Sudan University of Science and Technology

College of Graduate Studies

College of Languages

English Language Department

The Role of Morphological Awareness on Vocabulary Learning

دور الإدراك الصرفي في تعلم مفردات اللغة

The Research Submitted in partial fulfilment for the requirement of M.A. in English language (Applied Linguistics)

Prepared by:

Adam Sulieman Ibrahim Ahmed

Supervised by:

Dr. Ayman Hamadelneil Hamdan Abdalla

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الإستهلال

﴿ وَلَوْ أَنَّمَا فِي الْأَرْضِ مِنْ شَجَرَةٍ أَقْلَامٌ وَالْبَحْرُ يَمُدُّهُ مِنْ بَعْدِهِ سَبْعَةُ أَبْحُرٍ مَا نَفِدَتْ كَلِمَاتُ اللَّهِ إِنَّ اللَّهَ عَزِيزٌ حَكِيمٌ﴾

سورة لقمان (27)

Dedication

This work is dedicated to:

The soul of my father, my mother who have devoted her life for my sake,my brothers and sisters who have motivated me to go forward. My colleagues with whom we spent a very nice time.

Acknowledgements

I would like to express my appreciation to my supervisor Dr. Ayman Hamadelneil for his insightful guidance, support and his expertise about morphological awareness and vocabulary knowledge. I also owe thanks to the people who helped me to conduct the present study. My deep gratitude goes to Ustaz Yousif Khwaga who helped me a lot to conduct this research.

Abstract

This study examines the relationship between morphological awareness and vocabulary size in Sudanese students as EFL learners. The aims of this present study is to , investigate to what extent the students are aware of analytic and synthetic word formation rules, determine the relationship between Morphological awareness and vocabulary size and determine the Morphological awareness between students performance on complex and simple words. The results reveal that students displaced low overall Morphological awareness of word formation. The results also show that the students vocabulary size is relatively low. This indicate that they will struggle to understand on an average text. The study recommends to administer Morphological awareness test and vocabulary test separately to minimize cognitive load on the students. Teaching affixes to promote students vocabulary size.The Participants in the study were 30 Sudanese EFL learners. All the participants completed the test. Descriptive statistics, reliability measures and correlation coefficients were calculated and reported. The results indicate that, the students' overall morphological awareness and vocabulary size were limited, and that the relationship between the two constructs could not be established, owing to the appearance of floor effect in test scores and task difficulty. Although no statistical relationship was established between morphological Awareness and vocabulary in this study, it is premature to discount the potential Importance of morphological awareness in the L2 vocabulary development, particularly for the type of learner examined in this study.

المستخلص

تختبر هذه الدراسة العلاقة بين الادراك الصرفي وحجم المفردات لدى الطلاب السودانيين الذين يدرسون اللغة الانجليزية كلغة أجنبية . وحددت الدراسة لهذا البحث عدد ثلاثون طالباً ينتمون الي جامعة السودان للعلوم والتكنولوجيا، الهدف الرئيسي لهذه الدراسة هو تقصي وعي الطلاب لقوانين الفك والتركيب لمفردات اللغة. ثم تحديد العلاقة بين الادراك المعرفي وحجم المفردات. ايضا تهدف الدراسة الى تحديد العلاقة بين الادراك الصرفي واداء الطلاب حول المفردات المركبة والبسيطة. أما فما يخص نتائج البحث لهذه الدراسة فقد أظهرت ضعف إدراك الطلاب لمفردات اللغة وتصريفها . كما بينت عدم مقدرة الطلاب وتمكنهم من هذا الفن من تجميع وتركيب المفردات. ايضا لوحظ أن حجم المفرادات اللغوية لدى الطلاب قليل مما جعلهم يعانون الفهم الصحيح للنص ككل. وبصفة عامة ان معرفة الطلاب للإدراك الصرفي وحجم المفردات محدود جداً .

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Chapter One

Introduction

1.1 Background

Morphological awareness is defined as the ability to use the knowledge of word formation rules and the pairings between sounds and meanings kuo and Anderson (2006) with morphological awareness , learners are able to learn morphemes and morphemic boundaries by disassembling complex words into meaningful parts (e.g childhoods child + hood +s) . learning the meaning of roots , affixes (child = baby , - hood = the state of being , - s = to indicate plural nouns) the reassembling the meaningful parts into new meaning (mother hood , father hood , brother hood) . The practice of disassembling – reassembling method is called morphological analysis.

Vocabulary knowledge is one of the skills crucial towards fluent language use , the knowledge of around 3,000 word families is the threshold needed for tapping skills related to other languages Nation (1993) The size of one's vocabulary is an indicator of how well a second language (L2) learner can perform academic language skills , such as reading , listening and writing Treiman and cassar (1996), Bear , lnvernizzietal , (2000) Barring This threshold , learners will encounter problems understanding a language they are being exposed to Fulcher and Davidson (2007) . Argues that vocabulary knowledge is a predicator of learners discourse comprehension which always allows grammatical rules to be patterned in the learners mind Ellis (1997), Having in adequate vocabulary hampers learners reading comprehension in away that makes it more likely that the learners will face difficulties in the path of academic achievement .

As such, vocabulary learning and teaching is a central activity in an L2 classroom one way in which vocabulary learning can be fostered is through learning strategies these strategies are consciously or unconsciously learned techniques for processing information in order to enhance learning, comprehension and retention.

Studies show that language learners encounter complex words during the early stages of their lessons. For instance demonstrate 60% of newly encountered words by children are morphological transparent so one potential vocabulary learning strategy is the use of morphological awareness to learn new vocabularies.

1.2 Statement of the problem :

The aim of this study is to assess the morphological awareness as a learning strategy for promoting learners vocabulary size. It will first examine previous research that has analyzed on the role of morphological awareness in vocabulary development. Of particular interest will be the relationship between morphological awareness and vocabulary size as well as how it relates to the learners ability to deal with morphological complex words. The study will then investigate the relationship between English as a foreign language .learners morphological awareness and their respective vocabulary size. They will assess the relation ship between their vocabulary size and overall.

Morphological awareness, particularly their ability to deal with morphologically complex words in L2 learning, the results are expected to provide insightful evidence into how to improve vocabulary instructions at university level. Two key aspects of morphological awareness will be studied ; analytic and synthetic word formation analytic word formations means breaking words down into its meaningful components in contrast synthetic word formation refers to breaking the smallest pieces (morphemes) together to form words Aronoff and Fudeman (2011) .

The crucial problem for Sudanese EFL learners have experienced poor vocabulary knowledge in speaking English as it is considered a foreign language by Sudanese . When Sudanese university students express themselves, they are expected to possess good enough vocabulary to present topics and courses in front of their peers or even hold discussions with their supervisors on assignment, proposal and these of all which require high level of vocabulary knowledge. However their already insufficient level of vocabulary knowledge will be problematic, alongside other inherent problem such as morphological awareness and its relation to vocabulary knowledge and morphological complexity.

Morphological awareness, particularly their ability to deal with morphologically complex words in L2 learning. The results are expected to provide insightful evidence into how to improve vocabulary instruction .

1.3 Significance of the Research:

Despite the recognized potential of morphological awareness for vocabulary learning, little research up to date has focused on morphological awareness and its relationship to vocabulary size. The aim of the present study is to assess morphological awareness as a learning strategy promoting learners vocabulary size. It will first examine previous research that has looked at the role of morphological awareness vocabulary development. Of particular interest will be the relationship between morphological awareness and vocabulary size as well as how it relates to the learners ability to deal with morphological complex words.

1.4 objectives of the Research:

The study aims to achieve the following objectives:

1- To investigate to what extent the students are aware of analytic and synthetic word formation rules.
2- To determine the relationship between morphological awareness and vocabulary size.
3- To determine the morphological awareness between the students performance on complex and simple words.

1.5 Questions of the Research:

Based on the body of literature on morphological awareness and vocabulary learning, the study aims to answer the following questioners:

1- To what extent are Sudanese students aware of analytic and synthetic word formation rules?
2- How does this awareness relate to vocabulary size of the students?
3- How dose morphological awareness discriminate between students performance on complex and simple words?

1.6 Research Hypotheses :

The study considers the followings as its hypotheses:

1- Sudanese university students are not aware of analytic and synthetic word formation rules.
2- There is relationship between morphological awareness and vocabulary size.
3- The morphological awareness between the students performance on complex and simple words is different.

1.7 Methodology :

The study will adopt descriptive analytical method in order to determine the role of morphological awareness and its relation to vocabulary development and morphological complexity, the study will be conducted on Sudanese university students of both genders and randomly selected. The research will conduct a diagnosis test as main tool for data collecting.

1.8 Limits of the Research:

The condition of the study will inevitably be affected by the following limitation

1- The implementation of the study will have to be in the period of time during year 2016.
2- The study will only be conducted for Sudanese university EFL learners in Khartoum state.

Chapter Two

Literature Review and Previous Studies

2.0 Introduction:

This chapter introduces the reviewing related literature and previous studies written on the topic of Morphological Awareness and its effect on vocabulary knowledge.

2.1 Morphology and Lexicon:

2.1.1 Morphology and Morphemes:

Morphology refers to the study of forms. Linguistics Morphology refers to the study of words their internal structure and the mental process that are involved in word formation Arnoff and Fudeman , (2005) , O'Grady , Cuzman , (1997) . It is '… the study of the hierarchical and relational aspects of words and the operation on lexical items according to word formation rules to produce other lexical items' Leong and Parkinson. (1995 :237).

Traditionally, a word can be divided into the minimal linguistic Units that bear meanings or grammatical function (i .e. morphemes) . In line with the traditional definition. Coates (1999) Identifies four criteria of what it takes to be a morpheme. A morpheme should have meaning or function, recur in other words related meaning (e.g uim – in un be lievable and un happy), and be involved in a pattern of inter change (e.g. – est in longest can be substituted with another morpheme such as er).

Morphemes can be classified as free or bound. Simply, free morphemes are those that can exist in their own (e.g book in note books) whereas bound morphemes cannot (e.g –s in not books) Coates, (1999). The word reestablishments can be broken into four morphemes: re – establishment, - s Establish is called the root. The root is the core of a word to which other morphological Units are attached. Establish can also be a stem (iee. Abase morpheme to which other elements are attached). A stem can be simple (establish) or complex (establishment) Re-and-ment –s are called Affixes can appear in the form of

. Prefixes (e.g re-) bound morphemes that are attached in front of a stem

. Suffixes (e.g – s) bound morphemes, that are attached at the end of the stem . Circum fixes: bound Morpheme that are attached simultaneously before and after the stem (not applicable to English language)

. Infixes: bound morphemes that are attached in the middle of a stem (not in English)

Morphemes are further categorized into lexical morphemes (e.g. – ful – ness – etc) or grammatical morphemes (e.g ed , s) Grammatical morphemes are part of inflectional morphology that under lines the processes involved in building grammatical words forms . Words that contain inflection are called inflected words (e.g larger willing, biggest, bottles, etc) lexical morphemes are part of derivational morphology that is concerned with the process involved in building lexical words forms Coates, (1999). Derivational morphemes are of two types class 1 and class 2 class 1 morphemes trigger changes to the base and \ or change to stress assignment (e.g – ity in sanity – ive in productive) while class 2 morphemes do not (e.g – ness in promptness – less in hairless O'Grady , Cuzman , (1997) . Words that contain derivation are called derivatives derived words (e.g. dehumanize, unsatisfactory, etc.

The study of morphology has been approached by two complementary approaches: analytic and synthetic. See Arnoff and Fudeman ,(2005)

These approaches reflect two dimensions of learners morphological know led of word formation. The analytic approach is concerned with morpheme identification or breaking words down into its meaning ful components. For example, not books can be recognized as note – book – s. Learners can segment different meaning ful chunks that constitute a word Mc-Bride-chang etal - . , (2005) . The synthetic approach. On the other hand, is concerned with productivity of morphological structure or bringing the smallest pieces (morphemes) together to form words. It is assumed that learners know what the pieces are in order to be able to construct new meaning into words (Arnoff and Fudeman , (2005) , Mc-Bride-Chang et al (2005) . Therefore, analysis is subsequent to synthesis or synthesis pre supposes analysis.

The question of whether morphemes are discrete units, as structuralisms believe, distinguishes structuralisms view in morphology. From connectionists view , morphemes can also be defined as pairings between sound / phonological representations and meaning / semantic information (form – meaning correspondence) (Gonnerman , Seidenberg , Anderson 2007) Below is a very brief summary of how those two approaches differ in their views on morphological information , especially the reorientation of complex words .

Complex words, form the perspective of structuralism, are represented in memory distend morphemes that are used in processing Feldman (1995). Those morphemes are morphologically related but discrete structuralism views complex words like this (UN (help) (ful)). That id to say, the meaning of complex words is predictable from the meaning of its morphemic units (constituents).

To the contrary. Complex words in connectionists consist of non – discrete morphemes. Learning complex words are viable through the inter face between semantic and phonological properties of the words. phonological and semantic properties of particular words facilitate learners , Reponses to the target words whether the pairs are morphologically complex or not e.g ponaer – pond facilitated , the processing of territory – territ) the semantic and phonological similarities of pairs of words are graded across words (low related pairs , moderate related pairs , high related pairs Gonnerman et al (2007) .

Although the issue of representation is not resolved, the current study assumes that morphological knowledge is represented in discrete terms: the present study dose not seek to explore the difference between the two approaches.

2.1.2 The Analyzing of Complex Words:

The following is a brief review of the representation of morphological information in the lexicon and how the effect of morphological structure on lexical access provides evidence for the fact that learners analyze unfamiliar complex words into morphemic units.

2.1.2.1 Brief Summary of the Approaches to How:

Morphological information is represented in the lexicon How newly encountered words and non-words are processed (i.e productivity in morphology) is well documented accessing the words into the mental lexicon or recover their meaning is influenced by specific factors: word class word frequency and formation rules (long and par Kinston, 1995). Various models have been proposed to account for how morphological units are encoded and decoded see Chialant & Caramazza , (1995) .

The whole. Word hypothesis is one of lexical access models. This hypothesis that previously. Encountered word whether simple or complex is encoded in the mental lexicon as a whole (e.g. helped is represented in the lexicon as a whole word). That is to say, there are no differences between the processing of complex and simple words Chilean and Caramazza, (1995).

Another model is the fully decomposed representation it postulates that morphemic units of roots or stems (in another version) and affixes are indecently represented in the lexicon. Complex words are represented in a fully decomposed format. Stimulus is parsed prior to the lexical access Chialant and Caramazza . (1995)

A third model is augmented addressed morphology (AAA model) that posits that orthographic surface information guides the processing of stimulus. Known words are accessed as a whole. Whereas unfamiliar words are fully decomposed the whole word access is faster than the fully decomposed access – AAA model is supported by katz's et al. (1991) series of experiments on English past regular verbs and serb- Croatian future tense. The results indicate that identifying as past of the stem suggest that words are recognized as a whole and then decomposing access occurs.

A fourth model is the computational model. This model proposed by schreuder and Baayen (1995). Views lexical processing as an end to computing meaning from the morphological constituents. This model entails there stages of the parsing process. The first stage is segmentation where learners identify the whole. Word and its bound morphemes (affixes, bound, stem) then, the learners check out whether their

segmentation belongs to sub categorization / syntactic roles to the affixes (licensing). In the third stage, the learner compute and process the syntactic and semantic information of the complex words.

The premise that guides all of the above model is that morphological structure affects how complex word are accessed and processed. It is beyond the scope of the current thesis to explore that lexical access model. This conclusion of the analyzing of complex words has implications for teaching morphological units as part of the vocabulary instruction. In addition, empirical findings show that lexical access of words is influenced by some factors as they appear in the following section.

2.1.2.2 Evidence for the Effect of Morphological structure on lexical Access studded:

There are three factors that affect lexical access processes and that provide evidence for the effect of morphological structure in accessing complex words.

The first factor is word frequency that refers to how frequently a word occurs in language. Word frequency can be further classified to include root or stem frequency (iee the frequency of the root in a word such establish in establishment). And surface frequency i .e the frequency of a word as a whole inclusive of derivation and inflection) Rastle and Davis, (2003) studies reveal that high frequency words are accessed faster than low frequent words. Katz et al. (1991) demonstrate that lexical access of inflected words depends on root frequency of these words. The researchers investigate the effect of root / stem frequency as opposed to the surface frequency (the total frequency) or word recognition using 100 regular verbs (present tense, past tense, past participle, and present participle. They report that the frequency of the stem. Whether in the present or the past predicates word recognition better than the total frequency. As such, the effect of root frequency on word recognition substantiates that morphemic unit are indigently represented in the lexicon.

A second factor is morphological priming that refers to target word being proceeded by another stimulus (i.e prime), which facilitates or inhibits the recognition of the target word (under wood and Batt (1996) studies show that

morphologically unrelated, but homographic primes inhibit the recognition of the target while morphologically related words facilitate recognition. This suggests that morphological unit representation do exist in the lexicon.

For example Murrell and Morton (1974) studied the effect of or ethnographic similarity and phonologic simplicity on word recognition The results show that morphologically related primes (bored) facilitate lexical decision of the target words (boring) and that phonologically related primes (bored) does not have a facilitative effect on the target word (born) . These findings are taken as evidence of morphemic representation level of in the lexicon.

A third factor is non-word structure that refers to a string of looks like a real word (i.e a legal word such as , ROLT) or zu unreal word (i.e unilingual word such as GSTERA) that are not part of the words of the language in question under wood and Batt , (1996) .

Caramazza's et al. (1988) experiments display that the participants' reaction time to reject none words that contained either pseudo-root (cant-ovi) or pseudo – suffix (canz-evi). These results have been interpreted as evidence for the morphemic unit access.

The lexical access modals along with the factors that lexical access suggests that morphological structure of complex words are represented in the mental lexicon. And used to retrieve the meaning of morphologically complex access. There fore these modals and factors implicate that L 2 morphemic units should be introduced to L 2 learners as part of the language lessons.

2.2 Morphological Awareness and Vocabulary Knowledge:

The role of morphology in vocabulary knowledge is well documented. Many studies show the beneficiary effect of utilizing morphological information (i.e morphological awareness) in determining word meaning e.g. Roymond , Matt , Maria , (2000) and therefore in maximizing vocabulary threshold Sandra , (1994) , Wysocki and Jenkins , (1987) Below is a discussion on the nature of morphological awareness followed by discussion of morphological awareness and its relationship to vocabulary growth .

Morphological awareness refers to the learner's knowledge of morphemes and morphemic structure allowing them to reflect and manipulate morphological structure of words Carlisle, (1995), & stone (2003). Awareness of inflectional forms is gamed earlier than awareness of derivational forms Carlisle and Stone, (2003) the construct of morphological awareness has been extended to entail other subcomponents (orthographic semantic aspects) KUO and Anderson, (2006).

It should be noted that many people confuse morphology acquisition and morphological awareness. While the concept of morphological awareness implies learners use of met cognitive strategies of reflecting and manipulating word formation rules to derive the meaning of new words I the absence of communicative context, the concept morphology acquisition dose not necessarily entails Meta cognitive strategies. Morphology a acquisition means the cognitive abilities to use and comprehend morphological structure in natural speech KUO and Anderson (2006). In this sense, morphological awareness falls under the umbrella of morphology acquisition.

Morphological awareness delineated in this study hinges upon learners knowledge of morphemes that enables them to recover the meaning of new complex words by means of morpheme identification or decomposition (i.e analysis) . And to recombine morphemes to construct new meaning by means of morphological structure (i.e. synthesis).

Morphological awareness is constructed with phonological awareness. The letter refers to the phonological sensitivity to syllable segmentation rhyming and phoneme segmentation carroletal (2003) some researchers have explored the nexus between morphological awareness and reading comprehension and vocabulary knowledge independently of phonological awareness e.g. Carlisle , (2000), Fowler and liberman , (1995), Mahony et al ., (2000) . Whereas others compared the effect of morphological awareness with the effect of phonological awareness on promoting reading skills and proficiency after controlling for short – term memory and vocabulary Mc Bride – Chang – (2005) , singason et al (2000) and for verbal and non verbal intelligence Deacon & Kirby , (2004) . In the present study morphological awareness is addressed independently of phonological

awareness , however , this study dose not propose that phonological awareness is completely detached from morphological awareness .

2.2.1 Morphological Awareness and its Relationship to Language skills:

A considerable number of studies have accentuated that morphological awareness is a predicator of some language skills such , understanding the spelling system Fowler and Liberman , (1995) , Bear , Invenizzi , Templeton & Johnston (2004) ; Treiman & Casar , (1996) and vocabulary growth , single word reabing and reading comprehension see Lisle . 1995 ; Fowler & Liberman (1995) ; Qian (2002) ; Tyler & Nagy , (1990) . Much of the Interest of this study is the correlation between morphological awareness and vocabulary growth and reading the knowledge of morphological units contributes to vocabulary growth that helps developing reading proficiency. The sub sequent sections provide an account of the role of morphological awareness in vocabulary knowledge.

2.2.2 Vocabulary Size and Exposure to Derived words:

Vocabulary size refers to the number of words of which some aspect of meaning is known to the learners. Vocabulary size is contrasted to vocabulary depth that refers to how well a word is known. The current study capitalizes on vocabulary size rather than vocabulary depth.

The amount of children, exposure to derivatives (see section 2.1.1 for definitions of derivatives and derivations) is considerable. Nagy, Osborn, Winsor and O'Flahavan (1994) estimates that 4,000 words out of 10,000 words encountered by fifth graders in us are derive from frequent words. In the same vein, 13,000 out of 30,000 words encountered by high school students are derivatives (Biemiller, 2004). test , the estimation of vocabulary size varies from one study to another according to the criteria for defining a word , source of word pool and word sampling , For instance , D'Anna & Zechmesiters (1991) study indicates that the vocabulary size of college students were 1,700 words as the researchers define , a word as lemmas , or dictionary man entry and there fore , the derived words are not considered as part of the vocabulary size , Those estimation are consistent with Anglin's (1993) study of vocabulary knowledge growth among first and fifth

graders . She and others researchers report that the growth of derivatives increases three times compared to the growth of root words among the children. This can be ascribed to the increasing awareness of internal structure of words as readings become more sophisticated Nagy and scott (1990) conducted a study of students word schemas on seventh and twelfth graders and undergraduate students. All are asked to rate the plausibility of 96 definitions on a four – point scale (I: implausible – 4: plausible); the items word class. Definitions and sentences that illustrate word usage were presented the results show that there is increasing sensitivity to semantic regularities (i.e morphological units that share same semantic meaning) among the students. The results also high light that the undergraduates developed specific information about the types of meaning associated with English verbs (i.e morphological awareness).

The tremendous amount of exposure to complex words underlines the importance of morphological awareness in promoting vocabulary size and substantiates morphological awareness intervention as part of vocabulary instruction. Morphological awareness intervention can equip L 1 children and L 2 learners with some strategies for talking the meaning of new words. Although KUO and A derson (2006), suggest that vocabulary size is one of the variable to be controlled when assessing morphological awareness. The current study seeks to examine the relationship between those two factors.

2.2.3 Vocabulary Growth:

Vocabulary growth among beginner learners of a language mirrors their ability to use morphological analysis. It has been demonstrated that that morphological awareness and vocabulary growth are correlated Nagy & Anderson – (1984); Singson. Mahony and Mann – (2000); stern berg 1987; White Power & White. 1989; Wtsocki & Jenkins (1987). Sandra (1994) points out that morphology can play an important rote in developing poly morphemic vocabulary and in retaining their meaning. Learners vocabulary rapid growth is greatly attributed to their ability to apply word formation rules Wxsoki & Jenkins, (1987) learners who understand the meaning of adopt are likely to understand adoptive and adaptation by means of morpheme identification and morpheme synthesis.

A number of studies show that learners are able to use their knowledge of morphological units (affixes – roots) to extract meaning of complex words they encounter. As evidence in the following studies, these complex words are parsed into smaller more understandable units of meanings.

Gordon (1989) and Carlisle and Stone (2003) found that high stem frequently auditory primes facilitate children's lexical decision of low – frequency suffixed words , which manifests that learners deal with complex words analytically . Proficient readers apply analytic rules to low frequency complex words – especially when the stem frequency is high Katz. Rexer. Lukatalg(1991).

Wysocki and Jenkins (1987) investigated whether forth, sixth, and eight grader use morphological analysis to arrive to the meaning.

Students are given training session of asset words two weeks prior to the test they are tested on some words related to unrelated to the words in the training session . The researchers found that the students perform better in the related words and that learners understand new meanings by morphological generalization of those words sharing the roots.

2.2.4 Morphological Awareness and Reading Proficiency:

Morphological awareness has been studied in tandem with reading abilities in general and vocabulary knowledge in particular. Below are some examples of those studies that examine how morphological awareness boost vocabulary knowledge and reading abilities accordingly.

Ku and Anderson (2003) studied whether morphological awareness plays a significant role in vocabulary acquisition and reading proficiency among second. Forth and sixth American and Chinese graders of English and Chinese Language. Researcher administered a reading comprehension test along with a set of tests. These tests consist of a morpheme recognition test. Morpheme interpretation test and apseudo word judgment test. The results confirm the previous studies that morphological awareness is developed gradually through out the student's language experience and that morphological awareness is indispensable for English and dryness vocabulary acquisition and reading proficiency.

White power and White's (1987) results of experiment of the characteristic of affixed words is in accord with the previous studies. The results support the conclusion that morphological analysis is sufficient to understand affixed words that are semantically transparent (i.e. the meaning of the whole words can be derived from the meaning of its morphological units.

Deacon and Kirby's (2004) four year longitudinal study also shows that there is positive relationship between morphological awareness and reading comprehension for the second, fourth and sixth graders. They compared the effect of inflection awareness and phonological awareness on reading development (e.g. pseudo word reading, reading comprehension and single word reading) after controlling variables of verbal and non – verbal intelligence and prior reading ability. The study demonstrator that morphological awareness contributes to reading development even after three years of the study and after controlling for phonological awareness at word – level (vocabulary knowledge) that contribute to text – level understanding (reading comprehension) leong's (1999) study of morphological processing at word level , which contribute to the observed reading disabilities . The results under prints that dyslexic students night have difficulty with implicit transformation rules (i.e word formation rules of analysis and synthesis as mentioned in section (21) there fore the researcher recommends explicit instruction of transformation rules , word formation rules and morphological structure.

In short morphological awareness contributes to vocabulary growth and reading proficiency. The relationship between morphological awareness and vocabulary knowledge and reading abilities can be best understood in the light of the lexical access at word level and sentential level.

2.3 Morphological Awareness Cross Linguistic Variation

Morphological awareness is a skill that may vary across typological distinct languages. The L1 and L2 may differ in lexical access processes. It has been shown that L2 morphological awareness is constrained by learner's experience of L1 processing Koda, (2000) investigated how L1 morphological processing of Chinese affected L2 morphological awareness of English. It is noted that some of L2 morphological units are less salient for L2 learners (e.g. the separability of English morphemic units in complex words are not salient for beginners Arab learners of English), the results supported the view that the variation in L1

morphology determines how L2 learners process some aspects of morphological units of L2. Bindman (2004) arrives at a similar conclusion that there was a cross linguistic effect of morphological awareness on reading and spelling by children learning to write and read in English and Hebrew (one of the Semitic languages).

As English and Arabic (the L1 for the participants of the present study) are typologically different, a discussion on the differences between the morphology of English and Arabic is necessary. As contrastive language, English attaches affixes to the beginning or the end of free stems Saieah –Hadded of Geva, (2007). With affixation the stem can retain phonological and orthographical changes or both. Therefore English is considered to possess morphologically transparent structure. On the other hand, word formation in Arabic language a non-concatenate language. Invades superimposing vowels in the consternated pattern-root-and-pattern. Morphology, CVCV language Arnoff R Fudeman, (2005). The root and the word pattern in Arabic are always bound morphemes Saiegh Hadded R Geva (2007). Therefore Arabic has morphologically opaque structures. These differences between Arabic and English might hinder Arabic learners of English from readily analyzing and comprehending complex English words.

Furthermore, English graphemes are not linearly mapped into phonemes; one grapheme can represent more than phonemes (e.g. can be k or s) Arabic orthography , on the hand is presented with diacritics (that represent phonological information) or without diacritics. The former, graphemes are mapped into phonemes directly and therefore, morphological structure is not used to recover words meaning as the case of without diacritics orthography Arabic beginners of English tend to spell English words by just written consonant learning vowels transfer of Arabic orthography). Saiegh Hadded and Geva (2007) demonstrate that Arabic morphological awareness does not intervene with English morphological awareness, but predicts English word reading. The researchers attributed the results to the fact that morphological awareness in Arabic helps the learners to go beyond phonological and orthographical representations and to use syntactic and semantic cues to access the meaning of complex words.

Despite the facilitative effect of Arabic morphology demonstrated by the study of Saiegh. Hadded and Geva (2007), and due to the aforementioned

differences in English and Arabic Morphology, it is expected that Arabs beginners of English might confront some difficulties figuring out English morphological structures. As such explicit instruction that helps the learners may play an important role in raising Arab learners morphological awareness of English.

2.4 Explicit Instruction on Morphological Units

Explicit instruction on morphological units may enable learners to unlock the meaning of complex words, and this is maybe an important vocabulary learning

Strategy. Skills in morphological analysis give learners the sense of words and their meanings and contribute to the development of vocabulary knowledge and in turn reading proficiency. A number of studies have investigated the effectiveness of morphological analysis on deriving word meaning and the effectiveness of the methods undertaken to teach morphological units. There are a number of studies that show that explicit instruction on affixes and roots help the elementary graders to unlock the meaning of newly encountered words Baumann, Edwards, Boland, Olejnik, & Kame'enui, (2003); Baumann *et al*., (2002).

Previous Studies:

There are many studies related to the present study. Such as: Carlisle (1995:192) suggested that morphological awareness can serve as a " more general indix of metalinguistic capability than phonological and syntactic awareness " Building upon Carlisle's conceptualization. Deacon and Kirby (2004) tracked the four -year longitudinal development of reading ability among English –speaking Children by measuring Children's pseudoword reading. Singe, word reading.

Baumann *et al*. (2003) investigated the impact of instruction on morphological and contextual analysis (MC) vs. textbook vocabulary instruction (TV) on fifth graders' abilities to decipher meaning of unfamiliar words. The instruction was part of social studies lessons. The results indicate that the MC students outperformed the TV students in inferring meaning of unfamiliar, complex words. Early instruction on morphological units is advised by some researchers such as Anglin (1993) and Biemiller (2004). Similarly, Morin (2003) studied the impact of derivational morphology instruction on developing receptive and productive vocabulary

Knowledge in the case of Spanish beginner learners at college level. Morin compared the performance of a control group and an experimental group in the

first semester and the second semester. Three tests were administered: vocabulary knowledge test, productive knowledge test and receptive knowledge test. The results indicate that morphological instruction is a benefit in productive and receptive vocabulary knowledge, especially for second semester learners. Morphological instruction also helps in learning new unfamiliar words, and therefore, increasing vocabulary size.

Leong (1999) recommends early explicit instruction of transformation rules, word formation rules and morphological structure. Morphological analysis instruction proved to be effective.

There are number of methods for the instruction of morphological analysis. For example, disassembling and reassembling words is one of the MC methods in which learners are trained on how to chunk meaningful parts of complex words and use those parts to create new words Edwards, Font, Baumann, & Boland, (2004).

Another method is direct instruction with posters Graves, (2004). This method is more suitable for children learners where stems and highlighted affixes are presented on posters along with pictures. The method of affixes removal and replacement can used to introduce morphological analysis to adult learners.

Disassembling and reassembling words is concerned with dissecting complex words into small meaningful units, finding the meaning of stem and affixes, and finally reassembling the meaningful parts to come up with new complex words. In this sense, morphemic analysis instruction can make the learners to independently learn new vocabulary and to take the charge of their own vocabulary development—autonomy.

Overall, research showed that teaching morphological units explicitly is effective in deriving the learners to unlock complex word meaning. Teaching morphological information can be done with various ways such as, morphological analysis and posters of affixes and related word pictures. Teachers should utilize the methods that better suit the students' level and needs. Before deciding whether the learners need an explicit morphological analysis to boost their vocabulary size, the learners' morphological awareness and their vocabulary size should be investigated.

The next chapter describes the present study, participants, research instruments, procedure, and data analysis.

Chapter Three

Methodology

3.1 Introduction:

This chapter handles the research methodology, procedure and steps that have been used in order to assess the effect of morphological awareness on vocabulary knowledge. The present study focuses on L2 learner's morphological awareness and vocabulary knowledge. The study correlates measures of English morphological awareness with those of English vocabulary size to assess if, and to what extent, the factors are related.

In this chapter, the researcher attempts to introduce the method which is used to conduct the study and data collecting tools. The researcher adopts a descriptive analytical method.

3.2 Participants:

The participants of the study are EFL learners studying English at Sudan University of Science and Technology. They are 30 students. The first language of all participants is Arabic Language. Fifteen of these participants are girls and fifteen are boys and all of the participants are EFL learners.

3.3 Research Instrument:

In order to elicit teacher's perceptions and thought about the Effect of morphological awareness and its relationship to vocabulary knowledge and size, one instrument was used and adopted to the purpose of the study: Diagnosis test was used.

3.3.1 The test:

The test is used to test student's ability to reflect and manipulate morphemic units in English. This test is of interest to the researcher as it encompasses both the analytical and synthetic aspects of word formation rules the items of the test are

created by the researcher. The test is divided into two sections morpheme identification and morphological structure. See Appendices.

3.4 Validity:

The initial version of the test was first given to two doctors for its content validity and its applicability to the context of the study. Then 5 teachers were consulted for the clarity of the items after this piloting necessary change were made on the test.

3.5 Reliability:

In order to assess the reliability of the test used in the context of the study, Cronbach Alpha reliability co – efficient was calculated

3.5 Data Analysis:

The data were collected and analyzed as follows:

1. The test was conducted and designed for learners studying English as a foreign language.
2. The test was conducted to EFL learners at Sudan University of Science and Technology.

3.6 Summary

The researcher adopted analytical method. The sample of the study was chosen randomly. They were 30 students who were studying English as a foreign language. The researcher used diagnostic test as data collecting tools. The statistical Programme Package (SPSS) was used to analyze the results of the test and it was analyzed and interpreted in the following chapter.

Chapter Four

Data Analysis and Discussion of the Results:-

4.1 Introduction:-

This chapter introduced the data analysis of the study morphological awareness and its role in vocabulary knowledge and vocabulary size. The main tool used in this study was the test.

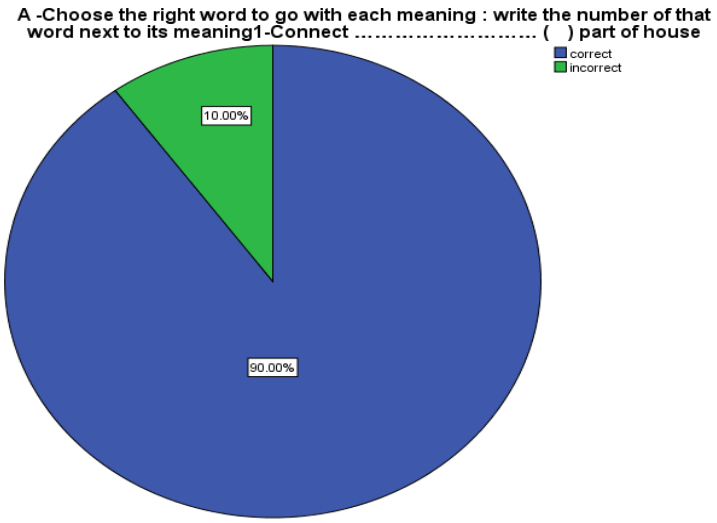
4.2 The analysis and interpretation:-

A- Choose the right word to go with each meaning: write the number of that word next to its meaning1-Connect?

Table (4.1) ( ) part of House

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	27	90.0	90.0	90.0
	incorrect	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Fig. (4.1) Part of house

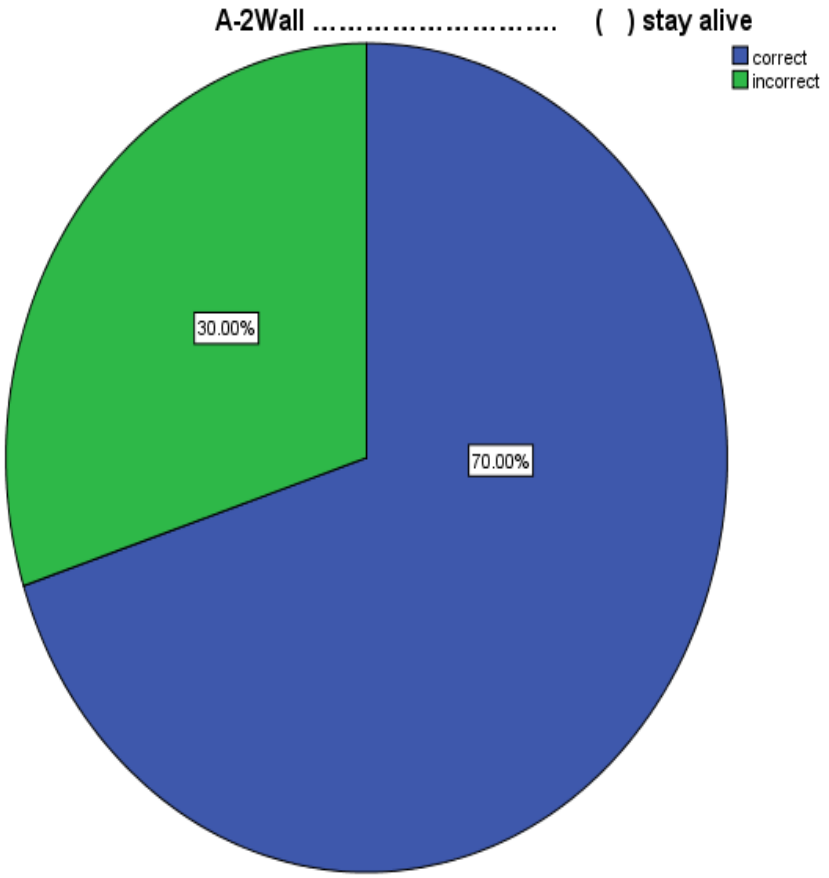


The above table and figure show that 90% of the responses have corrrect and 10% were incorrect

Table (4.2) ( ) stay alive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	21	70.0	70.0	70.0
	incorrect	9	30.0	30.0	100.0
	Total	30	100.0	100.0	

Fig. (4.2) Stay a live

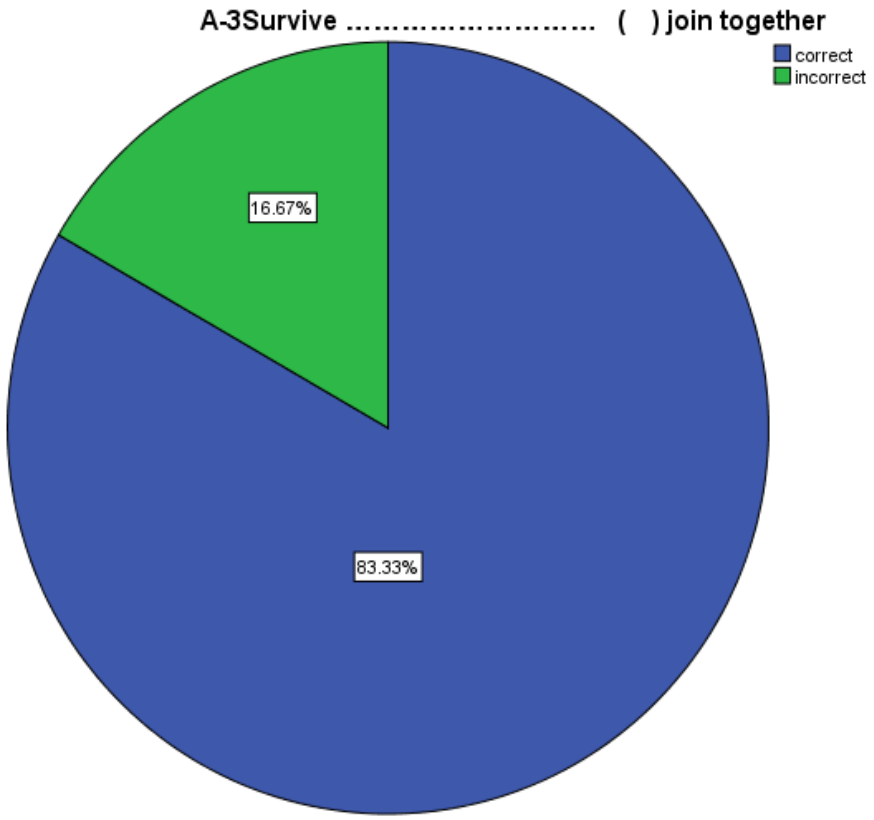


The above table and figure show that 70% of the response were correct and 30% are incorrect.

Table (4.3) ( ) join together

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	25	83.3	83.3	83.3
	incorrect	5	16.7	16.7	100.0
	Total	30	100.0	100.0	

Fig. (4.3) Join together

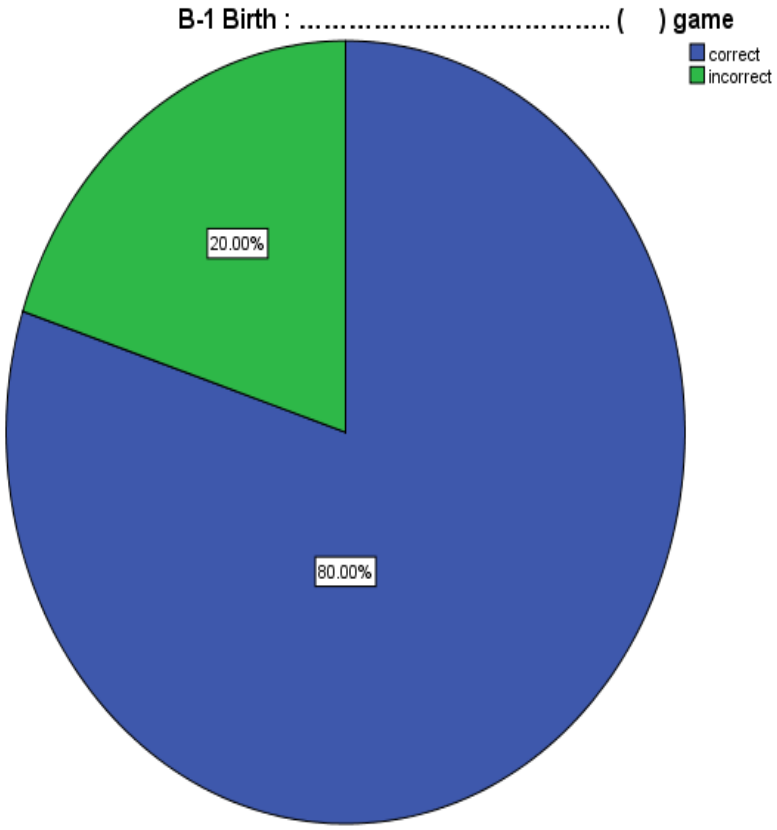


The above table and figure show that 83.3% of the responses were correct and only 16.7% were incorrect

Table (4.4) ( ) game

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	24	80.0	80.0	80.0
	incorrect	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Fig. (4.4) Game

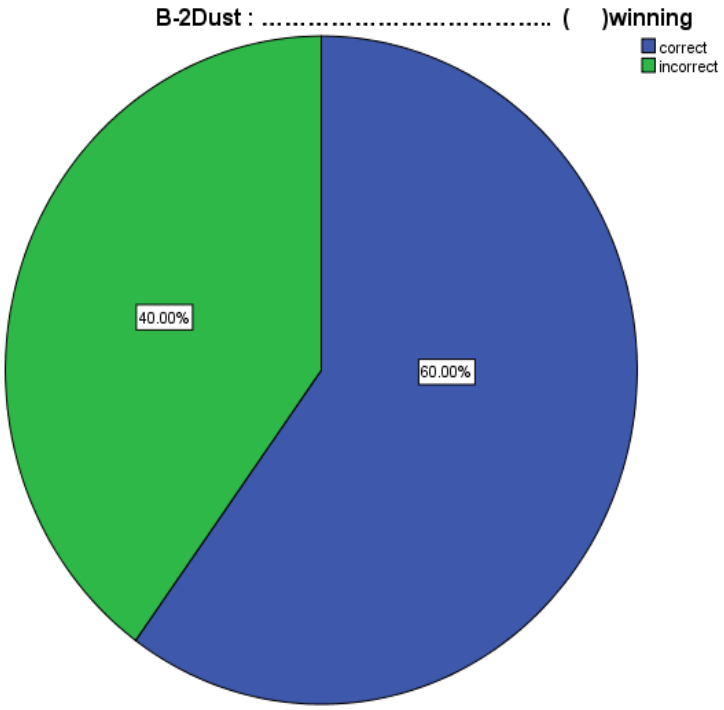


The above table and figure show that 80.0% of the response were correct and only 20. % were incorrect

Table (4.5) ( ) winning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	18	60.0	60.0	60.0
	incorrect	12	40.0	40.0	100.0
	Total	30	100.0	100.0	

Fig. (4.5) Winning

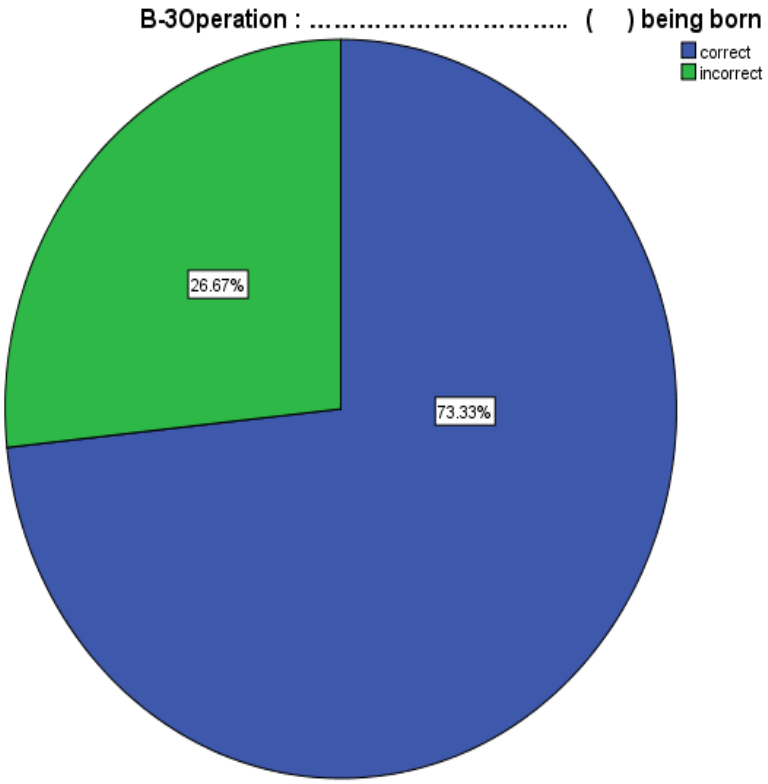


The above table and figure show that about 60.0% of the response were correct and only 40. % were incorrect

Table (4.6) ( ) being born

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	22	73.3	73.3	73.3
	incorrect	8	26.7	26.7	100.0
	Total	30	100.0	100.0	

Fig. (4.6) Being born

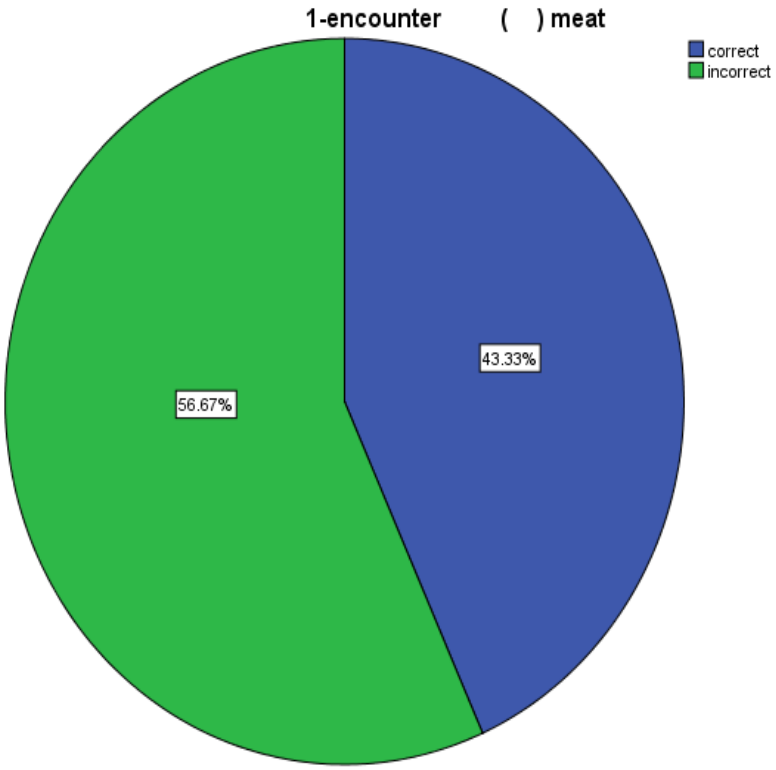


The above table and figure show that 73.3% of the response were correct and only 26. 7% were incorrect

Table (4.7) ( ) meet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	13	43.3	43.3	43.3
	incorrect	17	56.7	56.7	100.0
	Total	30	100.0	100.0	

Fig. (4.7) Meet

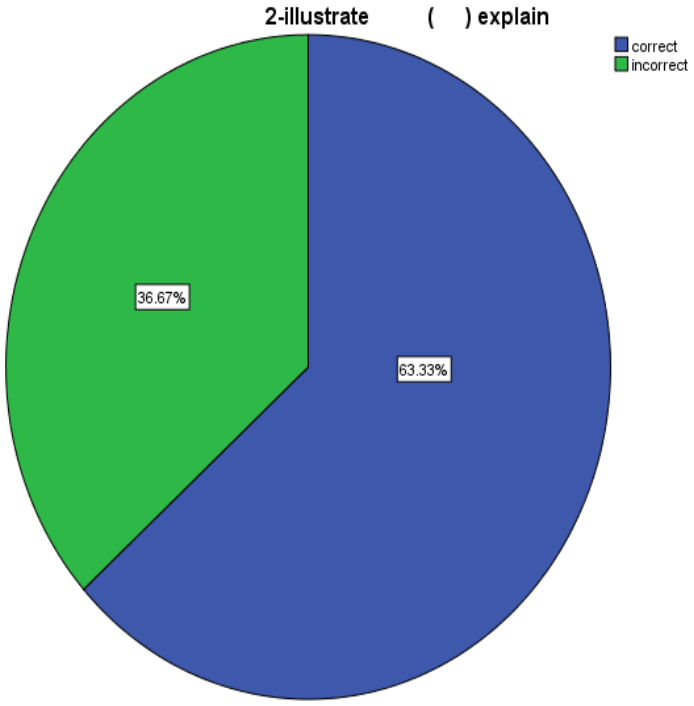


The above table show that 43.3% of the response were correct and only 56. 7% were incorrect

Table (4.8) ( ) explain

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	19	63.3	63.3	63.3
	incorrect	11	36.7	36.7	100.0
	Total	30	100.0	100.0	

Fig. (4.8) Explain

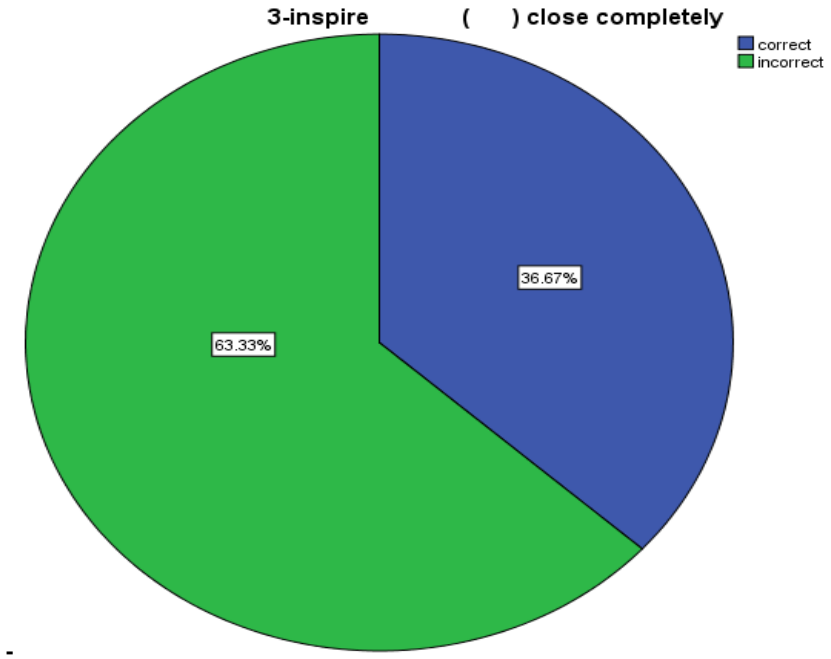


The above table and figure show that 63.3% of the response were correct and only 36. 7% were incorrect

Table (4.9) ( ) close completely

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	11	36.7	36.7	36.7
	incorrect	19	63.3	63.3	100.0
	Total	30	100.0	100.0	

Fig. (4.9) Close completely

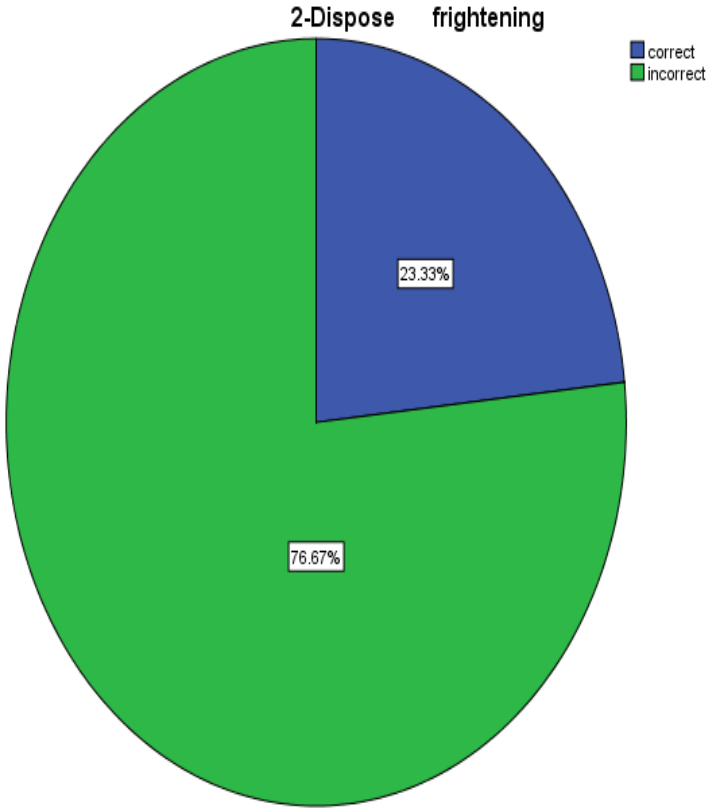


The above table and figure show that 36.7% of the response were correct and only 63. 3% were incorrect

Table (4.10) ( ) frightening

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	7	23.3	23.3	23.3
	incorrect	23	76.7	76.7	100.0
	Total	30	100.0	100.0	

Fig. (4.10) Frightening

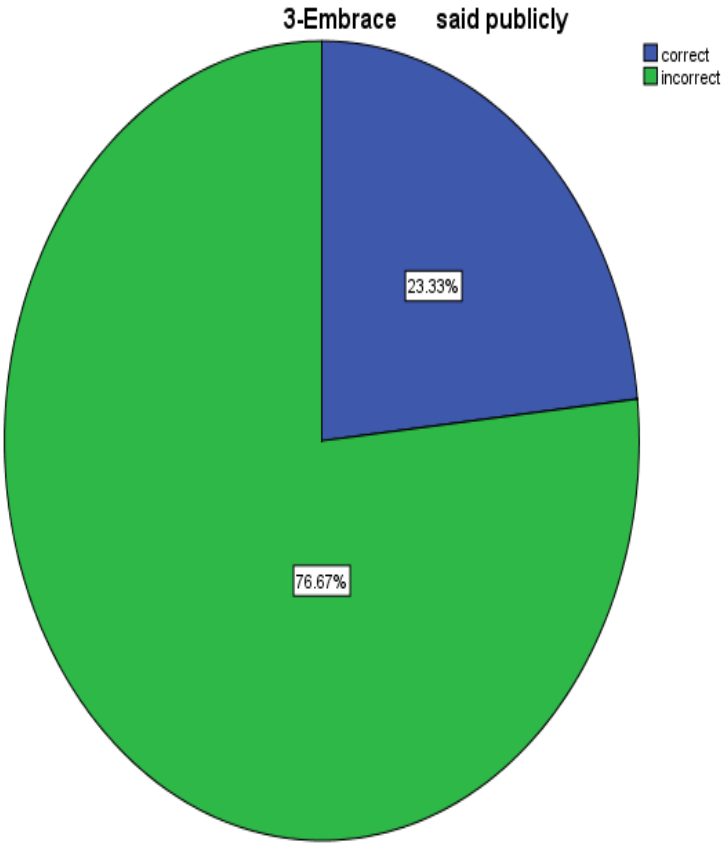


The above table and figure show that 23.3% of the sample were correct and only 76. 7% were incorrect

Table (4.11) ( ) said publicly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	7	23.3	23.3	23.3
	incorrect	23	76.7	76.7	100.0
	Total	30	100.0	100.0	

Fig. (4.11) Said publicly

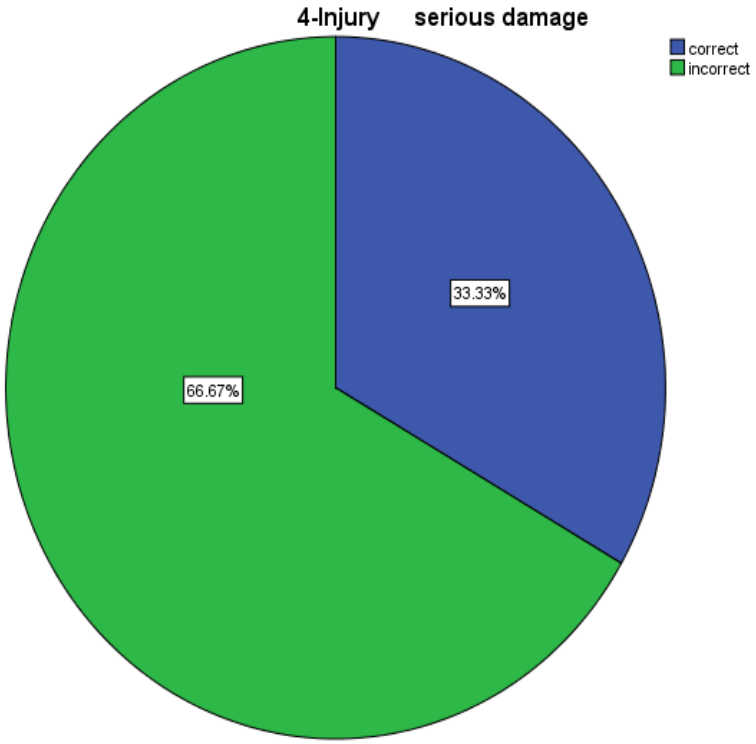


The above table and figure show that 23.3% of the response were correct and only 76. 7% were incorrect

Table (4.12) ( ) serious damage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	10	33.3	33.3	33.3
	incorrect	20	66.7	66.7	100.0
	Total	30	100.0	100.0	

Fig. (4.12) Serious damage



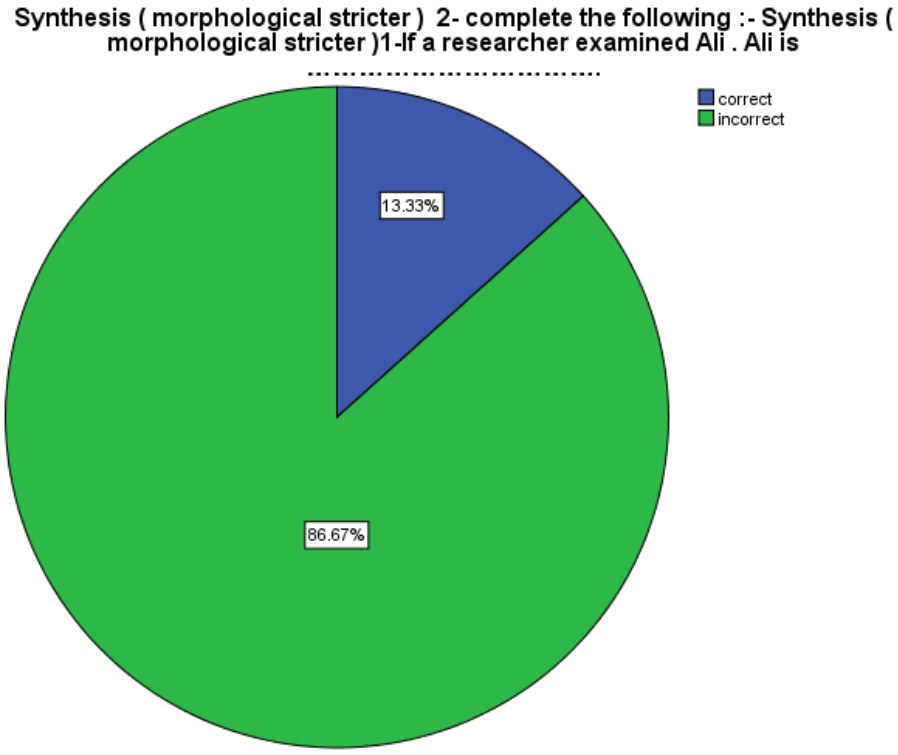
The above table and figure show that 33.3% of the responses were correct and only 66. 7% were incorrect

2- Synthesis (morphological stricter) complete the following

Table (4.13) 1- if a researcher examined Ali. Ali is ……

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	4	13.3	13.3	13.3
	incorrect	26	86.7	86.7	100.0
	Total	30	100.0	100.0	

Fig. (4.13) If a researcher examined Ali. Ali is ……

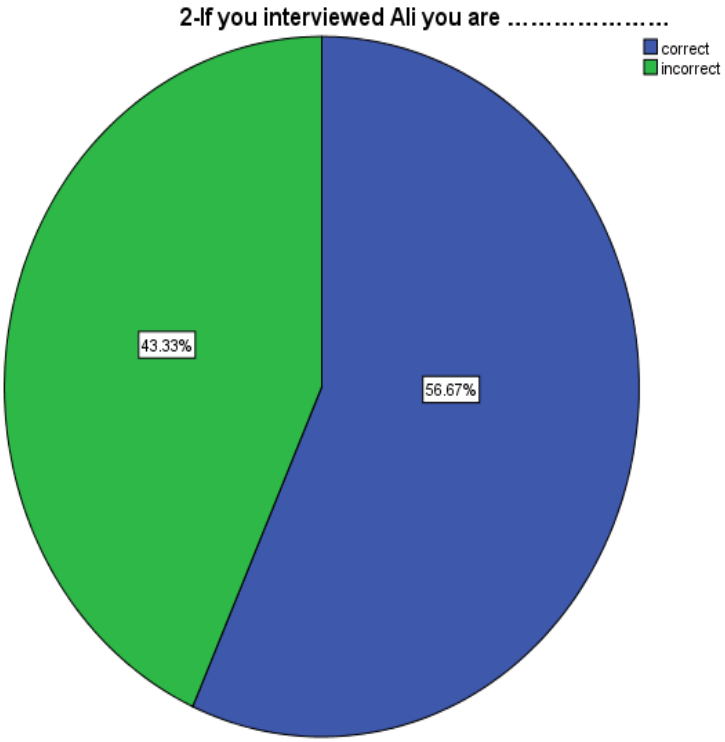


The above table and figure show that 13.3% of the response were correct and only 86. 7% were incorrect

Table (4.14) 2- If you interviewed Ali you are ……

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	17	56.7	56.7	56.7
	incorrect	13	43.3	43.3	100.0
	Total	30	100.0	100.0	

Fig. (4.14) If you interviewed Ali you are ……

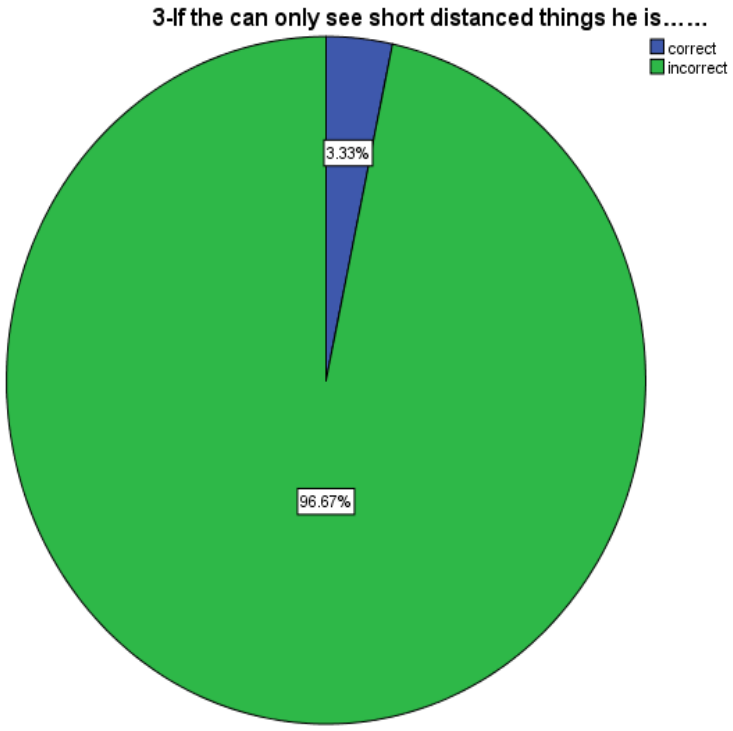


The above table and figure show that 56.7% of the response were correct and only 43. 3% were incorrect.

Table (4.15) 3- if he can only see short distanced things he is……

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	1	3.3	3.3	3.3
	incorrect	29	96.7	96.7	100.0
	Total	30	100.0	100.0	

Fig. (4.15) if he can only see short distanced things he is……

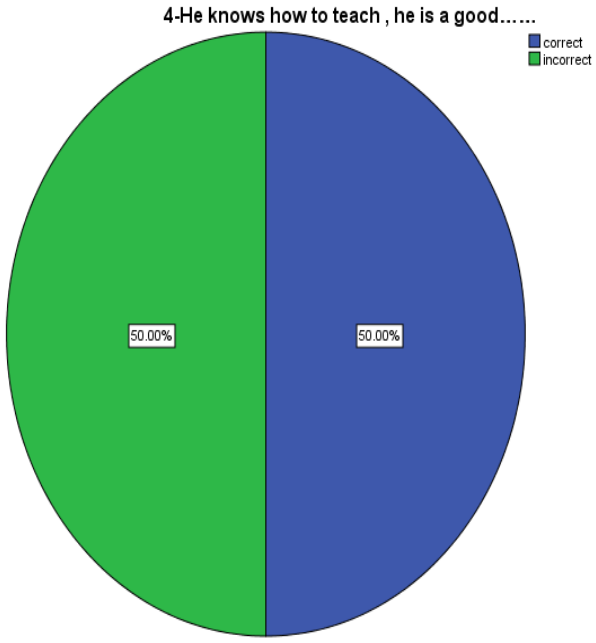


The above table and figure show that 3.3% of the response were correct and 96.7% were incorrect

Table (4.16) 4-He knows how to teach, he is a good……

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	15	50.0	50.0	50.0
	incorrect	15	50.0	50.0	100.0
	Total	30	100.0	100.0	

Fig. (4.16) He knows how to teach, he is a good……

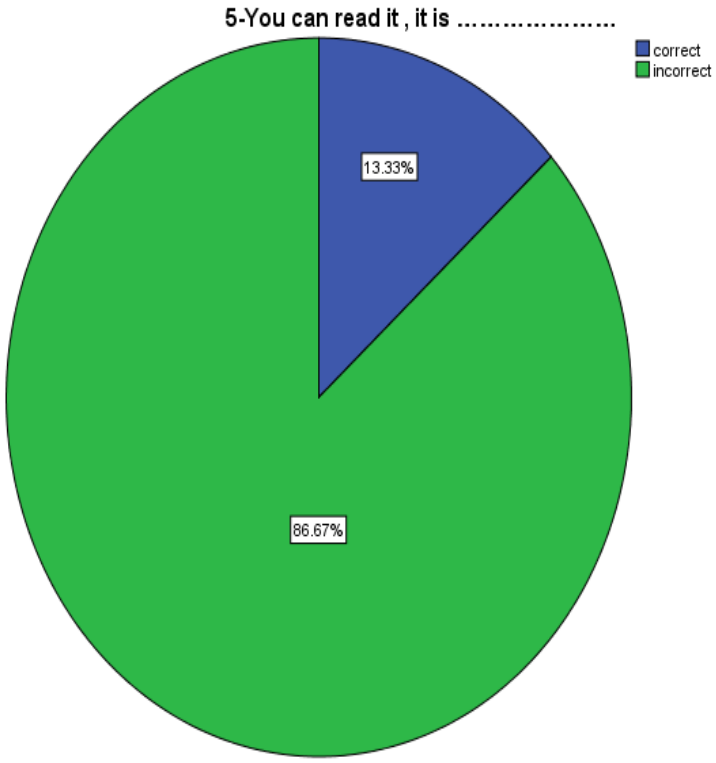


The above table and figure show that 50.0% of the response were correct and 50.0% were incorrect

Table (4.17) 5-You can read it, it is ……

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	correct	4	13.3	13.3	13.3
	incorrect	26	86.7	86.7	100.0
	Total	30	100.0	100.0	

Fig. (4.17) You can read it, it is ……



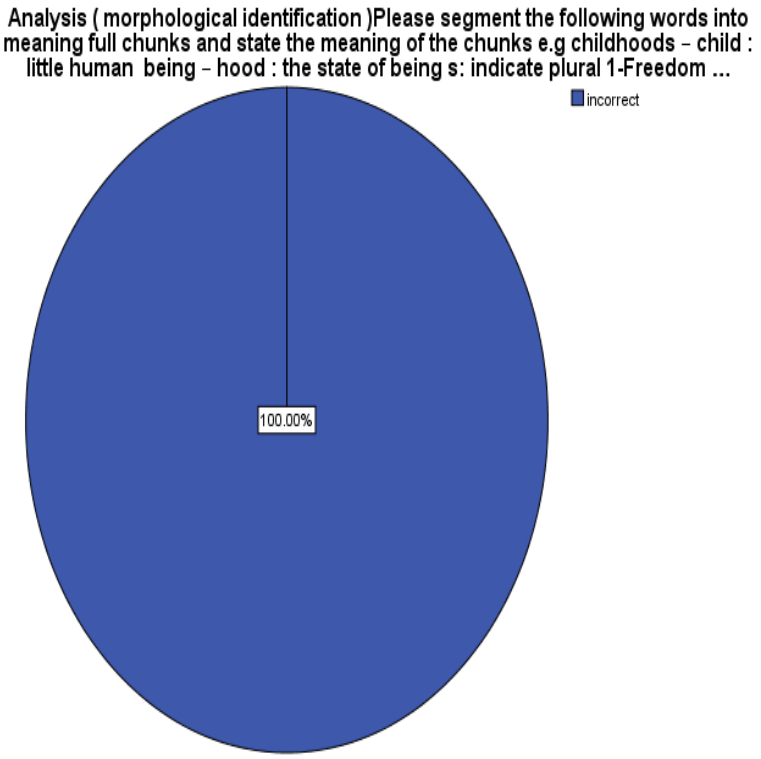
The above table and figure show that 13.3% of the response were correct and 86.7% were incorrect

3- Analysis (morphological identification)Please segment the following words into meaning full chunks and state the meaning of the chunks e.g. childhoods – child : little human being – hood : the state of being s: indicate plural

Table (4.18) 1-Freedom ...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.18) Freedom

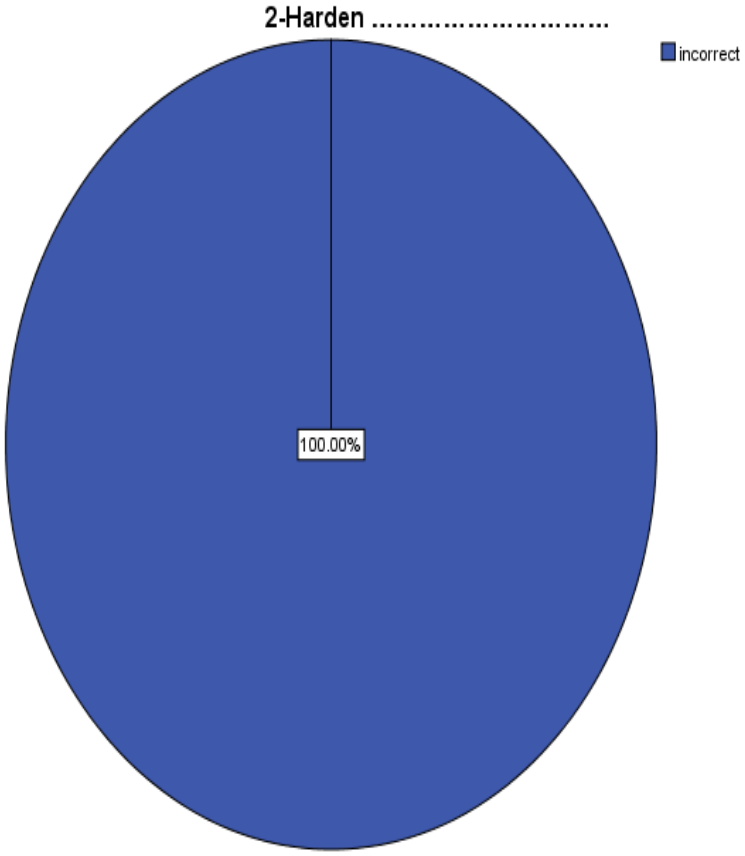


The above table and figure show that 100% of the response are incorrect

Table (4.19) 2-Harden ……

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.19) Harden

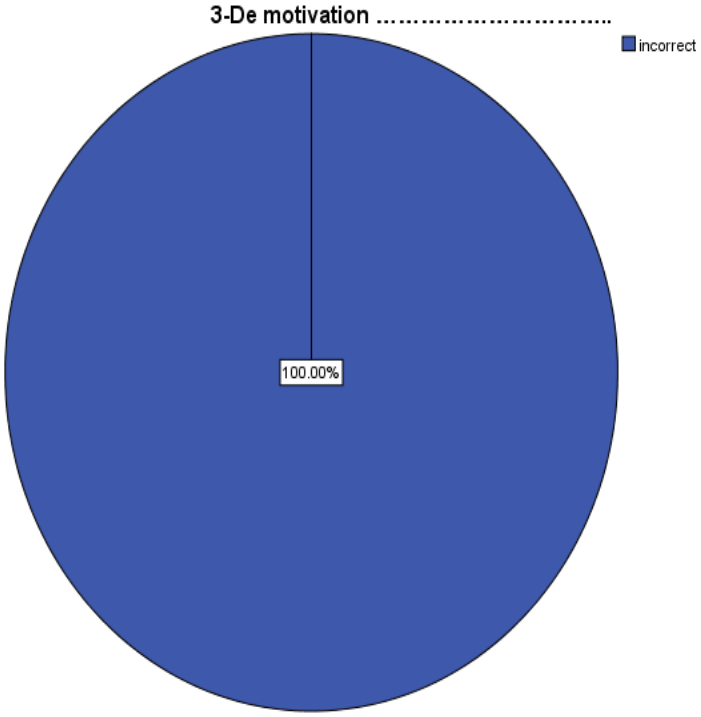


The above table and figure show that 100% of the response are incorrect

Table (4.20) 3-De motivation .....

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.20) De motivation

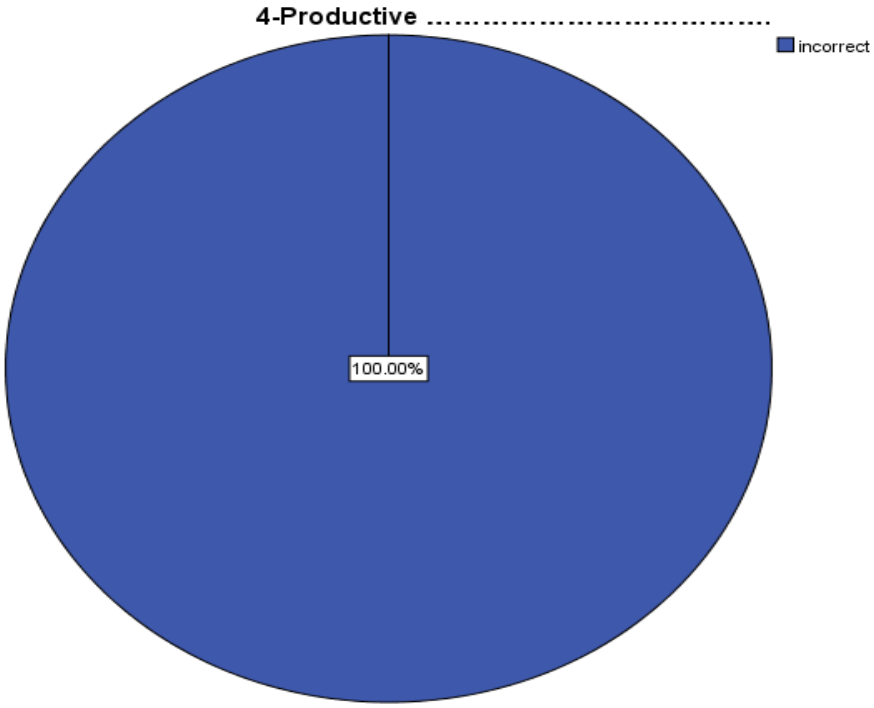


The above table and figure show that 100% of the response are incorrect

Table (4.21) 4- productive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.21) Productive

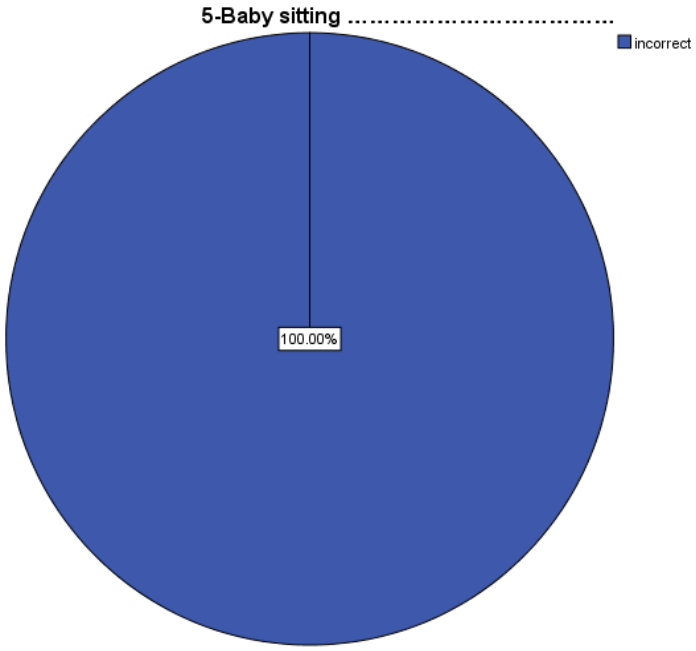


The above table and figure show that 100% of the response are incorrect

Table (4.22) 5- baby sitting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.22) Baby sitting

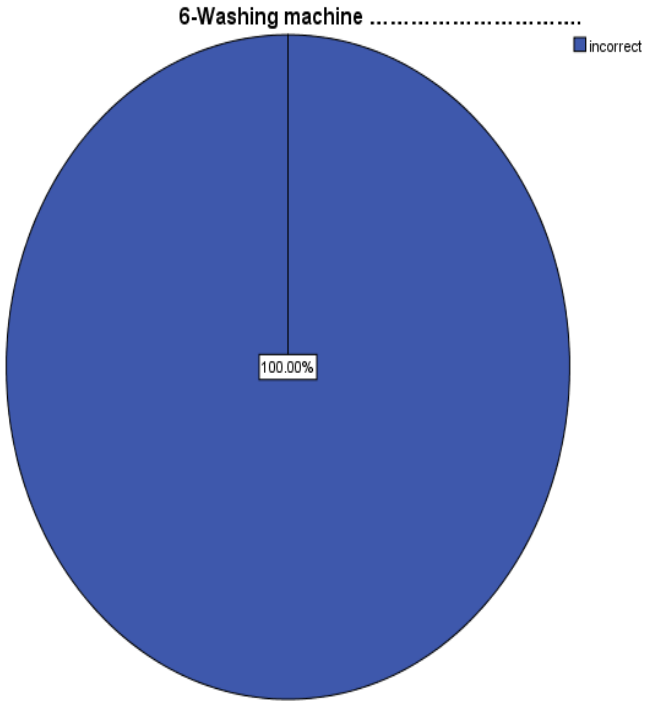


The above table and figure show that 100% of the response are incorrect

Table (4.23) 6- washing machine

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.23) Washing machine

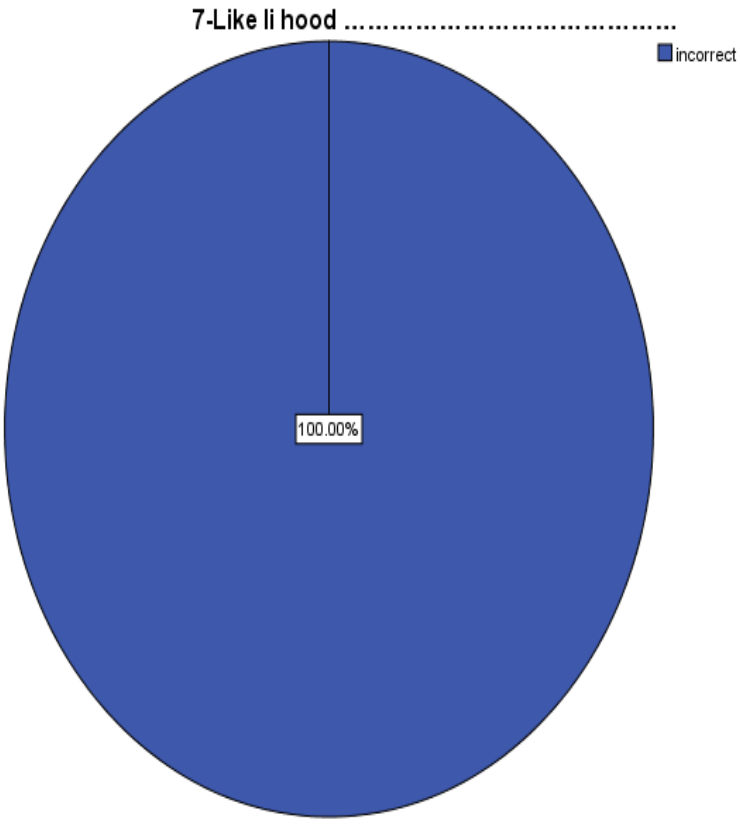


The above table and figure show that 100% of the response are incorrect

Table (4.24) 7- like I hood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.24)

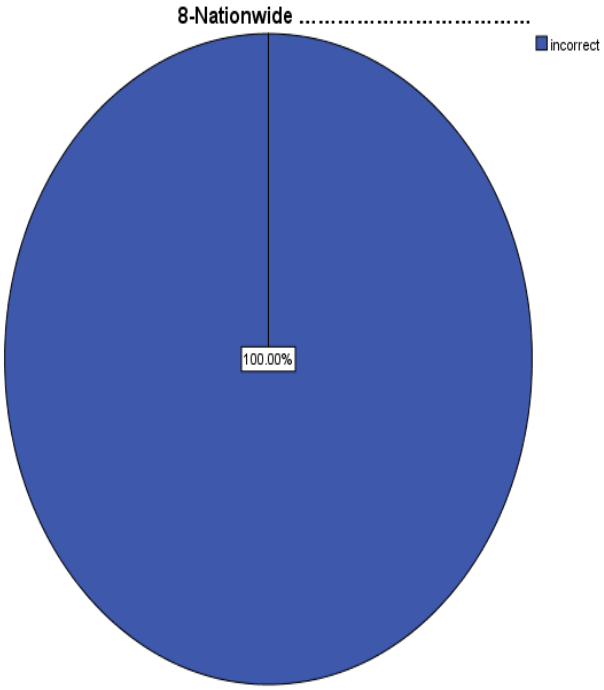


The above table and figure show that 100% of the response are incorrect

Table (4.25) 8- Nationwide

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.25) Nationwide

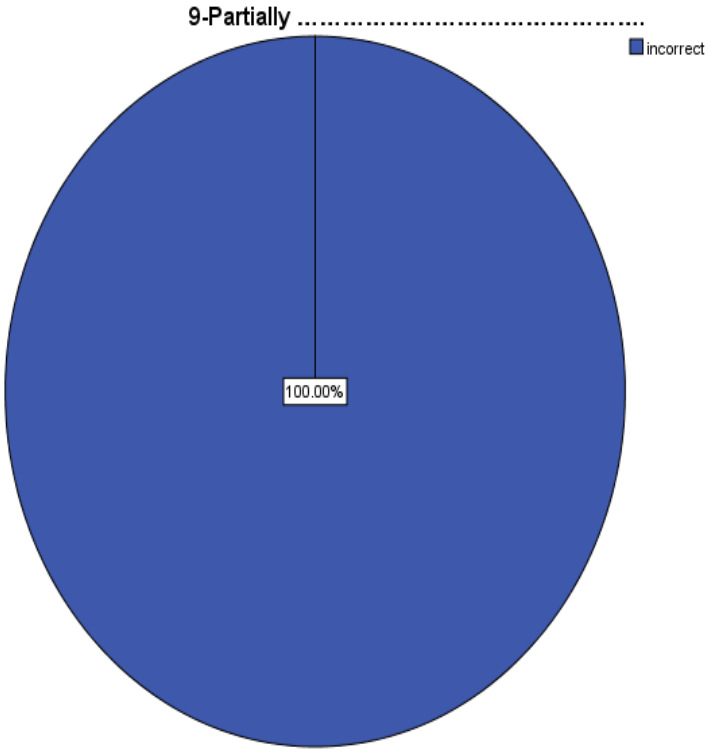


The above table and figure show that 100% of the response are incorrect

Table (4.26) 9- partially

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.26) partially

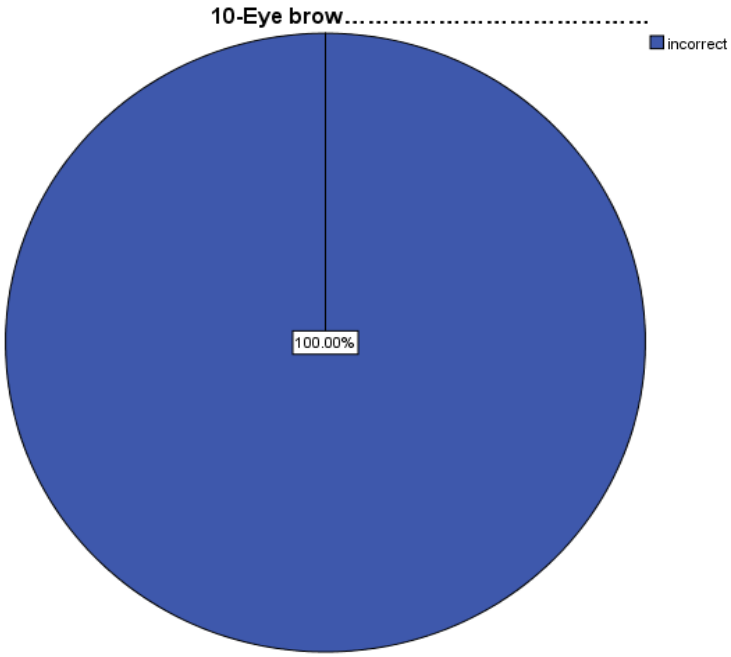


The above table and figure show that 100% of the response are incorrect

Table (4.27) 10- Eye brow

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect	30	100.0	100.0	100.0

Fig. (4.27) Eye brow



The above table and figure show that 100% of the response are incorrect

Table (4.28)

average	16.58333	13
percentage	55.3	43.3

4.3 Discussion:-

The results of the present study showed that the students have scored various scores on morphological awareness.

On the level of vocabulary size and knowledge the students gained 16.6 as mean for the correct answers group beside 13 as mean for the incorrect answers group taking into consideration that these means represent percentage of 55.3% and 43.3%.So the results indicated that the students are aware to some extent to the morphological knowledge.

On the level of synthetic and analytic awareness the sample of the research indicated that the students were unable to use the synthetic and analytic rules correctly .However ,the results showed that the students scored better on the level of synthetic than that of analytic .

Chapter Five

Conclusions, Recommendations and Suggestions for Further Studies

5.1 Conclusion

This chapter deals with research findings and research recommendations which support the main purpose of the study.

5.2 Research Findings and results

- The study reveals that the students perform poorly in morphological awareness and vocabulary size, which indicates that there is urgent need to include explicit instruction on morphological knowledge and contextualized analysis.

- The results reveal that the students displaced low overall morphological awareness of word formation rules, morpheme identification (analytic or morphological) structure (the synthetic aspects) however student performed somewhat better in synthesis section than in the analysis section.

- Also the results show that the students, vocabulary size is relatively low. This indicates that they struggle to understand on an average text.

` 5.3 Recommendations

- It is advisable to administer morphological awareness test and vocabulary test separately to minimize cognitive load on the students.

- It might also be useful for that the present study, with some modifications, to be carried out in other colleges of Languages to see if there is difference between students' performance in each other.

- Part of expanding students vocabulary, the learners should be introduced to academic words that are crucial for academic success.

- Students should be acquainted with the pitfalls of deriving words from context and from morphological parts so that they can effectively use words.

- Promotion students vocabulary knowledge and morphological knowledge products their academic success.

- Teaching affixes would promote students vocabulary size.

- These programs should follow general guide lines.

- A new outlook of vocabulary instruction should emerge in the college.

5.4 Suggestions

The researcher suggests the following:

1. The researcher suggests further studies on this field.
2. The researcher Suggests that students should be given intensives courses on both synthetic and analytic analysis.
3. Further more the researcher suggests that the students should be taught the rules of word formations for the sake of morphological awareness.

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Appendices

Dear students

I am carrying out a research to explore the morphological awareness of college of the applied linguistic in the Sudan university of science and Technology . I would like to investigate to what extent the students of the college of applied linguistic are aware of the analytic and synthetic rules of word formation and how this morphological awareness correlates with vocabulary size and complexity .

I greatly appreciate your participation in this research . Please answer all the questions if you agree to participate in the research project .

Thank you for your interest and participation in this study . I genuinely appreciate your time .

Sincerely

Adam Sulieman Ibrahim

The Test

A: Choose the right word to go with each meaning : write the number of that word next to its meaning .

A-

1- Connect …… ( ) part of house

2- Wall …… ( ) stay alive

3- Survive …… ( ) join together

4- Link ……

5- Exclude …….

6- …….

B- \

1- Birth : …….. ( ) winning

2- Dust : …….. ( ) game

3- Operation : …….. ( ) being born

4- Row : ……

5- Sport : ……

6- Victory : ……..

C- /

1- encounter

2- illustrate

3- inspire

4- plead

5- sea

6-Shift

d- 1- Betray

2- Dispose frightening ( )

3- Embrace said publicly ( )

4- Injury serious damage ( )

5- Proclaimed

6-scarcy

Synthesis (morphological stricter)

2- complete the following :-

1- If a researcher examined Ali . Ali is …….

2- If you interviewed Ali you are ……..

3- If he can only see short distanced things he is ……..

4- He knows how to teach , he is a good ……

5- You can read it , it is ……

Analysis (morphological identification)

Please segment the following words into meaning full chunks and state the meaning of the chunks

e.g childhoods – child : little human

being – hood : the state of being s: indicate plural

1- Freedom ……..
2- Harden …….
3- De -motivation ……..
4- Productive …….
5- Baby sitting ……
6- Washing machine …….
7- Like li hood ……
8- Nationwide ……..
9- Partially ……..
10-Eye brow …….