JOURNAL OF ACADEMIC RESEARCH FOR HUMANITIES
ISSN 2663-192x

HJRS Link: Journal of Academic Research for Humanities (HEC-Recognized for 2022-2023)
Edition Link: Journal of Academic Research for Humanities, 3(1) January-March 2023

Link of the Paper: https://jar.bwo.org

INVESTIGATION OF THE RELATIONSHIP OF RECEPTIVE VOCABULARY SIZE AND SPEAKING SKILLS: A STUDY OF IELTS TEST TAKERS IN PAKISTAN

Author 1: Hafsa Tazeen, M.Phil. Scholar, Government College University Faisalabad, Email: hafsatazeen50@gmail.com
Author 2: Shumaila Aman, Visiting Lecturer, Ghazi University, Dera Ghazi Khan, Email: shumailaaman7737731@gmail.com
Corresponding and Author 3: Dr. Muhammad Asif, Assistant Professor, Ghazi University, Dera Ghazi Khan, Email: uasif@gidgk.edu.pk

Paper Information

Citation of the paper:
(APA) Tazeen. Hafsa, Aman. Shumaila, Asif. Muhammad (2023). Investigation of the Relationship of Receptive Vocabulary Size and Speaking Skills: A Study of IELTS Test Takers in Pakistan. Journal of Academic Research for Humanities, 3(1), 127-137.

Subject Areas:
1 Languages Studies
2 English

Timeline of the Paper:
Received on: 06-02-2023
Reviews Completed on: 18-03-2023
Accepted on: 25-03-2023
Online on: 31-03-2023

Published by:
BWO RESEARCHES (PVT) LTD PAKISTAN

Abstract

Past studies have highlighted the importance of correlating vocabulary size with language skills. It was observed that these studies were unable to examine this relationship among IELTS Test Takers. This study aimed at investigating the relationship between receptive vocabulary size and the productive language skill i.e., speaking skills of IELTS Test Takers in Pakistan. It followed the model of a correlational study. So, to test the hypothesis, measures of band scores of IELTS speaking tests were collected from a sample of 125 undergraduate IELTS Test Takers. The data was analyzed statistically by using SPSS. Receptive vocabulary was calculated by using VST (Vocabulary Size Test) by Nation and Beglar (2001). These measures of IELTS test scores and Vocabulary size test were analyzed through simple linear regressions. T-test showed a statistically significant relationship between male and female test-takers. Females performed better in VST as compared to male test-takers. Mann-Whitney test for speaking skills showed that the results were not significant and there was no statistically significant relationship in the speaking scores of males and females. The relationship between VST and speaking skills was found to be non-significantly regressed with a 33.6% variance in speaking skills.

Key Words: Receptive Vocabulary Size, Productive Language Skills, IELTS Test Takers, Speaking Skills, Simple linear regression

Introduction

Vocabulary knowledge (VK) is the basic factor in developing language proficiency. There is an ongoing debate on the extent of vocabulary knowledge that should be known to a certain native/non-native language user at a certain age to reach a level of proficiency. Due to this reason, there is an increasing trend of researching vocabulary knowledge and its dimensions.

Numerous researchers divided VK into various types based on its use and other multiple interrelated dimensions (Dabbagh & Janebi Enayat, 2019; Derakhshan & Malmir, 2017; Jane Enayat & Haghighatpasand, 2019; Janebi Enayat & Baba, 2018; Matthews, 2018; Nation, 2001, 2011; Nation & Webb, 2011; Read, 2000, 2004; Schmitt, 2008, 2014; Webb & Sasao, 2013). Most of them agreed to divide VK into two parts: Receptive and Productive vocabulary (Laufer, 1998; Laufer & Paribakht, 1998; Henriksen, 1999; Nation, 2001; Read, 2000; Schmitt, 2014). A few of them also attempted to define VK in its dimension of depth and breadth. Nation (2001), explained the development of VK from a wider viewpoint by merging the form, meaning, and use of vocabulary. He elaborated the idea of VK in detail in the form of a table and explained receptive and productive vocabulary concerning their form, meaning, and use. Current research deals with the idea of receptive vocabulary knowledge with productive language skills i.e., speaking skills.

It has been argued by various theorists that there is a minimum relationship between receptive vocabulary size and productive language skills; specifically writing. In the last few decades, there has been an increasing body of research work that has focused on the examination of the extent of the relationship between vocabulary, vocabulary size, and receptive language skills. The contribution of vocabulary size has been studied in listening skills (Afshari & Tavakoli, 2017; Cheng & Matthews, 2018; Matthews & Cheng, 2015; Stæhr, 2009) and reading skills (e.g., Alavi & Akbarian, 2012; Cheng & Matthews, 2018; Janebi Enayat & Babaii, 2018; Nassaji, 2006; Qian, 1999, 2002; Qian & Schedl, 2004; Shiotsu & Weir, 2007; Zhang & Anual, 2008) in detail. Few researchers have advocated researchers questioning the linkage between vocabulary size and speaking (e.g., Derakhshan & Janebi Enayat, 2020; Koizumi & In'nami, 2013; Miralpeix & Munoz, 2018; Uchihara & Clenton, 2020; Uchihara & Saito, 2019) and writing (e.g., Albrechtsen et al., 2008; Dabbagh & Janebi Enayat, 2019; Lee, 2003; Miralpeix & Munoz, 2018).

After a careful review of the literature on this subject matter, it was evident that no researcher attempted to correlate vocabulary size with the productive language skill i.e., speaking skills of Pakistani IELTS test takers by comparing their receptive vocabulary sizes (measured by using VST) with their IELTS band scores of speaking skills. As other studies correlating different variables have only used simple correlating coefficients and descriptive results. So, this type of detailed statistical analysis will provide an in-depth analysis of the nature of the relationship between RVs and speaking skills.

Purpose of the study

This study aimed to explore the extent of the relationship between receptive vocabulary size and Speaking skills of the IELTS test takers in Pakistan. It compared the means of scores of VST and band scores of the IELTS speaking test using the Mann-Whitney U test based on the gender of the test takers. It also correlated the scores of vocabulary size tests with the band scores of speaking skills. Then, the extent of the relationship between the two variables was found by using simple linear regression.

Research objectives

The study tends to:

1) Explore the difference in the scores of VST and speaking skills of male and female IELTS test takers
2) Correlate the scores of VST and the IELTS speaking test
3) Investigate the extent of the relationship between VST and speaking skills of IELTS test takers

Need of the Project

Vocabulary size has been linked to several factors such as working memory, L2 comprehension, reading comprehension (Ibrahim, 2016), semantic knowledge, literacy abilities, and vocabulary depth (Li, 2014) in a variety of populations. Although there are numerous studies linking vocabulary size to other sub skills all around the world, there is no specific study that addresses Pakistani IELTS test takers and deals with a large population. After careful examination of the literature on this subject matter, it was found that there is no such research in and outside of Pakistan that deals with IELTS test takers by using VST and IELTS band scores to examine the extent of the relationship between receptive vocabulary size and productive language skills and analyze the relationship using simple linear regression and the Mann-Whitney U test. To fill this gap in the existing literature, the current study attempts to link the receptive vocabulary size with the speaking skills of the IELTS test takers of Pakistan.

Research Questions

To investigate the extent of the relationship between RVs and speaking skills, the following questions have been developed:

Question 1

Do the male and female IELTS test-takers differ in their scores on the receptive vocabulary size test and IELTS speaking test?

Question 2

How far does receptive vocabulary size correlate with speaking band scores of IELTS test takers from Pakistan?

Research Hypothesis

The current study hypothesized that:

Ho: There is no relationship between receptive vocabulary size and speaking skills.

Ho: There is no relationship between the mean scores of speaking and writing bands of male and female IELTS test takers.

Literature Review

Vocabulary size and Speaking

The link between RVS and speaking skills has been investigated deeply. Even though several types of research have found a link between lexical knowledge and speaking scores, the lexical indices utilized in these studies were not measures of size. Read (2005), examined the speaking skills of IELTS candidates by examining their lexical richness and complexity. He verified that the vocabulary scores corresponded to the band levels they were awarded in the IELTS. He did admit, however, that raters faced difficulty identifying students based on lexical performance, particularly at head-to-head band score levels.

According to Staehr (2009), it is important to know 2,000 words to achieve the 5th or higher band in standardized tests like IELTS listening and speaking tests. Milton, Wade, and Hopkins (2010) used computerized Yes/No tests to quantify orthographically, X-Lex (Meara & Milton, 2003), A-Lex phonologically, (Milton & Hopkins, 2006) vocabulary size to study the role of vocabulary knowledge. To explain performance in all of these language skills, the results were compared to the scores obtained from IELTS exams. The authors found a significant and positive correlation (r =.71) between aural

vocabulary size and speaking scores in IELTS. The results implied that aural vocabulary size can act as a predictor of L2 speech performance.

Based on their investigation of various talents in an experimental group of Dutch learners and native speakers' control group, De Jong et al. (2012) suggested a framework for speaking competency. They investigated the role of linguistic knowledge and processing, and pronunciation skills in the predictions of L2 speaking proficiency. 181 L2 and 54 native Dutch participants contributed to the performance of 8 speaking and 6 tasks for 9 different linguistic skills. They discovered that VK and intonation were strongly predicting the speaking proficiency of the participants when they employed sentence completion tasks as a measure of their controlled productive vocabulary.

The size of the vocabulary was emphasized in this study by using word-frequency bands as a criterion for creating productive vocabulary items in the format of the Productive Vocabulary Levels Test (PVLT) (Laufer & Nation, 1999). As a result, it failed to take into account not only the receptive vocabulary size but also its depth. It was found that the greatest predictors of speaking performance were vocabulary knowledge and the capacity to produce accurate sentence intonation, which explained 75.3 percent of the variance in functional adequacy. As a result, lexical knowledge, when combined with sentence intonation, aided students in communicating effectively.

Methodology

Research Population

There are 1000+ IELTS test preparation centers all across Pakistan, headed by British Council and AEO (Australian Education Office). As it was impossible to consult all of the centers across Pakistan, the centers in Punjab were selected to collect data. The students in these centers were from heterogeneous demographic and educational backgrounds. Their ages were also different from each other. The ratio of students from each center varied with each other. All these students served as the population of the current study.

Research Sample

125 students were selected from the institutes for the preparation of IELTS tests in Punjab. The data collected was divided into two groups based on their varied genders. These students ages ranged from 17- 25. As information about students was not required during the process of data collection, there was not much information regarding the educational details of the students.

Instrumentation

Based on the purpose of the research, two standardized instruments were used to collect the data i.e., IELTS test band scores and Vocabulary size test. The vocabulary size test (VST), developed by Paul Nation and David Beglar in 2001, and is administered to measure the receptive vocabulary size of IELTS test takers. It is a written test, containing 140 multiple-choice items. There are 140 words, layered in 14 levels, placed in unidentifiable contexts i.e., in the sentences where it becomes difficult for the students to predict their meanings. As the test deals with RVS, the words given in the test are somewhat known to the students. The distractors deal with the meaning of the word in the question. The scores of VST functioned as the data for the current research.

The second research instrument is the IELTS band scores of Productive language skills. IELTS (International English Language Testing System) is a set of tests meant to assist in working, studying, or migrating to a country where English is the primary language. This covers countries like Australia, Canada, New Zealand, the United Kingdom, and the United States. During the test, the abilities to listen, read, write, and communicate in English are

evaluated. The IELTS exam is scored on a scale of 1 to 9. This test is administered in Pakistan under the supervision of The British Council, IDP: IELTS Australia, and Cambridge Assessment English, who also jointly own IELTS. As explained earlier, the participants had already undergone IELTS tests and their band scores were also declared by the authorities. So, these band scores from IELTS test takers served as the data for the current research.

The data analysis methods used in this research were selected based on the purpose of the research. The scores of bands of speaking skills and VST were analyzed quantitatively with the help of a t-test and simple linear regression. T-Test was conducted to compare the male and female results on VST and speaking skills to answer the first research question. It is a statistical tool for determining the means of two groups that differ significantly based on a large sample of data. Before conducting the t-test, it was maintained that the large data was collected through random sampling, placed in the form of an ordinal scale.

To check whether the data were distributed normally, the Kolmogorov-Smirnov normality test was applied to the VST and speaking band scores of male and female students. The results of the Kolmogorov-Smirnov normality test for the performance of males and females on VST reveal that the data is distributed normally (P-value = 0.382, 0.738 respectively). This shows that the T-test will be applied to the VST scores of males and females to compare their mean values.

The results of the normality test for the performance of males and females on speaking skills reveal that the data is not distributed normally (P-value = 0.05, 0.629 respectively). It is known that if the p-value is small than 0.005, the data is not considered to be normal. In this case, instead of a T-test Mann-Whitney test will be used for the comparison of the speaking skills of male and female students.

After conducting the T-test and Mann-Whitney test, the Pearson correlation was selected initially to calculate the answer to the research questions. Before proceeding to produce the results, the assumptions of Pearson correlation were checked. As discussed earlier, the data was on an interval scale, and in the form of pairs without any outliers. The linearity of data was checked through scatterplots. The scatterplots showed that the data was linear. Next, to decide whether computing Pearson was appropriate or not, the normality test was conducted. It was found that the data set of speaking lacked normality. So, instead of Pearson correlation, Spearman rank correlation was conducted.

Then, two simple linear regressions were run for VST and Speaking. Linear regression is a statistical process that describes the relationship between the dependent and independent variables in data. Again, before running the test it was made sure that the data was having linear distribution, with equal variances.

Results

Do the male and female IELTS test-takers differ in their scores on the receptive vocabulary size test, and ELTS speaking skills?

Difference between VST scores of males with female IELTS Test Takers

As discussed earlier, the assumptions of the t-test were checked and it was finalized that the t-test will be used to find the differences in VST. An Independent t-test was conducted in SPSS. Table 4.1 explains the group statistics for both of the groups and table 2 explains the results of the independent t-test for male and female VST.

Table 4.1

Group Statistics: T-Test statistics for Male and Female

Group Statistics: T-Test statistics for male and female

	Gender	N	Mean	Std. Deviation	Std. mean error
VST	F	39	58.31	15.526	2.486
	M	86	49.79	14.783	1.594

Table 4.2

Independent Sample Test for Male and Female VST

Independent Samples Test for male and female VST

		Levene's Test for Equality of Variance		T-test for Equality of Means						
		F	Sig.	t	df	Sig(2-tailed)	Mean difference	Std. Error Difference	CI 95% Lower	CI 95% Upper
VST	Equal variances assumed	0.303	0.583	2.92	123	0.004	8.529	2.899	2.790	14.267
	Equal variances not			2.888	70.354	.005	8.529	2.953	2.639	14.418

To compare the mean scores of males and females VST, an independent sample t-test was conducted. The results indicated that the average mean scores of female students (*M*= 58.31) were greater than the average mean scores of male students (*M*= 49.78). The P-value was 0.004 ($p < 0.05$) which showed that the null hypothesis was rejected and that there was a statistically significant difference in the scores for VST for females and VST for males on the conditions; t (123) = 2.942. The 95% confidence interval of the differences showed the variance in the performance of male and female students which proved there was a significant difference between them.

Difference in the IELTS speaking band scores of male with female Test-Takers

As the dataset for speaking skills was not distributed normally, the Mann-Whitney test was selected to find the difference in the performance of male and females IELTS test takers in their Speaking test. Table 4.3 presented the descriptive statistics for the Mann-Whitney test. Next, table 9 presented the ranks, and table 4.4 presented the statistics for the test.

Table.4.3

Descriptive Statistics for Mann-Whitney Test for Speaking Skills

Descriptive Statistics for Mann Whitney test for speaking skills

	N	Mean	Std. Deviation	Min.	Max.	Percentiles 25th	50th (Median)	75th
Speaking	125	5.388	1.1979	1.5	7.5	4.500	5.500	6.250

As mentioned earlier, the dataset for speaking skills was not having normal distributions so the Mann-Whitney test was conducted to compare the performances of speaking skills of male and female IELTS Test Takers. This test divides the data into ranks and then provides the means scores of these ranks. As table 4.3 shows, there was a difference in the mean ranks of male (N=86, Rank= 59.11) and female (N= 39, Rank= 71.58) students. The sum of the ranks for both groups was also different as it shows that the data in each group has some similar systematic differences. Due to this difference, most of the high ranks belonged to one group resulting in different sums of ranks for each group.

Table. 4.4

Test Statistics for Mann Whitney Test for Speaking Skills

Test Statistics[a] for Mann Whitney test for speaking skills

	Speaking
Mann-Whitney U	1342.500
Wilcoxon W	5083.500
Z	-1.802
Asymp. Sig. (2-tailed)	.072
Exact Sig. (2-tailed)	.072
Exact Sig. (1-tailed)	.036
Point Probability	.000

a. Grouping Variable: Gender

Table 4.4 provided the test statistics for the Mann-Whitney test for speaking skills with gender as the grouping variable. From this table, it can be concluded that the speaking band score of male and female students was not significant at Z (N= 39, N= 86) = -1.802, p>0.05. As it is visible that Z = -1.802 which is less than the critical value -1.96 and the p-value was 0.072 which was more than 0.05 so the null hypothesis was accepted.

How far does receptive vocabulary size correlate with speaking band scores of IELTS test takers from Pakistan?

To measure the extent of the correlation between VST and speaking skills, spearman's rank correlation was used. The *p-value* was 0.000, which showed that the correlation was significant. The correlation coefficient was 0.598, which showed that a positive but moderate correlation existed between VST and speaking skills.

Table 4.5

Spearman Correlation of VST and Speaking Band Scores

Spearman correlation of VST and Speaking Band Scores

			VST	Speaking
Spearman's rho	VST	Correlation Coefficient	1.000	0.598
		Sig. (2-tailed)	.	0.000
		N	125	124
	Speaking	Correlation Coefficient	0.598	1.000
		Sig. (2-tailed)	0.000	.
		N	124	124

Table 4.5 gives information about the extent to which VST is related with the speaking skills. This model of relationship consists of predictor variables) attempting to predict the future outcomes of speaking skills. The value of R2 explains the variance caused by the predictor variable (VST) in the outcome variable (speaking skills). In this case, the value of R2 was 0.336 which meant that 33.6% variance was caused by VST in the scores of speaking skills. The adjusted R square was 0.331, which shows the fitness of the model as the population was large.

Table 4.6

Model Summary of Simple Linear Regression of VST and IELTS Speaking band Scores

Model summary of simple linear regression of VST and IELTS speaking band scores

					Std. Error of the Estimate	Change Statistics					Durbin watson
Model	R	R Square	Adjusted R Square			R Square Change	F Change	df1	df2	Sig. F Change	
1	.580[a]	.336	.331		.9410	.336	61.743	1	122	.000	1.283

Table. 4.7

ANOVA test results of VST and IELTS Speaking Band Scores

ANOVA test results of VST and IELTS speaking band scores

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	54.670	1	54.670	61.743	.000[b]
Residual	108.024	122	.885		
Total	162.694	123			

Table 4.7 explained that the model was a significant predictor of writing skills, F (1, 122) = 61.743, p< 0.01.

Table. 4.8

Simple Linear Regression Coefficient of VST and IELTS Speaking Band Scores

Simple Linear Regression Coefficients of VST and IELTS speaking band scores

Model	Unstandardized Coefficient		Standardized Coefficient			CI for B		Correlation		
	B	Std. Error	Beta	t	sig	Lower	Upper	Zero-order	partial	part
Constant	3.130	0.303		10.319	0.000	2.530	3.731			
VST	0.043	0.60	0.580	7.858	0.000	0.033	0.054	0.580	0.580	0.580

Table 4.8 indicated how VST contributed to the prediction of the Speaking skills scores. The statistical model was produced that allowed the prediction of the values of speaking skills based on VST.

The model was:

Y= β0+ β1X Here, Speaking Skills= 3.130+0.043VST. This intercept can predict the scores of speaking skills in terms of VST.

Summary of the results

- The data for male and female VST was distributed normally so a t-test was conducted.
- The data for male and female Speaking was not distributed normally so Mann-Whitney test was used.
- Spearman rank correlation was conducted to correlate VST with speaking skills.
- Simple linear regression was used to predict the new observations of productive language skills in terms of the vocabulary sizes of test-takers.

Do the male and female IELTS test takers differ in their scores on the receptive vocabulary size test and the IELTS speaking test?

- T-test showed a statistically significant relationship between male and female test-takers. Females performed better in VST as compared to male test-takers.
- Mann-Whitney test for speaking skills showed that the results were not significant and there was no statistically significant relationship in the speaking scores of males and females.

How far does receptive vocabulary size correlate with speaking band scores of IELTS test takers from Pakistan?

- There was a moderate non-significant correlation.
- The relationship between VST and speaking skills was found to be non-significantly regressed with a 33.6% variance in speaking skills.

The relationship between VST and speaking skills was explained by some researchers as explained earlier. They attempted to correlate speaking with the lexical resources i.e., vocabulary sizes by using spearman coefficients or Pearson correlation. However, some studies considered descriptive statistics to predict and investigate the nature of the relationship between vocabulary and L2 speaking. Their correlation coefficients were significant and strong. However, in the current study, speaking skills were moderately correlated with receptive vocabulary size.

As discussed earlier, speaking skills depend on 4 sub skills and vocabulary is among them. The relationship of RVs with speaking skills was analyzed using regression analysis by Dabbagh and Enayat (2021). Their results showed that RVS was a strong and significant predictor of speaking skills. According to De Jong et al. (2012) and Koizumi and In'nami (2013) L2 students with a greater vocabulary size can employ more infrequent words in their speaking performance.

In the lexical assessment of L2, Uchihara and Clenton (2020) offered evidence for the predictive power of receptive vocabulary size, as measured by the Yes/No test. An oral picture narrative was used to assess speaking abilities. Furthermore, this conclusion is in line with Derakhshan and Janebi Enayat's findings (2020), who discovered a link between the size of mid-frequency vocabulary and the lexical character of L2 speech ability.

The ideas of communicative competence can be used to explain why these results exist. After a thorough examination of these beliefs, it was discovered that to be employed effectively, productive skills required numerous sub skills. It wasn't enough to have a large enough vocabulary to perform well. Del Hymes' communicative language model divided communicative competence into two categories. Chomsky defined the idea of language usage but his paradigm did not address the importance of vocabulary knowledge in the execution or application of language abilities. His hypothesis was based on the impact of social elements on the development of a user's competence and

performance. He concentrated on how social factors influenced and described language performance and abilities.

Communication competency was separated into three parts by Canale and Swaine (1980). They looked at the effects of grammatical proficiency on a student's total language proficiency. His definition of grammatical competence was lexical item knowledge. He elaborated on the necessity of teaching students how to detect and accurately articulate the literal meaning of each remark using the appropriate words. The explicit employment of verbal and nonverbal methods was part of strategic competency. In 1983, Canale (1983) expanded the paradigm by including discourse competence, which entailed the capacity to mix linguistic structures to form meaningful writings.

As a result, it can be argued that when describing communicative ability, Canale and Swine addressed the relevance of lexical items. Bachman (1990) divided the concept of competence into four kinds based on the same principle. Along with the three other primary kinds, he used the term textual competence explicitly. Similarly, in the models of Celce Murcia Dorneyi and Thurrel (1995) and Littlewood (2011), communicative competence was separated into several parts, with lexical competence being one of them.

It can be concluded that these models of communicative competence explained the fact that skillfully using a language depends on a lot of factors. It was observed that the knowledge of vocabulary was not the ruling factor. Although vocabulary should play 25% parts in the overall speaking band score, this is not the case when real data is presented. Other key elements, besides vocabulary, account for 75% of the overall speaking band score. So, even if a student has a vast vocabulary, its size will only account for 25% of the band score.

Students may have been unfamiliar with some words when taking the vocabulary size exam, but they chose one true answer by chance. Non-native speakers make an effort to follow the norms and keep their texts cohesive. Pakistani students are required to study English as a second language; hence they are unfamiliar with the majority of the words. Even if they understand the words, they are unable to communicate effectively.

Conclusion

The main aim of the study was to analyze the relationship between RVs and productive language skills and to discuss the predictive nature of VST regarding the speaking skills of the students. After discussing the background, the current study formulated 3 research questions and a hypothesis associated with the aims of the study. After reviewing the relevant literature and theory, it was maintained that there was no study in Pakistan or outside the country that correlated VST with productive skills using T-test, correlation, and simple linear regression at that same time.

There was one independent variable (VST) and one dependent variable (Productive Language Skills) in the study. The study collected a sample of 125 Pakistani IELTS test takers and collected their band scores and their vocabulary sizes with the help of VST by Paul Nation. This data was entered in paired forms and analyzed in SPSS 23. Before conducting each test, the assumptions regarding the test were checked. It was known that the data on productive skills were not distributed normally so the Mann-Whitney test was used to gauge the differences.

It was assumed that the Pearson correlation would describe the coefficients of VST and productive skills. However, on checking the assumptions, it was known that Spearman Rank correlation would suit the data. 2 simple linear regression analyses

predicted the new observations of productive language skills in terms of their VST. Among these question, T-tests and Mann-Whitney tests were used to explain the differences in the performance of males and females in VST and speaking i.e., answered RQ 1. Pearson Correlation was conducted to answer RQ 2 and regression analyses were done to answer RQ 3. The result of these tests showed different trends in comparison to the other research done so far. Male and female data were found to be non-significant i.e., no differences existed. However, research showed that females had a trend of outperforming in productive skills.

Next, VST and speaking were correlated and it was found that there was a low degree of non-significant correlation. Similarly, regression analysis predicted that there were small variances in productive skills yet other researchers claimed to have high variances of 80%. These different results showed that the results of language tests on non-natives cannot be generalized. Each non-native student in a different country has a different life and education and personality. The behavior of Chinese students towards English as their L2 might be different as compared to Urdu-speaking non-natives of Pakistan. So, it is always impossible to produce the same results by a different set of people living in a different country

Recommendations

Language is being taught in non-native nations passively. The format of teaching grammar, spelling, punctuation and vocabulary is descriptive rather than practical. It is observed that if a student needs to improve their productive language skills, then they must be advised to produce the language than rather just studying the respective rules. It is recommended to devise such vocabulary learning techniques that will help the learners to use the language effectively. For this purpose, novice researchers might find or devise some advanced practical courses especially designed to enhance the vocabulary size of a non-native language user.

References

Alavi, S. M., & Akbarian, I. H. (2012). The role of vocabulary size in predicting performance on TOEFL reading item types. *System*, *40*(3), 376-385.

Alavi, S. M., & Akbarian, I. H. (2012). The role of vocabulary size in predicting performance on TOEFL reading item types. *System*, *40*(3), 376-385.

Astika, G. G. (1993). Analytical assessments of foreign students' writing. *RELC journal*, *24*(1), 61-70.

Bachman, L. F. (2004). *Statistical analyses for language assessment book*. Cambridge University Press.

Brown, D., Milton, J., & Fitzpatrick, T. (2014). Knowledge of collocations. *Dimensions of vocabulary knowledge*, 123-139.

Dang, T. N. Y., Webb, S., & Coxhead, A. (2022). Evaluating lists of high-frequency words: Teachers' and learners' perspectives. *Language Teaching Research*, *26*(4), 617-641.

Enayat, M. J., & Derakhshan, A. (2021). Vocabulary size and depth as predictors of second language speaking ability. *System*, *99*, 102521.

Hazenberg, S., & Hulstun, J. H. (1996). Defining a minimal receptive second-language vocabulary for non-native university students: An empirical investigation. *Applied linguistics*, *17*(2), 145-163.

Henriksen, B. (1999). Three dimensions of vocabulary development. *Studies in second language acquisition*, *21*(2), 303-317.

Hsueh-Chao, M. H., & Nation, P. (2000). Unknown vocabulary density and reading comprehension.

Janebi Enayat, M., & Babaii, E. (2018). Reliable predictors of reduced redundancy test performance: The interaction between lexical bonds and test takers' depth and breadth of vocabulary

knowledge. *Language Testing*, *35*(1), 121-144.

Janebi Enayat, M., & Haghighatpasand, M. (2019). Exploiting adventure video games for second language vocabulary recall: A mixed-methods study. *Innovation in Language Learning and Teaching*, *13*(1), 61-75.

Koizumi, R., & In'nami, Y. (2013). Vocabulary knowledge and speaking proficiency among second language learners from novice to intermediate levels. *Journal of Language Teaching and Research*, *4*(5), 900.

Laufer, B., & Ravenhorst-Kalovski, G. C. (2010). Lexical threshold revisited: Lexical text coverage, learners' vocabulary size and reading comprehension.

Malvern, D. D., & Richards, B. J. (2007). Validity and threats to the validity of vocabulary assessment.

Matthews, J., & Cheng, J. (2015). Recognition of high frequency words from speech as a predictor of L2 listening comprehension. *System*, *52*, 1-13.

Meara, P. (1993). The bilingual lexicon and the teaching of vocabulary. *The bilingual lexicon*, 279-297.

Milton, J., Wade, J., & Hopkins, N. (2010). Aural word recognition and oral competence in English as a foreign language. Insights into non-native vocabulary teaching and learning, 52, 83-98.

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.

Nation, I. S. P. (2011). Research into practice: Vocabulary. *Language Teaching*, *44*(4), 529-539.

Nation, I. S. P., & Webb, S. (2011). Content-based instruction and vocabulary learning. In *Handbook of research in second language teaching and learning* (pp. 631-644). Routledge.

Nation, I. S., & Webb, S. A. (2011). *Researching and analyzing vocabulary*. Boston, MA: Heinle, Cengage Learning.

Read, J. (2004). 7. Research in teaching vocabulary. *Annual Review of Applied Linguistics*, *24*, 146-161.

Read, J. (2004). Plumbing the depths: How should the construct of vocabulary knowledge be de[a]ned?. *Vocabulary in a second language*, 209.

Rehman, A. A., & Alharthi, K. (2016). An introduction to research paradigms. *International Journal of Educational Investigations*, *3*(8), 51-59.

Richards, J. C. (1976). The role of vocabulary teaching. *TESOL quarterly*, 77-89.

Schmitt, N. (2008). Instructed second language vocabulary learning. *Language teaching research*, *12*(3), 329-363.

Schmitt, N. (2014). Size and depth of vocabulary knowledge: What the research shows. *Language learning*, *64*(4), 913-951.

Stæhr, L. S. (2009). Vocabulary knowledge and advanced listening comprehension in English as a foreign language. *Studies in second language acquisition*, *31*(4), 577-607.

Uchihara, T., & Saito, K. (2019). Exploring the relationship between productive vocabulary knowledge and second language oral ability. *The language learning Journal*, *47*(1), 64-75

Webb, S. (2013). New Directions in Vocabulary Assessment.