البحث الثاني عشر :

The Relationship Between the Size and Depth of Vocabulary Knowledge Among Saudi Learners

العلاقة بين حجم وعمق معرفة المفردات لدى المتعلمين السعوديين

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حاصل على الماجستير في التربية

وزارة التربية والتعليم بالمملكة العربية السعودية

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● المستخلص :

قـام البــاحثون في مجــال تعلـم المفــردات وتدريسـها بــالتمييز بـين بعـدين مـن أبعـاد معرفـة المفـردات: الحجـم والعمـق. ومـع العلـم بـأن هـذين البعـدين غيـر منفصـلين وأنهمـا قـد يكونـان مـرتبطين ارتباطـا وثيقـا. لـذلك تهـدف الدراسـة الحاليـة إلى معرفـة العلاقـة بـين حجـم وعمـق معرفـة المفـردات لـدى المتعلمـين السـعوديين. اعتمـد البحـث التصميم شـبه التجريبي. اشـتمل مجتمـع الدراسـة على جميـع طلاب الثانويـة الثالثـة في ثانويـة الملـك سـعود بالطـائف / المملكـة العربيـة السـعودية. تم الاختيـار عمـدًا (١٠٨) طالـب وطالبـة ثـانوي ثالـث في ثانويـة الملـك سـعود بالطـائف ليكونـوا عينـة الدراسـة. لجمـع البيانـات اسـتخدم البـاحث اختبـارين ؛ اختبـار مسـتوى المفـردات (VLT) لقيـاس حجـم معرفـة المفـردات بـين الطـلاب. الاختبـار الثاني هـو اختبـار Word Associated Test (WAT) لقيـاس عمـق معرفـة المفـردات بـين الطـلاب. لتحليـل البيانـات اسـتخدم البحـث برنـامج SPSS. أظهـرت نتـائج الدراسـة أن هنـاك علاقـة إيجابيـة ذات دلالـة إحصائية عاليـة بـين حجـم وعمـق معرفـة المفـردات لـدى المتعلمـين السـعوديين. بالإضافـة إلى ذلـك ، هنـاك تـأثير كبيـر لـ "اختبـار الحجـم" على "اختبـار العمـق". أن عمـق مفـردات الشـخص هـو جـودة أو عمـق فهمـه ، في حـين يُقـاس حجـم المفـردات بعـدد الكلمـات التي يعرفهـا الفـرد على الأقـل بعضًـا مـن المكونـات المهمـة للمعنى. يشـير عمـق مفـردات الشـخص إلى مـدى معرفتـه لهـذه الكلمـات ، بينمـا يصـف حجـم المفـردات عـدد الكلمـات التي يعرفهـا. للتوصيـة ، هنـاك حاجـة إلى مزيـد مـن البحـث لتأكيـد العلاقـة بـين الحجـم والعمـق وحـول كيفيـة تحسـين هـذين البعـدين بـين المتعلمـين السـعوديين.

الكلمات المفتاحية : حجم المفردات – عمق المفردات – المتعلمين السعوديين

The Relationship Between the Size and Depth of Vocabulary Knowledge Among Saudi Learners

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Abstract

Researchers in the field of vocabulary learning and teaching have made a distinction   between two dimensions of vocabulary knowledge: size and depth. However, Milton (2009) empirically argues that these two dimensions

are not separable and that they might be closely related. Therefore, the current study aims to investigate the relationship between the size and depth of vocabulary knowledge among Saudi learners. The researcher adopted the quasi-experimental design. The population of the study involved all the third secondary students at King Saud High School in Taif \ Saudi Arabia. The researcher purposely chose (108) third secondary students at King Saud High School in Taif to be the sample of the study. To collect data, the researcher used two tests; Vocabulary Level Test (VLT) to measure the size of vocabulary knowledge among the students. The second test is Word Associated Test (WAT) to measure the depth of vocabulary knowledge among the students. To analyze data, the researcher used SPSS program. The findings of the study showed that there is a statistically significant high positive relationship between the size and depth of vocabulary knowledge among Saudi learners. In addition, there is a significant effect of " Size Test" on "Depth Test ". Anderson and Freebody (1981) stated that a person's vocabulary depth is the quality or depth of their understanding, whereas vocabulary size is measured by the number of words that the individual knows at least some of the significant components of the meaning. A person's vocabulary depth indicates how well they know these words, whereas vocabulary size describes how many words they know. To recommend, further research is needed to confirm the relationship between size and depth and about how to improve these two dimensions among the Saudi learners.
Keywords: Vocabulary size, Vocabulary depth, Saudi learners

Introduction

Second language (L2) vocabulary researchers agree that a learner's understanding of a term should be defined using a multidimensional construct. Read (1998), Wesche and Paribakht (1996), and Qian (1999) contend that one's vocabulary knowledge should have both breadth and depth. Vocabulary depth, on the other hand, reveals how thoroughly a student has learned the meaning of a word, as opposed to breadth, which is described in terms of the number of words a learner knows with some superficial awareness of some of the meanings.

According to Qian (1999), mastery of a wide range of lexical features, including as their pronunciation, spelling, meaning, register, frequency, morphology, syntax, and collocations, are indicators of a well-rounded vocabulary.

Qian's (1998; 1999; 2002) findings revealed that there existed high intercorrelations between vocabulary size, depth of vocabulary knowledge, and reading comprehension. Qian and Schedl (2004) found that vocabulary knowledge depth has a substantial effect on test takers' performance in reading comprehension. Finally, it has been established that lexical knowledge is related to reading comprehension, writing ability, linguistic fluency, and academic performance (Laufer et al, 2004).

In addition, when learning a new language, vocabulary is one of the most important factors. Since lexical items provide the core information that FL and SL learners need to comprehend and express, students of these languages are usually aware of how much their vocabulary knowledge limits their communication abilities. (Nation, 2001).

Researchers in the field of vocabulary learning and teaching have made a distinction between two dimensions of vocabulary

knowledge: size and depth (Bogaards and Laufer, 2004, Haastrup and Henriksen, 2000, Milton, 2009, Read, 2000). However, most recently, reviewing many studies in his excellent volume Measuring Second Language Vocabulary Acquisition, Milton (2009) empirically argues that these two dimensions are not separable and that they might be closely related.

Size of vocabulary knowledge is considered as referring to the number of words that language learners know at a particular level of language proficiency (Nation, 2001). Researchers have used various types of assessment tools with different formats to measure this dimension of vocabulary knowledge (Wesche and Paribakht, 1996, for a discussion of

these various assessment types). Nassaji (2004) states that one widely used measure to assess the size of vocabulary knowledge in the literature is Vocabulary Levels Test (henceforth VLT), which has a word–meaning matching format and is composed of words representing different word- frequency levels, ranging from high-frequency (2000-word level) to low- frequency words (10,000-word level). As Milton (2009) states, through these tests "we get believable and stable results" (p. 11) and they have good content validity (see Methodology section for an example item of VLT).

Depth of vocabulary knowledge refers to how well the language learner knows a word. According to Nassaji (2004, p. 112), researchers have indicated "the complexity and multi-dimensionality of word knowledge and have suggested that knowing a word well should mean more than knowing its individual meanings in particular contexts." Various kinds of knowledge are associated with a word that a learner must know, ranging from knowledge of its pronunciation, spelling, register, and stylistic and morphological features (Haastrup and Henriksen, 2000, Nation, 1990) to knowledge of the word's syntactic and semantic relationships with other

words in the language, including collocational meanings and knowledge of antonymy, synonymy, and hyponymy (Chapelle, 1994, Henriksen, 1999, Read, 2000).

One widely used measure assessing only some of these aspects is Word Associates Test (henceforth WAT) that was originally developed by Read (2000). He used the principle of word association to make a word associates format that asks learners to choose responses to a stimulus. The target word and associates have three basic relationships: "paradigmatic (superordinates, synonyms), syntagmatic

(collocates) and analytic (words representing a key element of the meaning of the target word)" (Read, 2004,

p. 221). The instrument was refined through a process of repeated piloting. The test has been found to be closely correlated with SL reading comprehension ability and has also been shown to have a high degree of internal reliability (Qian, 1999, Qian, 2002, Read, 1993). WAT measures only some components of vocabulary depth, as pointed out above, since these components are important. They appear frequently in discussions of vocabulary knowledge (e.g., Chapelle, 1994, Nation, 1990, Nation, 2001, Qian, 1999, Qian, 2002, Read, 1993, Read, 2000, Wesche and Paribakht, 1996). Although the test taps knowledge of adjectives only, given the design of the measure that requires the identification of nouns that collocate with the adjectives tested, nouns are indirectly tested as well.

What is worth mentioning concerning depth is that there are "no clear, comprehensive and unambiguous definitions to work with" (Milton, 2009, p. 150). The construct validity of depth is therefore challenged. However, one approach is to test the elements of vocabulary depth separately, say idiom or collocation, for the assumption that it will represent ability in the whole of vocabulary depth.

Given that, Wolter (2005) is not so optimistic about this test and cannot suggest with confidence that it succeeds in assessing depth of word knowledge. In addition, guessing and vocabulary size are likely to play a significant role in the scores the test produces (Milton, 2009, p. 163).

Therefore, this research sheds the light on the relationship between the size and depth of vocabulary knowledge among Saudi learners.

Statement of the Problem

Researchers in the field of vocabulary learning and teaching have made a distinction between two dimensions of vocabulary knowledge: size and depth. However, Milton (2009) empirically argues that these two dimensions are not separable and that they might be closely related. The problem of the study can be determined by the following main question: "What is the relationship between the size and depth of vocabulary knowledge among Saudi learners?".

Questions of the Study

The current study seeks to answer the following questions:
- What is the size of vocabulary knowledge among Saudi learners?
- What is the depth of vocabulary knowledge among Saudi learners?
- What is the relationship between the size and depth of vocabulary knowledge among Saudi learners?

Hypothesis of the Study
- There is a statistically significant high positive relationship between the size and depth of vocabulary knowledge among Saudi learners
- There is a significant effect of " Size Test" on "Depth Test ".

Purpose of the Study

The current study aims to investigate the relationship between the size and depth of vocabulary knowledge among Saudi learners.

Significance of the Study

The significance of the current study lies in the following:
- The researchers noticed through their review of previous

studies and modern sources related to the subject of the research that there are a limited number of studies that talked about the relationship between the size and depth of vocabulary knowledge, especially in Saudi Arabia, so this research may be considered one of the recent studies that can benefit researchers in the same field as a reference.

- The current study may contribute to drawing the attention of English teachers and who concerns about the difference between the size and the depth of vocabulary knowledge and the relationship between them.

Delimitation of the Study

Place: Taif city in Saudi Arabia

Time: The study was done during 2022, and data was collected during the third semester of the academic year.

Topic: The relationship between the size and depth of vocabulary knowledge.

People: Third secondary students at King Saud High School in Taif \ Saudi Arabia.

Definition of Terms

- Vocabulary: Susanto (2017) defined it as: "The learning of Vocabulary is important part in foreign language learning. The meanings of new words are very frequently emphasized, whether in books or in verbal communication. Vocabulary is considered as the central in language teaching and is of paramount importance to a language learner".

- Size of vocabulary knowledge: It refers to the number of words that language learners know at a particular level of language proficiency (Nation, 2001). Researchers have used various types of assessment tools with different

formats to measure this dimension of vocabulary knowledge (Wesche and Paribakht, 1996, for a discussion of these various assessment types).

- Depth of vocabulary knowledge: It refers to how well the language learner knows a word. According to Nassaji (2004, p. 112), researchers have indicated "the complexity and multi-dimensionality of word knowledge and have suggested that knowing a word well should mean more than knowing its individual meanings in particular contexts."

Previous Studies

Akbarian (2010) stated that vocabulary knowledge occupies an important position in language learning. This study investigates the relationship between vocabulary size and depth for Iranian learners of English for specific/academic purposes (ESP/EAP). The participants include 112 ESP graduate students at a university in Iran. The findings from linear regression analyses show that, overall, VLT (size test) and WAT (depth test) have a great deal of common shared variance for these participants (R2 = .746). However, when they were divided into low and high proficiency groups, based on whether the participants mastered the most frequent 2000 words in VLT, a substantial amount of shared variance was shown for the low group (R2 = .464) and a much higher one for the high group (R2 = .804). The findings suggest that vocabulary size and depth might be accounted for by the same factors, especially as the learners' proficiency increases.

Atai & Nikuinezhad (2012) designed a study to assess the relative contributions of vocabulary and syntactic knowledge as predictors of reading comprehension performance. Further,

it aimed to explore the connection between syntactic and lexical acuity and readers' ability to comprehend what they read. There were 159 male Iranian high school freshmen and sophomores involved. The reading sections of the Vocabulary Levels Test, Word Associates Test, and Syntactic Knowledge Test were used to compile the data. Results showed that there was a positive relationship between grammar and vocabulary scores and reading comprehension scores. Additionally, syntactic knowledge was found to have a stronger relationship to reading comprehension than vocabulary. In our investigation, we found that syntactic factors account for a greater percentage of the reading variance. To test whether depth / breadth of vocabulary knowledge or syntax may have better predictive power in reading comprehension performance, multiple-regression analysis was undertaken. Although other variables accounted for the variance in the reading test, the beta values suggested that grammar had a substantial role in the reader's overall comprehension. These findings shed additional light on the potential moderating role that learners' grammatical knowledge plays in their low-intermediate reading comprehension.

Schmitt (2014) reported that it's common to differentiate between vocabulary size (the number of words one knows) and vocabulary depth when talking about language skills (how well those words are known). Nonetheless, the connection between the two concepts remains hazy. While there may be no difference between the two, regression analysis reveals that depth offers distinctive explanatory power over size alone. It all comes down to definitions and metrics used to determine how vocabulary quantity and knowledge depth are related. This critical synthesis aims to

provide an empirical foundation for investigating the size-depth relationship by locating research that use such measurements. Multiple depth-based perspectives led to the emergence of distinct layouts. There is generally minimal difference between size and a variety of depth metrics for higher frequency terms and for learners with smaller vocabulary sizes. However, there is often a chasm between size and depth, with depth measures trailing behind size measures, for lower frequency terms and for greater vocabulary sizes. The link between size and some forms of word knowledge (such as derivative knowledge) appears to be weaker than with other forms of word knowledge.

Alzahrani et al. (2021) stated that the vocabulary of students learning a second language (L2) is a critical factor in their success in acquiring that L2. In addition, students of a target language can't become fluent in that language until they acquire a substantial vocabulary through reading, writing, listening, and speaking. For this reason, this research analyzes the relationship between vocabulary size and reading comprehension in Saudi Arabian high school EFL students. One hundred and eight students from a Saudi high school EFL program took two tests for this study: i the vocabulary size test (VST), and (ii) an adjusted reading comprehension test. The findings reveal that the average vocabulary size of Saudi EFL learners was 2025-word families, which allowed them to comprehend up to 90% of written texts. Vocabulary knowledge is a strong predictor of successful reading comprehension among these participants, but its influence is moderated by English competence. U.N. Sustainable Development Goal 4 (SDG-4) states that "all students will have highly motivated, well-supported, and well-qualified teachers to develop English- language skills

via coherent inter-school curricula and continued access to qualified, experienced English-language teachers." This paper offers helpful insights for educational stakeholders in Saudi Arabia to improve reading comprehension in L2 contexts in line with SDG-4.

Research Methodology

Design of this Study is a correlational descriptive approach. The Population of the Study is involved all the third secondary students at King Saud High School in Taif \ Saudi Arabia. As the researcher is the teacher of the classes included in is study. A convenient sampling approach was implemented to include (108) third secondary students at King Saud High School in Taif to be the sample of the study.

To collect data, the researcher used two tests; First, Vocabulary Level Test (VLT), which was developed by Nations & Beglar (2007), to measure the size of vocabulary knowledge among the students. The Vocabulary Level Test (VLT) is a simple diagnostic tool for measuring students' ability to understand spoken and written English. Words in the exam are drawn from a corpus, so their frequency profiles and distributions in real-world contexts can be relied upon. (Nation, 2013). The participants were asked to pair a target word with its definition during the exam. There are a total of five distinct sections within the exam which represent four-word frequency levels: The 1st 1,000-word level, the 2nd 1,000-word level, the 3rd 1,000-word level, the 4th 1,000-word level, the 5th 1,000-word level. There are a total of 150 words over the five sections of the test, with 30 items each level reflecting the whole frequency range. Test items are like the following example:

1. COMPOUND: They made a new **compound**.

   a. ◯ agreement

   b. ◯ thing made of two or more parts

   c. ◯ group of people forming a business

   d. ◯ guess based on past experience

The other one was Word Associated Test (WAT), which was developed by Read (1998), to measure the depth of the vocabulary knowledge among the students. Depth of Vocabulary Knowledge (DVK) is intended to measure learners' depth of receptive English vocabulary knowledge. DVK measures two aspects of vocabulary depth: meaning (synonymy and polysemy) and collocation (Qian, 1998). This test was originally developed by Read (1993) and was called the Word Associates Test (WAT). A modified version of the DVK, used in this study, contains 40 items; 32 items were original WAT, and eight items were developed by Qian (1998) to replace eight original items which were considered ambiguous. Each item consists of one stimulus adjective and two boxes, each containing four words. One to three words in the left box can be synonymous to the whole meaning or one aspect of the stimulus word, whereas one to three words in the right box can be collocations of the stimulus word. Thus, there are four correct answers for each item. However, the four answers are not equally spread. There are three possible situations: (a) each box contains two correct answers, (b) the left box contains one correct answer, and the right box contains three correct answers; and (c) the left box contains three correct answers, and the right box contains only one correct answer (Qian, 2002). In scoring DVK, each word correctly chosen was given one point. Thus, the maximum possible score for the 40 items was 160. Test items are like

the following example:

sensitive

| □ feeling | □ interesting | □ sharp | □ thick | □ clothes | □ instrument | □ skin | □ topic |

example:

Procedures of the Study

The study tools (that is, the two tests) were applied to a sample of students in the secondary stage (especially the third secondary grade) with the help of some English language teachers in the school, where the duration of each test was 45 minutes, and the students and teachers were very cooperative. The researcher gave oral instructions in Arabic to the participants before taking the test and the participation was voluntary. As the researcher did not face any difficulty in applying the two tests. The vocabulary size test was administered during regular classes and participation in this study was voluntary.

To analyze data, descriptive statistics were used to address the research questions of this study. Scores collected from this study were analyzed using the Statistical Package for Social Science (SPSS), by applying the descriptive test to the data to get the means and standard deviations for each of the test items. The researcher used the following tools of data analysis:

- Frequency: to calculate data frequencies.
- Mean: to show the main dimensions of the study
- Standard Deviation: to show how much variation or dispersion exists from the mean
- Correlational analysis: examine the correlation between size and depth of vocabulary.

Findings and Discussion

Frequencies of the study sample First 1000

SEE: They saw it.

The table below shows the distribution of the study sample according to SEE, we notice that (29.6%) of the study sample answered cut, (34.3%) answered looked at, (5.6%) answered started and (30.6%) answered waited for.

Table (4.1) Distribution of study sample according to SEE

	Frequency	Percent
cut	32	29.6
looked at	37	34.3
started	6	5.6
waited for	33	30.6
Total	108	100%

TIME: They have a lot of time.

The table below shows the distribution of the study sample according to TIME, we notice that (24.1%) of the study sample answered food, (8.3%) answered friends, (49.1%) answered hours and (18.5%) answered money.

Table (4.2) Distribution of study sample according to TIME

	Frequency	Percent
food	26	24.1
friends	9	8.3
hours	53	49.1
money	20	18.5
Total	108	100%

PERIOD: It was a difficult period.

The table below shows the distribution of the study sample according to PERIOD, we notice that (5.6%) of the study sample answered book, (27.8%) answered question, (18.5%) answered thing to do and (48.1%) answered time.

Table (4.3) Distribution of study sample according to PERIOD

	Frequency	Percent
book	6	5.6
question	30	27.8
thing to do	20	18.5
time	52	48.1
Total	108	100%

FIGURE: Is this the right figure.

The table below shows the distribution of the study sample according to

FIGURE, we notice that (21.3%) of the study sample answered answer, (27.8%) answered number, (25%) answered place and (25.9%) answered time.

Table (4.4) Distribution of study sample according to FIGURE

	Frequency	Percent
answer	23	21.3
number	30	27.8
place	27	25.0
time	28	25.9
Total	108	100%

POOR: We are poor.

The table below shows the distribution of the study sample according to POOR, we notice that (13%) of the study sample answered are very interested, (13.9%) answered do not like to work hard, (20.4%) answered feel happy and (52.8%) answered have no money.

Table (4.5) Distribution of study sample according to POOR

	Frequency	Percent
are very interested	14	13.0
do not like to work hard	15	13.9
feel happy	22	20.4
have no money	57	52.8
Total	108	100 %

DRIVE: He drives fast.

The table below shows the distribution of the study sample according to DRIVE, we notice that (23.1%) of the study sample answered Learns, (24.1%) answered swims, (10.2%) answered Throws balks and (42.6%) answered Uses car.

Table (4.6) Distribution of study sample according to DRIVE

	Frequency	Percent
Learns	25	23.1
swims	26	24.1
Throws balks	11	10.2
Uses car	46	42.6
Total	108	100%

JUMP: She tries to jump.

The table below shows the distribution of the study sample according to JUMP, we notice that (44.4%) of the study sample answered get off the ground suddenly, (21.3%) answered lie on top of the water, (13%) answered move very fast and (21.3%) answered stop the car at the edge of the road.

Table (4.7) Distribution of study sample according to JUMP

	Frequency	Percent
get off the ground suddenly	48	44.4
lie on top of the water	23	21.3
move very fast	14	13.0
stop the car at the edge of the road	23	21.3
Total	108	100%

SHOE: Where is your shoe?

The table below shows the distribution of the study sample according to SHOE, we notice that (23.1%) of the study sample answered the person who looks after you, (28.7%) answered the thing you keep your money in, (18.5%) answered the thing you use for writing and (29.6%) answered the thing you wear on your foot.

Table (4.8) Distribution of study sample according to SHOE

	Frequency	Percent
the person who looks after you	25	23.1
the thing you keep your money in	31	28.7
the thing you use for writing	20	18.5
the thing you wear on your foot	32	29.6
Total	108	100%

STANDARD: Her standards are very high.

The table below shows the distribution of the study sample according to STANDARD, we notice that (35.2%) of the study sample answered the bits at the back under her shoes, (23.1%) answered the levels she reaches in everything, (27.8%) answered the marks she gets in school and (13.9%) answered the money she asks for.

Table (4.9) Distribution of study sample according to STANDARD

	Frequency	Percent
the bits at the back under her shoes	38	35.2
the levels she reaches in everything	25	23.1
the marks she gets in school	30	27.8
the money she asks for	15	13.9
Total	108	100%

BASIS: This was used as the basis.

The table below shows the distribution of the study sample according to BASIS, we notice that (23.1%) of the study sample answered answer, (29.6%) answered main part, (22.2%) answered next step and (25%) answered place to take a rest.

Table (4.10) Distribution of study sample according to BASIS

	Frequency	Percent
answer	25	23.1
main part	32	29.6
next step	24	22.2
place to take a rest	27	25.0
Total	108	100 %

Second 1000

MAINTAIN: Can they maintain it?

The table below shows the distribution of the study sample according to MAINTAIN, we notice that (26.9%) of the study sample answered get a better one than it, (9.3%) answered get it, (41.7%) answered keep it as it is and (22.2%) answered make it larger.

Table (4.11) Distribution of study sample according to MAINTAIN

	Frequency	Percent
get a better one than it	29	26.9
get it	10	9.3
keep it as it is	45	41.7
make it larger	24	22.2
Total	108	100%

STONE: They sat on a stone.

The table below shows the distribution of the study sample according to STONE, we notice that (38%) of the study sample answered hard thing, (23.1%) answered kind of chair, (14.8%) answered part of a tree and (24.1%) answered soft thing on the floor.

Table (4.12) Distribution of study sample according to STONE

	Frequency	Percent
hard thing	41	38.0
kind of chair	25	23.1
part of a tree	16	14.8
soft thing on the floor	26	24.1
Total	108	100%

PATIENCE: He has no patience.

The table below shows the distribution of the study sample according to PATIENCE, we notice that (10.2%) of the study sample answered does not know what is fair, (22.2%)

answered has no faith, (30.6%) answered has no free time and (37%) answered will not wait happily.

Table (4.13) Distribution of study sample according to PATIENCE

	Frequency	Percent
does not know what is fair	11	10.2
has no faith	24	22.2
has no free time	33	30.6
will not wait happily	40	37.0
Total	108	100%

UPSET: I am upset.

The table below shows the distribution of the study sample according to UPSET, we notice that (26.9%) of the study sample answered famous, (23.1%) answered rich, (24.1%) answered tired and (25.9%) answered unhappy.

Table (4.14) Distribution of study sample according to UPSET

	Frequency	Percent
famous	29	26.9
rich	25	23.1
tired	26	24.1
unhappy	28	25.9
Total	108	100%

DRAWER: The drawer was empty.

The table below shows the distribution of the study sample according to DRAWER, we notice that (10.2%) of the study sample answered animal house, (17.6%) answered cupboard to keep things cold, (30.6%) answered place where cars are kept and (41.7%) answered sliding box.

Table (4.15) Distribution of study sample according to DRAWER

	Frequency	Percent
animal house	11	10.2
cupboard to keep things cold	19	17.6
place where cars are kept	33	30.6
sliding box	45	41.7
Total	108	100 %

NIL: His mark for that question was nil.

The table below shows the distribution of the study sample according to NIL, we notice that (12%) of the study sample answered in the middle, (41.7%) answered nothing, (24.1%) answered very bad and (22.2%) answered very good.

Table (4.16) Distribution of study sample according to Gender

	Frequency	Percent
in the middle	13	12.0
nothing	45	41.7
very bad	26	24.1
very good	24	22.2
Total	108	100%

PUB: They went to the pub.

The table below shows the distribution of the study sample according to PUB, we notice that (20.4%) of the study sample answered animal house, also (20.4%) answered cupboard to keep things cold, (11.1%) answered place that looks after money and (48.1%) answered place where people drink and talk.

Table (4.17) Distribution of study sample according to PUB

	Frequency	Percent
animal house	22	20.4
cupboard to keep things cold	22	20.4
place that looks after money	12	11.1
place where people drink and talk	52	48.1
Total	108	100%

CIRCLE: Make a circle.

The table below shows the distribution of the study sample according to CIRCLE, we notice that (13%) of the study sample answered large hole, (18.5%) answered rough picture, (37%) answered round shape and (31.5%) answered space

with nothing in it.

Table (4.18) Distribution of study sample according to CIRCLE

	Frequency	Percent
large hole	14	13.0
rough picture	20	18.5
round shape	40	37.0
space with nothing in it	34	31.5
Total	108	100%

MICROPHONE: Please use the microphone.

The table below shows the distribution of the study sample according to MICROPHONE, we notice that (48.1%) of the study sample answered machine that makes sounds louder, (16.7%) answered machine that makes things look bigger, (27.8%) answered Option 1machine for making food hot and (7.4%) answered small telephone that can be carried around.

Table (4.19) Distribution of study sample according to MICROPHONE

	Frequency	Percent
machine that makes sounds louder	52	48.1
machine that makes things look bigger	18	16.7
Option 1machine for making food hot	30	27.8
small telephone that can be carried around	8	7.4
Total	108	100%

PRO: He's a pro.

The table below shows the distribution of the study sample according to PRO, we notice that (23.1%) of the study sample answered a stupid person, (41.7%) answered someone who is employed to find out important secrets, (18.5%) answered someone who is paid for playing a sport, etc and (16.7%) answered someone who writes for a newspaper.

Table (4.20) Distribution of study sample according to PRO

	Frequency	Percent
a stupid person	25	23.1
someone who is employed to find out important secrets	45	41.7
someone who is paid for playing a sport, etc.	20	18.5
someone who writes for a newspaper	18	16.7
Total	108	100 %

Third 1000

SOLDIER: He is a soldier.

The table below shows the distribution of the study sample according to SOLDIER, we notice that (22.2%) of the study sample answered person in a business, (29.6%) answered person in the army, (14.8%) answered person who uses metal and (33.3%) answered student.

Table (4.21) Distribution of study sample according to SOLDIER

	Frequency	Percent
person in a business	24	22.2
person in the army	32	29.6
person who uses metal	16	14.8
student	36	33.3
Total	108	100%

RESTORE: It has been restored.

The table below shows the distribution of the study sample according to RESTORE, we notice that (13%) of the study sample answered given a lower price, (30.6%) answered given to a different person, (33.3%) answered made like new again and (23.1%) answered said again.

Table (4.22) Distribution of study sample according to RESTORE

	Frequency	Percent
given a lower price	14	13.0
given to a different person	33	30.6
made like new again	36	33.3
said again	25	23.1
Total	108	100%

JUG: He was holding a jug.

The table below shows the distribution of the study sample according to JUG, we notice that (34.3%) of the study sample answered a container for pouring liquids, (30.6%) answered a soft cap, (10.2%) answered a weapon that explodes and (25%) answered an informal discussion.

Table (4.23) Distribution of study sample according to JUG

	Frequency	Percent
a container for pouring liquids	37	34.3
a soft cap	33	30.6
a weapon that explodes	11	10.2
an informal discussion	27	25.0
Total	108	100%

SCRUB: He is scrubbing it.

The table below shows the distribution of the study sample according to SCRUB, we notice that (23.1%) of the study sample answered cutting shallow lines into it, (13.9%) answered drawing simple pictures of it, (28.7%) answered repairing it and (34.3%) answered rubbing it hard to clean it.

Table (4.24) Distribution of study sample according to SCRUB

	Frequency	Percent
cutting shallow lines into it	25	23.1
drawing simple pictures of it	15	13.9
repairing it	31	28.7
rubbing it hard to clean it	37	34.3
Total	108	100%

DINOSAUR: The children were pretending to be dinosaurs.

The table below shows the distribution of the study sample according to DINOSAUR, we notice that (23.1%) of the study sample answered animals that lived a long time ago,

(22.2%) answered large creatures with wings that breathe fire, (25%) answered robbers who work at sea and (29.6%) answered small creatures with human form but with wings.

Table (4.25) Distribution of study sample according to DINOSAUR

	Frequency	Percent
animals that lived a long time ago	25	23.1
large creatures with wings that breathe fire	24	22.2
robbers who work at sea	27	25.0
small creatures with human form but with wings	32	29.6
Total	108	100 %

STRAP: He broke the strap.

The table below shows the distribution of the study sample according to STRAP, we notice that (25%) of the study sample answered promise, (20.4%) answered shallow dish for food, (31.5%) answered strip of material for holding things together and (23.1%) answered top cover.

Table (4.26) Distribution of study sample according to STRAP

	Frequency	Percent
promise	27	25.0
shallow dish for food	22	20.4
strip of material for holding things together	34	31.5
top cover	25	23.1
Total	108	100%

PAVE: It was paved.

The table below shows the distribution of the study sample according to PAVE, we notice that (20.4%) of the study sample answered covered with a hard surface, (23.1%) answered divided, (22.2%) answered given gold edges and (34.3%) answered prevented from going through.

Table (4.27) Distribution of study sample according to PAVE

	Frequency	Percent
covered with a hard surface	22	20.4
divided	25	23.1
given gold edges	24	22.2
prevented from going through	37	34.3
Total	108	100%

DASH: They dashed over it.

The table below shows the distribution of the study sample according to DASH, we notice that (16.7%) of the study sample answered fought, (12%) answered looked quickly, (50%) answered moved quickly and (21.3%) answered moved slowly.

Table (4.28) Distribution of study sample according to DASH

	Frequency	Percent
fought	18	16.7
looked quickly	13	12.0
moved quickly	54	50.0
moved slowly	23	21.3
Total	108	100%

ROVE: He couldn't stop roving.

The table below shows the distribution of the study sample according to ROVE, we notice that (26.9%) of the study sample answered getting drunk, (23.1%) answered making a musical sound through closed lips, (40.7%) answered travelling around and (9.3%) answered working hard.

Table (4.29) Distribution of study sample according to ROVE

	Frequency	Percent
getting drunk	29	26.9
making a musical sound through closed lips	25	23.1
travelling around	44	40.7
working hard	10	9.3
Total	108	100%

LONESOME: He felt lonesome.

The table below shows the distribution of the study sample according to LONESOME, we notice that (11.1%) of the study sample answered full of energy, (42.6%) answered lonely, (27.8%) answered ungrateful and (18.5%) answered very tired.

Table (4.30) Distribution of study sample according to LONESOME

	Frequency	Percent
full of energy	12	11.1
lonely	46	42.6
ungrateful	30	27.8
very tired	20	18.5
Total	108	100 %

Fourth 1000

COMPOUND: They made a new compound.

The table below shows the distribution of the study sample according to COMPOUND, we notice that (23.1%) of the study sample answered agreement, (25%) answered group of people forming a business, (9.3%) answered guess based on past experience and (42.6%) answered thing made of two or more parts.

Table (4.31) Distribution of study sample according to COMPOUND

	Frequency	Percent
agreement	25	23.1
group of people forming a business	27	25.0
guess based on past experience	10	9.3
thing made of two or more parts	46	42.6
Total	108	100%

LATTER: I agree with the latter.

The table below shows the distribution of the study sample according to LATTER, we notice that (10.2%) of the study sample answered answer, (38%) answered last one, (23.1%) answered man from the church and (28.7%) answered reason given.

Table (4.32) Distribution of study sample according to LATTER

	Frequency	Percent
answer	11	10.2
last one	41	38.0
man from the church	25	23.1
reason given	31	28.7
Total	108	100%

TUMMY: Look at my tummy.

The table below shows the distribution of the study sample according to TUMMY, we notice that (24.1%) of the study sample answered cloth to cover the head, (20.4%) answered small furry animal, (46.3%) answered stomach and (9.3%) answered thumb.

Table (4.33) Distribution of study sample according to TUMMY

	Frequency	Percent
cloth to cover the head	26	24.1
small furry animal	22	20.4
stomach	50	46.3
thumb	10	9.3
Total	108	100%

CANDID: Please be candid.

The table below shows the distribution of the study sample according to CANDID, we notice that (22.2%) of the study sample answered be careful, (25.9%) answered say what you really think, (31.5%) answered show fairness to both sides and (20.4%) answered show sympathy.

Table (4.34) Distribution of study sample according to CANDID

	Frequency	Percent
be careful	24	22.2
say what you really think	28	25.9
show fairness to both sides	34	31.5
show sympathy	22	20.4
Total	108	100%

INPUT: We need more input.

The table below shows the distribution of the study sample according to INPUT, we notice that (23.1%) of the study sample answered artificial filling for a whole in wood, (37%) answered information, power, etc. put into something, (20.4%) answered money and (19.4%) answered workers.

Table (4.35) Distribution of study sample according to INPUT

	Frequency	Percent
artificial filling for a whole in wood	25	23.1
information, power, etc. put into something	40	37.0
money	22	20.4
workers	21	19.4
Total	108	100 %

QUIZ: We made a quiz.

The table below shows the distribution of the study sample according to QUIZ, we notice that (10.2%) of the study sample answered box for birds to make nests in, (23.1%) answered serious mistake, (40.7%) answered set of questions and (25.9%) answered thing to hold arrows.

Table (4.36) Distribution of study sample according to QUIZ

	Frequency	Percent
box for birds to make nests in	11	10.2
serious mistake	25	23.1
set of questions	44	40.7
thing to hold arrows	28	25.9

CRAB: Do you like crabs?

The table below shows the distribution of the study sample according to CRAB, we notice that (6.5%) of the study sample answered large black insects that sing at night, (42.6%) answered sea creatures that walk sideways, (28.7%) answered tight, hard collars and (22.2%) answered very thin small cakes.

Table (4.37) Distribution of study sample according to CRAB

	Frequency	Percent
large black insects that sing at night	7	6.5
sea creatures that walk sideways	46	42.6
tight, hard collars	31	28.7
very thin small cakes	24	22.2
Total	108	100%

VOCABULARY: You will need more vocabulary.

The table below shows the distribution of the study sample according to VOCABULARY, we notice that (10.2%) of the study sample answered guns, (12%) answered money, (29.6%) answered skill and (48.1%) answered words.

Table (4.38) Distribution of study sample according to
VOCABULARY

	Frequency	Percent
guns	11	10.2
money	13	12.0
skill	32	29.6
words	52	48.1
Total	108	100%

REMEDY: We found a good remedy.

The table below shows the distribution of the study sample according to REMEDY, we notice that (31.5%) of the study sample answered place to eat in public, (11.1%) answered rule about numbers, (37%) answered way to fix a problem and (20.4%) answered way to prepare food.

Table (4.39) Distribution of study sample according to REMEDY

	Frequency	Percent
place to eat in public	34	31.5
rule about numbers	12	11.1
way to fix a problem	40	37.0
way to prepare food	22	20.4
Total	108	100%

ALLEGE: They alleged it.

The table below shows the distribution of the study sample according to ALLEGE, we notice that (16.7%) of the study sample answered argued against the facts that supported it, (28.7%) answered claimed it without proof, (31.5%) answered provided facts to prove it and (23.1%) answered stole the ideas for it from someone else.

Table (4.40) Distribution of study sample according to ALLEGE

	Frequency	Percent
argued against the facts that supported it	18	16.7
claimed it without proof	31	28.7
provided facts to prove it	34	31.5
stole the ideas for it from someone else	25	23.1
Total	108	100 %

Fifth 1000

DEFICIT: The company had a large deficit.

The table below shows the distribution of the study sample according to DEFICIT, we notice that (13%) of the study sample answered had a lot of money in the bank, (36.1%) answered had a plan for spending that used a lot of money, also (36.1%) answered spent more money than it earned and (14.8%) answered went down in value.

Table (4.41) Distribution of study sample according to DEFICIT

	Frequency	Percent
had a lot of money in the bank	14	13.0
had a plan for spending that used a lot of money	39	36.1
spent more money than it earned	39	36.1
went down in value	16	14.8
Total	108	100%

WEEP: He wept.

The table below shows the distribution of the study sample according to WEEP, we notice that (31.5%) of the study

sample answered cried, (18.5%) answered died, (31.5%) answered finished his course and (18.5%) answered worried.

Table (4.42) Distribution of study sample according to WEEP

	Frequency	Percent
cried	34	31.5
died	20	18.5
finished his course	34	31.5
worried	20	18.5
Total	108	100%

NUN: We saw a nun.

The table below shows the distribution of the study sample according to NUN, we notice that (22.2%) of the study sample answered long thin creature that lives in the earth, (29.6%) answered terrible accident, (12%) answered unexplained bright light in the sky and (36.1%) answered woman following a strict religious life.

Table (4.43) Distribution of study sample according to NUN

	Frequency	Percent
long thin creature that lives in the earth	24	22.2
terrible accident	32	29.6
unexplained bright light in the sky	13	12.0
woman following a strict religious life	39	36.1
Total	108	100%

HAUNT: The house is haunted.

The table below shows the distribution of the study sample according to HAUNT, we notice that (15.7%) of the study sample answered empty, (42.6%) answered full of ghosts, (20.4%) answered full of ornaments and (21.3%) answered rented.

Table (4.44) Distribution of study sample according to HAUNT

	Frequency	Percent
empty	17	15.7
full of ghosts	46	42.6
full of ornaments	22	20.4
rented	23	21.3
Total	108	100%

COMPOST: We need some compost.

The table below shows the distribution of the study sample according to COMPOST, we notice that (29.6%) of the study sample answered hard stuff made of stones and sand stuck together, (24.1%) answered help to feel better, (19.4%) answered rotted plant material and (26.9%) answered strong support.

Table (4.45) Distribution of study sample according to COMPOST

	Frequency	Percent
hard stuff made of stones and sand stuck together	32	29.6
help to feel better	26	24.1
rotted plant material	21	19.4
strong support	29	26.9
Total	108	100 %

CUBE: I need one more cube.

The table below shows the distribution of the study sample according to CUBE, we notice that (8.3%) of the study sample answered piece of stiff paper folded in half, (27.8%) answered sharp thing used for joining things, (47.2%) answered solid square block and (16.7%) answered tall cup with no saucer.

Table (4.46) Distribution of study sample according to CUBE

	Frequency	Percent
piece of stiff paper folded in half	9	8.3
sharp thing used for joining things	30	27.8
solid square block	51	47.2
tall cup with no saucer	18	16.7
Total	108	100%

MINIATURE: It is a miniature.

The table below shows the distribution of the study sample according to MINIATURE, we notice that (9.3%) of the study sample answered a small line to join letters in handwriting, (22.2%) answered a very small living creature, (43.5%) answered a very small thing of its kind and (25%) answered an instrument to look at small objects.

Table (4.47) Distribution of study sample according to MINIATURE

	Frequency	Percent
a small line to join letters in handwriting	10	9.3
a very small living creature	24	22.2
a very small thing of its kind	47	43.5
an instrument to look at small objects	27	25.0
Total	108	100%

PEEL: Shall I peel it?

The table below shows the distribution of the study sample according to PEEL, we notice that (19.4%) of the study sample answered cut it into thin pieces, (22.2%) answered let it sit in water for a long time, also (22.2%) answered make it white and (36.1%) answered take the skin off it.

Table (4.48) Distribution of study sample according to PEEL

	Frequency	Percent
cut it into thin pieces	21	19.4
let it sit in water for a long time	24	22.2
make it white	24	22.2
take the skin off it	39	36.1
Total	108	100%

FRACTURE: They found a fracture.

The table below shows the distribution of the study sample according to FRACTURE, we notice that (43.5%) of the study sample answered break, (7.4%) answered rare jewel, (16.7%) answered short coat and (32.4%) answered small piece.

Table (4.49) Distribution of study sample according to FRACTURE

	Frequency	Percent
break	47	43.5
rare jewel	8	7.4
short coat	18	16.7
small piece	35	32.4
Total	108	100%

BACTERIUM: They didn't find a single bacterium in it.

The table below shows the distribution of the study sample according to BACTERIUM, we notice that (21.3%) of the study sample answered animal that carries water on its back, (23.1%) answered plant with red or orange flowers, (43.5%) answered small living thing causing disease and (12%) answered thing that has been stolen and sold to a shop.

Table (4.50) Distribution of study sample according to BACTERIUM

	Frequency	Percent
animal that carries water on its back	23	21.3
plant with red or orange flowers	25	23.1
small living thing causing disease	47	43.5
thing that has been stolen and sold to a shop	13	12.0
Total	108	100 %

Research Questions

Question 1/ What is the size of vocabulary knowledge among Saudi learners?

Table (4.51): Descriptive statistics

	Mean	Std. Deviation	Std. Error
Size Test	18.30	11.01	1.06

The table above showed the size of vocabulary knowledge among Saudi learners, and it was found that the Mean vocabulary knowledge is 18.30 with a standard deviation of 11.01.

Questions 2/ What is the depth of vocabulary knowledge among Saudi learners?

Table (4.52): Descriptive statistics

	Mean	Std. Deviation	Std. Error
Depth Test	68.70	24.08	2.32

The table above showed the depth of vocabulary knowledge among Saudi learners, and it was found that the Mean vocabulary knowledge is 68.70 with a standard deviation of 24.08

Questions 3/ what is the relationship between the size and depth of vocabulary knowledge among Saudi learners?

Table (4.53): Pearson correlation coefficient

		Size Test
Depth Test	Pearson correlation	0.796**
	Sig.	0.000

The table above showed that Sig. value less than (0.05), so correlation coefficient is sign, so There is a statistically significant high positive relationship at ($\alpha \leq 0.05$) between the size and depth of vocabulary knowledge among Saudi learners.

Effect of Size Test on Depth Test

The table below shows the result of the Effect of Size Test on Depth Test, which indicates that (i) The correlation coefficient was 0.796 which indicates that there is positive significant relationship between Size Test and Depth Test. (ii) The Regression coefficient of independent variables a significance level was 0.00 and it's lower than 0.05, then we can say that there is a significant effect at the 0.05 level of " Size Test on Depth Test". (iii) The R square value 63.3%, means that (63.3%) of the changes in Depth Test are caused by Size Test.

Table (4.54): Effect of Size Test on Depth Test

Independent Variable	Regression Coefficients			R	R-square	F	Sig.
	B	t	Sig.				
Constant	36.86	1344	000			183.22	
Size Test	1740	1354	000	0.796	0.633	**	0000

Discussion

The current study aims to investigate the relationship between the size and depth of vocabulary knowledge among Saudi learners. After data collection by applying the tests among the sample of the study. The findings showed that the mean of the size of vocabulary knowledge among Saudi learners is (18.30) from (50), which means that they have a low level of the size of vocabulary knowledge. This result deals with a study done by Al-Nujaidi (2003) who concluded that Saudi students have a rather limited vocabulary. Also, it agrees with Canga Alonso (2013) who found that majority of the students could have issues understanding written and spoken dialogue in English due to low scores on the receptive vocabulary level test. In fact, vocabulary size should be increased, as the amount of vocabulary one knows plays a

significant role in predicting their reading comprehension capacity, and this has been demonstrated by numerous studies

In addition, it was found that the mean of the depth of vocabulary knowledge among Saudi learners is (68.70) from 160, which means that they have a low level of the depth of vocabulary knowledge. For the relationship between size and depth, the findings showed that there is a statistically significant high positive relationship between the size and depth of vocabulary knowledge among Saudi learners. This result deals with Qian's (1998; 1999; 2002) findings which revealed that there are high intercorrelations between vocabulary size, depth of vocabulary knowledge. Therefore, this confirms what Milton (2009) empirically argues that these two dimensions (size and depth) are not separable and that they might be closely related. Also, Qian (1999, 2002) confirmed that the two concepts of breadth and depth, while stated in different ways, are philosophically and experimentally connected. Vocabulary breadth and depth were found to have significant associations, respectively, among L2 university students. Akbarian (2010) also found that vocabulary size and depth might be accounted for by the same factors, especially as the learners' proficiency increases. However, this result disagrees with Schmitt (2014) who found that there is often a chasm between size and depth, with depth measures trailing behind size measures, for lower frequency terms and for greater vocabulary sizes. The link between size and some forms of word knowledge (such as derivative knowledge) appears to be weaker than with other forms of word knowledge. In the end, we note that what distinguishes the current study is its handling of the issue of the relationship between size and depth, unlike previous studies that dealt with the relationship between size and other

variables, depth and other variables in language such as reading comprehension, writing ability, linguistic fluency, and academic performance. In addition, In most of the previous studies, study tools were applied to a sample of university students, but in this study, the volume and depth tests were applied to a sample of high school students, as very strong associations support the idea that breadth and depth are complementary aspects of vocabulary knowledge. Thus, breadth\size benefits from depth, and vice versa.

Conclusion

To conclude, Anderson and Freebody (1981) stated that a person's vocabulary depth is the quality or depth of their understanding, whereas vocabulary size is measured by the number of words that the individual knows at least some of the significant components of the meaning. A person's vocabulary depth indicates how well they know these words, whereas vocabulary size describes how many words they know. Therefore, this study aims to investigate the relationship between the size and depth of vocabulary knowledge among Saudi learners. The researcher randomly chose (108) third secondary students at King Saud High School in Taif to be the sample of the study. To collect data, the researcher used two tests; Vocabulary Level Test (VLT) to measure the size of vocabulary knowledge among the students. The other one was Word Associated Test (WAT) to measure the depth of the vocabulary knowledge among the students. The findings of the study showed that there is a statistically significant high positive relationship between the size and depth of vocabulary knowledge among Saudi learners. In addition, there is a significant effect of " Size Test" on "Depth Test ".

Recommendations

- Saudi learners need for more support and concentration in their English study regarding their vocabulary learning.
- Teachers should encourage students to use dictionaries and care about their acquisition of vocabulary
- Teaching technical and low-frequency terms as recommended by Nation and Chung (2009) to increase the size of vocabulary knowledge among the students so that they can achieve a high coverage rate in reading.
- Unfortunately, many foreign language classrooms suffer from a lack of preparation, which can result in students' incapacity to effectively use the vocabulary they have acquired. So Saudi Ministry of education should develop these classes to help students in enhancing their vocabulary size and depth. As the four pillars of vocabulary development proposed by Nation (2001, 2007) are Meaning-focused input, Meaning-focused output, Language-focused learning and Fluency development.
- Practice makes perfect, so students should practice vocabulary exercises which center on reinforcing the connection between form and meaning.
- Using language through speech and writing is a form of meaning- focused output, so students should write and speak to use the new learnt words to master them.

Suggestions for future Research

- It is suggested that future research investigate the discrepancy between the expected and actual vocabulary sizes by analyzing the vocabulary coverage of the entire program and the expected learned vocabulary by the end of it.
- Further research also is needed to be conducted about the relationship between size and depth and about how to improve these two dimensions among the Saudi learners.

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