

**Research Article**

The Role of Iranian EFL Learners' Vocabulary Size in Vocabulary Use, Content, and Organization of Their Writing

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Received: 12/04/2023

Accepted: 22/05/2023

**Keywords:**Content
Organization
Vocabulary size
Vocabulary use
Writing**ABSTRACT**

Introduction: Previous inquiries in FL vocabulary knowledge targeted profoundly on the vocabulary pedagogical outcomes and writing improvement, however, scant research has been done on the learners' lexical competence in the writing process. In this spirit, the study endeavored to investigate the relationship between vocabulary size (VS) and vocabulary use, content, and organization in writing besides VS's predictability in writing performance.

Methodology: To this end, 30 intermediate EFL learners' (15 males, 15 females) were administered on vocabulary size test (Nation, 2012) and a Preliminary English Test of writing. The scores were analyzed and the results indicated significant positive relationships between VS and writing scores, and VS and vocabulary use scores. To investigate the predictability of VS in writing elements scores, regression analysis was applied.

Results: The Linear regression revealed that VS variable accounts for 88.9% of vocabulary use in writing scores. The results proved the significant relationship between VS and writing on the one hand and VS and vocabulary used on the other hand.

Conclusion: Based on the results, The study offers evidence that VS is a significant predictor in vocabulary use knowledge, which is vital for the mastery of the required knowledge to be an effective writer.

1. Introduction

Language is a tool for oral communication and expressing thoughts in written format. The potentiality to perceive spoken words is no less remarkable than the capability to produce them. Writing as an important productive skill pertains to a complex language issue, especially in a second/foreign context, since its mastery reckons on proficiency in vocabulary, grammar, and discourse knowledge (Richards, 2008). There is mounting evidence that among the important subcomponents of writing vocabulary knowledge can be considered relatively more vital in production skills (Kiliç, 2019; Lee, 2003; Miralpeix & Muñoz, 2018). There are two dimensions of vocabulary knowledge/competence, namely vocabulary size (VS) and depth of vocabulary knowledge. To be well-qualified in language as a real user, one must know the most frequent words, that is, extending VS.

Vocabulary size is the number of words a learner has in the mental lexicon (Coxhead et al., 2015). It can be measured

by VS tests that measure a learner's knowledge of the word's form and the ability to link that form to a meaning (Coxhead et al., 2015). For several years, researchers have attempted to accumulate well-documented indications of VS as a strong predictor of text comprehension for students (Harmon & Wood, 2018).

In the same vein, Stæhr (2008) maintains that knowledge of vocabulary can predict the language proficiency of a second or foreign language learner, and it can have an effective role in an L2 learner's English communicative competence. Concerning VS, an important question is how many words a language learner needs to know (Karakoç & Köse, 2017). Whether or not the close connection between learners' receptive VS and the quality of their written compositions comes as a surprise, it highlights the crucial importance of having a large receptive vocabulary (Stæhr, 2008). Similarly, learners' receptive VS is strongly connected to their reading and

writing abilities and moderately associated with their listening (Stæhr, 2008). Additionally, compared to reading and speaking skills, VS is highly correlated with writing; however, it is moderately linked to reading, speaking, and listening (Miralpeix & Muñoz, 2018). According to Coxhead et al. (2015), VS increases with age.

The scores on the student's vocabulary knowledge tests can enlighten teachers and students about whether or not the test takers have had an adequate VS for completing certain tasks (Siregar, 2020). Besides, tests can also be used as a tool for teachers to monitor the growth of learners' vocabulary, evaluate the success of a program in reaching its objectives, and know the proper language learning instruction, materials, and curricula for the students (Siregar, 2020). In order to explore the relationship between VS and language proficiency entirely, future studies need to use multiple measures of VS (Stæhr, 2008). For now, many educators and researchers have employed the vocabulary size test (VST) created by Nation and Beglar (2007). Considering the role of vocabulary as the backbone of language (Thornbury, 2002; Wilkins, 1972), it can be influential in language production skills as writing.

In teaching and learning, writing plays a significant role in assessing learners (Salma, 2015). Javid and Umer (2014) maintain that students' academic growth is often assessed through writing. Hence, the evaluation of their general language competence often depends on the level of their writing skills (Fageeh, 2011). Writing is one of the language skills through which we can observe one's language ability and his/her proficiency in language elements as vocabulary (Handayani & Aminatun, 2020).

Tamura (2011) sought the alleged relationship between VS and writing. Vocabulary size in this study was described in word-item count. Two hundred forty university students participated in the study. Mochizuki vocab size test (1998) was administered to examine the VS, and the writings were evaluated using the EFL Composition Profile. The rated items included content, organization, mechanics, and vocabulary use. The participants answered 30 per 1000 words based on the word frequency list. They were asked to choose the appropriate L2 (English) word from six alternatives corresponding to the L1 (Japanese) word. The number of correct responses was the way to estimate on VS of the students. The study showed that the relationship between VS and writing quality is strong. Another finding indicates that participants with a VS of 2500 words or under-performed worse, but participants with a VS of 4500 and over-performed much better and gained better scores.

In the same way, Miralpeix and Muñoz (2018) examined the relationship between receptive VS and EFL proficiency in four language skills at upper-intermediate and advanced levels. Forty-two were assessed on ten word-frequency levels on both writing and speaking skills. The Results

elucidated the VS effectiveness in language proficiency to a large extent. However, this influence on production did not appear in learners with less than 5000 words. At the advanced level, VS was closely correlated with writing skills though it somewhat linked to listening, reading, and speaking.

Lee (2003) inquired into the role of vocabulary use in writing. A total of 65 secondary school multi-grade and multi-L1 intermediate ESL learners of a Greater Vancouver public secondary school took part in the study. The participants' vocabulary recognition skill was assessed through a fill-in-the-blanks test of single words and lexical phrases. The scores on the test revealed that the ESL learners' VS was significantly lower than that of seventy-nine native speakers of the same school. All participants were asked to write a composition on a general topic after reading but before target vocabulary instruction. The findings revealed that 13.19% of recognized vocabulary was productive. After vocabulary instruction, this data increased to 63.62%, which showed the effectiveness of teaching vocabulary in writing.

Regarding the important role of vocabulary in writing, the present study aimed to investigate the alleged relationship between the subcomponents of writing (organization, content, and vocabulary use) and VS. Besides, it sought to scrutinize the predictability of the VS variable in scores of writing components.

2. Methodology

2.1. Participants

The participants of the present study were 30 Iranian EFL learners, both males (N = 15) and females (N = 15) who were selected based on convenience sampling in order to collect the required data. Their ages ranged from 20 to 30 years old, and they were bachelor students in different fields of study from Mashhad, Khorasan Razavi, Iran. Their level of English was intermediate based on their obtained scores in the homogeneity test of the Oxford Placement Test (OPT).

2.2. Instruments

2.2.1. Oxford quick placement test

The OPT, a reliable proficiency test developed by Oxford University Press and Cambridge ESOL, was used as a placement test to select a homogenous group of participants based on their English levels. It includes 60 items of vocabulary and grammar in multiple-choice format. Each item has 1 point, and there was no minus point for wrong answers. According to the band scores of this test, those learners who scored within the range of 40-47 were selected as the intermediate-level subjects to participate in the present study.

Vocabulary Size Test¹

Circle the letter a-d with the closest meaning to the key word in the question.

1. SEE: They **saw** it.
 - a. cut
 - b. waited for
 - c. looked at
 - d. started

2. TIME: They have a lot of **time**.
 - a. money
 - b. food
 - c. hours
 - d. friends

Second 1000

1. MAINTAIN: Can they **maintain** it?
 - a. keep it as it is
 - b. make it larger
 - c. get a better one than it
 - d. get it

2. STONE: He sat on a **stone**.
 - a. hard thing
 - b. kind of chair
 - c. soft thing on the floor
 - d. part of a tree

Figure 1.

A sample of Vocabulary Size Test Used in the Study (Nation & Beglar, 2007)

2.2.2. Test of writing

The writing test used in this study was a standardized test extracted from Preliminary English Test (PET), a Cambridge qualification test designed to check the learners' proficiency at preliminary levels (Yaghchi et al., 2016).

2.2.3. Vocabulary size test

The VST was designed by Nation and Beglar (2007) to measure the form-meaning connections and knowledge of written word form besides a scant amount of concept knowledge. The test includes 140 multiple-choice items, ten from each 1000-word family level. It is not biased to any particular level (Figure 1).

Based on Nation and Beglar (2007), a learner's total score must be multiplied by 100 to get their total receptive VS.

2.3. Procedure

After the sampling procedure, the homogenous sample (30 EFL learners) was asked to take the standard writing test (i.e., PET), which consisted of two writing tasks of, writing email and writing a story. The participants were to select one topic. The approximate time for writing was around 20 minutes. The writing pieces were scored based on the standard and objective band scores of PET by two experts in the field to confirm the interrater reliability ($r=.80$). Then, they took the VST for about an hour.

The data were put into SPSS 27 to be analyzed. To elucidate the alleged relationship between the subcomponents of writing test scores (content, vocabulary use, and organization) and the VST scores Pearson correlation test was assigned. Since there was a significant correlation between the two main variables in the study (writing and VS scores) and the Durbin-Watson test confirmed the normality of the data. Since the correlations between the two subcomponents of writing (content and organization) and VS scores were not significant ($p > .05$), simple linear regression analyses were applied to reveal how much of the writing scores are explained by the VS variable.

3. Results**3.1. Descriptive statistics**

The descriptive statistics of the tests used in the study were analyzed.

As Table 1 shows, the minimum and maximum scores for the total placement test were 30 and 48 out of 60 and the mean score was 36.36. The mean score is also 13.58 and 12.96 depending on the scores of the two raters. The minimum vocabulary score was far lower than the minimum scores for other tests. This finding may indicate some problem regarding the VS test which might be due to its length.

Table 1.

Descriptive Statistics for the Tests Used in the Study

	Placement	Writing1	Writing2	Vocab
Mean	36.36	13.58	12.96	35.26
Median	36.00	14.00	12.75	35.50
Mode	32.00	11.00	11.00	41.00
Std. Deviation	5.20	2.33	2.66	13.04
Variance	27.13	5.46	7.102	170.13
Range	18.00	7.00	10.50	52.00
Minimum	30.00	10.00	8.00	8.00
Maximum	48.00	17.00	18.50	60.00

3.2. Correlational statistics

Pearson correlation test was applied to check the relationships between the VS scores and the total writing score as well as the VS scores and the scores on the writing subcomponents (content, vocabulary use, and organization). The obtained results revealed a positive significant correlation between VS scores and writing total scores ($p < .05$). Besides, there was a significant relationship between vocabulary use scores and VS scores (Table 2).

Table 2.

Correlational Analyses between Vocabulary Size Scores and Writing Scores (Content, Vocabulary Use, and Organization)

	Pearson Correlation	Pearson Correlation	Sig. (2-tailed)
voc size total - Writing/total	.518		.003
voc size total - organization	.147		.437
voc size total - Content	.096		.612
voc size total - voc use	.945		.000

Table 3.
Summary of the Regression

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	.945 ^a	.893	.889	2.320

3.3. Simple linear regression analyses

To check whether the scores of VST significantly predicted writing scores, simple linear regression was assigned. According to the acquired results in the correlational analyses section, only one writing subcomponent was significantly correlated to the VST scores, so instead of multiple linear regression, simple linear regression was assigned to the data. Before analyzing the regression models, some preliminary assumptions should be inspected. To check auto correlation in the residuals of a statistical regression analysis Durbin-Watson test was run (Table 3).

The test reported no autocorrelations ($d > 2$). As Table 3

shows the model indicated that the independent variable (VS score) can predict 88% of the vocabulary use changes. To ensure the linear correlation between the VST scores and vocabulary use scores, the ANOVA statistics were assigned (Table 4).

Kolmogorov-Smirnov and Shapiro-Wilk tests were run in order to systematically check the normality of the distributions (Table 5).

The normality of the residuals was confirmed ($p > .05$). Since all the assumptions of the linear regression were inspected, the model can be assigned to the variables.

Comparing beta values, it was signified that the VS score was a significant predictor of writing scores regarding vocabulary use. The coefficients indicated that the vocabulary use score of approximately .167 units was increased when the VS score increased (Table 6). The results indicated that the vocabulary use variable is an important factor in writing scores, and it can be predicted by VS independent variable.

Table 4.
The ANOVA Statistics of the Related Variables (Vocabulary Use Scores and Vocabulary Size Test Scores)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.499	1	133.499	233.635	.000 ^b
	Residual	15.999	28	.571		
	Total	149.499	29			

Note. a = Dependent Variable: voc use

b = Predictors: (Constant), voc size total

Table 5.
Checking the Normality of the Residuals

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	.134	30	.177	.936	30	.072

Table 6.
Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.127	.406		-2.776	.010
	voc size total	.167	.011	.945	15.285	.000

4. Discussion

The experimentation tested the alleged relationship between the VST scores and the subcomponents of the writing test (content, vocabulary use, and organization). The results of correlational analyses revealed a significant correlation between VS and writing scores on one hand and the vocabulary use scores and VS scores on the other hand. To check the predictability effect of the independent variable (VS) on writing score elements (vocabulary use, organization, and content), simple linear regression was applied. Beta values indicated that VS accounted for 88% of the vocabulary use scores.

The result has been supported by several studies that have found significant correlations between receptive vocabulary-size tests and written compositions (Albrechtsen et al., 2008; Milton, 2010). In second/foreign language settings, vocabulary knowledge (including VS as a crucial element) is always considered a good predictor of language proficiency (Stæhr, 2008). According to Stæhr

(2008), learners' receptive VS was strongly correlated to their reading and writing abilities, while it is relatively associated with their listening ability.

The findings also align with Tamura's (2011), which sought to investigate the relationship between VS and writing. A total of 240 university students took Mochizuki's vocab size test (1998) and the EFL Composition Profile task in the study by Nakanishi (2006) was used to examine the VS and writing test. The study showed a strong relationship between VS and writing quality. Participants with a VS of 4500 over-performed much better and scored better than participants with 2500 words or under.

The current study's results are consistent with Hasan and Subekti's (2017) study, which investigated the score of students' vocabulary mastery and writing descriptive text ability. They found that students' vocabulary mastery and writing descriptive text ability correlate significantly.

The study of Viera (2017), which focused on vocabulary knowledge in producing written texts, also aligns with the current study. It is shown that vocabulary knowledge of

foreign languages is necessary. It gives learners a broader ability to produce well-structured written texts and contributes to the comprehension of utterances.

In addition, the result is supported by Miralpeix and Muñoz' (2018) study analyzing the apparent correlation between receptive VS and EFL proficiency and reading, writing, listening, and speaking skills in upper-intermediate/advanced learners. The results of the receptive VST of forty-two participants revealed that VS is closely correlated with writing at more advanced levels but relatively linked to reading, listening, and speaking skills.

5. Conclusion

This study questioned the contribution of EFL learners' VST scores to their overall writing scores and their content, vocabulary use, and organization scores in writing performance in the writing task. The results proved the significant relationship between VS and writing on the one hand and VS and vocabulary used on the other hand. The study's regression findings posed the potentially predictable characteristic of VS on writing scores.

Based on the results, vocabulary is vital, and mastery of the required knowledge can make a foreign language learner an effective writer. Thus, learners should connect this information with information and concepts they have already known to become more familiar with the importance of vocabulary in writing.

This study can also have pedagogical implications for the teachers of the English language who wish to increase their learners' VS and writing ability. They must understand what knowledge and skills learners are expected to acquire (Hasan & Rezaul Karim, 2019). The findings provide teachers with the necessary information to design effective methods to promote the learners' VS.

This research was done on thirty intermediate EFL learners; as a recommendation, it can be replicated with a larger number of participants with different levels of English proficiency and at different ages. Finally, future studies should utilize procedures that confirm a higher degree of generalization.

Declarations

Competing interest

The authors declare no competing financial interests to influence the present work.

Authors' Contribution

Farnaz Farrokh Alae conceived, designed, and performed the analysis, Mohadeseh Ramezani collected the data, and Mitra Zerratspise designed and supervised the whole project. All authors contributed to writing the paper.

Funding

This research received no specific grant from any funding agency.

Availability of data and materials

This research includes original data generated for the M.A. thesis on this specific topic.

Ethical considerations

The subjects participated in this project voluntarily.

References

- Albrechtsen, D., Haastrup, K., Henriksen, B., & Henriksen, B. (2008). Declarative lexical knowledge. *Vocabulary and writing in a first and second language: Processes and development*, 29(3), 22-66. https://doi.org/10.1057/9780230593404_2
- Coxhead, A., Nation, P., & Sim, D. (2015). Measuring the vocabulary size of native speakers of English in New Zealand secondary schools. *New Zealand Journal of Educational Studies*, 50, 121-135. <https://doi.org/10.1007/s40841-015-0002-3>
- Fageeh, A. I. (2011). EFL learners' use of blogging for developing writing skills and enhancing attitudes towards English learning: An exploratory study. *Journal of Language and Literature*, 2(1), 31-48.
- Handayani, E. T., & Aminatun, D. (2020). Students' point of view on the use of WhatsApp group to elevate writing ability. *Journal of English Language Teaching and Learning*, 1(2), 31-37. <https://doi.org/10.33365/jeltl.v1i2.602>
- Harmon, J., & Wood, K. (2018). The vocabulary-comprehension relationship across the disciplines: Implications for instruction. *Education Sciences*, 8(3), 101-111. <https://doi.org/10.3390/educsci8030101>
- Hasan, M., & Rezaul Karim, M. (2019). Scaffolding effects on writing acquisition skills in EFL context. *Arab World English Journal (AWEJ)*, 10(3), 288-298. <https://doi.org/10.24093/awej/vol10no4.21>
- Hasan, H., & Subekti, N. B. (2017). The correlation between vocabulary mastery and writing skill of secondary school students. *JELLT (Journal of English Language and Language Teaching)*, 1(2), 55-60. <https://jurnal.ustjogja.ac.id/index.php/JELLT/article/view/1872>
- Javid, C. Z., & Umer, M. (2014). Saudi EFL learners' writing problems: A move towards solution. *Proceeding of the Global Summit on Education GSE*, 4, 164-180. <http://dx.doi.org/10.4236/ce.2016.74064>
- Kiliç, M. (2019). Vocabulary knowledge as a predictor of performance in writing and speaking: A case of Turkish EFL learners. *PASAA: Journal of Language Teaching and Learning in Thailand*, 57, 133-164. <https://files.eric.ed.gov/fulltext/EJ1224421.pdf>
- Lee, S. H. (2003). ESL learners' vocabulary use in writing and the effects of explicit vocabulary instruction. *System*, 31(4), 537-561. <https://doi.org/10.1016/j.system.2003.02.004>
- Milton, J. (2010). The development of vocabulary breadth across the CEFR levels. In I. Bartning, M. Martin, I. Vedder (Eds.), *Communicative proficiency and linguistic development: Intersections between SLA and language testing research volume 1 of EuroSLA monograph series* (pp. 211-232). EuroSLA.
- Miralpeix, I., & Muñoz, C. (2018). Receptive vocabulary size and its relationship to EFL language skills. *International Review of Applied Linguistics in Language Teaching*, 56(1), 1-24. <https://doi.org/10.1515/iral-2017-0016>
- Mochizuki, M. (1998). Nihoajin gakushushano tameno goisaizu testrito [A vocabulary size test for Japanese learners of English]. *Gogaku Kenkyuujo Kiyou*, 12, 27-53.
- Nakanishi, C. (2006). *A teaching approach to Japanese college students' EFL writing*. Keio University Press.
- Nation, P. (2012). *Measuring vocabulary size in an uncommonly taught language*. International Conference on Language Proficiency Testing in the Less Commonly Taught Languages, Bangkok, Thailand.
- Nation, I. S. P., & Beglar, D. (2007). A vocabulary size test. *The Language Teacher*, 31(7), 9-13.
- Richards, J. C. (2008). *Teaching listening and speaking*. Cambridge University Press.
- Salma, U. (2015). Problems and practical needs of writing skill in EFL context: An analysis of Iranian students of Aligarh Muslim University. *IOSR Journal of Humanities and Social Sciences*, 20(11), 74-76.
- Siregar, F. L. (2020). English students' vocabulary size and level at a private

- university in West Java, Indonesia. *Humaniora*, 11(2), 77-83.
<https://doi.org/10.21512/humaniora.v11i2.6388>
- Stæhr, L. S. (2008). Vocabulary size and the skills of listening, reading and writing. *Language Learning Journal*, 36(2), 139-152.
<https://doi.org/10.1080/09571730802389975>
- Tamura, F. (2011). The relationship between vocabulary size and writing. *Annual Review of English Language Education in Japan*, 22, 281-296.
https://doi.org/10.20581/arele.22.0_281
- Thornbury, S. (2002). *How to teach vocabulary*. Pearson Education Limited. Harlow, Essex.
- Viera, R. T. (2017). Vocabulary knowledge in the production of written texts: A case study on EFL language learners. *Revista Tecnológica-ESPOL*, 30(3), 1-19.
- Wilkins, D. A. (1972). *Linguistics in language teaching*. Edward Arnold.
- Yaghchi, M. A., Ghafoori, N., & Nabifar, N. (2016). The effects of authoritative vs. facilitative interventions on EFL learners' willingness to communicate. *Journal of Instruction and Evaluation*, 9, 177-194.