this context, yet this concept has not been explored in the Iranian context. To fill this gap, this study aims to investigate the impact of vocabulary size on reading comprehension skills and to find the relationship between gender and reading comprehension. Finally, the interaction effect of these two variables will be examined separately. By doing so, the following research questions are formulated to identify influential learning strategies in the Iranian context.

RQ1: Does the vocabulary size impact the reading comprehension abilities of Iranian EFL learners?

RQ2: What is the relationship between gender and reading comprehension proficiency among Iranian intermediate EFL learners?

RQ3: Do vocabulary size and gender interact to influence the reading comprehension of Iranian intermediate EFL learners?

## **Method**

### **Participants**

The study initially recruited 80 language learners enrolled in English language courses at the English Language Institute in Tabriz. These participants were drawn from four distinct classes, ensuring a diverse representation of learners. Among these, 30 were identified as male students, while the remaining 50 were female, offering a relatively balanced gender distribution within the sample. They study intermediate-level English, reflecting a stage where learners have acquired foundational language skills but still develop proficiency in more complex linguistic tasks. They sat the exam and were assessed after each term; hence, their level was obvious. All participants volunteered to participate in the study, demonstrating their willingness to contribute to the research objectives. They were provided with information regarding the nature and purpose of the study two weeks before the administration of the tests, allowing them ample time to prepare and understand the expectations. Furthermore, the

average age of the participants was around 20 years old, indicating a relatively young cohort of learners. The participants were divided into two groups based on high and low vocabulary knowledge. The low group scored below 15 on the vocabulary size test, which had limited vocabulary knowledge. On the other hand, the group that received higher than 15 had a higher level of vocabulary knowledge.

### **Instruments**

Two assessment tools were employed to gauge the variables under investigation in this study:

***Vocabulary Levels Test (VLT)***: The VLT, initially developed by Nation (1990), was used to evaluate the participants' vocabulary size. Renowned for its reliability and precision, scholars and researchers widely endorse it as a premier instrument for quantifying vocabulary levels (Webb et al., 2017). In this study, the 1000-word level version of the test was administered to assess the learners' fundamental lexical knowledge. This assessment comprises five segments, each tailored to assess varying degrees of lexical knowledge. Within each segment, participants encounter six items, with each item featuring six words accompanied by three corresponding definitions. This meticulous design comprehensively evaluates participants' vocabulary proficiency across different levels, providing valuable insights into their lexical breadth and depth.

***Reading Comprehension Test (RCT)***: The TOEFL reading comprehension segment was administered to measure the participants' second-language reading competence and lasted 1.5 hours for Level 2 (for high beginning to intermediate level learners). The selection of this assessment was grounded in its established trustworthiness, validity, and authenticity in appraising reading comprehension proficiency. Each score range is divided into four or five proficiency levels to assess a test taker's skill more accurately. With its rigorous standards and widespread recognition in language assessment, the TOEFL reading comprehension test provides a reliable means of evaluating participants' ability to comprehend and analyze written texts in English as a second language.

### **Procedure**

In addition to the procedures outlined above, participants were given a brief orientation session before the testing session. This orientation aimed to familiarize them with the testing environment and procedures. During this

session, participants were provided with information about the study's significance, the voluntary nature of their participation, and their rights as research subjects, including confidentiality and anonymity. This step ensured the participants were well-informed and comfortable before proceeding with the assessments. Furthermore, to enhance the reliability and validity of the collected data, stringent quality control measures were enforced during the testing process. This encompassed vigilant monitoring of the testing environment to mitigate distractions and guarantee ideal conditions for test administration. Any unexpected disturbances were promptly managed to uphold the integrity of the data. These meticulous measures were essential to ensure the accuracy and trustworthiness of the research outcomes.

Furthermore, to bolster the ecological validity of the study, the reading comprehension passages utilized in the TOEFL test were carefully chosen to mirror authentic, real-life reading situations that participants might encounter in academic or professional domains. This strategy was intended to evaluate participants' reading comprehension skills within contexts closely resembling those they would encounter beyond the confines of the classroom. By incorporating real-world scenarios into the assessment, the study aimed to provide a more accurate depiction of participants' reading comprehension abilities in practical settings. Moreover, adequate breaks were provided between the administration of the Vocabulary Levels Tests and the Reading Comprehension Test to mitigate the potential impact of test anxiety or fatigue on participants' performance. Participants were encouraged to take short breaks to rest and refresh themselves before proceeding to the next test section. These supplementary measures, i.e., break time to reduce fatigue and test anxiety, were implemented to optimize the data's quality and reliability and ensure participants felt supported and comfortable throughout the testing process.

### **Data analysis**

Using SPSS 22, the researcher conducted various statistical analyses to address three research questions: descriptive statistics and a two-way Analysis of Variance (ANOVA). An independent samples t-test was run to examine the difference in reading comprehension between the two groups at the 5% significance level. Two-way ANOVA was run to examine the main and interaction effects between gender and vocabulary size

accordingly. These methods provided robust evidence to answer the research questions while controlling for potential confounding variables.

### Results

The study aimed to investigate the impact of vocabulary size on the reading comprehension abilities of intermediate-level EFL learners in English Language Institution in Ardabil. The study compared the reading comprehension performance of participants characterized by low and high vocabulary sizes. This examination allowed for a nuanced understanding of how varying levels of vocabulary proficiency can influence reading comprehension outcomes among Iranian EFL learners.

The comparison of mean scores between the low and high vocabulary groups revealed a significant difference. Specifically, participants with high vocabulary scores demonstrated a mean reading comprehension score of 2.85 points higher than those with low vocabulary scores (Table 1). This indicates a statistically significant difference in reading comprehension between the two groups at the 5% significance level. These findings underscore the crucial link between vocabulary mastery and reading comprehension proficiency among Iranian intermediate EFL learners, shedding light on the intricate relationship between lexical knowledge and comprehension abilities.

**Table 1**

*Comparison of the two groups of Low and High in terms of comprehension*

Dependent Variable: Reading Comprehension						
(I) Voc	(J) Voc	Mean Differ ence (I-J)	Std. Err or	Sig .b	95% Confidence Interval for Difference <sup>b</sup>	
					Lower Bound	Upper Bound
<b>Low (≤15)</b>	<b>High (&gt;15)</b>	-2.850*	.274	.000	-3.396	-2.304

\*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

The second research question was designed to examine the impact of gender on reading comprehension proficiency among Iranian intermediate EFL learners. This inquiry sought to elucidate any potential influence of gender on participants' reading comprehension abilities. The outcomes of the assessments were meticulously scrutinized to discern any discernible patterns or correlations between gender and reading comprehension performance.

The data presented in Table 2 reveal that the mean reading comprehension score for the male group was 16.5, while for the female group, it was 16. Despite this slight difference, statistical analysis revealed no significant difference between the groups at the 5% confidence level.

**Table 2**

*Average, standard deviation and confidence limits 95% comprehension for males and females*

Dependent Variable: Reading Comprehension				
GENDER	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Males	16.500	.194	16.114	16.886
Females	16.000	.194	15.614	16.386

The third research question investigated the interaction effects of vocabulary size and gender on reading comprehension. Utilizing a two-way ANOVA, the researcher sought to scrutinize how these variables interacted and whether any combined effects influenced the participants' reading comprehension abilities. Based on the data in Table 3, the gender effect does not reach statistical significance at the 5% confidence level ( $P = 0.072$ ). With a significance level of 0.072, which exceeds the conventional threshold of 0.05, it can be inferred that gender does not significantly influence vocabulary comprehension. Therefore, gender did not have any significant effect on reading comprehension.

**Table 3**

*Comparison of the average comprehension for males and females*



Dependent Variable: Reading Comprehension						
(I) GEND ER	(J) GEND ER	Mean Differen ce (I-J)	Std. Err or	Sig. <sup>a</sup>	95% Interval for Lower Bound	Confidence Difference <sup>a</sup> Upper Bound
Males	Females	.500	.274	.072	-.046	1.046

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

As illustrated in Table 4, the results highlight a significant impact of vocabulary size on reading comprehension, with statistical significance observed at a 5% confidence level. The ANOVA analysis indicated a statistically significant effect for Vocabulary size ( $F = 108.016$ ,  $p = .000$ ,  $p < .05$ , Effect size = 0.587). Furthermore, the ANOVA outcomes revealed no statistically significant effect for gender ( $F = 3.325$ ,  $p = 0.072$ ,  $p > .05$ , Effect size = 0.042). This result showed a significant main effect of vocabulary size on reading comprehension, highlighting that vocabulary knowledge significantly impacts reading comprehension.

As mentioned in the third research question, the study also checked the interaction effect of gender vocabulary size, revealing no significant results at the 5% confidence level ( $F = 0.831$ ,  $P = 0.365$ ). Namely, the findings found no significant interaction effects between males and females, which indicates that gender differences can be neglected.

**Table 4**

*Two-way variance analysis table for content comprehension variable*

Dependent Variable: Reading Comprehension

Source	Type III Sum of Squares	df	Mean Square	F	Sig. .	Parti al Eta Squa red
Corrected Model	168.7	3	56.233	37.390	0.000	0.596

Intercept	21125	1	21125	140 46.3 69	0.0 00	0.99 5
Vocabulary size	162.45	1	162.45 0	108. 016	0.0 00	0.58 7
Gender	5	1	5.000	3.32 5	0.0 72	0.04 2
gender * vocabulary size	1.25	1	1.250	0.83 1	0.3 65	0.01 1
Error	114.30	76	1.504			
Total	21408	80				
Corrected Total	283	79				

a. R Squared = .596 (Adjusted R Squared = .580)

As shown in Table 5, further examination of means for different genders and vocabulary levels showed that high-vocabulary females ( $M = 17.55$ ) performed significantly better than their low-vocabulary group. Interestingly, the difference between the high and low vocabulary groups was not significantly different across genders, which can successfully reject any interaction effects across both genders.

**Table 5**

*Mean, standard deviation, and confidence limits 95% comprehension for four different groups*

Dependent Variable: Reading Comprehension					
Gender	Vocabulary	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound

Males	Low (<=15)	15.20 0	.27 4	14.654	15.746
	High (>15)	17.80 0	.27 4	17.254	18.346
Females	Low (<=15)	14.45 0	.27 4	13.904	14.996
	High (>15)	17.55 0	.27 4	17.004	18.096

### Discussion

The primary aim of this study was to examine the influence of vocabulary size on the reading comprehension abilities of Iranian male and female EFL learners. This research sought to achieve several objectives: first, to ascertain whether variations in vocabulary size impact learners' comprehension of reading materials; second, to establish a clear correlation between gender and reading comprehension skills; and third, to explore potential discrepancies in reading comprehension performance between male and female learners based on their respective vocabulary sizes.

The results of the initial research objective unveiled that vocabulary knowledge can significantly enhance reading comprehension. These results underscore the pivotal role vocabulary knowledge plays in shaping reading comprehension abilities, a finding echoed in prior studies such as those conducted by Chen and Zhang (2023), Kremmel et al. (2023), Fraser et al. (2021), and Herman and Leeser (2022). Moreover, extensive research in L2 reading has consistently demonstrated the significant impact of vocabulary knowledge on reading comprehension outcomes (Eskey, 2005; Qian, 2002; Schmitt, 2000; Stahl, 2003). Notably, Chen and Zhang's (2008) study highlighted the close interplay between vocabulary knowledge and English reading comprehension. Similarly, Kremmel et al. (2023) emphasized the link between vocabulary knowledge and performance on reading comprehension.

This investigation resonates with the conclusions drawn in prior investigations by Fraser et al. (2021), Herman and Leeser (2022), and Golkar (2007), all of which highlighted substantial correlations between vocabulary knowledge and reading comprehension abilities within EFL and ESL contexts. This consistency across studies emphasizes the fundamental

role of vocabulary acquisition in fostering practical reading skills among language learners. Furthermore, these results underscore the need for targeted vocabulary instruction strategies and interventions to enhance learners' lexical repertoire to bolster their reading comprehension performance. In agreement with this study, their findings highlight the need for educators to prioritize vocabulary instruction alongside reading comprehension activities, as enhancing students' lexical knowledge can significantly contribute to their reading comprehension abilities.

Investigating the interaction between vocabulary knowledge and how this knowledge can improve reading comprehension, Fraser et al. (2021) found that knowledge of lexicon and grammar can significantly enhance reading comprehension. Examining the relationship between lexical and content knowledge percentage and reading comprehension, Herman and Leoser (2022) found that low lexical knowledge can significantly hinder understanding, underpinning the key role of lexical repertoire in early L2 reading development. Similarly, this study highlights the importance of vocabulary acquisition as a foundational skill in developing reading comprehension proficiency in English as a foreign language. They suggest that learners with larger vocabularies are better equipped to comprehend written texts, as they possess a broader range of words to draw upon when interpreting and understanding the content.

Furthermore, the findings align with theoretical frameworks such as the lexical quality hypothesis, which posits that vocabulary knowledge is a key determinant of reading comprehension success. According to this hypothesis, lexical quality, which encompasses factors such as vocabulary breadth and depth, influences the efficiency and effectiveness of reading processes. Therefore, interventions to improve reading comprehension should include targeted vocabulary instruction to enhance learners' lexical proficiency. In this vein, numerous studies support the quality of lexical quality and, accordingly, the current study's findings regarding the relationship between vocabulary size and reading comprehension. In an international context, Kameli and Baki (2013) delved into the impact of varying levels of vocabulary knowledge on EFL reading among Iranian students, concluding that a positive relationship exists between vocabulary proficiency and successful reading comprehension. Similarly, Anjomshoa and Zamanian (2014) shed light on the benefits of raising students'

awareness of their vocabulary knowledge, noting its profound impact on enhancing their understanding of reading comprehension texts and overall reading ability. Additionally, Baleghizadeh and Golbin (2010) explored the effect of vocabulary size on the reading comprehension ability of Iranian EFL learners, revealing a significant correlation between vocabulary size and reading comprehension.

Further reinforcing these findings, Ghazanfar and Farvardin (2015) identified a significant relationship between reading comprehension, vocabulary size, and measures of phonological memory across different proficiency levels. This evidence supports the notion that vocabulary knowledge serves as a crucial factor in successful L2 reading, as suggested by previous studies such as those conducted by Shiotsu and Weir (2007) and Stahl (2003). Additionally, research by Sidek and Rahim (2015), Chou (2011), and Al-Damiree and Bataineh (2016) demonstrated the positive effects of vocabulary knowledge on EFL reading comprehension tests, highlighting the importance of students' vocabulary proficiency. Moreover, local studies by Mehrpour et al. (2011) and Hamzehlu et al. (2012) echoed these sentiments by revealing the significant role of vocabulary knowledge in reading comprehension exams and its positive correlation with reading comprehension performance. These studies provide further evidence of the critical link between vocabulary size and reading comprehension among Iranian EFL learners, emphasizing the need for targeted vocabulary instruction to enhance reading proficiency.

Further bolstering these findings, Ghazanfar and Farvardin (2015) unearthed a notable relationship between reading comprehension, vocabulary size, and PM measures across different proficiency levels. This evidence solidifies the notion that vocabulary knowledge is a pivotal factor in successful L2 reading, which aligns with the assertions made by previous studies such as those conducted by Shiotsu and Weir (2007) and Stahl (2003). Moreover, research by Sidek and Rahim (2015), Chou (2011), and Al-Damiree and Bataineh (2016) provided additional empirical evidence of the positive effects of vocabulary knowledge on EFL reading comprehension tests, underscoring the critical importance of students' vocabulary proficiency.

Expanding on these insights, the multifaceted nature of vocabulary learning and its implications for reading comprehension is worth noting.

Studies such as those by Nation (2001) emphasize the significance of extensive reading and incidental vocabulary learning in enhancing language proficiency. Furthermore, investigations into the role of vocabulary depth, semantic richness, and contextual understanding (e.g., Laufer & Hulstijn, 2001; Paribakht & Wesche, 1997) shed light on the intricate interplay between vocabulary knowledge and reading comprehension processes. In this line, a local study conducted by Mehrpour et al. (2011) and Hamzehlu et al. (2012) echoed these findings, emphasizing the significant role of vocabulary knowledge in reading comprehension exams and its positive correlation with reading comprehension performance.

The third research objective explored differences in reading comprehension between male and female learners influenced by vocabulary size. The results of the two-way analysis of variance (ANOVA) between the male and female groups indicated no statistically significant difference between the two groups. This finding aligns with previous studies such as those by Sotoudenama & Asadian (2011) and Güngör and Yaylı (2016), which found no significant difference in reading performance between male and female learners. Moreover, Asgarabadi et al. (2015) and Samadi and Aziz Mohammadi (2013) indicated no statistically significant difference between male and female students' reading comprehension abilities, suggesting that gender does not significantly impact general reading comprehension. Consequently, gender has no discernible impact on vocabulary and reading comprehension scores.

In this vein, this study is compatible with the research conducted by Abdorahimzadeh (2014) and Volkel et al. (2016), which found no substantial gender-based disparities in reading performance among learners. The insignificant interaction between gender and vocabulary suggests that the change in reading comprehension remains consistent across both male and female participants when transitioning from low to high vocabulary levels. These findings underscore the paramount importance of vocabulary acquisition in enhancing reading comprehension abilities, irrespective of gender differences among learners. Therefore, it can be concluded that instructional strategies to improve vocabulary and reading comprehension skills may not need to be tailored differently based

on gender, supporting the adoption of gender-neutral pedagogical approaches in EFL education.

However, it is important to note that some studies have produced contradictory results. For instance, AL-Shumaimeri (2005) found that male students outperformed their female counterparts in both tests. Furthermore, scholars like Alderson (2000) and Brantmeier (2004) have emphasized the importance of considering the reader's gender as a significant variable in determining reading comprehension. They caution test designers against biasing assessment tasks towards one gender. Similarly, the results of Pagal et al. (2017) revealed a statistical difference in reading comprehension skills between male and female students.

Moreover, studies by Salehi et al. (2014) and Abdorahimzadeh (2014) investigated the effects of gender on text comprehension, with Salehi et al. finding that females generally outperformed males in text comprehension. However, Abdorahimzadeh noted that test takers' gender did not affect their performance on a reading comprehension test. Ahmadi and Mansoordehghan (2012) explored gender-based differences in EFL reading comprehension in the Iranian context, finding that males were more successful in constructing meaning from non-textual content and performing on certain comprehension items. Shahmohammadi (2011) also observed that males scored significantly better on multiple-choice comprehension items. Zeynali (2012) investigated gender differences in language-learning strategies among Iranian learners and found a significant gender difference in the overall use of language-learning strategies.

While this study contributes valuable insights, it is essential to acknowledge that no single study can investigate all variables influencing L2 reading comprehension. That is, some studies have presented contradictory findings compared to the results of the current study. For instance, AL-Shumaimeri (2005) reported that male students outperformed their female counterparts in both tests, indicating a gender-based difference in reading comprehension performance. Similarly, scholars like Alderson (2000) and Brantmeier (2004) have highlighted the significance of the reader's gender as a determinant of reading comprehension, emphasizing the need for test designers to avoid biasing assessment tasks towards one gender.

Moreover, the results of Pagal et al. (2017) revealed a statistical difference in reading comprehension skills between male and female students, further suggesting gender-related disparities in reading performance. These contradictory findings may highlight the complexity of the relationship between reading comprehension and gender differences, underscoring the importance of considering various factors influencing comprehension abilities. On the other hand, Salehi et al. (2014) investigated the effects of gender and genre on text comprehension, finding that females exhibited better text comprehension overall. However, Abdorahimzadeh (2014) argued that test takers' gender did not influence their performance on a reading comprehension test, indicating a discrepancy in the impact of gender on comprehension across studies.

Additionally, Ahmadi and Mansoordehghan (2012) explored gender-based differences in EFL reading comprehension within the Iranian context. They found that males were more proficient in constructing meaning from non-textual content and performing on specific comprehension item types. Similarly, Shahmohammadi (2011) observed that males scored significantly better on multiple-choice comprehension items, suggesting potential gender-related differences in comprehension strategies or preferences. Furthermore, Zeynali (2012) investigated gender differences in language-learning strategies among Iranian learners, revealing a significant gender gap in the overall utilization of language-learning strategies. These findings indicate that gender can affect different aspects of the reading comprehension process, including comprehension strategies and text interpretation.

### **Conclusion**

The findings of the study underscore the integral role of vocabulary size in facilitating reading comprehension among EFL learners in the Iranian context. Acknowledging that no single research study can comprehensively investigate all variables affecting L2 reading comprehension is essential. Therefore, this study represents one step towards further research in this area, encouraging continued exploration and examination of the multifaceted factors influencing reading comprehension in second language learners. That is, despite the study's contribution to the field of EFL and reading comprehension and lexical knowledge, there are some limitations in this research, which need to be investigated in future studies.



First and foremost, this study is limited to intact groups at an institute in Tabriz, where non-random sampling is employed. Considering the limited group of participants, the small sample size, and the relatively unequal gender numbers in this study, it can be hard to generalize.

While this study focused on the impact of vocabulary size on reading comprehension and gender interaction, future research may consider duplicating this study among larger samples in different learning contexts, considering equal sample sizes regarding genders. In addition, only the effect of incidental vocabulary acquisition on reading comprehension can be considered. These findings contribute to a deep understanding of the complex dynamics in second language acquisition and underscore the importance of targeted vocabulary instruction and extensive reading practices in fostering language proficiency.

This study highlights the lexical affordances that facilitate reading comprehension and the role of gender regarding the probable interaction effect of gender on vocabulary size and reading comprehension. As such, it underscores the importance of creative vocabulary learning and encourages the use of effective supplementary materials in language education. The research will encourage teachers to actively include vocabulary teaching in their pedagogical approaches. Curriculum designers can practically incorporate in-reach lexical resources and content materials to educational objectives.

**Conflict of Interest:** None

### **References**

- Abdollahzadeh, S. (2014). Gender differences and EFL reading comprehension: Revisiting topic interest and test performance. *System*, 42, 70-80. <https://doi.org/10.1016/j.system.2013.11.004>
- Ahmadi, A., & Mansoordehghan, S. (2012). Comprehending a non-text: A study of gender-based differences in EFL reading comprehension. *Journal of Language Teaching and Research*, 3(4), 761-770. <https://doi.org/10.4304/jltr.3.4.761-770>
- Al-Damiree, R. R., & Bataineh, R. F. (2016). Vocabulary knowledge and syntactic awareness as potential catalysts for reading comprehension among young Jordanian EFL students. *Journal of Teaching and Teacher Education*, 4(1).

- Alderson, J. C. (2000). The nature of reading. In *Assessing reading* (pp. 1-20). Cambridge University Press.
- Al-Shumaimeri, Y. A. N. (2005). Gender differences in reading comprehension performance in relation to content familiarity of gender-neutral texts. *Paper presented at the Second International Conference: Language, Culture and Literature*, Minia University, Egypt. Retrieved from <http://www.faculty.ksu.edu.sa/Yousif/publications>
- Anjomshoa, L., & Zamanian, M. (2014). The effect of vocabulary knowledge on reading comprehension of Iranian EFL learners in Kerman Azad University. *International Journal on Studies in English Language and Literature (IJSELL)*, 2(5), 90-95. Retrieved from [www.arcjournals.org](http://www.arcjournals.org)
- Asgarabadi, Y., Rouhi, A., & Jafarigohar, M. (2015). Learner's gender, reading comprehension, and reading strategies in descriptive and narrative macro-genres. *Theory and Practice in Language Studies*, 5(12), 2558-2564. <https://doi.org/10.17507/tpls.0512.18>
- Anderson, R. C., & Freebody, P. (1981). Vocabulary knowledge. In J. T. Guthrie (Ed.), *Comprehension and teaching: Research reviews* (pp. 77-117). International Reading Association.
- Baleghizadeh, S., & Golbin, M. (2010). The effect of vocabulary size on reading comprehension of Iranian EFL learners. *LiBRI. Linguistic and Literary Broad Research and Innovation*, 1(2), 33-46.
- Brantmeier, C. (2004). Gender, violence-oriented passage content, and second language reading comprehension. *The Reading Matrix*, 4(2), 1-19.
- Cameron, L. (2001). *Teaching languages to young learners*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511733109>
- Gass, S. M., & Selinker, L. (2008). *Second language acquisition: An introductory course* (3rd ed.). Routledge. <https://doi.org/10.4324/9780203932841>
- Chen, X., & Masgoret, A. M. (2018). The importance of vocabulary in language learning and how to be taught. *Journal of International Students*, 8(1), 445-461. <https://doi.org/10.32674/jis.v8i1.71>
- Chen, T., & Zhang, D. (2023). Different aspects of vocabulary depth knowledge in L2 Chinese reading comprehension: Comparing higher- and lower-proficiency readers. *Foreign Language Annals*, 56(3), 786-806. <https://doi.org/10.1111/flan.12688>

- Cekiso, M. (2016). Gender differences in the reading comprehension of grade three rural learners in South Africa. *International Journal of Education Science*, 13(2), 247–254.
- Chou, P. T. M. (2011). The effects of vocabulary knowledge and background knowledge on reading comprehension of Taiwanese EFL students. *Electronic Journal of Foreign Language Teaching*, 8(1), 108–115. Retrieved from <http://e-flt.nus.edu.sg/>
- Cunningham, A. E., & Stanovich, K. E. (1998). The impact of print exposure on word recognition and reading comprehension. *Reading Research Quarterly*, 33(4), 406–409. <https://doi.org/10.1598/RRQ.33.4.7>
- Ellis, N. C. (1994). Vocabulary acquisition: The implicit ins and outs of explicit cognitive mediation. In *Implicit and explicit learning of languages* (pp. 211–282). Academic Press.
- Eskey, D. E. (2005). Reading in a second language. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (pp. 563–580). Lawrence Erlbaum Associates. <https://doi.org/10.5829/idosi.wasj.2013.21.sltl.2136>
- Fahim, M., & Barjasteh, H. (2012). Effects of critical thinking strategy training on male/female EFL learners' reading comprehension. *English Language Teaching*, 5(1), 140–150. <https://doi.org/10.5539/elt.v5n1p140>
- Fraser, C., Pasquarella, A., Geva, E., Gottardo, A., & Biemiller, A. (2021). English language learners' comprehension of logical relationships in expository texts: Evidence for the confluence of general vocabulary and text-connecting functions. *Language Learning*, 71(3), 872–906. <https://doi.org/10.1111/lang.12456>
- Ghaedi, R., & Shahrokhi, M. (2016). The impact of visualization and verbalization techniques on vocabulary learning of Iranian high school EFL learners: A gender perspective. *Ampersand*, 3, 32–44. <https://doi.org/10.1016/j.amper.2016.03.001>
- Ghazanfar, P., & Farvardin, M. T. (2015). The relationship between phonological memory, L2 reading comprehension and vocabulary size of Iranian high school students. *International Journal of English Language & Translation Studies*, 3(3), 64–72. Retrieved from <http://www.eltsjournal.org>

- Golkar, M., & Yamini, M. (2007). Vocabulary, proficiency and reading comprehension. *The Reading Matrix*, 7(3), 88–112.
- Ghaedi, Y., & Shahrokhi, M. (2016). The relationship between vocabulary size and reading comprehension of Iranian EFL learners. *Theory and Practice in Language Studies*, 6(8), 1695-1703. <https://doi.org/10.17507/tpls.0608.22>
- Graves, M. F. (2006). *The vocabulary book: Learning and instruction*. Teachers College Press.
- Hamman, M., Wood, L., & Keser, T. (2009). Vocabulary's role in the teaching of reading. *The Reading Teacher*, 63(3), 214-224. <https://doi.org/10.1598/RT.63.3.5>
- Harmon, J. M., Wood, K. D., & Keser, K. (2009). Promoting vocabulary learning with interactive word wall. *Middle School Journal*, 40(3), 58-63. <https://doi.org/10.1080/00940771.2009.114955>
- Hamzehlu, A., Barabadi, E., & Salavati, S. (2012). The relationship between vocabulary knowledge and reading comprehension in English as a foreign language. *International Journal of English Language Education*, 1(1), 93-108.
- Herman, E., & Leeser, M. J. (2022). The relationship between lexical coverage and type of reading comprehension in beginning L2 Spanish learners. *The Modern Language Journal*, 106(1), 284-305. <https://doi.org/10.1111/modl.12774>
- Kameli, S., & Baki, R. B. (2013). The impact of vocabulary knowledge level on EFL reading comprehension. *International Journal of Applied Linguistics & English Literature*, 2(1), 85-90. <https://doi.org/10.7575/ijalel.v.2n.1p.85>
- Kremmel, B., Indrarathne, B., Kormos, J., & Suzuki, S. (2023). Unknown vocabulary density and reading comprehension: Replicating Hu and Nation (2000). *Language Learning*, 73(4), 1127-1163. <https://doi.org/10.1111/lang.12572>
- Martin-Chang, S. L., & Gould, O. N. (2008). Revisiting print exposure: Exploring differential links to vocabulary, comprehension and reading rate. *Journal of Research in Reading*, 31(3), 273-284. <https://doi.org/10.1111/j.1467-9817.2008.00371.x>
- Mehrpour, S., Razmjoo, S. A., & Kian, P. (2011). The relationship between depth and breadth of vocabulary knowledge and reading comprehension

- among Iranian EFL learners. *Journal of English Language Teaching and Learning*, 53(222), 97-127.
- Nation, I. S. P. (2006). How large a vocabulary is needed for reading and listening? *The Canadian Modern Language Review*, 63(1), 59-82. <https://doi.org/10.3138/cmlr.63.1.59>
- Nation, I. S. P. (2011). *Learning vocabulary in another language*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139524759>
- Nation, I. S. P. (2013). Learning vocabulary in lexical sets: Dangers and guidelines. *TESOL Journal*, 4(3), 235-245. <https://doi.org/10.1002/tesj.102>
- Pagal, C. L., Mirafuentes, J. K. A., & Ypanto, Q. C. (2017). School age gender gap in reading comprehension. *Journal of Asian Development*, 3(2). <https://doi.org/10.5296/jad.v3i2.11079>
- Pringprom, P. (2011). Relationship between vocabulary size and reading comprehension. *FLLT Proceedings*, 182-191.
- Qian, D. D. (2000). *Validating the role of depth of vocabulary knowledge in assessing reading for basic comprehension*. Educational Testing Service.
- Qian, D. D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning*, 52(3), 513-536. <https://doi.org/10.1111/1467-9922.00193>
- Salehi, M., Lari, Z., & Rezanejad, A. (2014). The effects of gender and genre on language learners' reading comprehension ability. *Education Journal*, 3(5), 266-271. Retrieved from <http://www.sciencepublishinggroup.com/j/edu>
- Samadi, F., & Aziz Mohammadi, F. (2013). The interaction between Iranian EFL learners' interest in reading comprehension topics and their reading comprehension ability. *European Online Journal of Natural and Social Sciences*, 2(2). Retrieved from <http://www.european-science.com>
- Sen, Y., & Kuleli, M. (2015). The effect of vocabulary size and vocabulary depth on reading in EFL context. *\*Procedia - Social and Behavioral Sciences*, 199\*, 555-562. <https://doi.org/10.1016/j.sbspro.2015.07.546>

- Seng, G. H., & Hashim, F. (2006). Use of L1 in L2 reading comprehension among tertiary ESL learners. *Reading in a Foreign Language*, 18(1), 29-54.
- Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329-363. <https://doi.org/10.1177/1362168808089921>
- Schmitt, N., & Schmitt, D. (2020). *Vocabulary in language teaching* (2nd ed.). Cambridge University Press.
- Shiotsu, T., & Weir, C. J. (2007). The relative significance of syntactic knowledge and vocabulary breadth in the prediction of reading comprehension test performance. *Language Testing*, 24(1), 99-128. <https://doi.org/10.1177/0265532207071514>
- Sidek, H. M., & Rahim, S. A. (2015). Vocabulary knowledge and reading comprehension performance among EFL learners. *English Language Teaching*, 8(9), 177-187. <https://doi.org/10.5539/elt.v8n9p177>
- Stahl, S. A. (2003). Vocabulary and readability: How knowing word meanings affects comprehension. *Topics in Language Disorders*, 23(3), 241-247. <https://doi.org/10.1097/00011363-200307000-00008>
- Snow, C. E. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. RAND Corporation.
- Swan, M., & Walter, C. (2017). Misunderstanding comprehension. *ELT Journal*, 71(2), 228-236. <https://doi.org/10.1093/elt/ccw090>
- Vermeer, A. (2001). The role of vocabulary depth in reading comprehension: A multivariate analysis. *Reading Research Quarterly*, 36(4), 378-394. <https://doi.org/10.1598/RRQ.36.4.3>
- Webb, S., Sasao, Y., & Ballance, O. (2017). The updated Vocabulary Levels Test: Developing and validating two new forms of the VLT. *\*ITL - International Journal of Applied Linguistics*, 168\*(1), 33-69. <https://doi.org/10.1075/itl.168.1.02web>
- Yuksel, D. (2010). The relationship between vocabulary knowledge and reading comprehension in EFL context. *\*Procedia - Social and Behavioral Sciences*, 2\*(2), 4214-4219. <https://doi.org/10.1016/j.sbspro.2010.03.666>
- Yuksel, H. G., & Kavanoz, S. (2010). Does vocabulary knowledge distinguish among proficiency levels of Turkish university

students? *International Journal of Learning*, 17(5), 513-521. Retrieved from <http://www.Learning-Journal.com>

Zhang, L. J., & Annual, S. B. (2008). The role of vocabulary in reading comprehension: The case of secondary school students learning English in Singapore. *RELC Journal*, 39(1), 51-76. <https://doi.org/10.1177/0033688208091140>

Zeynali, S. (2012). Exploring the gender effect on EFL learners' learning strategies. *Theory and Practice in Language Studies*, 2(8), 1614-1620. <https://doi.org/10.4304/tpls.2.8.1614-1620>

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