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Classroom Discourse in EFL Contexts: The Effects of Vocabulary Instruction on Interactional Competence.
The Case of First Year LMD Oral Classrooms at Saida University.

Thesis submitted in fulfilment of the requirements for the degree of Doctorate in ‘English Discourse Studies and Applied Linguistics’

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Statement of Originality

‘I hereby declare that this thesis is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree or diploma at my university or any other educational institution, except where due acknowledgement is made in the thesis. Any contribution made to the research by others, with whom I have worked at my university or elsewhere, is explicitly acknowledged in the thesis. I also declare that the intellectual content of this thesis contains no plagiarism and is the product of my own work, except to the extent that assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged.’

Signed: Mr Abdelkader Makhlouf
Date: 17/07/2019
Dedication

I dedicate this humble work to my dear mother, and to the soul of my beloved father. I would also like to dedicate my thesis to my wife, my children, and to all my family members.
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ABSTRACT
The present study investigated the effects of vocabulary instruction on developing vocabulary learning environment through interactional competence. To this end, this study targeted two first year LMD oral classes at Saida University with 44 homogeneous students using vocabulary instruction in two different conditions: vocabulary instruction in the experimental condition through interactional competence enhanced by context, definitions and pictures; the other group with the same condition without pictures. To achieve the aim of the study, the researcher used a multi-method research design based on a combination of quantitative and qualitative research methods using the following instruments: English language students' questionnaires surveying the students’ attitudes toward the two vocabulary instructions; pre-, post-, and delayed post-tests with the use of identical lexical items and different words order to eliminate extraneous factors such as order and practice effects. In addition, the classes were audi-taped and transcribed into a small corpus for the purpose of delineating qualitatively and quantitatively the interactional features that are most salient by the use of Conversation Analysis (CA). The interactional features were adapted following Walsh’ (2011) Self-Evaluation of Teacher Talk (SETT) model, some interactional modifications involved in the negotiated meaning based on Pica and Daughty 1985 a, and students’ meaning negotiation with no teacher intervention adapted by the researcher. Statistical analyses were conducted for pre-, post-, delayed post-tests, and questionnaires data using the SPSS techniques, and SPSS version of PROCESS to test moderation and interaction effect using a regression model. The study determined the experimental group with greater vocabulary learning gain, and positive retention of 12 target words selected from the fifth level of 4000 Essential English Words by Paul Nation 2009. The data indicated that the relationship between vocabulary instruction and vocabulary learning was moderated by interactional competence and that the interaction effect between vocabulary instruction and interactional competence on the students’ vocabulary learning was highly significant. The results also indicated that the relationship between vocabulary instruction and vocabulary learning was positive in all cases and occurred at different levels (low, mean, and high) of interactional competence. In addition, the quantitative and qualitative analyses of qualitative data indicated that interactional competence was mostly featured with more opportunities for negotiation of meaning, more opportunities to have better learning space through extended learner turns, and more balanced teacher and students’ talks amount, which were associated with more questions asked by the teacher and students in favour of the experimental group.
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LIST OF ACRONYMS & ABBREVIATIONS

CIC: Classroom Interactional Competence
CLT: Communicative Language Teaching
CO: The Comprehensible Output
CS: Caretaker Speech
DMs: Discourse Markers
DCT: Dual Coding Theory
ESL: English Second Language
IC: Interactional Competence
IH: Interaction Hypothesis
ILH: Involvement Load Hypothesis
L1: First Language
L2: Second Language
NS: Native Speaker
NNS: Non Native Speaker
PTR: Past Time Reference
SCT: Socio-cultural Theory
SETT: Self Evaluation of Teacher Talk
SLA: Second Language Speaker
SLVA: Second Language Vocabulary Acquisition
SPSS: Statistical Package for Social Sciences
STT: Student Talking Time
TTT: Teacher Talking Time
WT: Wait Time
ZPD: Zone of Proximal Development
General Introduction

-Background of the Study

Language learning in a classroom context is firmly tied to the various communicative practices by which learners interact with each other and their teacher. In this sense, classroom discourse explores the relationship between language, interaction and learning. Tied to this relationship is the need to explore the relationship between classroom interaction and teaching. To this effect, teachers can do much to enhance learning by studying their own interactions with students and by studying the various communicative practices by which learners interact with each other and their teacher.

In this respect, teachers provide students the ability to participate in constructing an interactional atmosphere inside classroom. Therefore, teachers play a fundamental role in shaping classroom discourse and facilitating the task for students to engage in a meaningful communicative interaction and build up a common understanding among interactants. Hence, classroom interaction provides us with examples of how teachers instruct vocabulary within which interaction takes place to promote new words learning and retention.

According to Vygotsky’s sociocultural theory, learning is a semiotic process where participation and instruction are fundamental for learning and need to be directed towards the Zone of Proximal Development (ZPD). The (ZPD) asserts that learning is best expressed beyond the learner’s actual development level and approaches gradually more closely via the target language system through a collaborative achievement (Vygotsky, 1978). In this regard, Lantolf (2000) points out that collaboration within a social instructional network helps teachers and learners to create solid zones of proximal development and learning mental abilities. Albers et al (2008), supported the same idea and argued that in order for novice learners to acquire new knowledge they must engage in the zone of proximal development.

In the same line of thought, Krashen (1980) reported that input or comprehensible input with exposure that is slightly beyond a learner's current level of competence in the L2
(i.e., "i+1") is sufficiently helpful for explaining SLA. Both of Vygotsky’s view of learning expressed by ZPD and Krashen’s comprehensible input can be regarded as a bridge to help learners move to the next level of understanding in the learner’s interlanguage. However, in his interaction hypothesis theory, Long (1983b, 1983c, 1996) reported that learners must actively engage in social interaction in order to get the linguistic data they need from native speakers (NSs). He also suggested that a second language or the target language is best acquired through learners’ negotiation of meanings and the various teachers' speech characteristics. (Long, 1983a).

In an attempt to expend the aforementioned hypotheses, Swain (1985, 1995) recommended a production of a comprehensible output in order to better give learners the opportunity to generate precise, coherent and appropriate language and help them to move their interlanguage from a semantic to a syntactic analysis of the L2 input. In the same vein, Swain’s comprehensible output construct has been also subjected to research on collaborative discourse (Swain 1994).

Within SLA framework, “comprehensible input,” “negotiation of meaning,” and “comprehensible output” offer a best conceptualisation for input obtained via interaction. In addition, comprehensible output maybe viewed as a source of input for other interlocutors. However, another major work that can be associated to Long’s interaction hypothesis is Pica's contribution. Pica (1987) in an attempt to extend Long’s interaction hypothesis, emphasises the importance of the social relationship and mutual understanding between the participants as important in interactional modifications of a structure of a conversation or interactional restructuring.

Given the significance of input comprehension, it has been widely accepted that learners while receiving input they are required to comprehend it in an attempt to facilitate the acquisition process. From this perspective, then, teachers are required to sustain comprehensible input and help students to engage in an interactive communication in the target language. This is with the hope to enhance students learning through a more comprehensive instruction. Moreover, Ellis (1991), after he suggested an amendment to the description of interaction hypothesis, argued that more promotion of interactional restructuring is achievable through the tasks in which there is a need for the participants to exchange information with each other.
As far as vocabulary instruction is concerned, teachers with the adoption of different types of activities help students to learn vocabulary by making them actively engaged in interaction (Laufer, Nation and Meara, 2005). The effectiveness of such vocabulary teaching activities lies in the suggestion that students can better acquire new vocabulary by giving them opportunities to deal with words in context (Palmberg, 1988). Researchers stress on the fact that the importance to make learners acquainted with strategies for inferring the meaning of unknown vocabulary from context is undeniable. That is to say, the effectiveness of vocabulary learning decreases when getting learners memorise words out of context. In this view, Honeyfield (1977) suggests that in order to elevate the students’ capacities in inferring meaning from context teachers should provide them with cloze or gap exercise, words-in-context exercises and context enrichment exercises.

With regards to multi pedagogical approaches, vocabulary instruction took a more interactive model to language learning through Communicative Language Teaching (CLT). The latter, as well, was based on interaction hypothesis with the perspectives that learners acquire a second language when they negotiate meanings through interaction with others (Walsh, 2011). The (CLT), with a more focus on vocabulary instruction, emphasises the importance of vocabulary as a medium for learners to communicate effectively within contextualised activities, and enhance students to use language in appropriate ways (Zimmerman, 1997). The importance of the CLT method also lies on the use of tasks that create interaction among students (Swain and Lapkin, 1998).

A clear application of such communicative activities emerges from task-based approach. The latter plays an important role in creating collaboration and scaffolding among peers through interaction which promotes learners’ cognitive and linguistic development. Johnson (1982) and Littlewood (1981) argued that the meaningfulness of language through negotiation of meaning, when learners engage in meaning-focused activities, supports the learning process (Richards and Rodgers, 1986). For a task to be communicative, Nunan (1989) argued that it should involve learners in comprehending, manipulating, producing or interacting with a focus on meaning rather than form.
Walsh (2006) considers the second language classroom to be shaped by a dynamic and complex series of interrelated contexts, which leads to admit the importance of interaction as a key factor in teaching and learning. The relationship between classroom interaction and learning is still partially understood. However, it is fair to say that in order to improve teaching and learning we should give a considerable attention to classroom interaction.

Boulima (1999) states that classroom interaction also implies understanding how communication is constructed between the teacher and learners and how interaction is negotiated. In this view, Chaudron (1988) acknowledged that the extent to which communication can be jointly constructed between the teacher and learners has a great impact on the classroom learning events. In addition, interaction in which learners struggle to make output comprehensible is important for language development (Swain, 1985 Cited in Boulima, 1999).

Central to the success of classroom interaction is the teacher’s ability to manage learners’ contributions and raising their interactional competence. To put it differently, the production of a type of interaction that is more engaged and more focused on participation and negotiation of meaning is at the centre of a successful classroom interaction. In this spirit, classroom interactional competence (CIC) is conditioned with the ability of teachers and learners to use interaction as a tool for mediating and assisting learning (Walsh, 2011). Therefore, opportunities are openly offered to teachers and learners to mediate and assist each other in the creation of zones of proximal development.

The fundamental aim of interactional competence is to put interaction firmly at the centre of teaching and learning. In another sense, it argues that by improving their CIC, both teachers and learners will immediately improve learning and opportunities for learning (Walsh, 2012). In this context, Young (2011) describes interactional competence as what a person does together with others and not what a person knows.

Walsh (2006:3) argues that the responsibility of the teacher in the success of classroom discourse lies essentially on a set of features of classroom discourse. These are: control of patterns of communication; elicitation techniques; repair strategies; and modifying speech to learners. According to Walsh (2006:3), the communication patterns
found in language classrooms are special, different from those found in content-based subjects. In the same spirit, Willis (1992) acknowledges the importance of language for it is the focus of activity and the central objective of the lesson and the instrument for achieving it (Willis, 1992 cited in Walsh, 2006). This is to mean that the linguistic forms used are often simultaneously the aim of a lesson and the means which makes communication purely unique. In the same vein, (Long, 1983a: 9) points out that meaning and message are one and the same thing, ‘the vehicle and object of instruction’ (Long, 1983a: 9 cited in Walsh 2006:3). The uniqueness of communication denotes its complexity as well. In this regard, Cazden (1986) describes classroom communication as a problematic medium.

-Statement of the Problem

The title of the present research is worded as: Classroom Discourse in EFL Contexts: The Effects of Vocabulary Instruction on Interacational Competence. The Case of First Year LMD Oral Classrooms at Saida University.

The lack of vocabulary knowledge which consequently leads to inadequate vocabulary development is one of the largest obstacles for EFL learners. As claimed by (Folse, 2004), the lack of vocabulary is a focal point to obstruct English proficiency. Therefore, the main obstacle for EFL university students wed itself to vocabulary deficiencies and insufficient vocabulary knowledge in English. Teachers are fundamental agents who play an important role in shaping classroom discourse and facilitating the task for students to engage in a meaningful communicative interaction. They can help students to learn vocabulary, and facilitate for them the deep processing of words and their meaning by the use of the specific vocabulary instruction and the suitable tasks in relation to the purpose of learning English. Hence, classroom interaction provides us with examples of how both teachers and students interact and discuss new words and meanings with the application of a well determined instruction.

This is to mean that the interaction approach, crucially, can be incorporated into vocabulary instruction. Consequently, as Shayer (2002) confirms, the social and collaborative aspects of learning through interaction among peers helps to create a collective ZPD. In the same spirit, a number of researchers focused on tasks that require a deeper level of processing. They suggested that language pedagogical tasks; for example, cognitive tasks involving comprehension with the objective to focus on new vocabulary
items can lead to incidental acquisition and retention of the vocabulary items. For instance, the Involvement Load Hypothesis proposed by (Laufer & Hulstijn, 2001) suggests that task with higher involvement load leads to facilitate vocabulary learning and retention. In a case study conducted by Newton (1995), communicative activities that imply negotiation of words in task-based interaction lead to better retention words. To put it another way, tasks involving information that are processed at a deep level lead to a significantly higher level of vocabulary learning.

With the goal to have an insight into classroom discourse, the different patterns created in the classroom interaction between the teacher and the students are central to language learning in general and vocabulary learning in particular. From a purely typical discourse perspective, classroom discourse is primarily considered as the oral interaction between teachers and their students as well between students themselves that takes place in a classroom context. However, teachers and learners face many challenges in relation to classroom interaction and vocabulary instruction and learning. This is due to the fact that classrooms lack the feature of constructing an interactional atmosphere that leads to vocabulary learning which is built up on a common understanding among interactants.

It has been also proved that learning vocabulary in isolation without a firm instruction, out of context and other assisting clues, would most likely stimulate a short term memory storage, and thereby vocabulary gain and English proficiency. This can be supported by Krashen’s cognitive claim of the mental processing of the input and its quality (Trawinski, 2005). Hence, the present research addresses the following question: How effective is vocabulary instruction in developing a vocabulary learning environment in which interactional competence occurs?

-Objectives of the Study

The present study is carried out using statistical package for the social sciences (SPSS) in order to test the research hypotheses. In addition, an audio recording of oral sessions is used applying, conversation analysis (CA), in an attempt to discover:

1. The effects of vocabulary instruction on students’ vocabulary learning performance and retention.
2. The effects of vocabulary instruction on the major features of interactional competence during interaction (mainly negotiation of meaning), and consequently how does interactional competence differ between the two groups conditions.

3. The effects of vocabulary instruction on students’ attitudes and, thereby, promoting opportunities for vocabulary learning.

4. The interaction effect between vocabulary instruction and interactional competence on the students’ vocabulary learning.

With these goals in mind, we propose the following guidelines. (1) Instruction should help students develop their vocabulary learning and retention. (2) Instruction should help create a positive effect on interactional competence, and thereby learning. (3) The interaction effect of vocabulary instruction and interactional competence on the students’ vocabulary learning is significant. (4) Instruction should help students to gain positive attitudes.

-Questions of the Study

The study addresses the following research questions:

1. Does the type of vocabulary instruction have different effects on student’s vocabulary learning between the two group conditions?

2. Are there vocabulary gains in favor of the outperforming group?

3. Is there long term vocabulary retention in favor of the outperforming group?

4. Does interactional competence effectively moderate the relationship between vocabulary instruction and vocabulary learning?

5. Does the type of vocabulary instruction have different effects on students’ attitudes between the two groups’ conditions?

6. What interactional features are most salient in favor of the outperforming group?

-Hypotheses

A hypothesis is commonly defined as the tentative conclusion intended for verification. Thereby, a hypothesis is a tentative proposition for a phenomenon, relationship or situation, the reality or truth of which the researcher does not know. In another perspective, a hypothesis is a refinement of the research problem. It is the most specific statement of the problem.

**Hypothesis testing:** Refers to the use of statistics to determine the probability that a given hypothesis is true, which is sometimes also referred to as significance testing.
**Null hypothesis**: is merely the statistically and logically equivalence to the opposite of the research hypothesis.

The following research hypotheses were formulated to test the objectives:

Hypothesis 1

**H1** There is a difference of statistical significance between the means of the experimental and the control groups in the total vocabulary learning scores across all tasks.

Hypothesis 2

**H1** There is a statistically significant effect of vocabulary instruction on the students’ vocabulary learning in favour of the experimental group.

Hypothesis 3

**H1** There is a difference of statistical significance in the learners’ long-term vocabulary retention across all tasks in favour of the experimental group.

Hypothesis 4

**H1** There is a statistically significant interaction effect between the independent variable (Vocabulary Instruction) and moderator variable (Interactional Competence) on dependant variable (the students’ vocabulary learning).

Hypothesis 5

**H1** There is a difference of statistical significance between the two group conditions (the experimental and control groups) in the means of their total attitudes.

The above research hypotheses were converted into null hypotheses. Null hypothesis states that there is no significant difference or relationship between two or more parameters. In the present study the following null hypotheses were formulated.

1. **H0** = There is no difference of statistical significance between the means of the experimental and the control groups in the total vocabulary learning scores across all tasks.

2. **H0** = There is no statistically significant effect of vocabulary instruction on the students’ vocabulary learning in favour of the experimental group.

3. **H0** = There is no difference of statistical significance in the learners’ long-term vocabulary retention across all tasks in favour of the experimental group.

4. **H0** = There is no statistically significant interaction effect between the independent variable (Vocabulary Instruction) and moderator variable (Interactional Competence) on dependant variable (the students vocabulary learning).

5. **H0** = There is no difference of statistical significance between the two group conditions (the experimental and control groups) in the means of their total attitudes.
Purpose of the study

The purpose of this study is to compare two vocabulary instruction methods during interactional group work tasks. As a result, there is a need to examine the effect of vocabulary instruction on vocabulary learning and retention that is assigned to each method through interactional competence. Consequently, one class is instructed with vocabulary in context and by definition enhanced with the use of pictures, while the other class is directed with a control condition to instruct vocabulary in context and by definition without using pictures.

With this goal in mind, students and teacher are hoped to engage in rich dialogic interactions around words and word meanings and develop foreign students’ vocabulary learning, long term vocabulary retention and positive attitudes. The researcher therefore wishes to determine whether the use of vocabulary instruction according to the type of tasks will lead to a greater gain and retention of vocabulary and also to enrich interactional competence in EFL classroom context that is jointly constructed between the teacher and learners.

Therefore, the teachers’ responsibility starts with the adoption of a very comprehensive vocabulary instruction that helps students to improve their vocabulary learning and retention. To achieve this end, a need to insert an interactive vocabulary instruction based on communicative and meaningful tasks is regarded to be indispensable through effective interactional competence. Teachers, in this respect, are required to pay a great care in the ways students communicate the target vocabulary in order to make input more comprehensible for them.

Significance of the study

Given that much of the work on classroom discourse has been carried out to explore how communication takes place between teachers and their students and between students in classroom, there is a need to explore a research that enables better understanding of the communicative practice based on a comprehensive vocabulary instruction in EFL and its effect on promoting classroom interactional competence (CIC) in EFL context and consequently vocabulary learning and retention. Therefore, the present research offers the possibility to enrich the literature review with the search for comparison effects based on
the establishment of both qualitative and quantitative data rather than on either qualitative, or quantitative based data.

The main concern of the present study is not simply to describe classroom interaction, it is to achieve new understandings and develop the various ways in which we teach. In addition, the study endeavours to place interactional competence as indispensable in enhancing our understanding of teaching and learning as well. Therefore, the present research is an attempt to explore the ways through which a foreign language teacher can improve vocabulary learning and facilitate EFL interactional competence based on a more comprehensive vocabulary instruction. My plea is for the application of a vocabulary instruction that is based more on context and negotiation of meaning with the hope to achieve more successful vocabulary learning and a richer interactional competence.

To this end, the contribution of vocabulary instruction is with a great importance for the university students. Thus, the belief that vocabulary instruction is best implemented at only beginner and lower intermediate levels seems to be not a standardized rule. Furthermore, the fortification of vocabulary learning and interactional environment in university oral classrooms is deemed to be a fundamental access to students’ language-input through the contribution of a communicative vocabulary instruction. However, a special attention is more required to be turned to teaching vocabulary, as one of the major priorities of language teaching, in foreign-language context.

- Organisation of Thesis

The researcher divides the present study into five chapters. The organisation of the chapters are as follows:

Chapter -1 ‘Classroom Interaction and Related Theories’: It is concerned with theories that are most related to classroom interaction. It also explores important concepts such as: features of classroom discourse, interactional competence, classroom interactional competence, self-evaluation of teacher talk (SETT) model, classroom interactional competence (CIC).

Chapter -2 ‘Review of the Related Literature’: This chapter contains the theoretical basis of the problem through EFL vocabulary research in relation to instruction, interaction
and learning. In sum, a particular concern is devoted to overview some theoretical and empirical works tied with vocabulary instruction, interactional competence and vocabulary learning in relation to English as a foreign language.

Chapter – 3 ‘Methods and Procedures’: This chapter presents the methodology followed in carrying out the present study. It gives details with respect to population and sample, the tools used, the procedure adopted for data collection, and statistical techniques used for analysing data.

Chapter - 4 ‘Results of the Study’: This chapter contains quantitative and qualitative relevant results. The quantitative results contain statistical analysis of the data to answer the questions of the study. Results obtained through statistical analysis of the data are shown in tables and charts using the SPSS outputs and frequency counts related to the generated discourse in order to reveal the effect of vocabulary instruction on developing a vocabulary learning environment in which interactional competence occurs. The qualitative analysis consisted of the identification and description of the most prevalent features of interactional competence in relation to vocabulary instruction and vocabulary learning.

Chapter-5 ‘Discussion, Conclusions and Recommendations’: This chapter contains a summary of the research along with the major results, conclusions, limitations, and recommendations for future researches.

-Definition of the Terms
-**Classroom Interactional competence**: The ways in which teachers and learners use language to mediate learning.
-**Interactional competence**: Considers the competence speakers need to communicate effectively and emphasises what goes on between speakers rather than solo performance.
-**Negotiation of meaning**: Meanings are negotiated through interaction and when speakers seek clarification or confirm intended meanings.
-**Teacher Talk**: The kind of language used by the teacher for instruction in the classroom.
-**Comprehensible Input**: The type of input the teacher provides to the learners. It requires an adequate vocabulary instruction which helps students understand the vocabulary they are exposed to. This type of input needs to be just one level above that of the learner,
which is expressed as \((i + 1)\). Based on the tasks that stimulate interaction and the context in which the unknown words occur with familiar ones, the received input (just a bit more difficult \((i + 1)\)) is said to be made comprehensible with the aim to get the right output (i.e., the learned words). Comprehensible input is classified into three types: pre-modified input, interactionally modified input, and modified output.

- **Pre-modified input:** refers to the input which has been modified in some way and regarded as simplified input. It helps make input comprehensible as a result of simplification and contextual clues and extra linguistic clues.

- **Interactionally modified input:** refers to a type of input which has been modified in interaction with native speakers or more proficient non-native ones for the sake of comprehension, and results from negotiation of input through interaction.

- **Modified output:** refers to language that is adjusted so that learners can better comprehend the speaker’s meaning.

- **Task:** an activity in which there is some communication problem to solve (Skehan, 1998). It is essentially based on meaning and reached by engaging in some form of social interaction and various cognitive processes. A task is supplemented with the aim to produce new words with the possibility of generating feedback and negotiations.

- **Incidental learning:** is what causes vocabulary gains that the students demonstrated on the tests without being forewarned of the upcoming tests which followed the vocabulary exposure and task treatment. It is a by-product of the learners’ engagement in different activities. It involves the learning of one thing (vocabulary) when the learner’s primary objective is to do something else. In here, ‘something else’ can be attention to meaning that occurs subconsciously through engaging in language activities without specific intention to focus on vocabulary. It is an effective way of learning vocabulary from context with little interruption of the comprehension process which is invested while trying to detect the meaning of the word with deeper and richer understanding of a word.

- **Context:** is conceived as a helping tool that makes language comprehensible.

The term context is used to refer to information that explains the meaning of individual words without the use of other resources, such as dictionaries. The words, sentences, and paragraphs are considered as a good environment that determines a context in which an unknown word exists. When learners get involved in learning vocabulary incidentally they start understand the meaning of the word in the context in which it occurs. Incidental vocabulary learning results from context instead of direct vocabulary learning, which means learning and memorizing words from the dictionary or vocabulary lists.
Chapter One: Classroom Interaction and Related Theories

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CHAPTER ONE: CLASSROOM INTERACTION AND RELATED THEORIES

1.0 Introduction

The present chapter aims at paving the way for the theoretical basis of the problem through a selection of the theories that are most related to classroom interaction. These theories are related to classroom interaction, mainly, through comprehensible input hypothesis, interaction hypothesis, the output hypothesis, and interaction as an interpersonal activity. The latter, with specific attention encompasses the major features of classroom discourse, interactional competence, classroom interactional competence, and self-evaluation of teacher talk (SETT) model.

1.1 Comprehensible Input Hypothesis and Related Concepts

The term input is a focal point in understanding Krashen’s Comprehensible Input Hypothesis. In language learning the concept of input as summarized by Gass (1997,p.1) “is perhaps the single most important concept of second language acquisition (SLA). It is trivial to point out that no individual can learn a second language (L2) without input of some sort”. The term input in language learning, as Richards& Schmidt (1992) defined, is the language that learners hear or receive which consequently triggers learning (cited in Chioukh, 2011). Therefore, input is essential for language acquisition. In order for a second language acquisition to occur, learners must be acquainted with input with a set of internal mechanism in order for L2 data to process (Ellis, 1985).

The concept of input has been approached differently according to three scopes of views: The behaviorists regard language learning as governed by the stimuli and reinforcement learners are supposed to be exposed to and to receive. The mentalists, from their view as the name suggest, focus on the learners’ brain or ‘black box’. They stress on the fact that the brain’s readiness to learn language with a minimal exposure to input help to trigger acquisition (Ellis, 1997 cited in Zhang, 2009). In contrast, the interactionist stipulate that both linguistic environment and the learners’ inner mechanism in interaction activities, i.e. both input and internal language processing, are required for language learning (Zhang, 2009).
1.1.1 Comprehensible input hypothesis

Krashen’s input hypothesis has been regarded as one of the substantial contributions to understand language learning process. Krashen, in his input hypothesis, concedes that “We move from *i*, our current level, to *i+1*, the next level along the natural order, by understanding input containing *i+1*” (Krashen, 1985, p.2) In here, Krashen claims that in order for a second language learning to occur, input must be exposed in a comprehensible manner, i.e., ‘comprehensible input’. This evokes the idea that language is best acquired when input is comprehended or understood at a level that can be slightly beyond the current level of competence.

The main argument made by Krashen in his comprehensible Input hypothesis is that comprehensible input leads to acquisition of L2 as learners are given access to the next level “i+1” because it leads them to understand and express meaning. For example, if learners have a current level or competence “i” the next level in the developmental sequence is comprehensible input “i+1”. In this sense, Gass explained that “the input a learner is exposed to must be at the *i* + 1 level in order for it to be of use in terms of acquisition” (Gass, 2011, p. 309).

According to Gass (2011), the ‘Language Acquisition Device’ assumed by Krashen expressed by innate mental structure is activated by input at “*i* + 1” level which helps in altering a learner’s grammar. The acquisition then is conditioned by input. According to Krashen, the Input Hypothesis has important implications for the classroom. This is enhanced by the idea that exposure to input that is comprehensible is necessary and sufficient for the occurrence of second language learning.

Input hypothesis claims that there are two corollaries (Krashen, 1985: 2). First, speaking is regarded as a result of acquisition and not its cause since it is a result of building competence via comprehensible input and cannot be taught directly. Second, grammar is automatically acquired if there is enough of input that is understood (cited in Gass, 2011).

Central to Krashen’s input hypothesis is comprehensible input which is necessary for all of acquisition. Teachers by providing learners with different
materials such as listening and reading make input comprehensible for them. Besides, contextual information helps also to make input comprehensible and thereby acquiring the unknown structures (Krashen 1985, p.2).

Krashen (1982) made a distinction between implicit acquisition and explicit learning of L2 and argued that both involve separate mental processes and storage (Cited in Ellis, 2008). He states that in order to facilitate access to “comprehensible input” for learners, teachers should instruct them implicit knowledge.

Implicit acquisition of a second language for adults is limited because an additional input is required, under explicit learning framework in classroom situations, in order to achieve second language accuracy. The idea of consciousness is central in the explicit/implicit distinction. Implicit acquisition is subconsciously processed which results in the knowledge of language. Explicit learning, in the other hand is consciously processed which results in knowing about the rules of the language. According to Ellis, explicit knowledge in SLA research “is generally used to refer to knowledge that is available to the learner as a conscious representation” (Ellis, 2008, p.355).

1.1.2 The role of input hypotheses

The importance of Krashen’ input hypothesis leads to other major contributions as summarised by Liu (2015). It gives prominence to input as well as learners’ exposure to input (White, 1987); the emphasis is on the message rather than form which gives rise to meaningful communication in the classroom (Brown, 2000); it gives prominence to communicative language teaching (CLT) approach rather than the previous rule- or grammar-based approaches (McLaughlin, 1987 cited in Liu, 2015).

The way input affects the process of languages acquisition has been viewed in accordance with four major hypothesis (Ellis, 1994 cited in Trawinski, 2005). As summarised by Trawinski (2005), these four major hypotheses are:
1-frequency hypothesis (the order of language acquisition is determined by the frequency of different items in the input: the more frequently an item occurs, the earlier it appears in learner's output).

2-comprehensible input hypothesis (only comprehensible input leads to language acquisitions, incomprehensible input is neglected by the learner — cf. Krashen's Monitor Model, Chapter VI).

3-output hypothesis (for input to be internalised the learner needs to use the new language form in a meaningful situation; only a form successfully produced by the learner becomes a part of his/her linguistic repertoire).

4-collaborative discourse hypothesis (learning how to participate in conversations leads from the memorisation of formulaic speech to the gradual acquisition of language structures).

1.1.3 Intake vs. input

Earlier than the other researchers, Corder (1967) claimed that intake should be associated with language learning processing. He considers intake as what is internalized by the learner whereas input is what is available to the learner (Corder, 1967). According to Tavakoli (2012), Corder considers intake to be distinct from input, “which is the language that learners are exposed to” (p.176) whereas intake is “what they actually ‘take in’” (p.176). This means that input will not contribute alone in the language acquisition because learners, while internalizing the language being learned, they contribute in making it part of their inter language system. Also, in order for input to be comprehensible, learners must notice the forms to be acquired (Schmidt, 1994) which means that comprehensible input must become intake. The latter requires also from the learner to assimilate the data and use it to promote IL development (Larsen-Freeman & Long, 2014).

According to other models, intake refers to a process or a product. Tavakoli (2012, pp.176-177) reports that in the product view, intake is “unprocessed language input” and considered as “a sub-set of input before the input is processed by learners”; according to the process view, it is “processed language input” and considered as “the process of assimilating linguistic data or the mental activity that mediates
between the input ‘out there’ and the competence ‘inside the learner’s head’. The two different models can be presented according to the two following figures:

**Figure 1.1** Input, output: The product view (source: Tavakoli, 2012, p.177)

**Figure 1.2** Input, intake, and output: The process view (source: Tavakoli, 2012, p.177)

Schmidt (1990; 1995; 2001) from his view stated that both noticing and understanding are two essential levels of awareness. As far as noticing is concerned, it is a necessary condition to facilitate intake and it must be associated with attention which is necessary for intake too. Schmidt (1993) considers attention as responsible for noticing and “the necessary and sufficient condition for the conversion of input into intake” (Schmidt, 1993, p. 209). Understanding as a second level of awareness, is the outcome of deeper learning.

### 1.1.4 Critiques of input hypothesis

Input Hypothesis like other hypotheses in the Monitor Model has been criticised by researchers. For example, McLaughlin (1987) argues that the evidence for Karashen’s hypothesis is not sufficient because there are only “assertions that have only tangential relevance to the central claims of the theory” (McLaughlin 1987, p.43 cited in Liu, 2015). Therefore, he calls for an equilibrium between the internal and external factors, comprehension and production. He argues for “[A] more balanced view of the second language learning process” McLaughlin (1987, p. 51, as cited in Liu, 2015). For Gregg (1984, p.90), the Input Hypothesis is totally rejected because it lacks “more explanatory power…” (Cited in Liu, 2015). In the same line other researchers, such as Harley & Hart, 1997; Harley & Swain, 1984, suggested that though necessary for language acquisition comprehensible input alone is insufficient.
Tavakoli (2012) celebrates the fact that the vagueness in Krashen’s definition “of what constitutes conscious versus subconscious processes, as they are very difficult to test in practice: How can we tell when a learner’s production is the result of a conscious process and when it is not?” (p. 11) is a reason for criticizing his hypothesis.

Liu (2015) claims that there are three major arguments about the Input Hypothesis. First, vagueness of the input hypothesis at three levels: comprehensible input, the next level (i+1), and the acquisition process. For instance, “the ambiguity is chiefly manifested in what the formulation i+1 signifies and what “comprehensible input” means”, and the decision on how the next level and what structure to be acquired first and what next along the natural order are not well determined. Besides, the acquisition process is “equally obscure” (Liu, 2015, p. 142).

Second, the simplification of input argued by Krashen (1985) when he claimed that input can be made comprehensible by simplifying it is not well founded. For example, the claim that caretaker speech (CS) directed at children who are acquiring their L1 and simplified somehow for communication will facilitate language acquisition can be criticised on two levels: first, in L1 acquisition, CS does not always mean simplified speech; second, “comprehensible” input does not necessarily mean “simplified” or “caretaker speech” (Liu, 2015, p. 143).

Third, Krashen’s Input Hypothesis, which is part of the Monitor Model “an overall theory” as it was claimed by Krashen’s (1985, p.1), has been over-emphasised as “the central part” of his “overall theory”. Krashen’s (1980, p.168) overclaim of the Input Hypothesis to be “the single most important concept” is motivated by its attempt at “[answer] the critical question of how we acquire language” (see Liu, 2015, as cited in McLaughlin, 1987, p.36). Besides, Krashen’s (1985, p.4) claim that “[A]ll other factors thought to encourage or cause second-language acquisition work only when they contribute to comprehensible input and/or a low affective filter” seems to be over-emphasised to consider comprehensible input as the single causal factor in SLA. This overclaim can be refuted due to the contribution of other internal and external factors.
Liu (2015) states that the internal factors can be justified by the fact, as White (1987, p.98) points out, that “there may be more than one potential route for grammar change”. In here, White refers to other mechanisms underlying L1 and L2 acquisition such as the example from Berwick and Weinberg (1984) of the passive form acquired by the child. Their example underscores the fact that, apart from comprehensible input, the acquisition is based on the child’s existing syntactic or lexical knowledge and not on any contextual or extra-linguistic information (cited in Liu, 2015).

As stated by Liu (2015), the external factors such as those of interaction hypothesis (Long, 1983, 1996), output hypothesis (Swain, 2000), noticing hypothesis (Schmidt, 1990), input processing (Vanpatten & Cadierno, 1993); apart from comprehensible input under the framework of Input Hypothesis, can enhance the successful acquisition. Long’s (1983) proposition of “modified interaction” in his Interaction Hypothesis such as strategies, tactics, and both is one way for language acquisition. Long’s (1996) view of corrective feedback and negotiation of meaning in interaction as stated by (Lightbown & Spada (2006, p.44) is another way for language acquisition (see Liu, 2015). Swain’s comprehensible output hypothesis supplements the external factors of language acquisition mainly through deeper processing of language, promoting “noticing” in language production and conveying meaning (Liu, 2015).

Other researchers such as Schmidt and Frota (1986), Schmidt (1990, 1993, 1994), and Kormos (2001) consider noticing or “apperceiving” (Gass 1988, 1997) new language forms in the input by adult SL learners as a conscious process required for learning, in contrast to Krashen (1985, 1989) and Van Patten (1988) view of learning as a sub-conscious process. In the same line, Doughty (1991); Sharwood-Smith (1991, 1993) provided a theoretical and empirical framework on enhanced input that is based more on form and meaning rather than a focus on grammatical forms.

1.2 Interaction Hypothesis and Related Concepts

Long’s Interaction Hypothesis (HI) (1983b, 1983c, 1996) argues that developing language proficiency through comprehensible input is necessary but needs
to be supported by interaction and communication. The importance of comprehensible input is undeniable, and, according to Long, “it is most effective when it is modified through the negotiation of meaning” (Ellis, 1997, p.47). Thus, the language used in classroom should be treated as interaction which serves in turn to provide opportunities for learning. The central aim of the hypothesis lies also on the focus on form as well as focus on meaning and that “interaction in the L2 furthers acquisition as well as the exchange of information” (Tavakoli, 2012, p.183).

Researchers have conceptualized “comprehensible input” with an access to input obtained via interaction and consider language competence as a result of interaction between a learner’s input and output (Krashen, 1981, cited in Gass & Varonis, 1994; Lantolf & Thorne, 2006; Long, 1991a, 1991b, 1996). In this sense, interaction refers to “communication among individuals, particularly when they are “negotiating meaning” or working to prevent a breakdown in communication” (Gass, 1997; Gass & Mackey, 2000; Long, 1991a, 1991b; Pica, Doughty, & Young, 1986, cited in Palma, 2014, p.2).

1.2.1 Interaction hypothesis

Long’s main contribution suggests that interactional adjustments make input comprehensible, and comprehensible input promotes acquisition, thus interactional adjustments promote acquisition (Lightbown and Spada, 1993, p.30). Based on his investigation of conversations between a native speaker (NS) or more competent interlocutor and non-native speaker (NNS), Long (1983) suggested his interaction hypothesis. In here with a consideration of Long’s theory to be endowed with a “cognitive perspective on second language learning” (Shane, 2015, p. 43), conversation is regarded as a medium by which the language knowledge subject of learning is acquired “with knowledge being a process of internalization, rather than a display of interactional competence and the ability to enter into social relations” (Shane, 2015, p. 43).

Van Lier (1988) considers interaction as a medium between input and intake. This can be clearly conceived with the application of interaction through
meaningful activities. According to Figure 1.3 this enables the cognitive process to occur in combination with the available input or sections (cited in Xiao-yan, 2006).

![Diagram](image_url)

**Figure 1.3** The role of interaction (Van Lier, 1988, p.93) (source: Xiao-yan, 2006, p.28).

Negotiation for meaning also sustains interactants in a co-operative manner to “develop mutual understanding as they work together to overcome communication breakdown” (Oliver, 2009, p. 137). “negotiation of meaning” offered SLA researchers to conceptualized input obtained via interaction (Long, 1983b; Şahin, 2009; Swain, 2005; Swain & Lapkin, 1995, 1998) and enables learners “to transform what is initially incomprehensible to them into comprehensible input” (e.g., Pica, 1987a, 1992; Varonis & Gass, 1985, cited in Oliver, 2009, p. 137 ). Long considers interaction central in rendering learners actively engaged in order to acquire new language, for they need not to be only recipients of i+1.

### 1.2.2 Negotiation of meaning

Long’s approach is also supported by the role of negotiation in social interaction. In this respect, Long (1996) claims that “negotiation work that triggers interactional adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways” (Long 1996, pp. 451-452). Negotiation of meaning occurs during communication breakdown and interactional trouble. Negotiation of meaning implies modification and restructuring of interaction when learners face difficulties in message comprehensibility (Pica, 1994). Thus, central to negotiation of meaning, when a communication problem occurs, there is an interactional work and adjustments done by interactants, to achieve mutual understanding. The aim of negotiation under a framework of intersubjectivity is to create a shared social world between interlocutors (Brooks, 2009).
Long (1996) argues that negotiation of meaning helps learners to develop a second language acquisition through interactive tasks. He suggested also that the more heavily interaction is modified, the better input the learner will be (Long, 1996). Negotiation serves also to make input more comprehensible to the learner, and “facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways” (Palma, 2014, p.2).

Negotiation of meaning as studied by Pica, Young, and Doughty (1987) has a positive effect on comprehension especially through interactional modifications of input rather than linguistically simplifying input that is considered more conventional. (Cited in Petkova, Mariana, 2009). In this regard, negotiation of meaning, is conceptualised as

The interactive work done by interlocutors in order to ward off or resolve communication breakdowns which take place when the speaker’s utterance is not clear or comprehensible to the listener. In such situations, the impending or existing communicative impasse is signaled by means of clarification requests, confirmation checks, comprehension checks and repetitions, which leads to interactional modifications involving simplification or elaboration of the initial message, thus making input comprehensible (Pawlak, 2014, p.53).

Doughty and Pica (1986) proposed the negotiation model that is based essentially on the negotiation sequences which comprises “the opportunity that is provided to the learner to process utterances in the L2 which become more comprehensible” (p. 43). As cited in Palma (2014) the negotiation model integrates four components: First, a trigger which is “an utterance or part of an utterance that is not understood” (Doughty and Pica, 1986, p. 48). Second, a signal which is used when there is a lack of comprehension. Third, a response is expressed as the attempt to repair the problem by the first speaker. Fourth, a reaction comes as a response or an extension to the repair or correction.
In this sense, Gourlay (2005) and Harris (2005) maintain that negotiation of meaning activates the students’ selective attention and interpersonal communication through the task-based approach.

When students signal incomprehension about a lexical, morphological or complexity task item, a response from the other interlocutor is given trying to fill the gap . . . conversational turns later the item is acquired by the speaker who asked for clarification by using it abundantly through the entire act speeches of the following turns (Gourlay, 2005, p. 115, cited in Palma, 2014).

Based on conversational interaction, language acquisition is facilitated because “it connects input; internal learner capacities, particularly selective attention; and output in productive ways” (Long, 1996, pp. 451-452). In here, conversational and linguistic modifications that occur in interaction together further comprehensible linguistic input. In this sense, a key point in understanding long’s interaction hypothesis is the learners’ exposition to modified input and the way interactants engage in conversation with learners.

Ellis (2005) has identified negotiation sequences as clarification requests, confirmation checks, recasts, etc. Besides, negotiation research has been conceptualized under the description of discourse strategies comprising clarification requests, confirmation checks, comprehension checks, and repetition (e.g., Long, 1981, 1983; Mackey, 1999; Mackey & Philp, 1998; Oliver, 1998, 2000, 2002; Pica, 1987, 1992; Pica, Holliday, Lewis, & Morgenthaler, 1989, cited in Oliver, 2009). As summarized by Oliver (2009) the four strategies can be described as follows: Clarification requests are strategies meant to clarify what the speaker has said. The listener uses those strategies with statements such as “I don’t understand”, wh-questions, yes-no questions and tag questions.

Confirmation checks are used by the listener with expressions that often involve repetition accompanied by rising intonation. Unlike the first strategy, Confirmation checks are used to confirm that what has just been said is correctly heard. Comprehension checks are strategies used by the speaker to check that the preceding utterance was understood by the listener and may also involve self
repetition associated with rising intonation. They are often established in the form of a question (e.g., “Do you understand?”). Self-repetition is a strategy used by the speaker and may include partial, exact, and expanded repetitions of lexical items (Oliver, 2009).

<table>
<thead>
<tr>
<th>Trigger</th>
<th>Signal</th>
<th>Response</th>
<th>Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>lexical item</td>
<td>confirmation check</td>
<td>repetition</td>
<td>evaluation</td>
</tr>
<tr>
<td>phonetic error</td>
<td>clarification request</td>
<td>expansion</td>
<td>non-verbal correction</td>
</tr>
<tr>
<td>language complexity</td>
<td>comprehension check</td>
<td>reformulation</td>
<td></td>
</tr>
<tr>
<td>task complexity</td>
<td></td>
<td>Use of L1</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1.4** Negotiation process. Source: Sequence adapted from Doughty (2000a, p. 49).

Negative feedback obtained during negotiation can be facilitative of L2 development, “at least for vocabulary, morphology, and language-specific syntax, and essential for learning certain specifiable L1–L2 contrasts” (Palma, 2014, pp.2-3). Long’s (1996) updated version of the interaction hypothesis reveals how negative feedback operates in L2 acquisition. Through negotiation of meaning negative feedback is elicited and directed to draw the learners’ attention to mismatches between input and output (Stevens, 1999). Long (1996) claims that “negative feedback obtained through negotiation work or elsewhere may be facilitative of L2 development, at least for vocabulary, morphology, and language-specific syntax, and essential for learning certain specifiable L1-L2 contrasts” (Long 1996:414).

### 1.2.3 Turn taking

Turn taking is expressed by the learner’s ability to draw the interlocutor’s attention to turn takes in conversation. It is an important aspect of conversation analysis because when turn-taking comes to be associated with break downs, there is a need to signal that something important is happening in the conversation. Turn taking can be clearly illustrated when participants allow appropriate opportunities for others to talk, or ‘take the floor’ Tavakoli (2012). In here, the floor is the right to speak and be listened to. Tavakoli (2012) states that “Turn-taking is the set of practices through which conversation is organized and is therefore an important aspect of conversation analysis” p.350.

Turn taking is a basic ingredient in making input comprehensible. Trawinski (2005) claims that in classroom opportunities for turn taking can be created by the
learner (self-initiated turns) or by the teacher (teacher-initiated turns). The different aspects of turn taking in language classroom can be illustrated in the following figure:

![Figure 1.5: Turn taking in language classroom](Allwright, 1991, p. 128 source: Trawinski, 2005, p.65)

### 1.2.4 Corrective feedback

Long’s (1996) revision of his Interaction Hypothesis, with a more highlighting for individual cognitive processing, attention, awareness, focus on form, and negative evidence opened the doors for researchers to focus on different types of corrective feedback (Zoghi, 2016). For example, recasts as can be expressed through short response to correct what seems erroneous (Loewen, 2009), or facilitating the speaker’s self corrections through prompts as another type of feedback (Ammar & Spada, 2006; Lyster, 2004).

Corrective feedback can be provided implicitly or explicitly. Implicit corrective feedback is provided by the listener and involves the form of negotiation strategies such as confirmation checks, clarifications requests, and repetition. These features render corrective feedback and negotiation for meaning closely overlapped
The error committed in implicit feedback is not overtly indicated (Ellis, Loewen, and Erlam, 2006). It takes the form of recasts, defined by Long (in press) as

A reformulation of all or part of a learner’s immediately preceding utterance in which one or more non-target like (lexical, grammatical etc.) items are replaced by the corresponding target language form(s), and where, throughout the exchange, the focus of the interlocutors is on meaning not language as an object. (P.2 cited in Ellis, Loewen, and Erlam, 2006).

Explicit corrective feedback is provided by teachers to make learners aware of the form of their linguistic errors or mistakes. However, as Ellis, Loewen, and Erlam (2006) indicate, explicit feedback has two forms: (a) explicit correction, in which the error committed by the learner is clearly highlighted by the teacher, and affords both positive and negative evidence by indicating that what the learner said was incorrect (e.g., “No, not goed—went”). (b) metalinguistic feedback, unlike explicit correction it affords only negative evidence. For example, “You need past tense,” It is defined by Lyster and Ranta (1997) as “comments, information, or questions related to the well-formedness of the learner’s utterance” (p. 47 cited in Ellis, Loewen, and Erlam, 2006). However, as argued by Ellis, Loewen, and Erlam, (2006) “metalinguistic feedback, are more likely to impede the natural flow of communication and to activate the kind of learning mechanisms that result in explicit rather than implicit second language (L2) knowledge” (p. 341).

The effectiveness of corrective feedback is remarkably expressed through the use of DMs in teacher talk which signals politeness and personal stances (Yang, 2014). Besides, corrective feedback jointly with form-focused instruction provided within the context of communicative interaction can promote second language in both the short and long term (White et al 1991; Spada et al 1993).

In relation to feedback received by learners, direct and indirect negative evidence come to inform that a learner’s utterance is ill-formed. Direct negative evidence occurs explicitly to inform the learner that his utterance is incorrect in some way. On the other hand unlike error correction, which is direct negative evidence, indirect negative evidence occurs implicitly in conversational interactions to confirm,
query, and restate what the person says. Indirect negative evidence indicates that the learner’s utterance is wrong and does not normally interrupt the flow of communication and is focused on meaning (Tavakoli, 2012).

1.2.5 Gass’ input-interaction hypothesis

Gass’ Input-Interaction Hypothesis (2005) calls for the importance of interaction or negotiation as a ‘setting stage’ or a resource for language learning rather than the location of actual learning (cited in Shane, 2015). This is clear when he asserts that ‘conversation is not only a medium of practice, but also the means of which learning takes place’ (Gass, 2005, p.09). According to Gass (2005), the input and interaction approach assumes that “language learning is stimulated by communicative pressure, and examines the relationship between communication and acquisition and the mechanisms (e.g., noticing, attention) that mediate between them.” (Gass, 2005, p.01).

In Long’s terms, conversational interaction in a second language is considered primary for developing language and not merely a forum for practice of specific language features (Gass, 2005, p.09). This forms the basis for Interaction Hypothesis which is expressed by Long as: “negotiation for meaning, and especially negotiation work that triggers interactional adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways” (Long (1996, pp. 451–2, cited in Gass, 2005).

Another claim in Gass’ Input-Interaction Hypothesis is that interaction leads to changes in knowledge of the language being taught mainly through the modified input adopted and transformed by the learner, negotiation of meaning, clarification of utterances, testing out and practicing language structures and learning to accommodate other interlocutors. This is in turn has a great potential on the acquisition of the language being taught that is typified by a “modification in understanding, rather than use” (Shane, 2015, p. 45).
According to Gass (1997) it is not possible for learners to reach automatically all the input that they are exposed to. In other words, as explained by Numa (2000), at any given time “only some of the data about an L2 actually filters through to learners” (p.16). Numa (2000) states that the interactionist model includes different steps of acquisition process as illustrated in figure 1.6.

Learners in the first step while getting input through reading or hearing they apperceive or notice the gap between their present knowledge of the L2 and information contained in the input in a conscious way (Schmidt, 1990, 1993; Schmidt & Frota, 1986 cited in Numa, 2000 ). As proposed by Gass (1997) the apperceived input has a principal function which acts as “a priming device that prepares the input for further analysis” (Gass, 1997 p. 4).

The second step is based on the qualitative treatment of Gass' notion of comprehended input which is different from Krashen's (1980) comprehensible input. The difference is considered from the fact that comprehended input is a typical example of a hearer's perspective on what makes input understandable. comprehensible input from the other side differs from comprehended input because “it suggests that input becomes understandable as a result of whatever the speaker does to modify his or her speech” (Numa, 2000, p.18). Another difference lies on the fact that comprehension ranges gradually from a comparatively shallow, semantically based process to a deeper, syntactically based analysis of the structure of the language contained in the input. In this respect, the notion of comprehension is expressed by Gass (1997) as “a continuum of possibilities ranging from semantics to detailed structural analyses” (Gass, 1997, p. 5).

The third step, based on psycholinguistic process where apperceived data occurs under the framework of intake, addressed the fact that the apperceived input is assimilated into learners' pre-existing frames of knowledge about the L2. According to Gass (1997), intake is not merely a subset of input, it is a mental activity and selective processing that mediates input and grammars (p. 5).

The fourth step, in a more close interaction with intake, involves integration.
According to Gass (1997), there are two possible outcomes of integration that take place subsequently after apperceived input has been processed to become intake. The first is the incorporation of the new knowledge into the learner’s interlanguage as stated by Gass (1997): “the development per se of one's second language grammar” (p. 5). The second is storage that subsequently takes place after the occurrence of the former. In this regard Numa (2000) explained that there are four things a learner may do. First, the hypothesis about how the L2 works during the intake phase may be confirmed or rejected, then this new knowledge can be incorporated into the learner’s grammar in the subsequent step of integration. Second, there is a possibility where a learner may seem not to use the input at all; however input helps render prior hypotheses more strengthened or reconfirmed. In here, the information contained in the input becomes intake and takes part of the learner's grammar. Third, the processed input may be stored incompletely until having a situation where further clarification exists. Fourth, the possibility of not using a particular piece of input at all.

The final step in the model is output (Swain, 1985, 1995). Output represents an essential part in the acquisition process for two main reasons: First, the hypotheses that the students have formed during the intake can be validated through feedback they may receive from interlocutors. Second, output can be seen as a forcing motive to incite learners to move from a semantic to a syntactic mode of L2 processing (Numa, 2000).

**Figure 1.6** An interactionist model of second language acquisition (adapted from Gass, 1997). Reprinted with the permission of Lawrence Erlbaum Associates. (Source: Numa, 2000, p.17).
1.3 The Output Hypothesis and Related Concepts

Output as opposing to input means the language a learner produces either in speech or writing (Tavakoli, 2012). In 1985, the consideration of output to be part of the learning mechanism and the traditional view of output as a way to produce what had previously been learned were not seriously contemplated (Gass & Selinker 2008). According to Swain (1985), the occurrence of SLA is primarily based on the focus of output, i.e. the words used by learners. In 1995, output was estimated as significantly important in the development of syntax and morphology (Gass & Selinker 2001, cited in Zhang, 2009).

Researchers consider Swain’s output hypothesis as an important addition to Krashen's input hypothesis and Long’s interaction hypothesis. Swain emphasises the fact that the role of output can be conceived from three important sides. Output is needed to be produced in the process of negotiating meaning in precised, coherent and appropriate ways so that learners develop the necessary grammatical resources under the heading of “pushed language use” (Xiao-yan, 2006). In this vein, (Swain 1985, pp. 248–249) considers the concept of ‘negotiated meaning’ as not simply limited to ‘getting one’s messages across’, rather it involves conveying the message precisely, coherently and appropriately. Thus, it involves the notion of being ‘pushed’ in output which is parallel to the concept of comprehensible input (i + 1) (cited in Pawlak, 2014, p. 56).

1.3.1 The output hypothesis

According to Swain’s output hypothesis, comprehensible input alone is insufficient to L2 learning process. In this sense, Output Hypothesis emphasizes that in order for SLA to take place input should become intake (Xiao-yan, 2006). Thus, Output hypothesis based on comprehensible output offers solutions to the limitations found in the Input hypothesis, i.e. “language produced by the learner that can be understood by other speakers of the language” Tavakoli, 2012, p.256). This is to mean that Krashen’s Input hypothesis didn’t value comprehensive output more particularly with the admission that learner’s language production pushes forward SLA/ FLA.
Swain’s addition to Long’s hypothesis is consolidated by the fact that in some empirical researches interaction hypothesis did not provide clear evidence that interactions facilitated acquisition. For example, Sato (1986), conducted a ten month longitudinal study of two Vietnamese students; however, Sato’s analysis of the two learner’s interlanguage development within the specific semantic domain of past time reference (PTR) did not reveal that the acquisition of all of the linguistic devices which encode PTR is clearly facilitated by the interactions (Browne, 2003).

The early conception of Swain’s output hypothesis was affected by cognitive theory. However, Swain in her later work, influenced by sociocultural theory and interaction-based research, was attracted by the idea that learners can sustain each other in a way that helps them notice the language features that they did not use them easily at all or discover them previously (Spada & Lightbown, 1993, p.166). However, the demonstration of how learner/learner interactions contribute to learning in the long term has not yet been achieved (Shehadeh, 2002; Mackey & Goo, 2007). An empirical study was conducted by Bitchener (2004) in which pre-intermediate learners of L2 English did a considerable amount of negotiation for meaning on lexical items based on two different types of tasks. The study revealed that learners were able to use the correct language item when they repeated the task twelve weeks later because their negotiation led to a correct resolution (cited in Spada & Lightbown, 1993).

Another case proved the insufficiency of comprehensible input, as an essential element of SLA, is Swain’s observational data of the French immersion program in Canada (Allen, Swain, Harley, & Cummins, 1990 cited in Browne, 2003). In this respect, Swain noted that only few students exhibited a full mastery of French although many of them over a period of many years received large amounts of “comprehensible input”, with many corresponding opportunities for “interaction” (Browne, 2003). This can be supported by the argument put by Swain (1985) that immersion students are incapable to achieve native like productive competence because of the luck of appropriate opportunities to use the target language in the classroom or the necessary feedback from their teachers. Besides, she considered the other reason that their comprehensible output is limited and because they were not
being ‘pushed’ in their output more than considering their comprehensible input as limited (p.249).

### 1.3.2 Pushed output

The essence of Swain’s argument in her hypothesis is that forcing learners to speak in the L2 supports acquisition by pushing them to construct an utterance that might even be seen wrong for them. In this vein, Swain (1995) argues that by “pushing” learners to make more efforts which in turn lead them to “stretch” their interlanguage resources, they are enforced to process language more deeply, and to move beyond their current stage of language development (Browne, 2003). Therefore, the necessity to use language in a meaningful way pushes learners to produce output and consequently improve their language level (Xiao-yan, 2006).

Swain’s premise of “pushed output” opposes Krashen’s view that output is the result of acquisition not its cause, and forces learners to pay attention to the means of expression when producing messages that require to be processed syntactically, i.e., “to move from semantic (top-down) to syntactic (bottom up) processing” (Tavakoli, 2012, p.256). In other words, in speaking or writing students move from semantic to syntactic processing. In this sense, learners when they negotiate meaning, i.e. engaging in output they are learning the language. In this sense, “comprehensible output” as hypothesized by Swain is a missing part in what may enable students to stretch their linguistic resources and “to achieve full competence” (Browne, 2003, p.16).

As cited by Browne (2003), Swain’s (1985) Pushed Output Hypothesis provoked various qualitative studies. In this regard, Pica, Holliday, Lewis, and Morgenthaler (1989) highlighted the role of requests for clarification or confirmation in modifying learners’ output. They concluded that modifications contribute to the process of SLA although their study did not show that these conversational modifications specifically led to acquisition (Browne, 2003).

The output hypothesis revolves around the idea that noticing gaps in linguistic knowledge by learners while producing output leads to modifications in output.
(Swain, 1985, 2005). Noticing gaps in linguistic knowledge permits learners through practice of language structures to communicate personal meanings.

Interaction enables learners to test out hypotheses in relation to grammatical structures. This interaction process, which is elaborated in a collaborative dialogue, consolidates the learners’ knowledge of language mainly through problem-solving (Swain 2000). In this sense, in a French immersion program enhanced by three different types of collaborative tasks (dictagloss, cloze, and proof-reading), Kowal and Swain (1997) found that because students were “Pushed” to produce the target language, they were able to notice the gap” between what they wanted to say and what they were able to say (cited in Browne, 2003).

Central to the interaction process and respectively other depending terms, as defined by Swain (2000), is the term “beyond” that requires to generate consequently other definitions:

The beyond is collaborative dialogue. And what is 'collaborative dialogue'? It is knowledge-building dialogue…it is dialogue that constructs linguistic knowledge. It is what allows performance to outstrip competence. It is where language use and language learning can co-occur. It is language use mediating language learning. It is cognitive activity and it is social activity (p.97).

Swain claims that dialogues are significance mediums by which language acquisition is promoted (Hall & Verplaetse, 2000). The same idea is supported by Marije (2011), “In dialogues L2 learners are encouraged to try out new forms and learn through hypothesis-testing. When they fail to be comprehensible they receive negative feedback from the interlocutor. Clarification requests and negotiations of form and meaning are the result” (p.144).

1.3.3 Basic functions of output hypothesis

Swain’s Output Hypothesis (2005) relates output and more specifically ‘forced output’ to three main functions: Noticing/Triggering, Hypothesis Testing and Metalinguistic (reflective) (Swain 2005). These three functions lead learners to focus on form as well as meaning in contrast to modified input and negotiation of meaning which may only result in a focus on the messages being exchanged in interaction
(Tavakoli 2012). Tavakoli (2012) once summarized respectively the three aforementioned functions as follows:

1) Learners when trying to communicate in their still-developing target language, they may notice the gap between the message and meaning they want to convey and what they believe they know. As an outcome, when learners encounter a linguistic problem, a certain awareness raises leading them to an appropriate action.

2. Hypothesis testing or testing different hypotheses about a particular linguistic system may result when learners use their still-developing target language and reformulate the utterance as a response to communication breakdown. As a result, learners may be experimenting with what works and what does not work. Thus, hypothesis testing occurs when learners start to realize how meaning is expressed accurately, which intern furthers language acquisition. It might be also a result when learners utter something and participate in negotiated interaction and receive negative feedback.

3. ‘Forced Output’ furthers acquisition because it operates as a metalinguistic function. In here, output leads learners to think about linguistic information through which they are able to control and internalise linguistic knowledge. The metalinguistic function occurs when “learners may be consciously thinking about language and its system, about its phonological, grammatical, and semantic rules in order to guide them to produce utterances that are linguistically correct and communicatively appropriate” (Tavakoli, 2012, p.257). The metalinguistic or reflective function of output holds a major role for negative feedback which is supplied in somewhat less communicative activities such as text-reconstruction tasks (e.g. Kowal and Swain 1994; Fortune 2008 cited in Pawlak, 2014), and text-reformulation tasks in written assignments (e.g. Sachs and Polio 2007; Watanabe and Swain 2007 cited in Pawlak, 2014).

The importance of the aforementioned functions of Swain’s Output Hypothesis has been praised by Muranoi (2007) as essential parts of output practice. The three functions provide opportunities for L2 production which in turn facilitate L2 acquisition. In this sense, Muranoi (2007) explains that “output practice that leads
learners to notice gaps in their interlanguage systems, test their existing knowledge, reflect consciously on their own language, and process language syntactically is expected to be the most beneficial for L2 development” (p.59).

1.4 Interaction as an interpersonal activity

According to Vygotsky (1978), the effectiveness of learning weded itself to the nature of the social interaction between two or more people with different levels of skills and knowledge which help in turn to move into and through the next layer of knowledge or understanding (1978 cited Wertsch 1985). According to Kozulin (2002), mediators can be categorized as human and symbolic. The former is concerned with the effectiveness of the adult’s involvement in promoting the child’s performance; whereas, the latter deals with symbolic tools-mediators that are introduced in order to bring changes in the child’s performance.

Under the framework of a sociocultural perspective, therefore, researchers attempts to account for the social and cultural aspects of learning rather than the cognitive ones which are argued by Ellis, 2003; Gass, 2003. The cognitive approaches in contrast, consider the individual as the sole channel through which knowledge is gained and that language learning is attributed to various internal processes (Donato, 2000). However, according to Vygotsky the higher forms of human mental activity such as voluntary attention, intentional memory, logical thought, planning, and problem solving are developed by the sociocultural settings and the social milieu (Turuk, 2008).

1.4.1 Vygotsky’s socioculture theory

Vygotsky’s sociocultural theory of learning claims that language learning is facilitated by interaction which is regarded as “a causative force in acquisition” (Tavakoli, 2012, p. 324). Under sociocultural settings, the theory views learning as essentially a social process and regards the individual as inseparable from his social context. SC theory calls for the importance of joining language to the context in which it is acquired and considers the social and cultural aspects as important
variables that affect language learning (Thoms, 2008). Thus, the theory rejects to separate language from the context in which it is acquired.

According to Tavakoli (2012), the sociocultural theory “does not distinguish between input and output but rather views language acquisition as an inherently social practice that takes place within interaction as learners are assisted to produce linguistic forms and functions that they are unable to perform by themselves” (p. 171). Unlike Krashen, 1982; Long, 1996, Vigotsky views learning as the result of the unfolding dialogic, collaborative, and social interaction, rather than being understood as a result of such interaction.

1.4.2 Fundamental concepts in sociocultural theory

There are a number of concepts that contribute to make learning a collaborative achievement and not an individual one. The SC theory advocates learning as a process motivated by instruction and socially mediated activities that help L2 development to be geared to the Zone of Proximal Development (ZPD) that is beyond the learner’s actual development level. These Fundamental Concepts are namely ‘mediation’, ‘self-regulation’, ‘internalization’, and the ‘zone of proximal development’.

The concept of mediation’ according to Gass and Selinker (2008), is the most important one because sociocultural theory “rests on the assumption that human activity (including cognitive activity) is mediated by what are known as symbolic artifacts (higher-level cultural tools) such as language and literacy and by material artifacts” (p. 283). Tavakoli (2012) considers also that the relationship between humans and the social and material world around us are mediated by these material artifacts and that “humans use symbols as tools to mediate psychological activity and to control our psychological processes (p. 325).

Self-regulation is a form of mediation and refers to a process of learner development (Tavakoli, 2012; Shane, 2015). According to Vigotsky, self-regulation lies in an individual’s competence to negotiate through social interaction. For a teacher, in order to help the learners to achieve this, he needs to design activities that
promote quality dialogic engagement and not only to design activities that get students to “talk” as part of input/output exchange (Erben, Ban& Castañeda, 2009).

As Erben et al. (2009) have noted, “Self-regulation is facilitated by the nature and quality of an individual’s interactional involvement and ability to understand the discursive practices of the knowledge and sociocultural community in which the interaction takes place (p.52). That is to say, a learner who is undertaking an unknown activity for the first time may get the help of other more experienced/ knowledgeable / native speaking peers through interaction by which he becomes socialised into the strategic processes of reasoning of the classroom culture. The ability to perform and complete the task strategically by a surrogate, such as the teacher or a group of peer students helps to controle the metacognition of the English language learner (Erben et al. 2009).

Another fundamental concept of the sociocultural theory is internalization. Internalization refers to “the process that leads an individual to later performance” (Tavakoli, 2012, p.325) when symbolic systems achieve a psychological status. This occurs when “mental activity takes precedence when practical actions are being performed” (Shane, 2015, p.22). Internalization can occur through imitation, either immediate and intentional or delayed. For example, in early child language that is recognized and observed through imitation/practice when children are alone in bed. Similarly in classroom setting, imitation/private speech situations are controlled by the learner and not necessarily by the teacher’s agenda. (Tavakoli, 2012).

The other concept in the sociocultural theory is the Zone of Proximal Development (ZPD). Vygotsky (1978, p. 86) defined it as: “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.” The essence behind Vygotsky’s formulation of the concept of ZPD is the value of predicting a child's future growth and capabilities. According to Gass and Selinker (2008), in an attempt to explain Vygotsky’ ZPD, the interpersonal activity is what causes learning in its social and collaborative form and shapes the basis for individual functioning.
Intersubjectivity that is determined by the interaction between novices and experts in the attempt to solve problems is what constructs the Zone of Proximal Development. (Diaz, Neal, & Amaya-Williams, 1990) argued for the same idea by emphasizing that when teacher and learners share knowledge and responsibility for the task both they achieve intersubjectivity in joint problem-solving activity. The level of “intersubjectivity,” is initially created by the teacher which enables the learner to redefine the problem situation with respect to teacher’s perspectives (Wertsch 1984). Subsequently, the task responsibility is gradually and increasingly transferred to the learner with the aim to share the teacher’s goals and definition of the problem situation (Rogo & Gardner, 1984, cited in Erben et al., 2009).

De Guerrero and Villamil (1994) consolidate the idea of collaboration in problem solving which reinforces the mechanism for movement in the ZPD because “it allows for interchangeability of roles and for continuous access to strategic forms of control in accordance with task demands” (p. 493, cited in Erben et al., 2009). The same idea is previously endorsed by Vygotsky (1978) who claimed that

The child is able to copy a series of actions which surpass his or her own capacities, but only within limits. By means of copying, the child is able to perform much better when together with and guided by adults than when left alone, and can do so with understanding and independently. The difference between the level of solved tasks that can be performed with adult guidance and help and the level of independently solved tasks is the zone of proximal development (p.117).

ZPD has been approached by Razfar, Licón Khisty, and Chval (2011) as something different from Krashen’s i+1 theory of comprehensible input (Table 1.1). First, they consider ZPD as something related to problem solving and interaction and not to language. On the contrary, in i+1 language comprehension is the goal and the acquisition of linguistic structures happen as a result. Second, ZPDs happens as a result to interaction of participants engaged in joint problem solving activity with more capable others with self-regulation. In contrast, i+1 happens in the individual’s mind and development follows a predetermined natural order.
### Table 1.1. Zone of Proximal Development versus Comprehensible Input

<table>
<thead>
<tr>
<th>Zone of Proximal Development</th>
<th>Comprehensible Input</th>
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<tr>
<td>“The distance between the actual development level as determined by independent problem solving and level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86).</td>
<td>“We move from $i$, our current level to $i+1$, the next level along the natural order, by understanding input containing $i+1$” (Krashen, 1985, p. 2).</td>
</tr>
</tbody>
</table>


However, according to Ohta (2001), a successful construct of the ZPD that is associated with language development requires a balance in the use of assistance that is provided during the task. That is to say, the over assistance provided during the task will not help language development to occur. In the other side, the same negative result can occur if the task is too easy and not challenging. Hence, an "appropriate challenge is necessary to stimulate development in the ZPD". In the same line, Cameron (2001) supported the same idea with the focus on having a balance between demands and support. Thus, learners should neither have tasks that are too demanding nor too much supported by the teachers.

According to Ohta (2001), the construct of the ZPD shows that language development may not take place if too much assistance is provided during the task or if the task is too easy and not challenging. An "appropriate challenge is necessary to stimulate development in the ZPD" (Ohta 2001, p.II). Likewise, Cameron (2001) agreed that achieving learning goals requires a balance between demands and support. That is, if the task is too demanding, learners will find it difficult to cope, which may lead to frustration; on the other hand if too much support is provided then learners will not be stretched.

A further basic concept in SCT is Scaffolding. Scaffolding is defined as “the support provided to learners to enable them to perform tasks which are beyond their capacity, by way of stimulating its interest in a task, orienting it towards appropriate goals, highlighting salient features of a task and demonstrating relevant
strategies”(Tavakoli, 2012, p.301). That is to say, if some learners may not have the enough linguistic tools to express their ideas, the teacher or more proficient peers may assist them to engage in the interaction using the appropriate language. This entails a dialogical process which enables language acquisition device to be located in the interaction that “takes place between speakers rather than inside learners’ heads (Tavakoli, 2012, p.301). This can be supported by Donato’s (1994) claim that novice learners by means of speech and supportive conditions in a social interaction can extend their level of competence.

In an attempt to explain Vygotsky’s notion of scaffolding Bruner (1996) claimed that “interpsychological support coming from the more knowledgeable other” (p.304) is what makes learning occur provided that learners should scaffold for each other without having the teacher the only one who do so. Larsen-Freeman (1997) considers teaching as successfully tied to scaffolding or the interaction of language learners with the assistance of more competent ones in order to help them master the target language rather than being tied to transmission of knowledge.

Successful scaffolding as suggested by Maybin et al (1992) requires from a learner to complete successfully the task with the teacher's help; and that he achieves a considerable amount of independent competence as a response to the experience. However, there is a need to highlight that the over-scaffolding towards the less capable students may lead to negative impact on their learning. In this sense, Al-dabbas (2008, p. 22) pointed out that because Libyan EFL teachers “provide more scaffolding than is required, and learners are treated as dependent learners who need to be spoon-fed”, it was considered as “routinely wrongly used”.

1.4.3 Features of classroom discourse

Classroom discourse exhibits the relationship between language, interaction and learning. Classroom discourse provides ideal platform to investigate the type of teachers-learners interaction (Yang and Walsh, 2014). Walsh states that there are four features of L2 classroom discourse: control of patterns of communication, elicitation techniques, repair strategies, and modifying speech to learners (Walsh, 2006: 5). In this sense, Walsh, 2011 maintains that these four features of L2 classroom discourse
have been selected largely because they typify much of the interaction that takes place in classrooms.

Regarding the first feature, it is most of the time in classrooms to find teachers in charge of interaction because they control patterns of communication by managing both the topic of conversation and turn-taking and give cues to their students and thereby direct most of their responses and control the amount of ‘space’ learners’ they have in the interaction (Walsh, 2011). Teachers also control the patterns communication typically by asking a question and giving feedback for every contribution made by the student. (Walsh, 2011)

The second feature is qualified by the great amount of techniques applied by the teacher while eliciting learner production and organising classroom structure (Walsh, 2006). Walsh maintains that teachers use elicitation techniques as strategies to incite learners to respond (Walsh, 2011). In this sense, more effort is required by the teacher as the initiator of both conversation and classroom activity. In this vein, Walsh argues that learners ask few questions in correspondence to more questions asked by teachers, which are dominant features of classroom discourse (Walsh, 2011).

There are mainly two types of questions that dominate classroom discourse: display and referential questions. Display questions are questions to which teachers already know the answer. Their function is to get learners to ‘display’ what they know about something. Referential questions, in contrast, are genuine questions, to which a teacher does not know the answer. They often begin with a wh- question such as who, why, what, etc by which learners produce often longer and more complicated responses, and engage in a more conversational type of interaction (Walsh, 2011).

Modifying speech to learners as a third feature implies conscious and deliberate modification strategies that occur for a number of reasons: The first, is that what is said by a teacher should be understood by learners as a condition for their learning. In this sense, Walsh points out that “it is highly unlikely that learners will progress if they do not understand their teacher” (p. 06). A second reason is that teachers model language by using appropriate pronunciation, intonation, sentence and
word stress, and so on in order to give learners an opportunity to hear the sounds of the target language.

As a third reason, Walsh (2011) argues that teachers modify their speech because they need to ensure that the class is following, that everyone understands and that learners don’t ‘get lost’ in the rapid flow of the discourse (Walsh, 2011). In the same perspectives, the use of transition markers is indispensable to signal the beginnings and endings of various activities or stages in a lesson. Discourse markers such as right, ok, now, so, alright help teachers modify their interactional resources to assist comprehension and help learners ‘navigate the discourse’ because they perform a very important function in signaling changes in the interaction or organisation of learning (Walsh, 2011).

The fourth feature, repair, is simply a form of error correction. The importance of error correction is recognized by the considerable amount of teachers’ time occupied in classroom interaction. This importance is supported by Van Lier who maintains that ‘apart from questioning, the activity that most characterises language classrooms is correction of errors’ (1988: 276). The ways in which teachers deal with errors can be direct and indirect. Walsh (2011) maintains that the strategies selected while correcting errors must be related to the pedagogic goals of the moment which serve to promote opportunities for learning; for instance, a highly controlled practice activity requires more error correction than one where the focus is oral fluency. However, in most cases, students are unable to express themselves adequately owing to the fact that the teacher interrupts so much in order to correct errors. In this light, Walsh also maintains that the basic choices facing a teacher in error correction are:

• ignore the error completely;
• indicate that an error has been made and correct it;
• indicate that an error has been made and get the learner who made it to correct it;
• indicate that an error has been made and get other learners to correct it.
1.5 Interactional Competence and Related Concepts

The concept of interactional competence implies the ability to converse with others successfully and to initiate and respond appropriately. It considers the competence speakers need to communicate effectively and emphasises what goes on between speakers rather than solo performance which allows us to concentrate more on the ability of learners to communicate intended meaning and to establish joint understandings (Walsh, 2011). In the same perspective, Todhunter (2007) defines it as “the ability to appropriately and effectively participate in conversations” (Todhunter, 2007, p. 605).

According to Masuda (2011), the term "competence" as related to "interactional" refers to a dialogical construct because “competence is jointly created and socially enacted”. In this respect, participants with different levels through interaction help to construct the interactional competence process. Interactional competence is bottom-up, local and situated. Participants learn "interactive practices" through a cumulative process of interaction with other more experienced speakers during which they employ resources acquired in similar instances of situated discursive practices (Masuda, 2011).

In a more social perspective as Masuda (2011) considers, IC is “necessary for sustaining social interaction and relies upon the speakers’ ability to use resources drawn from interactive practices” (Masuda, 2011, p. 520). As May (2009) argued, this necessitates coordination and the incorporation of a range of interactional processes, under a co-construction and collaboration framework (May, 2009, p. 398).

1.5.1 Interactional competence

Interactional competence was first coined by Kramsch (1986) who wrote that IC presupposes “a shared internal context or ‘sphere of inter-subjectivity”. Kramsch (1986 p. 370): “I propose (. . .) a push for interactional competence to give our students a truly emancipating, rather than compensating foreign language education”. In here, second language speakers are perceived as being in some way inferior to first
language speakers which is expressed by what Cook (2001) terms as ‘deficit’ model that is adopted by much foreign language teaching (Walsh, 2011).

IC emerges out as a counter reaction to ACTFL’s limited view of language proficiency as simply to measure the functional competence. In this respect, while trying to assess speaking performance, ACTFL (1986) didn’t display a full conception of the true nature of communicative competence that comprises the interactional features of a natural conversation. Thus, features of interaction are central while interlocutors display collaborative efforts that are dynamically socially situated in contrast to the cognitive, static perspective of language within proficiency movement framework (Cabrero, 2013). In this respect, Kramsch (1986) critisised the ACTFL/ETS Proficiency Guidelines while disregrarding one’s ability to participate in authentic discourse and to be as input-output, static, linear, and accuracy-focused as input-output, static, linear, and accuracy-focused. For example, a focus on assessing the student’s ability to form a question without assessing the function the question would have within a discourse as Kramsch (1986) claimed “Pragmatic failure,…the inability to understand what is meant by what is said,” (Kramsch, 1986, p. 369 cited in Tarvin, 2014).

The features of interaction that are defined by Kramsch following Wells (1981) are expressed by the shared understanding between the participants in the communicative event as the joint construction of a “sphere of intersubjectivity” (Cited in Cabrero, 2013). From his side, Oksaar (1990) emphasized the role of extralinguistic behavior, paralinguistic features, nonverbal behavior, and sociocultural norms for interactional competence to be achieved (1990, pp. 530).

In the same spirit, Young (2008) defined IC as “a relationship between the participants’ employment of linguistic and interactional resources and the contexts in which they are employed (p.100)” The above definition implies the fact that unlike communicative competence, interactional competence is not an individual phenomenon because it is co-constructed by all participants in a specific conversational practice. It asserts also the relationship between the linguistic and interactional resources’ exercised by interactants in specific contexts. As Escobar
Urmeneta & Walsh (2017) make it clear “It is the relationship between linguistic and interactional resources which is crucial to effective communication” (p.192).

Some important interactional resources employed and their impact on the overall flow and coherence of a given classroom discussion as stated by Walsh (2012) are the following: Turn-taking exemplified by the students’ ability to interrupt, hold and pass turns. Repair as errors are largely ignored by interactants unless an error causes a problem for understanding. This is what Firth (1996) refers to as the ‘let it pass’ principle. Overlaps and interruptions in which McCarthy (2003) refers to as good ‘listenership’ and helps the communication to work well because as maintained by Walsh (2012 p. 05) “they ‘oil the wheels’ of the interaction and help to prevent trouble and breakdowns from”. Topic management serves to indicate the coherence of a piece of spoken interaction discourse “in which all participants are concerned to engage with and develop a topic to the full” (Walsh, 2012 p. 05).

In the search to put the notion of IC under a conceptual framework within the SLA context, Hall (1993) invested the effort to understand the role of interaction in the development of L2 spoken communication. He considers the linguistic and paralinguistic resources to be necessary to participate in speech events and therefore to create interactional competence (Cited in Cabrero, 2013).

Interactional competence is basically expressed by the joint understanding between interactants and how that communication is managed. Thus, stated by Walsh (2011), rather than fluency, interactional competence is concerned with what McCarthy (2005) terms confluence: the act of making spoken language fluent together with another speaker. When speakers focus on collective meaning-making and engaged in a constant process of trying to make sense of each other, negotiate meanings, assist and query, support, clarify and so on we can say that they are concerned with spoken confluence which is rather fundamental to effective communication than fluency. However, “a person who has a high level of interactional competence is not necessarily an accurate speaker”. (Walsh, 2011). Confluence is a concept where most classroom communication involves interactants’ engagement “in a constant process of making sense of each other, negotiating meanings, assisting, clarifying and so on” (Escobar Urmeneta & Walsh, 2017, p.4).
1.5.2 Communicative competence model

In the early theories of SLA such as cognitive theories language was regarded as completely separated from its communicative function, with a minor attempt to understand how and why humans use language. According to Cabrero (2013), L2 acquisition was regarded as “merly an intrinsic, rule-governed mental process consisting of the manipulation of a finite set of linguistic elements—sounds, morphemes, words, sentences, and so forth—that comprise the second language” (Cabrero, 2013, p. 15-16).

The attempt to conceptualise language under a theoretical model of communicative competence was well drawn in Hymes’s (1972) model of first language (L1), as opposing to the previous ones. Hymes constructed a comprehensive framework that is based more on communication. This model paved the way for the entry of other subsequent models. The latter conceptualised language ability as a multifaceted phenomenon based on grammatical and sociolinguistic knowledge, discourse and pragmatic dimensions, and later interactional competence (IC). However, interactional competence has been conceived differently as part of communicative competence framework (Johnson, 2004) from one part, as an integral component of pragmatic competence (Hall, 1993), as synonymous to collaboration (Kramsch, 1986), and as a theory of speaking ability (Young, 2008, 2011) from other parts (cited in Cabrero, 2013).

Hymes major contribution to redefine the concept of competence was to give attention to the speakers’ needs to communicate effectively in authentic social situations, i.e., the focus is on the speakers’ situational appropriateness of their language. In fact, his basic contribution constitutes an opposition to the linguistic competence argued by Chomsky which merely refers to speakers’ knowledge of their language including the rules which they have mastered in order to produce and understand an infinite number of sentences, and to recognise grammatical mistakes and ambiguities.

Besides, in contrast to the popular linguistic theories of structuralism and transformational grammar, Hymes based his approach on the fact that the meaning of
an utterance can be understood only on relation to the “speech event” or “communicative event” in which it is embedded (Hymes 1962, cited in Bussmann, 2006, p. 381). According to Crystal, communicative competence focuses on the native speakers’ ability to produce and understand sentences which are appropriate to the context in which they occur, and what speakers need to know in order to communicate effectively in socially distinct setting (Crystal, 2008, p. 92).

In his communicative competence model, Hymes differentiate between competence and performance, i.e., respectively between what a speaker knows and how he behaves in particular instances. Besides, inspite the fact that he did not incorporate interactional features within his model of communicative competence, Hymes’ conception of performance shaped the future conceptualizations of IC.

According to Cabrero (2013), Hymes conceived actual use of language as a dynamic concept involving not only the competence of individual speakers, but also the competence of other participants in the speech event, as well as the characteristics of the events themselves. (Cabrero, 2013, p. 18). Thus, in contrast to Chomsky’s linguistic competence, Hymes considers competence as an interaction between knowledge and ability to use that knowledge.

The notion of communicative competence as it was introduced by Hymes in the 1960s: (1962, 1964, and 1972), emphasised that knowledge of grammatical rules is not sufficient for speaking a language and for communicating. Thus, in addition to the ability of producing grammatically acceptable utterances, speakers also need to know when to speak and when to stay silent, or what is appropriate to say in a particular situation.

![Figure 1.7 Hymes’s (1972) communicative competence model. (Source: Cabrero, 2013, p.19).](image)
The concept of communicative competence is not easy to be defined in a
general way because of the complexity of communication which is primarily
cognitive. However, a good clarification of communication is related to the study of
its behavioural basis composed of many communication skills.

In this respect, Spitzberg maintained that: Skills are conceived as
manifestations of some underlying capacity for action as a function of numerous
motivation (e.g., confidence, goals, reinforcement, potential, etc) and knowledge (e.g.,
content and procedural knowledge, familiarity, etc) components (Spitzberg 2003,
cited in Rickheit & Strohner, 2008, p.25). In here, Spitzberg considers skills as the
capacity of doing action.

From what is preceded, Spitzberg considers skills as the capacity of doing
action, based on the feelings of people who interact and on some of their specific
knowledge. Saville-Troike argued that the notion of cultural competence, or the total
set of knowledge and skills which speakers bring into situation must be connected to
the concept of communicative competence (Saville-Troike, 2003, p. 18).

1.5.3 Effectiveness vs. appropriateness

Communicative competence is based on two facts: both grammatical and
situational (socio-cultural context). According to Rickheit and Strohner (2008) the
two aforementioned facts are based on two important criteria: appropriateness and
effectiveness. Whereas effectiveness describes the outcome of communicative
competence, appropriateness connects it with the situational conditions of the actual
social interaction. (Rickheit & Strohner, 2008, p.16 cited in Makhlouf & Driss).

Spitzberg and Cupalh (1989:07) stated that “appropriateness reflects tact or
politeness and is defined as the avoidance of violating social or interpersonal norms,
rules, or expectations”, quoted in Rickheit and Strohner (2008, p. 26). Rickheit and
Strohner consider appropriateness as the extent to which a use of language matches
the linguistic and sociolinguistic expectations, and practices of native speakers of the
language (Cited in Richard Schmidt, 2002, p. 30). This means that a speaker’s
knowledge when producing a given utterance is based not only on grammar, but also on what is suitable (appropriate, adequate) in the particular situation.

Effectiveness, as a second criterion of communicative competence, revolves around the meaning that communication is predicted to reach a certain goal. For example the ability to achieve or to infer a speaker’s (utterance) meaning or what is intended by his utterance. Spetzberg and Cupch pointed out that effectiveness implies success in goal achievement or task accomplishment which is derived from control (Spitzberg & Cupach 1989, quoted in Rickheit & Strohner, 2008, p. 25).

Hymes communicative competence model had an influential impact on other researchers’ models. For example, as stated by Cabrero (2013), Canale and Swain (1980) considered the interaction between knowledge of both linguistic and non-linguistic factors as primary in constructing communicative competence. Their first model in its initial form in 1980 consisted of three types of knowledge: knowledge of the rules of grammar, knowledge of sociolinguistic rules, and knowledge of communication strategies. Later in 1983, Canale expanded the model by adding a fourth component: knowledge of discourse rules (Cabrero, 2013).

The first type, grammatical competence (Formal Competence) is based on what was argued by Chomsky: the knowledge of grammar, vocabulary, phonology, and semantics of a language. This type comprises two levels: competence that is identified primarily with grammatical competence and performance, on the contrary, is what speakers do with competence (cited in Makhlof & Driss 2016).

Pragmatic competence, as a second type, refers to the ability to use expressions to achieve a desired communicative effect (Malmiaer, 2005, p. 530). In addition it is a competence that transcends above and over grammatical competence in order to participate successfully in the speech community (Meyerhoff, 2006, pp. 96-97). For example, politeness is regarded as one component of pragmatic competence (Leech cited in Starzny, 2005, p. 866).

Sociolinguistic competence (also Socio-cultural competence), as a third type, is the knowledge of the relationship between language and its linguistic context. It is based on Hymes’s concept of appropriateness for it is typified with the knowledge of
how to use and respond appropriately to different types of speech acts such as: requests, apologies, thanks and invitations (cited in Makhlouf & Driss, 2016).

The fourth type, strategic competence, encompasses the verbal and non-verbal strategies learners employ to achieve their communicative goals or when they face breakdowns of communication as a result to their lack of grammatical or sociolinguistic knowledge. In here, learners employ strategies to negotiate meaning during communication which help them to manage the interaction (Cabrero, 2013).

**Figure 1.8** Canale and Swain (1980; Canale, 1983) model of L2 communicative competence. (Source: Cabrero, 2013, p.21).

Another influential model is that of Bachman’s (1990) Communicative Language Ability (CLA) (Bachman 1990, pp. 81-107, M. Johnson 2001, p. 161). His model considers both performance and competence as an integrated whole and inseparable. He based his model on a combination of theoretical framework and empirical evidence gathered from construct validity studies in the field of language assessment (M. Johnson 2001, p. 81) and, in some part ,on Canale and Swain’s model (Cabrero, 2013). Bachman’s framework comprises three components: language competence, strategic competence, and psychophysiological mechanisms) (Figure 1.9) (Mäkinen, 2011).

**Figure 1.9** Bachman’s Communicative Language Ability (Adapted from Bachman 1990).
First, language competence comprises a set of specific knowledge components that are used in communication through language. This type in itself comprises both organizational competence and pragmatic competence. The former includes, as well, grammatical competence and textual competence; whereas, the latter is divided on illocutionary competence and sociolinguistic competence (Cabrero, 2013).

Second, as stated by Mäkinen (2011), strategic competence “refers to a person’s mental capacity for using the components of language competence in language use in relation to its context (Bachman 1990, p. 84 cited in Mäkinen, 2011). In some part, this type reflects Canale and Swain’s (1980) conceptualization of the same type of competence; however, they diverge in terms of viewing it as a compensatory mechanism, or as Bachman conceives it differently as a general cognitive capacity that speakers implement throughout the communicative event (Cabrero, 2013). Besides, strategic competence contains a set of cognitive language skills such as planning, assessing, and executing (M. Johnson, 2001, p. 162).

Third, psycho physiological mechanisms, according to Bachman (1990), refer to “the neurological and psychological process involved in the actual execution of language as a physical phenomenon” (Bachman, 1990, p. 84).

![Figure 1.10](source: Cabrero, 2013, p.22)
1.5.4 Interactional competence vs. communicative competence

The main differences between interactional competence and communicative competence can be drawn as follows:

According to He and Young (1998) there are two main differences under a frame reference of linguistic and pragmatic resources that include a set of knowledge of: rhetorical scripts, certain lexis and syntactic patterns specific to the practice, topical organization, and the means for signaling boundaries between practices and transitions within the practice itself, how turns are managed (He and Young, 1998, p. 6 cited in Young, 2011).

He and Young (1998) considered interactional competence to be different from communicative competence in two ways. They argued from one way that interactional competence is a further elaboration of second language knowledge; in other words, to discourse, pragmatic, and strategic competence. In the other way, they reported that unlike communicative competence that can be assessed in a given individual, interactional competence is specific to an interactive practice and is co-constructed by all participants (He & Young, 1998, p. 07).

Young (2008) further extended the list of these two resources and wrote that IC includes the following seven resources that participants bring to interaction: identity resources (participation framework), linguistic resources (register, modes of meaning), and interactional resources (speech acts, turn-taking, repair, boundaries) (Young, 2008, p. 71 cited in Young, 2011). Young (2011) stated that IC involves knowledge and employment of these resources in social contexts.

More particularly, IC focuses on the interaction of a group of individuals while engaging with one another whereas CC focuses on individual differences in competence as Young (2011) argued by emphasizing that “…IC is distributed across participants and varies in different interactional practices. And the most fundamental difference between interactional and communicative competence is that IC is not what a person knows, it is what a person does together with others.” (Young, 2011, p. 430).
(He and Young, 1998; Young, 1999, 2002) differentiate communicative competence as being context independent and maintain that interactional competence “is a co-construction in an interactive episode and is specific to the practice”. Other researchers such as Jacoby and Ochs (1995) make a clear difference between the two types of competence. They define interactional competence as “the joint creation of a form, interpretation, stance, action activity, identity, institution, skill, ideology, emotion, or other culturally meaningful reality” (p. 171).

Researchers emphasized the importance of co-construction as a core stone of IC. Others, such as the case of Hall and Pekarek Doehler (2011), consider the skill of speaking shaped by the language of an individual as a predominant characteristic in communicative competence, unlike the skill of interaction that is coined with IC.

More recent researches, in an attempt to find a convincing and workable definition, recognise the fact that interactional competence is context specific and concentrate on the idea of constructing meanings together among interactants. This fact opposes the way by which communicative competence looks at features of individual performance. For example, the interactional resources required with minimal interactional competence in a context where the emphasis is on a transaction, such as ordering a coffee differs significantly from those required to take part in a conversation in most classroom contexts. The latter in order to successfully compete for the floor, gain and pass turns, attend to what the speaker has said, interrupt, clarify required more sophisticated interactional resources (Walsh, 2012).

Walsh (2011) points out that interactional competence differs from communicative competence in that it is context-specific and concerned with the ways in which interactants construct meanings together, that is a joint enterprise rather than looking at features of individual performance. The term context-specific determines the relationship between ‘the linguistic and interactional resources’. In this context, Young (2008, p. 100) states that “Interactional competence is a relationship between participants’ employment of linguistic and interactional resources and the contexts in which they are employed . . .”.

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The main features that illustrate the difference between interactional competence and communicative competence have been summarized by Walsh (2011, p.165), in which he argues that interactional competence is viewed as a process of co-construction contingent on the context in which it occurs.

**Table 1.2. Interactional competence vs. communicative competence**

<table>
<thead>
<tr>
<th>Interactional competence</th>
<th>Communicative competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasizes the ways in which interactants co-construct meanings and jointly establish understanding.</td>
<td>The focus is on individual differences in competence and the fact that one of the aims of learning a language is to move to the next level of competence.</td>
</tr>
<tr>
<td>Includes both interactional and linguistic resources, but places more emphasis on the way the interaction is guided and managed through turns-at-talk, overlaps, acknowledgment tokens, pauses, repair and so on.</td>
<td>Emphasises the knowledge and skills needed to use language in specific contexts as opposed to knowledge of language as an idealised system.</td>
</tr>
<tr>
<td>Is highly context-specific: the interactional competence required in one context will not always transfer to another. Different interactional resources will be needed in different contexts.</td>
<td>Context is everything; what we say is dependent on who we are talking to, where we are, why we are talking, what we have to say and when this takes place (Hymes, 1972).</td>
</tr>
<tr>
<td>Largely rejects individual performance in favour of collaborative enterprise.</td>
<td>Emphasizes individual performance and recognizes that this can and will change.</td>
</tr>
<tr>
<td>Less concerned with accuracy and fluency and more concerned with communication; this means that speakers must pay close attention to each others’ contributions and help and support where</td>
<td>Accuracy, fluency and appropriacy lie at the heart of communicative competence and are also the measures used to evaluate it.</td>
</tr>
<tr>
<td>Necessary.</td>
<td>Places equal emphasis on attending to the speaker as producing one’s own contribution; listening plays as much a part in interactional competence as speaking.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Focuses more on individual speech production than on the listener and acknowledgment of what has been said.</td>
</tr>
</tbody>
</table>

### 1.6 Summary

In this chapter, an overview of classroom discourse is provided as an umbrella for classroom interaction. The latter explores the relationship between language, interaction and learning. Classroom discourse is rooted in different theories. These theories were reflected in various hypotheses and perspectives mainly, through comprehensible input hypothesis, interaction hypothesis, the output hypothesis, and interaction as an interpersonal activity. From these perspectives the main aim was sought to have a closer look at the different concepts that paved the way for the following chapter.
Chapter Two: Review of the Related Literature

2.0 Introduction

2.1 Types of Vocabulary Learning
   2.1.1 Incidental vocabulary learning
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2.5 Summary
CHAPTER TWO: REVIEW OF THE RELATED LITERATURE

2.0 Introduction

The present chapter aims at shaping the theoretical basis of the problem through a selection of the most relevant reviewed literature. The key aspects that help understanding the foundation of the problem are focalized around the area of EFL vocabulary research in relation to instruction, interaction and learning.

The review shows how the variables of the study can be used together based on empirical studies revolved around researching EFL vocabulary with a focus on: vocabulary instruction, word learning, and the cognitive effect of vocabulary instruction on vocabulary learning, mainly through the cognitive role of memory. At the end, with the objective to reach the main aim of the study, this chapter incorporates both vocabulary instruction and interaction into vocabulary learning.

2.1 Types of Vocabulary Learning

New word meanings are learned according to different types. Teachers in the classroom setting teach vocabulary for learners according to different types of instruction. To this end vocabulary learning occurs incidentally, intentionally, implicitly, or explicitly.

2.1.1 Incidental vocabulary learning

Instead of instructing vocabulary to learners directly or explicitly they can be incidentally exposed to a number of targeted words. Originally the term incidental learning referred to a methodological feature of learning experiments where subjects were not told that they would be later tested (Hulstijn, 2011, p.1). The term incidental vocabulary acquisition is defined by Paribakht and Wesche (1999) as the acquisition of new lexical items when learners focus on understanding meaning rather than on the explicit goal of learning new words. Richards & Schmidt (2002) consider it as learning one thing while intending to learn another thing. This is clearly mentioned by Schmidt (1994) when he admitted that “incidental learning involves the learning of one thing (e.g. grammar) while the learner’s primary objective is to do something else” (p.16). Learning of one thing can be also vocabulary, when the learner’s primary objective is to do
something else (Shujing, 2007). In here, ‘something else’ can be attention to meaning (as opposed to form) (Ellis et al., 2009, p.264), or communication (Hulstijn, 2007 p.8).

According to Beck and McKeown (1991) incidental vocabulary acquisition occurs as students come with an initial encounter with a word in an oral situation, such as conversation, or written environments, such as books. This encounter would increase students’ word knowledge and consolidate new words, especially when students do some activities with partners or group members (Wu, 2009). Besides, Nation (2001) states that incidental vocabulary learning, mainly in reading, occurs subconsciously through engaging in language activities without specific intention to focus on vocabulary. Hulstijn (2011) considers incidental vocabulary acquisition as a by-product of the learners’ engagement in different activities such as listening, reading and writing. Other researchers consider incidental vocabulary learning as an outcome of the use of unfocused communicative tasks with the aim to elicit general samples of the language in contrast to specific forms (Ellis, Basturkman & Loewen, 2002, pp.419-432).

Unlike the intentional vocabulary method, the incidental method is best used with advanced learners (Laufer & Hulstijn 2001). However, in contrast to learning vocabulary intentionally, Gass (1999) claims that the amount of lexical development occurs incidentally with less cognitive processing as learners do not invest much energy to memorise words. This distinction is supported with the view that incidental vocabulary learning has been regarded differently from deliberate vocabulary learning (Day, Omura, & Hiramatsu, 1991; Ridder, 2002). The distinction lies in the amount of energy exerted which involves both noticing and consciousness. Deliberate learning implies more noticing and consciousness because it is more focused and goal-oriented than incidental learning. Other researchers, however, consider that successful second language vocabulary acquisition (SLVA) comparing with L1 vocabulary acquisition requires higher levels of language awareness, form-focused instruction and explicit learning (N. Ellis 2008; Laufer 2006; Nation 2001; Elgort & Nation, 2010).

The effectiveness of incidental vocabulary learning has been pointed out by many researchers. Krashen (1989) maintains that vocabulary is most efficiently acquired incidentally through the act of reading when learners guess the meaning of the unknown words from context, i.e., through exposure to input (Nation, 2001), and meaning-focused
instruction (DeKeyser 1998). In the same vein, (Jenkins, Stein, & Wysocki, 1984; Nagy, Herman, & Anderson, 1985; Saragi, Nation, & Meister, 1978) called for the importance of incidental learning as an effective way of learning vocabulary from context.

The same argument is called by (Beck & McKeown, 1991; Carnine et al., 1984) which is known as the context method. The latter is preferred also by Gambrell and Headley (2006) because, unlike the use of dictionaries, little interruption of the comprehension process is invested while trying to detect the meaning of the word with deeper and richer understanding of a word. However, Laufer (2005) argues that when meaning is difficult to guess from context it becomes difficult for L2 learners to retain words they have guessed because words that are not easy to guess are also easy to forget (cited in Elgort & Nation, 2010).

The term context is commonly used to refer to “information in written text that explains the meaning of individual words” (Alvermann, Dillon, & O'Brien, 1987, p. 14). Context requires the process of inferring and understanding word meanings by scrutinizing the surrounding text, which includes syntactic, semantic, and linguistic cues in the preceding or succeeding phrases and sentences (Sternberg, 1987; Baumann et al., 2002). According to Saragi et al. (1978) a large number of vocabulary items could be learnt through context. Various researches have been conducted in relation to the effectiveness of contextual learning. They came to the result that context leads to positive vocabulary acquisition (Clarke & Nation, 1980; Cohen & Aphek, 1980; Mondria & Wit-De Boer, 1991; Saragi et al., 1978).

The use of context clues, as claimed by Gambrell and Headley (2006), is pivotal to decipher the meaning of unknown words without the use of other resources, such as dictionaries. The same researchers consider the words, sentences, and paragraphs as a good environment that determines a context in which an unknown word exists. Using context effectively leads to positive vocabulary learning (Kennedy & Weener, 1974; Buikema & Graves, 1993; Kuhn & Stahl, 1998).

Incidental Vocabulary learning helps retain words in a better way for a longer period of time through a deeper mental processing (Hulstijn & Laufer, 2001). The latter lies on the amount and type of attention or mental effort required to decipher a word in context (Hulstijn, 1992). While learners get involved in learning vocabulary
incidentally they start understand the meanings in the given text, related grammatical patterns, common lexical sets and typical association of the word with the context (cited in Ahmad, 2012). This fact can be consolidated by the fact that a cognitive foothold, based on the mental action of the word-form, can be established when learners make connections between the context and the prior knowledge (Mondria & Wit-De Boer, 1991).

However, inferring from context method, has been contested by (Bensoussan and Laufer, 1984; Carnine, Kameenui and Coyle, 1984; Laufer and Sim, 1985; McKeown, 1985; Kelly, 1989; Koster, 1985; Stip and Hulstijn, 1986) for they argue that:(a) context does not always offer enough information for the inferring method to be successfully applied; (b) learners risk to learn the wrong meaning because of probable wrong inferences; (c) successful results with the application of the inferring method are workable only with learners who have good problem-solving skills (cited in Hulstijn, J.H, 1992). The claim that context does not always result in improved retention is also maintained by Mondria and Wit-De Boer’s (1991). This goes in line with Nassaji’s claim that students should not rely on context too much and that a need for explicit teaching is indispensable as an effective inferencing strategy (Nassaji, 2003).

Other researches attempted to investigate the students’ incidental vocabulary acquisition with the use of multimedia. For example, Akbulut (2007) shows that learners are driven to remember the words easily when having access to word definitions along with pictures and short video clips more than those assigned to the definition only. In a study explored by Kim and Gilman (2008) it was reported that students who are supported with visual text and supplementary graphics, or with visual text supplemented by spoken text and graphics increased their vocabulary effectively. Jones (2004) found that using vocabulary in context with combination of sound and image resulted with more recognition and recall of new words.

2.1.2 Intentional vocabulary instruction

As same as the incidental learning, the origin of the intentional learning resulted from a methodological feature of learning experiments. The conceptualization of the terms intentional and incidental learning belong to the American behaviorist psychology under the heading of stimulus-response contingencies (Postman & Keppel, 1969 cited in
Hulstijn, 2011). However, unlike the incidental learning condition, subjects in the intentional condition were told in advance that they would afterwards be tested on their recollection of the materials to which they were going to be exposed (Hulstijn, 2011, p.1).

When there is an explicit purpose to teach the meaning of a word, we are mainly concerned with intentional vocabulary instruction (Beck and McKeown, 1991). The term intentional refers to “a deliberate attempt to commit factual information to memory, often including the use of rehearsal techniques, like preparing for a test in school or learning a song by heart” (Hulstijn, 2011, p.1). This can explicitly occur when learners are provided with resources that help them to learn the meaning and definitions of a word, mainly, through a dictionary (Carnine et al., 1984; Jenkins et al., 1989) or vocabulary lists, and direct vocabulary explanation (Wu, 2009). However, depending more on dictionaries would have little impact on a student’s vocabulary knowledge (Allen, 1999).

Such negative aspect is justified by the fact that definitions alone do not always have enough information for a complete understanding of new words, and that these definitions imply other unfamiliar or unknown words (Greenwood, 2002; Irvin, 1990). Besides, looking up definitions through a dictionary can be distracting and time consuming (Rickelman & Taylor, 2006; Carnine et al., 1984). Furthermore, dictionary instruction alone seems not to be guarantor enough for word knowledge (Nagy & Scott, 2000).

Intentional vocabulary learning in contrast to the incidental one is less effective because learners depend more on rote learning rather than context. As cited in Ahmad (2012), this can occur basically when vocabulary is more focused on synonyms, antonyms, word substitution, multiple choice, scrambled words and crossword puzzles. On the contrary, learners tend to learn vocabulary more effectively when they infer meaning through context because it sharpens the ability for guessing and helps understand the meaning gradually and undergoes more cognitive process (Ahmad, 2012). However, Elgort & Nation (2010) state that deliberate learning through rehearsal and memorisation techniques (for example, keyword mnemonics, semantic mapping) proved to be helpful to improve retention of vocabulary items.
2.1.3 Implicit and explicit learning

According to Hulstijn (2011) the terms implicit and explicit learning, respectively, refer to “the unconscious and conscious learning of facts or regularities in the input materials to which subjects in learning experiments are exposed” (p.2). Implicit learning requires a process which takes place naturally, simply and without conscious operations which lead to the acquisition of knowledge about the underlying structure of a complex stimulus environment (Tavakoli, 2012, p. 162).

Implicit and explicit learning are distinguished in cognitive psychology in two principal ways: First, in implicit learning central attentional resources are not required and the resulting knowledge is subsymbolic, reflecting statistical sensitivity to the structure of the learned material. Thus, “generalizations arise from conspiracies of memorized utterances collaborating in productive schematic linguistic productions” (Ellis, 2008, p.125). However, in explicit learning a series of successive facts are memorized which implies conscious learning occurs with knowledge that is symbolic in nature (i.e. it is represented in explicit form). Second, although there are certain behavioral responses learners may make, still they are unaware of the learning that takes place implicitly since they cannot verbalize what they have learned.

According to Ellis, et.al (2009), “implicit language learning takes place without either intentionality or awareness (p.7)” . However, this definition would raise controversy because the absence of awareness would affect the occurrence of learning. Thus, as Ellis, et.al (2009) put “there is no such thing as complete implicit learning and so a better definition of implicit language learning might be ‘learning without any metalinguistic awareness”. Such definition is based on Schmidt (1994, 2001) distinction of two types of awareness: awareness as noticing and metalinguistic awareness. The former involves conscious attention to ‘surface elements’ (involving perception), whereas the latter involves awareness of the underlying abstract rule that governs particular linguistic phenomena (involving analysis) (cited in Ellis, et.al, 2009).

Explicit learning, in contrast, is characterized by “more conscious operation where the individual makes and tests hypotheses in a search for structure” (Ellis 1994, p. 1). Explicit learning implies from learners to be aware about what they have learned since
they can verbalize what they have learned (Ellis, et.al. 2009). However, the term explicit
learning, although it involves a conscious process, cannot be associated with intentional
learning because “one may learn something intentionally without it being explicit”
(Tavakoli, 2012, p.125). In explicit language learning, the understanding of a rule results
through “a global explanation involving logical reasoning (deductively), followed by
examples which give credence to that explanation” (Tavakoli, 2012, p. 124).

2.1.4 Incidental and intentional learning vs. implicit and explicit learning

In vocabulary acquisition research, the terms incidental and intentional (deliberate)
learning are sometimes connected and overlap in meaning with the terms implicit and
explicit learning. However, the incidental and intentional learning, respectively, are not
synonymous with implicit and explicit learning. In foreign or second language settings
vocabulary acquisition involves a process that may take place implicitly and explicitly,
incidentally and deliberately (Elgort & Nation, 2010).

Elgort and Nation (2010) claim that implicit learning with unintentional
(incidental) usage-based learning should not be equated. The argument behind this
disparity lies on the fact, as claimed by Hulstjin, that implicit learning through hearing or
seeing takes place every time information is processed, which includes deliberate
learning (cited in Elgort & Nation, 2010). Besides, in incidental learning, information or skills which
are acquired “were not part of the original learning intention or task” (Field, 2004, p. 127).

A distinction is made between that of incidental vs. intentional vocabulary
acquisition and implicit vs. explicit learning. Incidental vocabulary acquisition is generally
defined as the “learning of vocabulary as the by-product of any activity not explicitly
geared to vocabulary learning” which is contrasted with intentional vocabulary learning,
“any activity geared at committing lexical information to memory” (Hulstijn 2001,p.
271). This goes in line with Meara (1994) distinction of the two terms. He considers,
incidental learning as a by-product of learning something else, whereas intentional
learning is a result of what is designed by teachers or students. In the other side, implicit
and explicit learning generally revolve around the absence or presence of conscious
operations as a crucial distinguishing factor.
According to Ellis, implicit learning assumes the “acquisition of knowledge about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply and without conscious operation” while explicit learning implies “more conscious operation where the individual makes and tests hypotheses in a search for structure” (Ellis 1994, p. 1 cited in Angelika Rieder, 2003). A distinction can be made also between explicit vocabulary instruction and incidental vocabulary learning. Rather than in explicit vocabulary instruction, incidental learning provokes a large amount of vocabulary growth when learners engage in activities such as reading and listening (Chall, Jacobs, & Baldwin, 1990; Nagy & Scott, 2000).

Angelika Rieder (2003) states that a problem rises in considering incidental learning to be taken place unconsciously. In this sense, Gass (1999) considers the existence of conscious process or the active role of the learner in incidental vocabulary acquisition even though learning occurs as a byproduct of reading, or as a ‘side-effect’ of another activity (see diagram 1). Ellis (1994, p. 38), also criticized the seeming equalisation of the terms ‘incidental’ with ‘unconscious’ He notes that incidental vocabulary acquisition is non-explicit as it does not involve an explicit learning intention (the overall goal of the learner is text comprehension). This implies that neither the process nor the product of such learning is necessarily implicit in the sense of non-conscious (cited in Angelika Rieder, 2003).

![Diagram: implicit vs. explicit learning](psychology)

**Definition:** +/- consciousness

![Diagram: incidental vs. intentional vocabulary acquisition]
(L2 pedagogy)
Definition: +/- intention

Figure 2.1 Unclear relation between implicit/explicit and incidental/intentional learning. Source: (Angelika Rieder, 2003, p. 26)

The distinctions between implicit and incidental frequently remain notoriously vague by different researchers, with multiple interpretations because of the term consciousness (see diagram 2). For instance, Hulstijn 1998 states that implicit learning is initially defined as “without teaching” and “without conscious inductions”. Besides, the learner’s attention to word form and meaning is not required in implicit lexical learning (Hulstijn, 1998, p. 49).

Defining the incidental learning as “learning without intention” leads to the non clear contrast between incidental learning and implicit learning as both jointly refer to the process of ‘picking up’ a language. While suggested by Schmidt (1994: 168) that the term implicit learning can be defined as unconscious it can be interpreted in two ways: firstly, “implicit learning means incidental because it’s unintentional. Secondly, it involves induction without awareness” (cited in Angelika Rieder, 2003).

Figure 2.2 The unclear definition of the term consciousness. Source: (Angelika Rieder, 2003, p. 27)

Table 2.1. Typical tasks for investigating four types of learning

<table>
<thead>
<tr>
<th>Approach</th>
<th>Typical task</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)Incidental learning</td>
<td>Either (1) learners are given a task but not told they will be tested or (2) they are given a task that focuses their attention on one aspect of the L2 and, without being prewarned, tested on some</td>
</tr>
</tbody>
</table>
other aspect of the task (e.g. they are taught a specific grammatical feature and then tested on whether they have learned a different grammatical feature which they were exposed to but not taught).

<table>
<thead>
<tr>
<th>(2) Intentional learning</th>
<th>Learners are given a task (e.g. they are taught and given practice in using a specific grammatical feature), told they will be tested afterwards and then tested on the task as set.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) Implicit learning</td>
<td>Learners are simply exposed to input data, asked to process it for meaning and then tested (without warning) to see what they have learned (e.g. they are exposed to input that contains plentiful exemplars of a specific grammatical feature but do not have their attention focused on this feature).</td>
</tr>
<tr>
<td>(4) Explicit learning</td>
<td>Learners are either given an explicit rule relating to a specific feature which they then apply to data in practice activities (deductive explicit learning) or they are asked to discover an explicit rule from an array of data provided (i.e. inductive explicit learning).</td>
</tr>
</tbody>
</table>

Source: Ellis, et.al, (2009)

2.2 Vocabulary Instruction and Word Learning

Hulstijn (1992) stated that Bialystok (1983); Nation (1982); Nation and Coady (1988); Schouten-van Parreren (1985), (1986) have suggested that when learners themselves infer the meaning of new words they learn them in a better way. This is based on the assumption that inferring or deducing the solution of a problem will lead learners to invest more mental efforts in tasks and thereby can retrieve and recall information in a more positive way (Craik and Tulving, 1975; Jacoby, 1978; Jacoby and Craik, 1979; Jacoby, Craik and Begg, 1979, cited in Hulstijn, J.H, 1992). In a study conducted by Hulstijn (1992) it was found that inferred meanings (high mental effort) were better recalled than given meanings (low mental effort).

From another point of view, Pica (2013) states that comprehensible input, interaction, and comprehensible/pushed output are necessary, but not sufficient for language acquisition. Therefore, learners need other opportunities such as tasks that activates cognitive processes and L2 outcomes through, a) Need (to understand meaning); b) Search
(for answers); c) Evaluation (e.g. compare; apply to future context). The latter ones are based on Involvement Load Hypothesis (Hulstijn 2001; 1998; Laufer & Hulstijn, 2001). Besides, learners are required to get opportunities to participate in different kinds of communication and interaction. For example, conversation and discussion, negotiation of meaning and task-based interaction that promotes attention to form, function/meaning relationships.

2.2.1 Effectiveness of vocabulary tasks on promoting vocabulary acquisition

Tasks are crucially tied to the instruction adopted by the teacher. According to Long closed tasks (i.e. a task with a single or a finite set of correct solutions) work better than open tasks. Tasks that provoke participants to exchange information with each other foster interactional restructuring (cited in Ellis, 1991).

Tasks are considered as activities or sequence of activities that are believed to be motivating as they aspire to be meaning centred or real-world oriented, with a set objective that is essentially based on meaning and reached by engaging in some form of social interaction (von Sydow, 2015). Besides, Crookall (1990) claims that the meaningfulness and motivation that are found in such activities are supplemented with the aim to produce new words with the possibility of generating feedback and negotiations (cited in von Sydow, 2015). The intended objective is achieved through language which may result subsequently with an incidental language learning (Ellis, 2000 cited in von Sydow, 2015).

According to Skehan a task is best viewed from four perspectives: (1) meaning is primary; (2) there is a goal which needs to be worked towards; (3) the activity (task) is outcome evaluated; and (4) there is a real-world relationship (Skehan, 1998: 268 cited in Dooly & Eastmen, 2008, p. 130). In a similar way, Ellis (2003) presents a broader definition of ‘task’:

A task is a work plan that requires learners to process language pragmatically...it requires them to give primary attention to meaning and to make use of their own linguistic resources, although the design of the task may predispose them to choose particular forms. A task is intended to result in language use that bears a resemblance, direct or indirect, to the way language is used in the real world. Like
other language activities, a task can engage productive or receptive, and oral or written skills, and also various cognitive processes. (Ellis, 2003, p.16 cited in De la Fuente, 2006).

As far as vocabulary research is concerned, various studies have attempted to explain the effectiveness of some tasks in promoting L2 vocabulary acquisition. They claimed that tasks that require more mental effort on the learners’ part lead to a better retention of vocabulary. De la Fuente (2006) confirmed that “from a cognitive perspective, tasks are specific language-learning activities that may facilitate optimal conditions for second language learning by triggering processes said to facilitate SLA” (p.264). For example, the effect of some tasks through the comparison of input, negotiation, and negotiation with ‘pushed output’ on receptive and productive word acquisition has been investigated by De la Fuente (2002). In his study he concluded that both negotiation with or without pushed output are effective for receptive acquisition. However, the same study showed that a more positive productive word acquisition and retention can be the result of negotiation with pushed output rather than input alone.

Earlier in an analogous research, Joe (1995) found that tasks involving a high degree of cognitive or generative process helped to achieve more positive incidental vocabulary acquisition than tasks producing a low degree of cognitive or generative process. This is enhanced by the argument that more cognitive processing would generate more vocabulary learning and gain of new words. Another study conducted by Paribakht and Wesche (1997) with the attempt to compare word learning in both ‘reading only’ and ‘reading plus’ conditions. The first condition is supported with the use of eight texts (exposure to target words in texts), whereas the second one is supported with the use of four texts and different vocabulary exercises in which students were required to practice new words in post reading vocabulary focused exercises. The researchers remarked that students exposed to the second condition had better retention of vocabulary.

Another perspective can be derived from using vocabulary tasks is that more communicative tasks activate incidental learning of vocabulary. This can be supported by Fernández Dobao (2014) study with the aim to compare pair and small group work. His study revealed that groups have a greater cumulative lexical competence than pairs. However, there was no significant difference in acquired vocabulary among the
learners inspite the fact that not all group members were engaged in negotiation. In this respect, Fernández Dobao (2014) explains that learners can be actively involved in the LRE, as listeners and observers although they may seem passive. This is possible especially when learners interact with their teacher and benefit from feedback and modified input addressed to other learners (p.19).

2.2.2 Learning word meanings from context

Nation (2001) underscores the role of context in helping learners get the best return for their learning effort. He claims that the more often an unknown word appears in the context, the more learners are likely to guess the meaning of the word and learn it. Learning from guessing is part of the meaning-focused input strand (Nation & Meara, 2010). Word guessing is possible through the clues the context provides. The more clues are found, the easier it is to figure out and guess the meaning of the unknown word. Using context to determine unknown words enables learners to score better on various tests that are intended to assess vocabulary knowledge (Kennedy & Weener, 1974; Buikema & Graves, 1993; Kuhn & Stahl, 1998).

Williams (1985) claims that inferring from context is one of the potentially trainable strategies to figure out the meaning of unfamiliar words in written text. Nation argued for the importance of context by emphasising that knowing a word in terms of various areas such as meaning, reference, grammar, collocations, and constraints on its use, words parts, words’ written and spoken forms is tightly related to context (Nation, 2001, p.353).

According to Nation (2001), guessing from context is the most important source of incidental vocabulary learning (p.368). In order to effectively use this strategy, the unknown word to be guessed has to have plenty of comprehensible supporting context. In this sense, (Nation and Meara, 2010) state that “learners need to know 95–98 per cent of the tokens in a text” (p.42). Incidental learning opposes the direct intentional learning and teaching of vocabulary (Kelly, 1990 cited in Nation, 2001). Nation (2001) considers learning from context as “the incidental learning of vocabulary from reading or listening to normal language use while the main focus of the learners' attention is on the message of the text”(p. 369). In here, text can be short or long. Carter (1992) claims that the large
amount of contexts that help native speakers to experiment and confirm, expand or narrow down the lexical nets is what constitutes for them the primary source of vocabulary.

Nation (2001) points out that it is better to have a balanced language learning programme based on an appropriate balance opportunities to learn from message-focused activities and from direct study of language items, with direct study of language items occupying no more than 25% of the total learning programme. With this goal in mind there should be a deliberate, intentional focus on developing the skills and strategies needed to carry out such learning in addition to incidental learning (Nation, 2001).

It is important to consider the learner’s proficiency level as a determinant factor in the success of contextual inferencing. For example, beginners with the help of synonym, definition, translation into L1, or an illustration have to make deliberate attempts at learning lexical items because they do not have enough linguistic knowledge (Pavičić, 2008). In other terms, the different categories of knowledge (linguistic knowledge, world knowledge and strategic knowledge enable the learner to apply them when attempting to infer meaning from context (Nagy, 1997 cited in Pavičić, 2008).

The role of the context in initial stages of learning is limited, but as the learner’s knowledge expands the role of the context is considerably significant. This is to mean that the wide range of contexts is an important source of vocabulary in L2 learning because it provides a sufficient amount of comprehensible input. As claimed by Nagy (1997), this is clearly evidenced when we consider that within a year up to 1000 words can be learnt by an average learner from written materials.

In order to control the amount of unknown words that can be guessed from context we should know the learners' vocabulary size. This is very important because this will affect the density of unknown words in a text (Nation, 2001). A meta-analysis of twenty studies involving native speakers (Swanborn and de Glopper, 1999) have identified the efficiency of learning vocabulary from guessing in the context and confirmed that the range of chance of learning in various experiments depended partly on how soon learning was measured after the reading occurred (Nation, 2001). (Swanborn and de Glopper (1999) studies emphasized that the unknown words represent tree percent or less of the running word, from which fifteen percent of the unknown words were successfully learnt

Besides, the choice of words has to be carried out properly in order to get more chances of guessing and needs to take account of actual learner knowledge (Nation, 2001). While this is true, unfortunately most experiments fail to adopt an adequate guessing from context because they use a mixture of high frequency and low frequency words most of which are already known to the learners (Schatz and Baldwin, 1986 cited in Nation, 2001). Another reason that shows why studies of guessing by non-native speakers have not had impressive results is claimed by (Nation, 2001). In this vein, (Nation, 2001) explains that “this may be partly due to poor design, but it is also the effect of the cumulative nature of such learning involving only small gains per meeting for most words” (p.372).

To get rid of such problems, there is a need to focus on unknown words at the appropriate frequency level for the learners being tested. In a study conducted by Schatz and Baldwin (1986), based on multiple-choice in which learners were asked to provide a definition, it has been discovered that no significant difference was found between learners who had context to help them guess and learners who were tested on words in isolation. This is to mean that the tests did not give credit for partial knowledge because of their forms and the ways in which they were marked (Nation, 2001).

Another way that helps determine the appropriateness of vocabulary subject of learning is based on two major considerations: the needs of the learners and the usefulness of the vocabulary items. The usefulness of items is based on discovering their frequency and range in a relevant corpus (Nation & Meara, 2010). The benefit that can be resulted from frequency studies is clearly stated by (Nation and Meara, 2010): “If we use frequency counts to distinguish high-frequency from low-frequency words, then it seems clear that the high-frequency words need to be the first and main vocabulary goal of learners” (p.37). The needs of the learners with the aim to make special purpose vocabulary lists serve also to increase the number of high-frequency words that teachers and learners should give attention to. For example, the Academic Word List (Coxhead, 2000 cited in Nation & Meara, 2010).
Considering the complexity of finding out the proportion of unknown words that can be guessed from context, Nation (2001) substitutes this inquiry by questioning if it is possible to use context to keep adding small amounts of information about words that are not yet fully known. As an answer, he confirms that “it is likely that almost every context can do this for almost every word, but this has not yet been investigated experimentally (p.372).

### 2.2.3 Learning vocabulary from meaning-focused input and output

Incidental vocabulary Learning is closely related to two types of learning: learning vocabulary from meaning-focused input and, learning vocabulary from meaning-focused output. The former is one type of learning incidentally through listening and reading (Nation & Meara, 2010), i.e. using the language receptively. Nation and Meara (2010) state three major conditions need to be met in order for such learning to occur with non-native speakers:

1) The unknown vocabulary should make a very small proportion of the tokens, preferably around one unknown word in fifty, i.e. low unknown vocabulary load.

2) A very large quantity of input is required, preferably one million tokens or more per year, i.e. large quantity of input.

3) Deliberate attention: Effective learning also requires more deliberate attention to unknown words through the occurrence of the same vocabulary in the deliberate learning strand of the course. It also helps to make learners aware of new words through for example: glossing, dictionary use, or highlighting in the text.

These three conditions are best realized in graded readers. The latters are helpful for learners in the beginning and intermediate in particular. However, as Nation (2001) states it is possible also that:

Guessing could be tested or practiced with isolated sentences or with continuous text… it seems that only a small proportion of the clues needed for guessing occur outside the sentence containing the unknown word. It thus may be acceptable for practicality reasons to practice or test some guessing in isolated sentences (p.393).
The use of extensive reading in the acquisition of vocabulary is also advocated by Krashen. In his Input Hypothesis (IH), Krashen states that “comprehensible input is…a richly specified internal language acquisition…. device the best hypothesis is that competence in spelling and vocabulary is most efficiently attained by comprehensible input in the form of reading, a position argued by several others (e.g., 19, 122, 123).” (1989, p.440).

As far as listening is concerned, the same conditions of low unknown vocabulary load, quantity of input and some deliberate attention to vocabulary are necessary for effective vocabulary learning. For example, quantity of input can be partly achieved through repeated listening, where learners listen to the same story several times over several days. Concerning deliberate attention to vocabulary can be achieved through a quick definition of unknown items by the teacher, noting them on the board, or encouraging learners ask for clarifying words which helps them negotiate their meaning (Elley, 1989; Ellis, 1994, 1995; Ellis and Heimbach, 1997; Ellis and He, 1999 cited in Nation & Meara, 2010).

The second type of vocabulary learning is learning from meaning-focused output, i.e. learning through speaking and writing. In here, language is used productively. This type helps to move receptive knowledge into productive knowledge. There are many ways through which the productive skills can occur. First, the use of pictures or definitions which stimulate the use of new vocabulary. Second, involving learners in group work activities through speaking helps learners positively to negotiate the meanings of unknown words with each other (Newton, 1995). Third, speaking activities that try to optimize vocabulary learning by careful design of the written input to such activities (Joe, Nation and Newton 1996). This can be best applied through using a partly known word in speaking or writing activities (see Nation & Meara, 2010).

According to Ellis and He (1999); Joe (1998) activities which involve more production were more efficient for vocabulary acquisition (cited in Mármol & Sánchez-Lafuente, 2013). For example, Ellis and He (1999) conducted an experience with three groups, each of which was treated differently. Group one received pre-modified input which is regarded as simplified input because input was less grammatically complex with the aim not to allow learners to ask questions for directions. The second group received
interactionally modified input for the sake of facilitating comprehension. In this case, unlike the first group, learners were allowed to ask clarification questions to the teacher if they had not understood the directions.

The final group received modified output. This type Modified output refers to “language that is adjusted so that learners can better comprehend the speaker’s meaning” (Tavakoli, 2013, p. 170), which can serve as another learner’s comprehensible input (Ellis, 1999; Long, 1996). Results showed that interaction and negotiation of new vocabulary, as learners could modify their own directions more than the others, help them to promote incidental vocabulary acquisition.

2.2.4 Instruction of new lexical items

The teacher instructs the meaning and form of the lexical item. The meaning of lexical items can be instructed either verbally or non-verbally. Here are some ways, summarised by Pavičić (2008), under which a teacher can present and instruct vocabulary:

1. Connecting an L2 item with its equivalent in L1. This strategy can be mostly used when checking comprehension. It can be used also when it is necessary to point out the similarities or differences between L2 and L1.

2. Defining the meaning in a simple and clear way with the goal to develop them and retain them for a long-term. This type can take the following forms: the use of synonym, antonym, analytic definition (X is a Y which), taxonomic definition, (Autumn is a season), giving examples or the reverse, giving the superordinate term (A rose is a flower), describing the function (Pen use it to write), grammatical definition (worse comparison of bad), definition by connection (danger lives have not been protected), definition by classification (Family a group of people), and the so-called full definition, the one resembling word definitions in monolingual dictionaries.

3. Presentation through context. For example, can be presented in a context of one sentence only or several sentences in which the word appears. This can help the learner to guess the meaning on the basis of the cumulative effect of the sentences. Besides, as noted by Nagy, Anderson and Herman (1987), several studies provided useful information about the nature of learning from context, in which contexts are specially created, combined with definitions, or replaced known words with nonsense words (see Nation, 2001, p.373). In this sense, Nation (2001) claimed that guessing from context, which is a form of incidental learning, is at the top of any list of vocabulary learning strategies. This is because it is still
the most important way that learners can increase their vocabulary although it is a form of incidental learning that is less certain and not always being successful due to the lack of clues (p. 420).

4. Directly connecting the meaning to real objects or phenomena. It is best instructed for beginners or young learners with the use of procedures such as demonstration, realia and visual aids, which at the same time serve as cues for remembering lexical items. It can be also supplemented by a verbal definition. The latter can reduce the possibility of incorrect guessing and helps reinforce the linguistic and visual storing of information, i.e. chance that what Paivio calls "dual encoding" will occur (Paivio and Desrochers, 1981 cited in Nation, 2001). In this sense, Nation (2001) explains that it is useful to present several examples to help learners determine the essential features of the concept or associate the object or picture with focusing information. This is possible because the meaning is stored both linguistically and visually, and the underlying concept of the word can be easily represented through picture (p.85).

5. Active involvement of learners in presentation. This can occur by showing learners a picture and inviting them to supply a word, or defining a word or giving its synonym. This helps them to discover the word’s meaning and thereby enhances memory.

6. Word manipulation. For example, matching words and their definitions, grouping words, finding the odd one out, etc.

7. Productive use of words through speaking and writing activities. Learners are able to create mental links by producing and using words in a meaningful context. For example, completing sentences or texts, with words offered or not, using words in sentences, conversations, stories, etc.

In relation to instruction of new lexical items, an important study conducted by Stahl and Fairbanks (1986) where they reported a meta-analysis of studies concerned with the effects of vocabulary instruction on the learning of word meanings and on comprehension. Their study suggested that the most effective vocabulary teaching methods included both definitional and contextual information in their programs, involved the students in deeper processing, and gave the students more than one or two exposures to the learned words.
First, Stahl (1983, 1985) suggested that knowing a word requires both definitional and contextual information. Definitional information is the knowledge of the relationship between a word and other known words, such as synonyms or a dictionary definition or in a network model of semantic memory (e.g., Collins & Loftus, 1975 cited in Stahl & Fairbanks 1986). Contextual knowledge is defined by Stahl and Fairbanks (1986) as “knowledge of a core concept and how that knowledge is realized in different contexts” (p.74). This type of information is termed contextual knowledge because it develops from exposure to words in context (Stahl & Fairbanks, 1986).

Additionally, Stahl and Fairbanks (1986) suggested that the types of activities students are required to engage in while learning new words, for example, through an adaptation of the "depth of processing" framework used in short-term memory research (Craik & Tulving, 1975) is one way to affect learning. Stahl (1985) suggested three progressing levels, specifically for the child, representing different depth of processing demands for vocabulary instructional programs: association, comprehension, and generation.

First, association occurs between a new word and either a definition or a single context. Second, comprehension of a learned association “either by showing understanding of a word in a sentence or by doing something with definitional information, such as finding an antonym, classifying words, and so forth” (Stahl & Fairbanks, 1986,p. 76). Third, generation which is a more active process (Slamecka & Graf, 1978) involves the production of a novel response to the word, either written or oral (cited in Stahl & Fairbanks, 1986).

Exposures are the third method factor that can be added to definitional and contextual information, and depth of processing in vocabulary learning. Stahl and Fairbanks (1986) underscore the importance of multiple exposures to a word as an effective method that “would have a greater effect on vocabulary learning than one that gives the student one or two mentions of the word paired with a definition or used in a sentence”(p.76). Besides, effective vocabulary learning under the form of natural word learning in a compressed form is associated with multiple exposures to words in different contexts (Carroll, 1964 cited in Stahl & Fairbanks, 1986).
2.3 The Cognitive Effect on Vocabulary Learning

The cognitive theory emphasizes the considerable role of learning strategies as highly relevant cognitive processes in L2 acquisition. This implies involving the mental processes in learning with a focus oriented towards how knowledge is developed, becomes automatic and how new knowledge is integrated into an existing cognitive system of the learner (Pavičić, 2008). Within this, ‘meaningful learning’ is taking an overriding position which can be described as ‘a clearly articulated and precisely differentiated conscious experience that emerges when potentially meaningful signs, symbols, concepts, or propositions are related to and incorporated within a given individual’s cognitive structure’ (Ausubel, 1967, p.10 cited in Pavičić, 2008, p. 26).

Researchers have attempted to understand how language is stored in memory in addition to the process of language acquisition results in terms of comprehension and production (O’Malley & Chamot, 1996). According to cognitive theory, L2 acquisition is a complex cognitive skill which comprises a set of cognitive systems such as perception, memory and information processing with the aim to treat the limitations in human mental capacity that most likely inhibit performance (Ellis, 2000, p. 175).

2.3.1 The cognitive role of memory in vocabulary learning

The role of memory is indispensable in learning in general and vocabulary learning in particular. The role of memory in learning can be conceived both in long-term and short-term scale. Short-term memory (the working memory system) requires conscious effort and control to retain only modest amounts of information which makes it restricted by limited capacity (Pavičić, 2008). Thornbury (2002) has advocated that the transfer of the learning material can be inserted into the long-term memory by a set of facilitative principles. For example, multiple encounters with a lexical item, retrieval and use of lexical items, cognitive depth, affective depth, personalisation, imaging, use of mnemonics and conscious attention that is necessary to remember a lexical item (cited in Pavičić, 2008). The long-term memory is believed to be large in capacity, operates in parallel fashion and does not require conscious control (Atkinson & Schiffrin, 1968, cited in Skehan, 2000).
However, second language mental lexicon is developed when the mental lexicon is systematically organised. In this sense, Hulstijn (2000) defines the mental lexicon as ‘a memory system in which a vast number of words, accumulated in the course of time, has been stored’ (Hulstijn, 2000, p.210). The organisation of mental lexicon is characterised by fluidity and flexibility (Aitchison, 1990: 12 cited in Pavičić, 2008). The latter can be justified by the claim that ‘the mental lexicon offers multiple access to information; processes of word recognition and word production activate more words than necessary, only to make a final selection and suppress the ‘unnecessary’ information’ Pavičić, 2008, p.12).

It is worthy to mention that the mental lexicon development is intricate and not simple. The reason behind the intricacy of such lexicon development can be supported by considering that the amount of “receptive vocabulary is much larger than productive vocabulary, and that receptive vocabulary precedes productive vocabulary” (Pavičić, 2008, p.12). However, as O’Malley and Chamot (1996: 17) conclude citing Weinstein and Mayer (1986), we may conceive the way new information are acquired in a four-stage encoding process involving selection, acquisition, construction and integration. In the first stage, the working memory is where learners transfer specific information that are selected and resulted in a more focus. In the second stage, these information are stored permanently as a process of acquisition. In the third stage, by making use of related information, learners actively construct internal connections between ideas in the working memory and the long-term memory. Finally, in the integration stage, it is possible for learners to search actively for prior knowledge in the long-term memory and transfer this knowledge into the active memory.

2.3.2 Dual coding theory (DCT) and word retention

Retention of vocabulary over extended periods of time is indispensable for vocabulary learning. Connecting the meaning of words to real objects or phenomena is best instructed through the use of procedures such as visual aids and images. This serves to remember lexical items as a result of visual storing of information. The presentation of meaning with images enables learners to connect them in their minds as a result of what Paivio (1986) calls “dual coding”, i.e. the linguistic and visual storing of information.
Paivio’s dual coding theory is a modification and an extension of his version originally proposed in 1971 as “Imagery and verbal processes”.

The principle of dual coding reinforces language learning through the use of images and helps enhance the visual memory in turn (Paivio, 1986). The theory accounts for both verbal and nonverbal cognition. The nonverbal cognition deals with imagery because its function is related to the generation of mental images (Sadoski, Goetz, Stricker & Burdenski Jr, 2003). Words are easily remembered and learned when connected with images as a result of an object identity that is established through the visual system (David & Hirschman, 1998; Kellogg & Howe, 1971; Underwood, 1989 cited in Pyle, 2009). The two codes: verbal and non verbal are combined in a complementary and supporting way that helps retrieve back the word in case one of the two codes is forgotten. In this sense, Sadoski (2005) notes that “all knowledge, meaning, and memory are described by representation and processing within and between the two codes in this theory which include knowledge of words and their meanings” (cited in Khoii, Sadat Hosseini, 2016, p.76).

The dual coding theory assumes that “there are two classes of phenomena handled cognitively by separate subsystems, one specialized for the representation and processing of information concerning nonverbal objects and events, the other specialized for dealing with language…the two systems are assumed to be structurally and functionally distinct” (Paivio, 1986, p.53). The fact these two subsystems are different in the nature of representational units and in the way these units are organized into higher order structures means that they are structurally distinct. Besides, they are functionally distinct because they are independent as being separately active the one without the other. At the same time they can be active in parallel. However, Paivio (1986) points out that the two systems “are functionally interconnected so that activity in one system can initiate activity in the other” p.53).

DCT emphasizes the central role of verbal and imaginal associative structures. Clark and Paivio (1991) point out that “the development and activation of verbal and imaginal associative structures are governed by DCT's processing assumptions” (p, 153). One of the premises of DCT is that instructions and other moderating contextual influences determine in part the pattern of activation and temporarily enhance activation of
some connections and inhibit others. For example, “pictures and instructions to image
indeed do increase reports of imagery in various tasks and produce other effects consistent
with an imagery interpretation” (Clark & Paivio, 1991p, 153).

Clark and Paivio (1991) point out that imagery instructions and related context
facilitate vocabulary and other school learning rather than leaving learners to their own
devices. For example, when students are instructed to generate synonyms they will make
such responses more likely than when students free-associate to words (Clark, 1978 cited
in Clark & Paivio, 1991). Another example related to antonyms, illustrated by Wynne et
al. (1965) study, showed that adding antonym-evoking stimuli to the beginning of a free-
association list increased the frequency of antonym responses for later items (cited in Clark
& Paivio, 1991). In this respect, Clark and Paivio (1991) explained that “words such as
"black" and "hot," which tend to elicit opposite responses (e.g., "white," "cold"), activated
the word "antonym" or some equivalent term, which then primed antonym responses for
later items” (156).

Besides, imagery processing in concrete words that denote tangible objects such as
book, teacher, and blackboard is more than in abstract words such as ability, success,
effort, mass (Clark & Paivio, 1991). DCT posits that both word concreteness and imagery
value should be central variables in cognitive and educational tasks related to meaning.
The effectiveness of word concreteness (tangible objects with concrete referents) and
imagery value (visual, auditory, or mental picture) has been empirically proved to be
evoked easily in words, sentences, or larger units of text (Paivio, A., Yuille, & Madigan,

Several studies have been conducted to support the effectiveness of the DCT on
abstract and concrete words. For example, a study conducted by Paivio and
Yuille (1969) where 96 participants equipped with a list of 79 words were exposed to two
learning and recall trials. The participants were divided equally into two groups, then each
group exhibited two different ways of order: randomly and syntactically. The participants
were given four minutes to write down the possible words they could remember after
which they were permitted to see each word. The results of the study were consistent with
the dual coding theory and proved that the concrete words were recalled more than the
abstract words.
In a similar vein, Paivio, Walsh, and Bons (1994) conducted an experiment with 120 undergraduate introductory to psychology students who were exposed through a projector to twelve abstract and twelve concrete words. The findings of the study supported the dual coding theory, for the concrete words were better recalled than abstract words.

Other studies illustrate the idea of dual coding and its effect on language learning. For example, Mayer and Sims (1994) conducted two experiments with the aim to help students combine verbal and visual information to construct knowledge, and enable them in turn to understand such information so as to transfer the new material to new situations. The two experiments for high- and low-spatial ability students viewed visual animations (computer-generated animation) and listened to verbal narrations that explained the workings either of a bicycle tire pump (Experiment 1) or of the human respiratory system (Experiment 2).

The two experiments were presented either simultaneously (concurrent group) or successively (successive group). After that, the students took a problem-solving test. The results showed that the concurrent group performed better than the successive group as a result of contiguity effect which was strong, in terms of creative solutions to subsequent transfer problems, for high and not for low-spatial ability students. This is consistent with the dual-coding theory because more cognitive resources to building referential connections between visual and verbal representations are devoted by low-experience, high-spatial learners, i.e. the instruction that carefully synchronizes the presentation of verbal and visual forms of scientific explanation was more beneficial especially for low-experience, high-spatial ability students.

Another experiment conducted by Schultz and Woodall (1980) on pictorial and narrative learning mediators with 126 third and fourth grade students. The learners were randomly divided into three groups: control group, narrative mediator, and pictorial mediator. The learners were exposed to ten words to study in four minutes. The results of the study demonstrated that the pictorial mediator group outperformed the other groups with a higher recall of words. The findings were indicative because it supported the dual coding theory (cited in Yui, Ng, Perera, 2017).
Another study supporting (DCT) conducted by Hall, Bailey, and Tillman (1997) with a focus on illustration. In their study, they compared three groups. One group received text alone and two groups received the text in addition to illustrations. However, one of the last groups used illustrations based on the learners’ own creation. The findings showed that there was no significant difference between the two groups receiving text with illustration. However, the two groups scored better than the third group receiving text without illustration.

Another attempt by Smith, Stahl, and Neel (1987) to explore the usefulness of imagery as a learning tool in a classroom situation as a means to master a greater number of unknown college level words. The students took one of the three treatments: In group 1 (Definition Only), the students received only the words and the definitions of the word. For example, augury: omen. In group 2 (Definition and Sentence), the students received the word with the definition as well as a sentence using the word in a context that would suggest its meaning. For example, augury: omen. The broken mirror was an unlucky augury of unfortunate events to come. In group 3 (Definition, Sentence, and Image), the students received the word with the definition, the sentence using the word in context, as well as an image depicting the ideas in the sentence.

The results of the above study showed the existence of a significant difference that occurred between treatment group 1 and treatment group 3 in the delayed test administered two weeks after instruction. The study supports the importance of Paivio's dual coding theory in learning because visual image helped students to improve their long term memory for the vocabulary items in the study, and proved that can be used in the college reading program.

2.3.3 The involvement load hypothesis

The Involvement Load Hypothesis introduced by Laufer and Hulstijn (2001) has developed from the depth of processing model proposed by Craik & Lockhart in 1972. The latter claims that retention in long term memory depends on how deep information is processed during learning and proposed that semantic processing is associated with higher levels of retention for target items. Thus, the retention in long term
memory depends on the shallowness or depth with which it is initially processed and not on the amount of time those data have been stored in short-term memory (cited in Laufer & Hulstijn, 2001; Mármol & Sánchez-Lafuente, 2013). However, their model was regarded as oversimplified (Tsubaki, 2006).

Laufer and Hulstijn (2001) model is determined by the suggestion that higher task-induced involvement load leads to better vocabulary learning. That is, “the more deeply a word is processed, the better the chance it will be retained” (Ó hÓgain, 2012, p.9). The hypothesis is supported with the claim that the role of involvement in learning tasks allows learners to be more involved with the target words while completing the activities, which leads to incidental learning. That is, the more learners are involved with words, the better the chance they will retain them. The hypothesis involves three factors (need, search, evaluation) based on a motivational-cognitive construct. The term involvement load contains both motivational and cognitive components. The latter requires the allocation of attention to form-meaning relationships (Laufer & Hulstijn, 2001: 14).

The motivational component involves ‘need’ which is determined with the need to complete the task as a result of the unknown word. According to Laufer and Hulstijn (2001) need is “the drive to comply with task requirements can be either externally imposed (i.e., moderate need, +N) or self-imposed (i.e., strong need, ++N)” (p. 14). That is, motivation influences the retention of unfamiliar words in incidental learning tasks. This influence can be either moderate or strong, depending on whether motivation is extrinsic (imposed by an external agent, such as the teacher) or intrinsic (self-imposed by the learner).

The cognitive component involves both search, and evaluation. Search is caused by the need to search for or retrieve the meaning or form of a particular word. It is defined as "the attempt to find the meaning of an unknown word when the meaning is not provided" which "may include a variety of strategies, such as contextual guessing, consulting a dictionary, or asking the teacher" (Martinez-Fernandez, 2008, p. 211 cited in Ghorbanifar & Rahmandoost, 2012). Evaluation occurs as a result of comparing the form or meaning with other possible words or meanings and then choosing the most suitable one that fits its context. According to Laufer and Hulstijn, the evaluation component involves “a comparison of a given word with other words, a comparison of a specific meaning of a
word with its other meanings, or combining the word with others in order to assess whether a word (i.e. a form-meaning pair) does or does not fit its context” (2001, p. 14).

The degrees of value for each component in the involvement load hypothesis are categories gradually as (none, moderate, and strong) “need” (+N), and two cognitive components, “search” (+S) and “evaluation” (+E). According to Laufer and Hulstijn (2001), the task requirements can be either externally imposed (i.e., moderate need, +N) or self-imposed (i.e., strong need, ++N)” (p. 14). There is also “moderate evaluation” (+E), when words being evaluated must fit in a given context, and “strong evaluation” (++E), when words being evaluated must be combined with additional words in an original context created by the learner (cited in Leow, 2015).

The basic claim of Laufer and Hulstijn revolves around the extent of cognitive processing which effects the amount of lexical retention. As Douglas (2016) puts it, “The higher the aggregate result of all three the stronger the Involvement Load, and thus better acquisition and retention”. (p.2239). The following tables clearly indicate the degrees of the components in the involvement load hypothesis.

**Table 2.2.** The Degrees of the Components in the Involvement Load Hypothesis (source, Ghorbani & Rahmandoost 2012).

<table>
<thead>
<tr>
<th>Components</th>
<th>Degrees of the Involvement Load</th>
<th>Explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need</td>
<td>Index 0 (None)</td>
<td>The learner does not feel the need to learn the word.</td>
</tr>
<tr>
<td></td>
<td>Index 1 (Moderate)</td>
<td>The learner is required to learn the word.</td>
</tr>
<tr>
<td></td>
<td>Index 2 (Strong)</td>
<td>The learner decides to learn the word.</td>
</tr>
<tr>
<td>Search</td>
<td>Index 0 (None)</td>
<td>They do not need to learn the meanings or forms of the word.</td>
</tr>
<tr>
<td></td>
<td>Index 1 (Moderate)</td>
<td>The meaning of the word is found.</td>
</tr>
<tr>
<td></td>
<td>Index 2 (Strong)</td>
<td>The form of the word is found.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Index 0 (None)</td>
<td>The word is not compared with other words.</td>
</tr>
<tr>
<td>Components</td>
<td>Degrees of Involvement</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Need</td>
<td>Index 0 (none)</td>
<td>The learner does not feel the need to learn the word</td>
</tr>
<tr>
<td></td>
<td>Index 1 (moderate)</td>
<td>The learner is required to learn the word (For example: when it is triggered by an external agent such as the teacher, or when the learners have to learn words in order to pass their English classes or to be engaged in learning tasks in their English class).</td>
</tr>
<tr>
<td></td>
<td>Index 2 (strong)</td>
<td>The learner decides to learn the word (the learning need comes from the learner himself)</td>
</tr>
<tr>
<td>Search (comprises two levels: level 0 and level 1, indicating no gradation but just whether this component is included or not in the activity).</td>
<td>Index 0 (absence)</td>
<td>The learner does not look for the meaning or form of the word with a lexical instrument</td>
</tr>
<tr>
<td></td>
<td>Index 1 (existence)</td>
<td>The meaning and form of the word are found by the learner</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Index 0 (none)</td>
<td>The word is not compared</td>
</tr>
</tbody>
</table>

*Table 2.3. Components and levels of Involvement adapted from Mármol & Sánchez-Lafuente, 2013; Tsubaki, 2006.*
with any other word

| Index 1 (moderate) | The word is compared with other words in the provided context: when there is the possibility of choosing an L2 word among different options, or when passages and materials are provided by the teachers in the classroom. For example, “filling the blanks” and matching, and learners have to choose words from a list that their teachers give them |
| Index 2 (strong) | The word is compared with other words in self-provided context (the learner’s mental lexicon) (when the learner uses an L2 word in a sentence or text, without having the possibility to choose among several options), or when students are asked by teachers to write essays or make presentations. |

Leow (2015) states that noticing and elaborated processing of the words, and ultimately vocabulary retention can interpret the different degrees of learner involvement which can be caused by the permutation of the three components (need, search,
evaluation). Besides, Laufer and Hulstijn suggest that involvement load with the interaction between the effect of involvement load and other factors such as type of item and quantity of exposure is what determines the task effectiveness and not whether the task is input or output oriented (Leow, 2015). Besides, negotiation in communicative tasks is more productive in terms of vocabulary acquisition than those tasks with no negotiation (Ellis 1994; Newton 1995). Ellis and He (1999) and Joe (1998) supported the same idea that activities which involve more production were more efficient for vocabulary acquisition (cited in Mármol & Sánchez-Lafuente, 2013). However, contrary to Laufer and Hulstijn suggestion, Yaqubi, Rayati and Gorgi (2010) found that input or output-based tasks effect vocabulary learning more than their involvement loads.

2.3.4 Empirical evidence on the involvement load hypothesis

There is some empirical evidence on the Involvement Load Hypothesis stated by Mármol & Sánchez-Lafuente (2013). Folse (2006) conducted a study about the effects of different writing tasks on the learning of L2 words by university students whose proficiency levels ranged from lower intermediate to advanced level. However, his study was not supportive to the Involvement Load Hypothesis since the tasks were equally effective although they differently involve strong and moderate evaluation. Another study conducted by Keating (2008) which revealed that better retention of meaning and form were obtained by beginning Spanish learners while completing a sentence-writing exercise after reading in comparison to a blank-filling exercise. Nevertheless, another study conducted by Lu (2013), showed that unlike the previous study the blank-filling task for lower-intermediate learners was more beneficial to vocabulary learning than the composition task, which is probably due to time constraints in FL classrooms.

Another study conducted by Makhlouf and Boulenouar (2017) in an attempt to investigate the effects of vocabulary instruction on translated word learning for first year EFL Master Students of didactics at Saida University. The experimental group was assigned to vocabulary instruction through group work enhanced by short text context, definitions and examples. However, the control group exhibited the same treatment without examples. The findings demonstrated the existence of statistically significant differences in favor of the experimental group in the post test between the means of the two test scores in the first task (isolated word translation vocabulary). However, there were
no statistically significant differences between the two test scores in the second task (Phrase translation within a sentence context). The positive learning results regarding the first task are indicative because students are engaged in tasks that require a deeper level of processing.

Some analogous results to the aforementioned experiment were reported in the study conducted by Clark (1984) for fifty five seventh graders from an urban school. In his study, the learners were respectively exposed to three different vocabulary instruction methodologies (definitions- context- definitions and contextual sentence examples). However, it was discovered that the three methods improved the learners’ vocabulary knowledge with no single preferred method.

In the same vein, the study conducted by Hulstijn and Laufer (2001) in Israel and the Netherlands universities in which each had experimental group with the same tasks. As reported by Mohamed (2016) the findings supported the hypothesis because the amount of retention was related to the total involvement load. The participants were advanced English learners assigned to three different tasks: 1- reading comprehension with glosses (moderate need, no search, and no evaluation); 2- reading plus filling in target words (moderate need, no search, and moderate evaluation); and 3- composition writing using target words (moderate need, no search, and strong evaluation).

In the first group there were no search or evaluation index conditions, but need was the only component that existed in the condition because the learners were required to do the task as a class activity. In the second group the task had a moderate need index because the learners were required to do the task. In this condition search did not occur because the students did not have to look for the meanings of the target words. In the same condition the involvement load for the evaluation was moderate. The third condition had the highest involvement load of the three with a stronger and higher degree of the evaluation index than the other two in that the subjects used the words in their own context. In this case the evaluation was stronger because students wrote compositions with 10 target words in the form of a letter, using the translation and explanation, and using the target words. Thus, the group which had to produce output performed better than the other groups and retained more words than the other groups.
The three experimental conditions in Hulstijn and Laufer (2001) study were
different only in evaluation indexes. According to Tsubaki (2006) it is because of
evaluation index, in the third condition, that students had better retention of words as they
had the advantage of more information and more time and they worked on the task longer
than the other two groups. Unlike evaluation index, the need and the search indexes seem
not to influence the retention of words Tsubaki (2006). In this respect, Tsubaki (2006)
explains that “Naturally, the more information and time the learners have, the more they
learn” (p. 182).

2.4 Incorporating Vocabulary Instruction and Interaction into Vocabulary Learning

Although Long (1983d), in his early version of interaction hypothesis, claimed that
there is no direct evidence to support the input hypothesis: “like any genuine hypothesis,
the input hypothesis has not been proven. There has been no direct test of it to date” (p.98),
he argued that “linguistic input probably has to be comprehensible to the learner if it is to
serve as data for second language acquisition” (Long, 1983c, p.126). Thus, effective SLA
relies on sufficient amount of comprehensible input. However, Long’s (1996) revision of
the interaction hypothesis considers comprehensible input to be facilitative rather than
necessary in acquisition.

Long’s earlier version of interaction hypothesis (1983d) incorporated Krashen’s
claim about comprehensible input as being necessary and sufficient for the development in
the L2: (1) access to comprehensible input is a characteristic of all cases of successful
acquisition (first and second); (2) greater quantities of comprehensible input seem to result
in better or at least faster acquisition; (3) lack of access to comprehensible input results in
little or no acquisition (Long, 1983d, p. 210).

However, Long pointed out that interaction provides comprehensible input (Long,
1985), and that the comprehensibility of input is achieved “through the speech
modifications of native speakers addressing non-native speakers of the target language”
(Long, 1983c, p.126). In relation to interaction and comprehensible input, Young (2011),
in a similar vein, describes the interactional competence (I C) as what a person does
together with others and not what a person knows. In another sense, it argues that by
improving their classroom interactional competence (CIC), both teachers and learners will
immediately improve learning and opportunities for learning (Walsh, 2012). Thus, the more L2 interaction the learner holds with the other interactants (the teacher and the peers), the more comprehensible input the learner will receive.

With regards to vocabulary acquisition, Krashen (1989) maintains that vocabulary is most efficiently acquired incidentally through the act of reading when learners guess the meaning of the unknown words from context, i.e., through exposure to input (Nation, 2001). Krashen (1989, pp. 440-464) points out that comprehensible and meaningful input, with the attempt to replace grammatically correct production, should be used instead to teach learners to master vocabulary. He points out also that vocabulary input should be provided to language learners in an interesting way in order to help them acquire language (cited in Wu, 2009).

Besides, comprehensible input is an important component of language learning because learners have the opportunity to learn the language which is slightly higher than their current competence. In this view, more comprehensible input through the introduction of communicative language use, which leads to the negotiation for meaning, can be supported with the use of small group tasks with a two-way information exchange (Long, 1983d).

2.4.1 Comprehensible input and vocabulary learning

Krashen’s input hypothesis has been supported by some researchers (Long, 1983d; Ellis, 1999; Gass & Varonis, 1994). Park (2002) classified comprehensible input into three types: pre-modified input, interactionally modified input, and modified output. Pre-modified input refers to the input which has been modified in some way and regarded as simplified input. It helps make input comprehensible as a result of simplification and contextual clues and extra linguistic clues. Interactionally modified input refers to a type of input which has been modified in interaction with native speakers or more proficient non-native ones for the sake of comprehension, and results from negotiation of input through interaction. Modified output refers to “language that is adjusted so that learners can better comprehend the speaker’s meaning” (Tavakoli, 2013, p. 170), which can serve as another learner’s comprehensible input (Ellis, 1999; Long, 1996). Tavakoli (2013) explains that the adjustment of language occurs when learners modify a previous utterance in response
to feedback or self-monitoring. Repair of an initial error or some other change can also be part of it, p. 225).

Pre-modified input helps make language input comprehensible. For example by providing definitions of difficult vocabulary items, input becomes comprehensible. In the same line, Urano (2002) and Kong (2007) emphasised the effects of lexical simplification on incidental vocabulary acquisition. Interactionally modified input has been proved, by Ellis (1994), to be facilitative to comprehension more than other types of input because negotiation of meaning makes input comprehensible. However, where vocabulary acquisition is concerned, Ellis (2001a) found that interactionally modified input did not reveal more effective results than premodified input (Ellis & Barkhuizen, 2005). According to Long, this happens when language learners face communicative problems in conversation. In interaction modified output occurs as a response to comprehensible input, which makes it sometimes difficult to be separated clearly from interactionally modified input. In this view, modified output of one learner can be regarded as another learner’s comprehensible input because negotiation and modified output works interactionally (Bahrani & Soltani, 2012).

2.4.2 Comprehensible output, and vocabulary learning

According to Swain (2005), the occurrence of SLA is primarily based on the focus of output (comprehensible output), i.e. the words used by learners. She considers comprehensible input alone as insufficient to L2 learning process, though it is important. Swain offers solutions to the limitations found in the Input hypothesis, i.e. “language produced by the learner that can be understood by other speakers of the language” (Tavakoli, 2012, p.256). However, as Krashen (1998) puts, Swain’s claim about comprehensible output doesn’t mean that it is responsible for all or even most of our language competence. Rather the claim is that "sometimes, under some conditions, output facilitates second language learning in ways that are different from, or enhance, those of input" (Swain and Lapkin, 1995, p. 371 cited in Krashen, 1998, p. 175).

Swain’s output hypothesis has been criticized by Krashen (1994) when he concluded that output is too rare and scarce to make a real contribution to linguistic competence, and that high levels of linguistic competence are possible without output. In
addition, he concluded that there is no direct evidence that comprehensible output leads to language acquisition, and that students do not enjoy being "pushed" to speak (Krashen, 1998).

Krashen’s claim about the scarcity of output is supported also by other researchers like Ellis, Tanaka, and Yamazaki (1994) when they examined vocabulary acquisition under three conditions, tasks in which EFL students heard (1) "premodified" input (i.e. input only or input recorded from a task performed with a native speaker and non-native speaker who could request clarification), (2) interactionally modified input (i.e. input plus output: the linguistic environment where a native speaker (NS) or a more competent non-native speaker (NNS) interacts with an NNS, and where both parties modify and restructure the interaction to arrive at mutual understanding), (3) unmodified input (input recorded from a native speaker doing the task with another native speaker). Their findings revealed that "of the 42 learners in the IM (interactionally modified) group, only seven engaged in meaning negotiation. The others simply listened" (p. 211 cited in Krashen, 1998, p.175).

Krashen’s claim about the scarcity of output is also supported by Pica (1988) study of ten one-hour interactions between low level ESL acquirers and native speakers (teachers). Pica’s study revealed that instances of comprehensible output were "relatively infrequent" (p. 45) because only 87 potential instances of comprehensible output that native speaker requested in interactions were found, that is, "confirmation, clarification, or repetition of the NNS utterance " (p. 93) (cited in Krashen,1998, pp.175-176).

One of Swain’s main arguments in her output hypothesis is that rather than simply being exposed to input, learners are forced to produce output that contains linguistic forms in their interlanguage system and to process language forms and meanings more deeply (Kwon, 2006). This helps them acquire language as they start to test hypotheses about comprehension of input or about linguistic correctness (Kwon, 2006).

According to Wu (2009), the effectiveness of Swain’s output hypothesis is evident through the students’ ability to learn the vocabulary incidentally because when they speak, they are required to modify their utterances in order to be understood. In this sense, the exposure to the comprehensible target language strengthens the learned English
vocabulary. Besides, Swain argues that learners can best master a second language (more fluently and accurately) if they are given more opportunities to engage in verbal production such as communication with others, or oral activities. (Wu, 2009). This can be also supported with the view that pushing learners to produce output helps them process language syntactically rather than semantically.

Although Swain and Krashen hypotheses differ significantly and even are contrasting, yet both are important. Swain emphasizes the role of output tasks for increasing learners’ vocabulary knowledge in SLA, whereas Krashen claims that productive vocabulary is the natural result of receptive vocabulary acquisition. In their study of the effects of input and output tasks on the learning and retention of EAP vocabulary (with the goal to compare the effect of input only, input plus output, and output plus input instructions), Shirzad, Rasekh and Dabaghi (2017) concluded that all types of instructions for lower intermediate learners were beneficial for EAP vocabulary learning and retention. This is to say, their study supports both input and output hypotheses because exposure to new language is more important than the type and sequence of presentation.

2.4.3 Interactional competence and vocabulary learning

Interaction in classroom is considered as an interactive environment that helps learners to develop English vocabulary learning incidentally. When students get involved in some activities such as listening or reading they start increase their vocabulary size (Rivers 1984, pp. 3-16 cited in Wu, 2009). Lightbown and Spada (2013) point out that communicative and content based instruction provides an interactive medium where the emphasis is on communication of meaning. In the same line, Marzano (2004) endorses that discussion in vocabulary instruction helps students encode information in their own words. This also helps them discuss new terms, gain deeper understanding as a result of permanent storage memory of words (p, 86).

The focus on meaning will help students to acquire language in a way similar to natural acquisition (input is simplified and made comprehensible by the use of contextual cues., there is a limited amount of error correction on the part of the teacher, and meaning is emphasized over form) (Lightbown & Spada 2013, p. 127). In this vein, the ability of teachers and learners to use interaction as a tool for mediating and assisting learning is
what constitutes Classroom Interactional Competence (CIC) (Walsh, 2011). Therefore, opportunities are openly offered to teachers and learners to mediate and assist each other in the creation of zones of proximal development (Vygotsky, 1978). Lantolf (2000) reports that collaboration within a social instructional network helps teachers and learners to create solid zones of proximal development and learning mental abilities.

The quality of interaction can have positive effect on the incidental learning (Wu, 2009). The latter can be tied to the success of classroom interaction that is based on the teacher’s ability to manage learners’ contributions and raising their interactional competence. To put it differently, the production of a type of interaction that is more engaged and more focused on participation is at the centre of a successful classroom interaction. There are six main types in interaction which consist of comprehensible inputs and outputs exposure of language for learners: errors, feedback on errors, negotiation for meaning, genuine questions, display questions, metalinguistic comments. (Lightbown & Spada 2013, pp. 129-149). These types of inputs and outputs exposure assist the occurrence of incidental vocabulary learning.

First, feedback on errors is received from the teacher and students when the other students make errors in communication. Second, negotiation for meaning happens when there is a lack of understanding among the interactants. In this case, vocabulary can be learned incidentally as students get the modified input (Nation 2001, p. 123). Third, genuine (referential) and display questions help the learner to acquire the vocabulary being learned. Genuine or referential questions are questions to which a teacher does not know the answer. Display questions are questions to which teachers already know the answer. Their function is to get learners to ‘display’ what they know about something (Walsh, 2011, Lightbown & Spada 2013). However, Long and Crookes (1987) argue that teachers should minimize the use of display questions because these hamper interaction, which in turn affects the acquisition through comprehensible input. Fourth, metalinguistic comments “generally indicate that there is an error somewhere (for example, 'Can you find your error?')”(Lightbown & Spada 2013, p.140).

As far as classroom discourse is concerned, in addition to input modification, teacher talk plays an important role in the process of second language acquisition. Teacher
talk relies on comprehension checks and imperatives. The following table reveals the results of studies regarding features of teacher talk:

**Table 2.4.** Language Adjustments in Teacher Talk (Ellis, 1994, p.582, source: Trawinski, 2005, p.63).

<table>
<thead>
<tr>
<th>Features</th>
<th>Main conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of talk</td>
<td>The teacher takes up about 2/3 of the total talking time.</td>
</tr>
<tr>
<td>Functional distribution</td>
<td>Teacher dominance: teachers are likely to explain, question and command and learners to respond.</td>
</tr>
<tr>
<td>Rate of speech</td>
<td>Teachers slow down their rate of speech and do it to a greater extent with less proficient learners. There is considerable variability among teachers.</td>
</tr>
<tr>
<td>Pauses discourse</td>
<td>Teachers make use of longer pauses when talking to learners.</td>
</tr>
<tr>
<td>Modifications in Phonology, intonation articulation, stress</td>
<td>Teachers speak louder and make their speech more distinct talking to learners.</td>
</tr>
<tr>
<td>Modifications in vocabulary</td>
<td>A lower type-token ration, additionally teachers vary in accordance with the learner's proficiency level.</td>
</tr>
<tr>
<td>Modifications in syntax</td>
<td>Shorter utterances with less proficient learners. Lower degree of subordination, fewer marked structures, more declaratives and statements than questions. Ungrammatical teacher talk is rare.</td>
</tr>
<tr>
<td>Modifications in discourse</td>
<td>Teachers use more self-repetitions with L2 learners.</td>
</tr>
</tbody>
</table>
In the same vein, Nunan (1991) advocated that excessive teacher talk is not advised if more opportunities for producing comprehensible output are most sought by learners themselves, and therefore increasing their chances for better learning (p. 190). In a similar way, Harmer (2000, p.4) emphasises that “a good teacher maximizes STT and minimizes TTT.”

In a study conducted by Shane (2015) in Taiwan, in an attempt to evaluate the teacher talk in the light of the overall pedagogical aims and modes used, he clarified the most important features of teacher talk (Table 2.4). That is, to find out the extent by which the teacher’s use of language and pedagogic purpose coincide. The findings of his study suggested that intersubjectivity is achieved by means of affordances that include recipient design (modifying one’s speech according to the needs of an interlocutor) and repair offered by the instructor during episodes of interaction as features of interaction that delineated interactional competence. These affordances in order to be acted upon by learners and to create learning space for them need to be mediated by extended wait-time.

In conjunction with these affordances, extended wait-time is employed as a means of creating space for these affordances to be acted upon by learners. Wait-time can be efficiently extended when the teacher waits for some time for the learner’s answer which is measured in seconds. Walsh (2011), states that teacher's wait-time allows learners more time to think and prepare their contribution when it is significantly prolonged in no less than 2 seconds. According to Rowe (1974), wait-time is identified in two types: Wait-time I (WT1) and Wait-time II (WT2). The first is determined with the interval that separates the end of the teacher's question and the learner's response. The second is marked with the pause that separates the student's response and the teacher's feedback or the following question.

In a similar vein, another study was conducted by Shamsipour and Allami (2012) to investigate the types of the teacher talk which can decrease and create opportunities for learning a foreign language. The study was based on the interactional features proposed by Self evaluation of teacher talk (SETT) framework. The findings of their study demonstrated the positive role of the teacher talk in promoting the foreign language learners’ performance. However, the observed types of the teacher talk were categories under two positive and negative impacts.
Table 2.5. Positive and Negative Effects of Features of Teacher Talk

<table>
<thead>
<tr>
<th>Types</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scaffolding</td>
<td>Positive</td>
</tr>
<tr>
<td>Direct Repair</td>
<td></td>
</tr>
<tr>
<td>Content Feedback</td>
<td></td>
</tr>
<tr>
<td>Extended Wait Time</td>
<td></td>
</tr>
<tr>
<td>Referential Questions</td>
<td></td>
</tr>
<tr>
<td>Seeking Clarification</td>
<td></td>
</tr>
<tr>
<td>Extended Teacher Turn</td>
<td></td>
</tr>
<tr>
<td>Display Questions</td>
<td></td>
</tr>
<tr>
<td>Extended Learner Turn</td>
<td></td>
</tr>
<tr>
<td>Teacher Echo</td>
<td>Negative</td>
</tr>
<tr>
<td>Teacher Interruption</td>
<td></td>
</tr>
<tr>
<td>Turn Completion</td>
<td></td>
</tr>
</tbody>
</table>

Source: (Shamsipour & Allami, 2012)

The first nine types of classroom features: scaffolding, direct repairing of learner output, content feedback, extended wait-time (maximizing interactional space), referential and display questions, seeking clarification, extended teacher and learner turns were found to be helpful in creating opportunities for learning in EFL classes, minimising the breakdown in communication and maximising learners understanding. However, the remaining types: teacher interruption, teacher echo and turn completion were found to be destructive features because negotiation of meaning reduced and therefore learning decreased. The findings of this study are indicative because they correspond to Walsh's SETT framework which helps enhancing second language learning.

2.4.4 Negotiation of meaning and vocabulary learning

Boulima (1999) states that classroom interaction implies also understanding how communication is constructed between the teacher and learners and how interaction is negotiated. Many researchers have investigated the contribution of negotiation of meaning in 2 LA (Foster & Ohta, 2005; Gass & Vanoris, 1985, 1994; Jeong, 2011; Lee, 2005; Lee,

Other empirical studies examined the effects of negotiation of meaning on learners’ ability to acquire and retain vocabulary items. Luan & Sappathy (2011) study with a group of primary school learners reveals that learners who negotiate for meaning in the two-way task had higher vocabulary performance in acquiring and retaining vocabulary items. Another study conducted by Yi and Sun (2013) with Chinese learners of English in the classroom setting. The study shows that exposing the college students to pre-modified input (input that has been simplified and made more redundant) and negotiation of meaning (with their teachers or peers) helped them to score better than the students who were exposed to pre-modified input (without negotiation of meaning) in terms of acquiring new words.

L2 learning and vocabulary acquisition is also driven by negotiation of meaning in the linguistic difficulties that prompt more questioning in the learner-learner interactions, which enable them to search for immediate resolution of language difficulties (Zhao & Bitchener, 2007, p.446). Besides, Chaudron (1988) acknowledged that the extent to which communication can be jointly constructed between the teacher and learners has a great impact on the classroom learning events. In addition, interaction in which learners struggle to make output comprehensible is important for language development (Swain, 1985 Cited in Boulima, 1999).
2.5 Summary

This chapter contains the theoretical basis of the research problem. It is concerned with EFL vocabulary research and related concepts with the aim to bring the variables of the study together based on empirical studies. In sum, a particular concern is devoted to overview some theoretical and empirical works tied with vocabulary instruction in EFL context, interactional competence, vocabulary learning and word retention.
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CHAPTER THREE: METHODS AND PROCEDURES

3.0 Introduction

This chapter provides an insight on the methodology used in this study. It gives information about, the study design and variables, the conceptual and statistical models of the present study. The chapter also explores how interactional competence is designed in classroom, i.e., classroom interactional competence (CIC), mainly through Walsh (2006, 2011) self-evaluation of teacher talk (SETT) model in addition to interactional modifications involved in the negotiated meaning (Based on Pica and Daughty 1985 a. It also describes the population, the sample, the selection of participants, and the instruments used in the study. This chapter also contains a description of the collected data in relation to interaction and how they were analysed and interpreted both qualitatively and quantitatively; data in relation to scoring students’ vocabulary learning and retention, and the data obtained through the questionnaires and their analysis with the use of SPSS techniques, SPSS version of PROCESS to test moderation and interaction effect using a regression model, and the bootstrap method.

3.1 Study design and variables

The attempt to examine the effects of vocabulary instruction on interactional competence and subsequently on vocabulary learning and retention implemented the use of a mixed methods research based on both quantitative and qualitative data. Both quantitative and qualitative methods are used to provide clear understanding of the research problem and question better than using either method by itself (Creswell, 2012, p. 535). This type of research design helps understanding a research problem which requires collecting, analysing, and “mixing” both quantitative and qualitative methods in a single study or a series of studies (Creswell & Plano Clark, 2011, cited in Creswell, 2012, p. 535). In this regard, both experimental method and analysis of qualitative data were used to achieve the objectives aimed by the researcher.
An experimental design based on English vocabulary test was used as the post-test to determine control and experimental participants’ vocabulary performance after the treatment. A delay post test was also used to determine the vocabulary retention gained by the students. The scores obtained from the tests are considered as the criterion for the quantitative comparison of the control and experimental groups.

In this study the researcher is motivated by the use of the experimental approach because there is a need to establish a possible cause and effect between both independent and dependent variables. In this sense, it is required to control all variables that might influence the outcome except the one (s) for the independent variable. This means that the probable cause of independent variable on the dependent variable occurs when the independent variable influences the dependent variable. This, in turn, requires that the conditions under which both groups are tested should be the same so that we guarantee that the change in variable Y is attributable to variations in variable X and not to some extraneous variables.

It is worthy to mention that the treatment itself is designed through group work activities to engage students in interaction around word meanings based on two different vocabulary instructions: First, vocabulary instruction by definition and context through group interaction; second, vocabulary instruction by definition and context enhanced by pictures through group interaction. The effects of vocabulary instruction on interactional competence have been studied under a comparative framework. The effect of such vocabulary instructions helps to compare the interactional competence of both groups quantitatively and qualitatively without using pre and post tests. Hence, the model adopted in this study depends on three variables: (independent, moderator, and dependant).
A moderator is defined as a “variable that affects the direction and/or strength of a relationship between an independent or predictor variable and a dependent or criterion variable.” (Baron & Kenny, 1986, p 1174). The model adopted in this study implies the interconnection of more than one effect. In this sense Hayes (2013) displays the relationship between the variables as follows “The effect of X on some variable Y is moderated by M if its size, sign, or strength depends on or can be predicted by M. In that case, M is said to be a moderator of X’s effect on Y, predicted by M.” (Hayes, 2013, p 208).

Marsh et al (2013) considers moderation (or interaction) to be determined by the strength or direction of the effect of a predictor variable on an outcome variable as a function of the values of the third variable, called a moderator p361). Hence, the three variables (independent, moderator, and dependant) respectively stand for: first, vocabulary instruction; second, interactional competence; and third, vocabulary learning and retention.

The qualitative method applied in this study relies on collecting authentic data with a focus on the interactive nature of discourse and how both teachers and students interact to mediate learning. In this regards, Stotsky and Mall (2005) reported that “Studies featuring qualitative methods tend to focus on small numbers of participants and a thorough understanding of small, complete units of social interaction; hence, "thick" descriptions, or masses of details, are a salient characteristic of these studies” (p. 07). In de Bot, Lowie and Verspoor’s (2005) view, “Qualitative research is typically in-depth and small scale” (p.239). Therefore, the design being used in this study to describe the effect of
vocabulary instruction on interactional competence counts for the use of both qualitative and quantitative approaches. Hence, the two approaches are important to illustrate the relationship and the effect of the variables being investigated on learning outcomes.

Doughty’s (2000) endorses the importance of qualitative comments that are basically generated from transcribing and coding data of interaction and communication. The patterns of interaction that delineate the structure of communication which include hearing laughs and calm breathing are so important to create a relaxed and comfortable atmosphere. The latter would stimulate the researcher’s qualitative comments and therefore enhance the research quality based on raw numbers, percentages and statistics enlightened by meaning (p. 110).

The data analysed in relation to interaction were based on a corpus of recorded classes. The classes were audio-taped and transcribed in an attempt to approach relatively a close distance to an authentic interaction occurring in the classroom. In this sense, the mixed methods using qualitative discourse-analysis investigations in combination with quantitative statistic offer a comprehensive understanding of the different learning stages of classroom interaction.

Following Walsh (2011), a Self-Evaluation of Teacher Talk (SETT) model was adopted and adapted with some other patterns to reveal the interactional features (interactures) that are present in the transcribed discourse. With this goal in mind a coding scheme is used here to present the quantitative investigation which is in turn accompanied by a qualitative analysis of the discourse generated. As such, the mixed-method approach integrating both a quantitative investigation and a qualitative analysis of the discourse generated would help to emerge the most useful insights (Galaczi, 2014).

The choice of a mixed method is also motivated by the opposition of the traditional distinction between qualitative and quantitative research which has long been criticised as “naive” or “oversimplified” (Nunan, 1992: 3). Dörnyei (2007: 24) states that a mixed
methods research “involves different combinations of qualitative and quantitative research either at the data collection or at the analysis levels”. He also states that mixed methods support each other by integrating embedded quantitative and qualitative data at different levels which hence makes the results “more meaningful” (Dörnyei, 2007: 273).

In the same vein, Krathwohl (1997) pointed out that the act of blending and mixing the quantitative and qualitative methods is becoming more commonplace. Stotsky and Mall (2005) argued for the fact that both methods can be used compatibly by emphasizing that nowadays there is great tendency in English language arts to use both qualitative and quantitative methods. For example, a model case-study method of investigation with some of the advantages of a quantified study; using 26 carefully selected subjects in comparison groups was creatively used by Epes (1985). Epes, in his method, attempted to test hypotheses and tentatively established causal relationships. In addition, possible causal factors can be established based on seemingly important differences of comparison groups through codification and quantification (p.11).

Another insight in this study that is taken into consideration is the evaluation of the instructions through the students’ attitudes. Attitudes are a highly determinant factor in shaping the rate of language learning (Starks and Paltridge, 1996). Karahan (2007) stated that “positive language attitudes let learner have positive orientation towards learning English” (Karahan, 2007, p.84). In this sense, two questionnaires were administered for both control and experimental groups. Therefore, the present study includes different methods and tools. As Calfee & Chambliss (2005) have noted, “A useful guiding principle is triangulation, which means to consider different ways of collecting data for each construct in the study”. In the same line, Birnbaum, Emig, & Fisher (2005) argued that triangulation helps researchers to ensure the validity of their study.

3.1.1 The conceptual model

The conceptual model of the present study deals with combined effect of two variables on the third variable.
This figure shows that the moderator variable (in this case interactional competence) affects the relationship between the predictor variable (vocabulary instruction) and an outcome variable (vocabulary learning). This means that the strength or direction of the relationship between vocabulary instruction and vocabulary learning is affected by interactional competence. The aim behind adopting this model is to check the change in the relationship between vocabulary instruction and vocabulary learning in the outperforming group between the two conditions (the control and experimental groups). In case there is a change it can be decided that the relationship between vocabulary instruction and vocabulary learning is moderated by interactional competence.

### 3.1.2 The statistical model

![Diagram of the statistical moderation model. Source: (Field, 2013, p. 440).](image)

**Figure 3.3** Diagram of the statistical moderation model. Source: (Field, 2013, p. 440).
The statistical model conceptualises moderation statistically. It helps us to predict the outcome from three angles: first, the predictor variable; second the moderator variable; and third the interaction of the predictor and moderator variables. The third angle (interaction effect) is the one that helps us to determine if moderation has occurred or not.

Besides, it is insightful to include the predictor and moderator as well as it is a highly determinant factor to check the validity of interaction effect. It is through regression, then, that we can predict students’ vocabulary learning from the predictor (vocabulary instruction), moderator (interactional competence), and the interaction between the predictor and the moderator. Interaction here means the combined effect of two variables multiplied together through analysis in SPSS: the predictor and moderator.

3.2 Designing Interactional Competence in Classroom

Creating opportunities for learning is conditioned by understanding and extending CIC, i.e. promoting interactions that are both appropriate to a particular micro-context and to specific pedagogic goals (Walsh 2011). Thus, interaction is firmly attached to teaching and learning by which teachers and learners are expected to improve learning and opportunities for learning and subsequently CIC.

In relation to communicative competence, one can strongly consider the large gap that CIC comes to fill up. CIC emphasises communication to be a joint enterprise which requires the ability to communicate collectively and reciprocally rather than looking at features of individual performance (Walsh, 2011). In this sense, Kramsch (1986) and Young (2008) acknowledged the disadvantage resulted from CC in which communication is operated at the individual level of the interactants with a major focus on solo performance (Kramsch 1986, Young 2008 Cited in Escobar Urmeneta & Walsh, 2017).
3.2.1 Classroom interactional competence (CIC)

CIC is defined as “teachers and learners ability to use interaction as a tool for mediating and assisting learning” (Walsh 2006, p. 132). Walsh (2011) maintains that CIC implies from both teachers and learners to adopt ways by which interactional decisions and subsequent actions enhance learning and learning opportunity. Therefore, CIC , as Escobar Urmeneta & Walsh (2017) state “focuses on the ways in which teachers’ and learners’ interactional decisions and subsequent actions enhance language learning and learning opportunity” (Escobar Urmeneta & Walsh, 2017, p. 04).

Central to the concept of CIC is the comprehension of the ways interactants create, maintain and sustain ‘space for learning’ which is part of how CIC influence learning. By space for learning we mean the degree to which both teachers and learners create interactional space that is adequately suitable for the specific pedagogical goal of the moment (Walsh, 2011).

Walsh (2011) states that there are three basic features in which CIC manifests itself. First, CIC entails matching the pedagogic goal of the moment to the language that is both convergent to that goal and that is appropriate to the learners. Thus, teacher’s pedagogic goals and the interaction used to achieve them are at one, and working together as a ‘mode convergent’ This entails understanding the interactional strategies that are appropriate to teaching goals and adjusting them in relation to the co-construction of meaning and the unfolding agenda of a lesson (Walsh, 2011). Put it in another way, as postulated by Escobar Urmeneta & Walsh (2017), teachers’ ability to use language which is convergent to the pedagogic goal(s) in an attempt to demonstrate CIC “entails an understanding of the interactional strategies which are appropriate to teaching goals and which are adjusted in relation to the co-construction of meaning and the unfolding agenda of a lesson” (pp. 04- 05).
Second, it facilitates interactional space for learners by which they are better able to contribute to the process of co-constructing meanings. Interactional space is maximised through increased wait-time. Teachers in order to enhance learning they need also to shape learner contributions, i.e. taking a learner response and doing something with it rather than simply accepting it.

What is needed, I would suggest, is a re-thinking of the role of the teacher so that interaction is more carefully understood, and so that the teacher plays a more central role in shaping learner contributions. Shaping involves taking a learner response and doing something with it rather than simply accepting it” (Walsh, 2011, p. 06).

For example, by paraphrasing, summarising and scaffolding students’ responses teachers are performing a more powerful role in the interaction. This goes in tandem with the dialogic framework, where learners collectively and actively construct their own understandings in and through interactions with others who may be more experienced while engaging in discussion and debate (Escobar Urmeneta & Walsh, 2017).

Third, developing a positive self-image through the students’ interactions with the assistance of teacher’s ability to create a safe environment. The same concept is derived from “positive face, or the need to obtain favourable or appreciative reactions from fellow members of society” (Brown & Levinson 1987, p. 61 cited in Escobar Urmeneta & Walsh, 2017 ). This implies, as Escobar Urmeneta & Walsh (2017) indicate, allowance by which “everyone’s face depends on everyone else’s conversational behaviour”, and every one “allow a certain type of face” or what they called “face-work” by which they refer to a set of actions a participant performs in order to help oneself or other participant(s) to “maintain” and “enhance” face, that is, their dignity, by either avoiding threatening situation, or by using certain rituals in order to repair the damage potentially inflicted on a participant after a criticism or a
disagreement, for example, have been formulated. (Escobar Urmeneta & Walsh, 2017, p. 06).

The importance of classroom interactional competence (CIC) is recognised by Walsh (2011) as a fifth skill in addition to speaking, listening, reading and writing which serves to enhance learning and teaching in classrooms (Walsh, 2011). In general, the main features of CIC are summarised by Walsh (2011, p. 165-174) as follow:

- Convergence of language use and pedagogical goals
- The need for interactional space
- The process of shaping learner contributions by scaffolding, paraphrasing etc.
- The use of extended wait time, pauses of several seconds
- The use of requests for clarification
- Minimal response tokens
- Evidence of content feedback

In an attempt to clarify the construct of classroom interactional competence (CIC) across a range of CLIL classroom settings, Escobar Urmeneta & Walsh (2017) investigated the interactions through three broad features which took place in CLIL classrooms: alignment between pedagogic goals and language use; creating space for learning, and shaping learners’ contributions in feedback. The same researchers concluded their study with the usefulness of CIC with the analysis of both teacher-class and group work interaction in CLIL settings joined with a success in developing the learners’ interactional resources.

3.2.2 Self-evaluation of teacher talk (SETT) model

A framework of Self-Evaluation of Teacher Talk (SETT) for analysing L2 classroom discourse has been proposed by Walsh (2006, 2011). It is designed to allow teachers to gain a closer understanding of interactional processes in the classroom as a means of improving their teaching (Walsh, 2006). Thus, the main goal of the SETT
framework is to explore the relationship between institutional goals (teaching objectives) and language used to achieve these goals (Shane, 2015).

The main importance of (SETT) is to offer us the ability to recognize the extent to which the discourse is communicative. Thus, SETT is a tool or framework that helps to investigate classroom discourse. According to Shane (2015), SETT facilitates opportunities for learning and provides teachers the ability to reflect on how “pedagogical purpose and language use converge (signaling successful instruction) or diverge (signaling less successful instruction), as it is through talk that pedagogy and interaction achieve synthesis” (Shane, 2015, p. 54). For him, SETT is a framework through which teaching objectives and teacher-talk coincide or conflict.

Many researchers have been concerned with the quality of communication that takes place in classrooms. As such, David Nunan himself writes “in communicative classrooms, inter-actions may [. . .] not be very communicative after all” (cited in Walsh, 2011, p. 39). Other researchers like Thornbury (2008) in a study, stated by Walsh (2011), incited teachers with the collaboration of small groups of trainee teachers to use their own lesson transcripts as a means of raising awareness of the importance of classroom interaction. The trainees were asked to look at the features of their talk that were felt to be more or less communicative after getting the recorded lesson to be transcribed and analyzing one segment of the lesson. Then, the trainees were asked to comment on those segments in a written evaluation which were considered as self-evaluations.

The study stated above concluded that “teachers can be sensitised to making their classrooms more communicative through a more appropriate use of language and interactional resources.” (Walsh, 2011, p 40). This is supported with Walsh claim “Essentially, through shaping the discourse, a teacher is helping learners to say what they mean by using the most appropriate language to do so. The process of ‘shaping’ contributions occurs by seeking clarification, scaffolding, modelling, or repairing learner input” (Walsh, 2011, p. 172).
In addition, teachers are required more to help and guide learners because engaging students to work in groups and pairs is not in itself ‘communicative’. (See Walsh, 2011, p. 39). The same study revealed the following features of communicative classroom talk: • Referential questions, which require greater effort and depth of processing on the part of the teacher. • Content feedback, that is based on meaning where the focus transcends over language-related issues, rather than language form. • Wait-time invested by teachers who wait after asking a question before getting a response. • Student-initiated talk. Typically through requests for clarification and confirmation which foster learning through negotiated meaning. Students in this case are more likely to be engaged with the learning process.

SETT model helps to discern and identify the forms of teacher-talk and the interactional features that are appropriate in certain modes and to relate theme to the pedagogic goals of the moment such as scaffolding, display questions and confirmation checks (Shane, 2015). According to Walsh (2006) a mode is ‘the interrelatedness of language use and teaching purpose’ (Walsh 2006, p.62 cited in Shane,2015). They are identified as ‘four patterns’ or ‘four micro-contexts ‘ and ‘each mode is made up of specific interactional features (such as display questions, repair, content feedback) and particular pedagogic goals’. (Walsh, 2011). These micro-contexts through the process of “participation, face-to-face meaning-making, and language socialisation” are co-constructed between both teachers and students (Walsh and O’Keeffe, 2007, p. 4 cited in Yang, 2014).

However, the SETT framework is ‘a means to an end, not an end in itself’ (Walsh, 2006, p. 91) because it does not encompass all parts of classroom context or forms of interaction rather it ‘aims at building understanding in practitioners, rather than explicating every interaction that occurs in the second language classroom' (Shane,2015, p. 56).
As adopted by Walsh (2006, pp. 66-68), there are four modes that can be stated as follows:

1. Managerial Mode (the main focus is on setting up an activity, i.e. a teacher’s main task is to manage students’ learning process).
2. Materials Mode (the main focus is on the use of text, tape or other materials, i.e. classroom interaction is directed by teaching materials).
3. Skills and Systems Mode (the main focus is on particular language items, vocabulary or a specific skill, i.e. the interaction between teachers and learners are centred on language skills and systems);
4. Classroom Context Mode (the main focus is on eliciting feelings, attitudes and emotions of learners, i.e. students have more opportunities to participate in the classroom).

(See Shane, 2015 and Yang, 2014).

According to Walsh (2011), “classroom interaction can be classified very neatly into a finite number of modes, each with its own particular set of pedagogic and interactional features”. Thus, the four modes are helpful for better understanding of the relationship between interaction and classroom pedagogy.

As summarised by Walsh (2011), the main components are illustrated through the following table:

**Table 3.1. L2 classroom modes. Source: (Walsh, 2006, p. 66).**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Pedagogic Goals</th>
<th>Interactional features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial</td>
<td>To transmit information</td>
<td>A single, extended teacher turn that uses explanations and/or instructions</td>
</tr>
<tr>
<td></td>
<td>To organise the physical learning environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To refer learners to</td>
<td>The use of transitional</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Materials</th>
<th>To provide language practice around a piece of material</th>
<th>Predominance of IRF pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To elicit responses in relation to the material</td>
<td>Extensive use of display questions</td>
</tr>
<tr>
<td></td>
<td>To check and display answers</td>
<td>Form-focused feedback</td>
</tr>
<tr>
<td></td>
<td>To clarify when necessary</td>
<td>Corrective repair</td>
</tr>
<tr>
<td></td>
<td>To evaluate contributions</td>
<td>The use of scaffolding</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skills and systems</th>
<th>To enable learners to produce correct forms</th>
<th>The use of direct repair</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To enable learners to manipulate the target language</td>
<td>The use of scaffolding</td>
</tr>
<tr>
<td></td>
<td>To provide corrective feedback</td>
<td>Extended teacher turns</td>
</tr>
<tr>
<td></td>
<td>To provide learners with</td>
<td>Display questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teacher echo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clarification requests</td>
</tr>
</tbody>
</table>

|                             | markers                                  | Form-focused feedback    |
|                             | The use of confirmation checks           |                          |
|                             | An absence of learner contributions      |                          |
According to Yang (2014) the process that defines these modes differs for each. For him in order to manage the classroom, as Walsh (2006) stipulates, managerial mode usually occurs at the opening or ending of a lesson. This includes extended teacher turns as well an absence of learners’ participation. Materials mode, as a second mode, comprises activities that are designed as centered on the target learning materials that are constrained by the subject/topic. At the same time the resulted conversation is dominated by the teacher in spite the fact that IRF exchange pattern can manipulate the structure. In the third mode, the focus is on the process of linguistic acquisition which adequately expresses the term Skills and systems mode. Hence, the focus of interaction between teachers and learners is on language skill and system practice. Classroom context mode, as a fourth mode, relatively limits the teacher turns and extends more the students’ participation and interactional space (Yang, 2014, p. 37).
Table 3.2. SETT: Self Evaluation of Teacher Talk. (Based on Walsh, 2006, source, Shane, 2015).

<table>
<thead>
<tr>
<th>Feature of Teacher Talk</th>
<th>Description</th>
</tr>
</thead>
</table>
| A. Scaffolding          | 1. Reformulation (rephrasing a learner’s contribution)  
                          2. Extension (extending a learner’s contribution)  
                          3. Modelling (providing an example for learner(s)) |
| B. Direct repair        | Correcting an error quickly and directly. |
| C. Content feedback     | Giving feedback to the message rather than the words used. |
| D. Extended wait-time   | Allowing sufficient time (several seconds) for students to respond or formulate a response. |
| E. Referential questions| Genuine questions to which the teacher does not know the answer. |
| F. Seeking clarification| 1. Teacher asks a student to clarify something the student has said.  
                              2. Student asks teacher to clarify something the teacher has said. |
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **G.**  
Extended learner turn | Learner turn of more than one utterance. |
| **H.**  
Teacher echo | 1. Teacher repeats teacher’s previous utterance.  
2. Teacher repeats a learner’s contribution. |
| **I.**  
Teacher interruptions | Interrupting a learner’s contribution. |
| **J.**  
Extended teacher turn | Teacher turn of more than one utterance. |
| **K.**  
Turn completion | Completing a learner’s contribution for the learner. |
| **L.**  
Display questions | Asking questions to which the teacher knows the answer. |
| **M.**  
Form-focused feedback | Giving feedback on the words used, not the message. |

Note: Confirmation checks (Confirming understanding of a student’s or teacher’s contribution) is an extra interactional feature which is part of the SETT framework. The latter is made up of fourteen interactional features (*interactures*) (Walsh, 2011).
3.2.3 Negotiation of meaning or ‘negotiated interaction’

(Arlik 1991) enumerates three major processing that result in input modification and, consequently, to language acquisition: 1 comprehension check (checking if the message is understood by the receiver. For example, “you know what I mean?”; 2 confirmation check (if the receiver has correctly understood the message. For example, “so you decided to leave France?” ; 3 clarification check (request for further information). For example, “what do you mean by saying that?” (cited in Trawinski, 2005, p.59). The three aforementioned processing and other processing are summarized in the following table:

**Table 3.3. Interactional Modifications Involved in the Negotiated Meaning (Based on Pica and Daughty 1985 a, source, Ellis, 1991).**

<table>
<thead>
<tr>
<th>Interactional Feature</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarification requests</td>
<td>Any expression that elicits clarification of the preceding utterance.</td>
<td>A:She is on welfare. B:What do you mean by welfare?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A:Mexican food have a lot of ulcers? B:Mexicans have a lot of ulcers? Because of the food?</td>
</tr>
<tr>
<td>Confirmation checks</td>
<td>Any expression immediately following the previous speaker's utterance intended to confirm that the utterance was understood or heard correctly.</td>
<td>A. There was no one there.</td>
</tr>
<tr>
<td>Comprehension checks</td>
<td>Any expression designed to establish whether the speaker's own preceding utterance has been understood by the addressee</td>
<td></td>
</tr>
<tr>
<td>Repetition Type</td>
<td>Description</td>
<td>Example</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Self-repetitions:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) repairing</td>
<td>The speaker repeats/ paraphrases some part of her own utterance in order to help the addressee overcome a communication problem.</td>
<td>Do you know what I mean?</td>
</tr>
<tr>
<td>(2) preventive</td>
<td>The speaker repeats/ paraphrases some part of her own utterance in order to prevent the addressee experiencing a communication problem.</td>
<td>A: Do you share his feelings? Does anyone agree with Gustavo?</td>
</tr>
<tr>
<td>(3) reacting</td>
<td>The speaker repeats/ paraphrases some part of one of her previous utterances in order to help establish or develop the topic of conversation.</td>
<td>A: I think she has a lot of money. B: But we don't know that? A: But her husband is very rich.</td>
</tr>
<tr>
<td><strong>Other-repetitions:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) repairing</td>
<td>The speaker repeats/ paraphrases some part of the other speakers utterance in order to help overcome a communication problem.</td>
<td>A: I think the fourth family. B: Not the fourth family, the third family.</td>
</tr>
<tr>
<td>(2) reacting</td>
<td>The speaker repeats/ paraphrases some part of the other speaker's utterance in order to help overcome a communication problem.</td>
<td></td>
</tr>
</tbody>
</table>
Negotiated interaction and language acquisition can be connected according to the following model proposed by Long (1983, p. 214):

![Diagram of Verbal Communication](image)

**Figure 3.4** Role of negotiated speech modification (Long, 1983, p. 214) (Source: Trawinski, 2005, p. 60)
3.3 Population and Sample of the Study

This study has been conducted at two different classes of the Department of Foreign Languages at Saida University, in Algeria. The population of the study was all the EFL students of the first year of LMD system. The students’ age ranged from 18 to 25. Their nationalities were Algerian, and their first languages were Arabic. The teacher who instructed the two groups is the researcher himself, a male non native speaker of English. He has been teaching English oral classes for four years as a part time teacher.

In order to choose two homogenous groups subjects of the study, the students were selected based on their scores in a timed test labeled “a test of verbal speed”. The test, which contains thirty different words, is taken from Lewis’ (1979) vocabulary book entitled “Word Power Made Easy: The Complete Handbook for Building a Superior Vocabulary”. The selection of two homogenous groups based on the subjects’ scores helps the researcher to control the characteristics or attributes they bring to the experiment because they are considered more similar between the two groups (Creswell, 2012, p.299).

The seven groups of first year university students were asked in no more than three minutes to decide whether the word in column B is the same (or approximately the same) in meaning as the word in column A; opposite (or approximately opposite) in meaning; or whether the two words are merely different. Finally the students were asked to circle S for same, O for opposite, and D for different (See Appendix 1).

The students are judged to have a performance scoring based on the following criteria: If the student has up to 10 correct answers, the score is 25 points. If he has 11–20 correct answers, the score is 50 points. If he has 21–25 correct answers, the score is 75 points, and if he has 26–30 correct answers, the score is 100 points (See Appendix 1,).

Finally, the two homogenous groups were selected to take part of the study based on the students’ performance in the timed test. The ranking of groups was compared by
calculating the ranking scores for each group and dividing by the number of participants. It has been revealed that the general mean reached by the students in the two groups were close which ranked them over the remaining groups. This, in turn helped to judge both groups to have closer similarity among the total population. Therefore, five groups didn’t take part in the study. However, the third group which scored immediately after the two selected groups were enrolled in the study to help the researcher undergoes a series of pilot studies on the remaining instruments.

During the ongoing study the two groups received two forms of instruction. One group was instructed with vocabulary in context and by definition enhanced with the use of pictures, while the other group was directed with a control condition to instruct vocabulary in context and by definition without using pictures. Only 44 students divided equally into two groups participated in this study. They tested into the fifth level of 4000 Essential English Words 5 (Level 5 in a six-level books by Paul Nation 2009). The vocabulary instruction aimed to help students to improve their vocabulary learning and retention through rich dialogic interactions around words and word meanings.

3.4 Instruments of the Study

The present study used different instruments that help investigate the research questions and hypotheses. These instruments are the followings: preliminary test, experimental instruments, tasks and group work interaction, instruments in relation to data transcription and coding interaction features, and questionnaires.

3.4.1 Preliminary test

Before starting the treatment the researcher developed and validated the preliminary (placement) test (See Appendix 2). (The students were tested into the fifth level of 4000 Essential English Words 5 (Level 5 in a six-level books by Paul Nation 2009). The preliminary (placement) test aimed at exploring the students’ actual English
level prior to the experiment. The placement test was adapted by the researcher from Nation’s (2009) 6 level books. Based on the students’ performance in the placement test it was revealed that the general mean reached by the students is in line with the 4th level.

To improve the students’ vocabulary level, the researcher administered the experiment based on the fifth level as a step forward in the students learning process. In here, the researcher is inspired with Krashen’s comprehensible input. With this goal in mind, the received input (just a bit more difficult \((i + 1)\)) is said to be made comprehensible with the aim to get the right output (i.e., the learned words).

The researcher calculated the score of each student in the preliminary test. Accordingly, he put the students in 6 small groups work with the attempt to make equilibrium between all the groups with different average performances according to their scores. This helps the researcher establish performance similarities among the small groups.

3.4.2 Experimental instruments, tasks and group work interaction

In order to examine the cause effect relationship between the independent variable called "vocabulary instruction" and the dependent variables called vocabulary learning and retention through groups work interaction, the researcher selected two homogenous groups of seven 1st year university EFL students based on their performance in the “timed test”: one was the experimental group instructed with vocabulary in context and by definition enhanced with the use of pictures, while the other group was directed with a control condition to instruct vocabulary in context and by definition without using pictures.

The tasks subject of the present study aimed to test the effect to which the instruction could have on students’ vocabulary leaning and retention through groups work interaction. However, the researcher didn’t declare the real purpose behind the study.
because the real intention was to help makes vocabulary learning occur incidentally. According to Laufer (2010) “learners are typically required to perform a task involving the processing of some information without being told in advance that they will be tested afterwards on their recall of that information”. (p. 18).

The term group work is defined as “a generic term covering a multiplicity of techniques in which two or more students are assigned a task that involves collaboration and self-initiated language”. (Brown, 2001, p.177). According to Brown (2001), the advantages of group work are broadly conceived as follows: 1. Group work generates interactive language. 2. Group work offers an embracing affective climate. 3. Group work promotes learner responsibility and autonomy. 4. Group work is a step toward individualizing instruction.

During the experiment that took place in one visit to each of the classes the students were instructed as follows:

- Each of the twelve target words was introduced using multiple-choice (six sentences) definitions and an example sentence. One definition was taken from Nation’s (2009) fifth level of 4000 Essential English Words and the others were adapted by the researcher from Contemporary Dictionary Definition: Vocabulary.com and Cambridge Advanced Learner's Dictionary 3rd Edition.

- Then, the students in each small group work were asked to choose the best definition for the underlined word. The Students spend eight to 10 minutes in each group work answering the questions. They were asked not to use dictionaries, phones or other materials apart from the handouts given to them. It is also worth mentioning that students were given printed materials and resources and asked to return them back immediately and that they were not allowed to capturing a screenshot.

- The target words were provided with scrambled colored pictures to help learners visualize the word as it is being used in the example sentence. Three pictures were taken
from Nation’s (2009) fifth level of 4000 Essential English Words and the others were adapted by the researcher by retrieving them from the internet. The students in the experimental group were asked to match those target words with the suitable definition and picture, and discuss their meanings for each small group work. These word/image associations aim to help students grasp the meaning of the word as well as recall the word later (Nation, 2009).

-Each small group was asked to discuss the meaning of two words out of the twelve ones. This technique is similar to what Brown (2001) called “problem solving and decision making”. According to Brown (2001) “problem-solving techniques center students' attention on meaningful cognitive challenges and not so much on grammatical or phonological forms” (p. 186).

The group work sessions were audio recorded using a microphone that was attached to the teacher. The group work interaction engendered in both experimental and control groups an audio recorded data of about 30 minutes for each. The aim of involving learners in group work activities through speaking helps them positively negotiate the meanings of unknown words with each other. In here, communication can be jointly constructed between the teacher and learners. In this vein, it is argued that by improving their classroom interactional competence (CIC), both teachers and learners will immediately improve learning and opportunities for learning (Walsh, 2012). Tasks that provoke participants to exchange information with each other foster interactional restructuring (cited in Ellis, 1991).

The idea to operationalise the concepts of retention of words is tied to degree of task involvement load (Laufer & Hulstijn, 2001). Laufer and Hulstijn (2001) pointed out that a high involvement load, i.e. the combination of the three factors in a vocabulary task: need, search and evaluation (a motivational-cognitive construct) is what helps have better word retention. Therefore, best results in the vocabulary tests are expected when accomplishing the task with the highest degree of involvement load. The degrees of value
for each component in the involvement load hypothesis are categorized gradually as (none, moderate, and strong) “need” (+N), and two cognitive components, “search” (+S) and “evaluation” (+E).

In line with the Hulstijn and Laufer's (2001) study, the degree of task involvement load both in experimental and control groups is described as follow: According to Laufer and Hulstijn (2001), the task requirements can be either externally imposed (i.e., moderate need, +N) or self-imposed (i.e., strong need, ++N)” (p. 14). Search is caused by the need to search for or retrieve the meaning or form of a particular word. It is defined as "the attempt to find the meaning of an unknown word when the meaning is not provided" which "may include a variety of strategies, such as contextual guessing, consulting a dictionary, or asking the teacher" (Martinez-Fernandez, 2008, p. 211 cited in Ghorbani & Rahmandoost, 2012). There is also “moderate evaluation” (+E), when words being evaluated must fit in a given context, and “strong evaluation” (++E), when words being evaluated must be combined with additional words in an original context created by the learner (cited in Leow, 2015).

In both groups need and evaluation are moderate (+N), (+E). First the component of need is moderate because it was externally imposed by the task, rather than by the students themselves. Second ‘evaluation’ is moderate because the students in order to decide which word best fits the given context in the multiple choice definition with or without pictures are required to check the meaning provided. However, search is higher in the experimental group than the control group because students in the experimental group are required to find the meaning of the target word and also to combine it or match it with the corresponding picture. Therefore, the three components are described in the control and experimental groups respectively as follows: [+N, +S, +E] and [+N, ++S, +E]. Accordingly, the index value is 3 (1+1+1) for control group and 4 (1+1+2) for experimental group (see table 3.4).
Table 3.4. Involvement Index in the Control and Experimental Conditions.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Conceptualisation</th>
<th>Involvement Load</th>
<th>Involvement Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context+ definition (Control condition)</td>
<td>Moderate involvement</td>
<td>Moderate need (1) Moderate search (1) Moderate evaluation (1)</td>
<td>1 + 1 + 1 = 3</td>
</tr>
<tr>
<td>Context+definition+ pictures (experimental condition)</td>
<td>High involvement</td>
<td>Moderate need (1) High search (2) Moderate evaluation (1)</td>
<td>1 + 2 + 1 = 4</td>
</tr>
</tbody>
</table>

3.4.2.1 Vocabulary pre-test

Before starting the treatment the pre-test was conducted to detect the initial differences between the two groups. It can be also argued that any differences between the two groups after finishing the treatment are due to the effect of vocabulary instruction with a specific experimental treatment through group interaction.

3.4.2.2 Vocabulary post-test

The post-test was applied four weeks after the treatment and six weeks after the pre-test. The students were tested individually. The aim was to recognize the effectiveness of both instructions and which one could contribute more in word learning through small groups’ interaction. This also implies the evaluation of vocabulary instruction effect on the
major features of interactional competence during interaction and students’ vocabulary learning.

The tasks in the pre and post tests were identical. The time allocated to perform the tests was 45 minutes. However, the order of tasks differed in the pre- and post- tests in order to exclude the extraneous factors such as order or practice effects from one side, and allow optimal comparison from the other side.

3.4.2.3 Vocabulary delay post-test

An unannounced delay post- test was applied two weeks after the post-test in order to measure the students’ retention of the target words in long-term memory. The tasks in the post and delay post tests were identical.

3.4.3 Data Transcription and coding interaction features

The transcripts of recordings are indispensible to help the researcher highlighting research interest as a system for building a database, and access to a range of interaction. Transcripts of recordings help analysts elaborate and highlight specific phenomena in texts (ten Have, 2007). Data transcribed helped the researcher to compare qualitatively and quantitatively the possible differences that might emerge from the students performances in the two classes, in terms of their interaction activities based on group work tasks.

Transcription has two main objectives. The first objective is to translate data quantitatively. The latter is similar to systematic observation and observation in suspended time where the main interest is to translate observations into numerical data which is usually done by a coding procedure. Kellett (2005) points out that systematic observation “requires a degree of pre-planning because researchers need to know what particular aspects of behaviour they are going to be looking at, rather than just observing generally” (p.49). Observation in suspended time requires observing collected data at a
later time and view them several times (Kellett, 2005). The second objective is to interpret data qualitatively based on CA procedures.

CA transcripts are aimed to “make what was said and how it was said available for analytic consideration” (ten Have, 2007: 32). The transcription system in the present project is adapted from Atkinson and Heritage (1984b, pp. ix-xvi), Johnson (1995), Slade and Thornbury (2006), vanLier (1988) (See Appendix 7). The aim being to represent the exchanges as they occurred in the classroom and the finer details of transcription were ignored, such as pitch direction and other paralinguistic phenomena. CA transcripts are helpful for the researcher to approach the authenticity of the original interaction through including interactional details, which however can be time-consuming (Jefferson, 2004; ten Have, 2004).

The study engendered a corpus of more than one hour’ audio recordings. After gathering the data and coding them according to Walsh's model and other patterns adapted by the researcher, they were quantified. Some were determined by the researcher later after finishing the transcription which are the students’ meaning negotiation with no teacher intervention and students interruptions. This coincides with the process of intersubjectivity and the emic perspective CA serves to achieve through sequenced actions participants perform in talk-in-interaction (Seedhouse, 2005). They were also analysed qualitatively based on the principles of conversation analysis (CA). The transcription system used in the present research is presented without integrating nonverbal sounds or any body language features.

The turns were numbered to differentiate the moves between the teacher and the students and between the students themselves. Therefore, each speaker turn is numbered after getting transcribed verbatim. The transcripts for each group along with its audio recording were reviewed many times in order to determine and to code the interactional features. The coding of the data is mainly accounted for all the interactional features \textit{(interactures)} adapted following Walsh’ (2011) Self-Evaluation of Teacher Talk
(SETT) model, some interactional modifications involved in the negotiated meaning based on Pica and Daughty 1985 a, and some other patterns adapted by the researcher such as students’ meaning negotiation with no teacher intervention (See Appendix 8).

However, it is worthy to mention that the researcher alone effectuated the coding scheme which is remarkably considered as one of the limitations of the research. In order to overstep and minimise the limitation marked by the researcher’s sole coding scheme, the triangulation of quantitative and qualitative data and analysis were carried out by the researcher. In this sense, using more than one method offers the possibility to minimise the limitations that are likely to occur due to the use of one method and therefore helps to achieve the results in a better way (Cohen et al., 2011). In addition, as mentioned by Galaczi (2014), complementing qualitative analysis with quantitative coding of the data helps redress the issue of generalisability and representation that is considered one of main caveats often associated with qualitative analysis (p.558).

3.4.3.1 Conversational analysis CA

Conversational Analysis CA is useful to be applied within such work of classroom discourse in order to understand the interaction within context. This is assisted with what Biber et al (1998) concludes, corpus related approaches should not be limited to only describing quantitative patterns of linguistic features. CA is highly useful as an analytical endeavour that explores the sequential order in talk-in-interaction by examining language as social action (Hutchby and Wooffitt 2008; Goodwin and Heritage, 1990; ten Have, 2007; Wooffitt, 2005 cited in Yang, 2011).

Seedhouse (2005) points out, that CA serves to achieve the purpose of uncovering the ordered rules underlying interactional organisation from an emic perspective and to understand the process of intersubjectivity through sequenced actions participants perform in talk-in-interaction. In the same perspectives, Groom and Littlemore (2011) consider
conversation analysis as “arguably the most rigorous (and certainly the most popular) of the currently available approaches to emic analysis in applied linguistics” (p. 82).

Through the use of audio or video recordings and then transforming them into transcripts, the researcher therefore, with the attempt to achieve an emic perspective, examines both the context-free construction of talk as well as the implementation of sequential organisation which is context-sensitive (Seedhouse, 2005). CA approach is useful to portray the subtle relationship between interactional practices and pedagogy in classroom contexts.

Ten Have (2007, p.9-10) delineated the major differences of CA in contrast to other approaches as follows:

- Details and subtleties of human interaction and interactional activities can best be approached through CA more than most other approaches.

- CA is less ‘artificial’ because it favors naturally occurring data such as ‘situated’ achievement that are studied in interviews, or external forces rather than ‘experimental’ or ‘researcher provoked’ ones which are a product of personal intentions.

- CA considers how people interact in organizational and procedural manner as an emergent collectively organized event rather than a series of individual acts. Therefore, CA analytic purpose is not to explain why people act as they do, but rather to explicate how they do it.

- CA can be seen as a study of language-as-used that is most concerned with oral language as actually used interactionally in ‘natural’ situations.

3.4.3.2 Validity

CA is used to analyse data qualitatively in relation to what occurs naturally regarding classroom interaction. CA helps the researcher to interpret the patterns of interaction based on excerpts of the transcribed data. For a realist content analysis in discourse analysis the text is presented by the researcher so that the reader could contest
the interpretation given and validate, therefore, the researcher’s interpretation (Yardley and Bishop, 2008, p.363). However, qualitative research requires certain forms of validity. According to Seedhouse (2004) there are four types of validity: internal, external, ecological, and construct validity.

First, in terms of internal validity, Seedhouse (2005) argues that conversation analysts “cannot make any claims beyond what is demonstrated by the interactional detail without destroying the emic perspective and hence the whole internal validity of the enterprise” (p. 255 cited in Warayet, 2011). Internal validity relates to the soundness, integrity, and credibility of findings which requires investigating data from the participants’ perspectives rather than from that of the analysts (Warayet, 2011). In addition, carrying out inductively the qualitative research based on the participants’ behavior rather than on existing theories ensures the internal validity (Alshenqeeti, 2014, p.99).

Second, external validity is concerned with generalisability or “the extent to which findings can be generalised beyond a specific research context” (Seedhouse, 2004, p. 256; see also Bryman, 2008, p.33 cited in Warayet, 2011). The generalisable description as rationally organised in relation to institutional goals is derived from the fact that CA studies of institutional discourse implies the organisation of micro-interaction in an institutional setting (Peräkylä, 1997, quoted in Seedhouse, 2004, p. 256, see Warayet, 2011). In this sense, as revealed by Seedhouse’s (2004) study of an institutional setting, a reflexive relationship between pedagogy and interaction is a generalisable feature of L2 classroom interaction (cited in Warayet, 2011). Additionally, the generalisability and representation issue associated with the qualitative analysis in CA is supported with quantitative coding of the data (Galaczi, 2014).

Third, ecological validity concerns “whether findings are applicable to people’s everyday life” (Seedhouse, 2004, p. 256 cited in Warayet, 2011). The validity of CA depends more on recordings of naturally occurring talk in its authentic social setting rather than on pedagogical recommendations produced by theorists. For example, the current
study or Seedhouse’s (2004) and Warayet’s (2011) studies rely on describing what participants do during classroom interaction.

Construct validity, as a fourth type, in relation to CA relies on the interactional features analysis that is done emically rather than etically. “The emic approach investigates how local people think” (Kottak, 2006), i.e. from the perspective of the subject being investigated in contrast to the view of what comes from the perspectives of the observer, i.e., etic (Lliescu, 2017, p.30), or insider’s perspective (Hutchby and Wooffitt 1998). In this perspective, Seedhouse (2004, 2013) notes, “the ‘construct’ of the TCU ... is an interactant’s construct rather than an analyst’s one, and it is not etically specifiable” (Seedhouse 2004, p. 257 quoted in Warayet, 2011, p.114), and “CA is not a system of etically specifiable units and rules to be followed in a regulative sense” (Seedhouse, 2013, p.99). In here, external factors or the analyst’s perspective do not effect data being investigated (Warayet, 2011).

3.4.3.3 Reliability

In relation to CA findings, reliability is tied to authenticity and credibility of data (Bogdan and Biklen, 2006). With regards to reliability related to interactional competence, Shane (2015) claims that “reliability is derived from what is chosen to be recorded, the technical quality of what is recorded and how adequate a transcript is with regard to the detail of interactional features that are noted” (p.76). The group work sessions were audio recorded using a microphone that was attached to the teacher and a sophisticated tape recorder placed in the centre of the classroom (a Sumsung phone “S4”) to assure the good quality of the recorded interaction sessions being recorded. The interaction sessions were well recorded due also to the nature of the classroom where echo sounds were eliminated. The students in both groups were given a warm-up session before starting the recording in order to make them feel comfortable.
The coding was carried out by using the interactional features (interactures) adapted following Walsh’ (2011) Self-Evaluation of Teacher Talk (SETT) model, some interactional modifications involved in the negotiated meaning based on Pica and Daughty 1985 a, and some other patterns determined later by the researcher after finishing the transcription such as students’ meaning negotiation with no teacher intervention and students questions. The codes are applied reliably to the transcript segments by recoding them after a delay to check for ‘drift’ in code assignation (see Stages of verbal protocol analysis, Ormerod and Ball, 2008, p. 563).

3.4.4 Questionnaires

Two questionnaires (See Appendix 6) were administered to gather data from a convenience sample of university students subjects of the study at Saida University. The items of the questionnaires were prepared by the researcher. The participants were selected from the first year (LMD University System).

The questionnaires were used by the researcher to collect the data applying a five point Likert scale. The purpose of these questionnaires is to reveal the students’ attitudes for both the control and the experimental groups regarding the two instruction conditions that help answer the final research question. The questionnaires were given to the students after the delay post-tests. Twenty two students in each group answered the questionnaires.

The researcher developed and validated the questionnaires after conducting a pilot study with the third group. Twenty minutes maximum were estimated as sufficient to answer the questionnaire. The researcher used English questionnaire items and explains them to the students when it was necessary. The first part of the questionnaire requires obtaining demographic data such as gender, age. The second part consists of five axes 1. Vocabulary Learning Attitudes 2. Vocabulary learning Attitudes based on context 3. Attitudes in relation to cognitive and mental efforts involved in the task 4. Attitudes in relation to memorization context 5. Attitudes in relation to classroom interactional
competence. The latter, consists of statements about the interactional features in teacher talk that are most effective in facilitating learners’ interactional competence in classroom talk in relation to EFL context.

A five-point Likert scale was used for the subjects' responses on the statements. The purpose of Likert scale is to indicate the strength of agreement or disagreement with the statements by selecting the appropriate number. Each statement gave five options:

1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly Agree

3.4.4.1 Validity of the questionnaires

The questionnaires were exposed to the supervisor and other English teachers from other universities whose participation is tremendously significant for establishing content validity of the questionnaires. The contributors were expected to add some changes so that the questionnaires can be firmly enhanced before establishing a final form.

3.4.4.2 Reliability of the questionnaires

Reliability is equivalent to the consistency of a test. Reliability refers to the consistency and precision of a measurement procedure. A test is considered reliable if we get the same results repeatedly. If the test has a high co-efficient of reliability, errors of measurement are reduced to a minimum. In the present study, a Cronbach Alpha coefficient was used to establish the internal reliability of the questionnaires and to check whether or not the results will reveal stability and consistency in the answers. According to the present study a good percentage of reliability with 0.873 has been established which indicates that the questionnaire is valid and the study is subject of reliable analysis.
3.5 Data Collection Procedures

The database for the present study consisted mainly of text and words selection in addition to the various vocabulary tests (pre-test, post-test, and delayed posttest) that were administered to the participants. However, a series of pilot studies were underwent on the various instruments (preliminary test, experimental tasks pre- post tests) before launching the study.

3.5.1 Piloting the instruments and the various research procedures

One of the best ways to ensure the reliability and validity of the study is to pilot the research instruments and procedures before launching the project (Dornyei, 2007). From his side, Dornyei (2007) endorsed the fact that “Piloting is more important in quantitative studies than in qualitative ones, because quantitative studies rely on the psychometric properties of the research instruments” (p.75). This can be best viewed through questionnaire design as reported by Sudman and Bradburn (1983, p. 283): “if you do not have the resources to pilot-test your questionnaire, don't do the study” (cited in Dornyei, 2007).

In the present study, the researcher underwent a series of pilot studies on the various instruments (preliminary test, experimental tasks pre- post tests) with the third group which scored immediately after the two selected groups. The different test instruments were also piloted in terms of timing in order to determine how much time is needed for students to perform the tests.

As far as the questionnaire is concerned, the researcher piloted its items based on the third group’s responses. This helped the researcher establish the questionnaire’s reliability which was estimated at 0.83 / according to Cronbach Alpha coefficient.
3.5.2 Text and words selection

After deciding to administer the experiment based on the fifth level from Nation’s (2009) 6 level books, the researcher chose the text that came from thirty topics (units). The students from both groups were given a list of thirty topics and were asked to rate them on a five point scale for selection. Then, the general mean for both groups was in line more with three topics: (9, 16, 20). The researcher, then, asked the students to vote for the topic of most interest among the three. Topic number 9 entitled “The Weaving Machine” (See Appendix 3) was determined as the most suitable one, for it was selected by the majority of students.

Unit number nine from which the selected text came covered 20 words subject of the study. Only 12 words have been selected among the twenty: Prestige- fad-- diminish-- obsolete-- spectacular-- managerial– refute -drawbacks – benevolent– medieval- impose-- dependence. The twelve words were judged by the researcher to be unfamiliar to the two groups based on a rapid test. The same rapid test was administered as a pilot to the third group in order to determine the average time in which the students can perform the test.

The researcher gave the students in each group the twenty words printed in piece of paper and asked them to select twelve words the most unfamiliar for them in no more than two minutes based on two point scale (familiar, unfamiliar). A final set of the 12 target words was selected as the most unfamiliar for both groups. The importance of selecting these unfamiliar words is that the target words are designed to recognize the students’ words learning with regard to different tasks and their retention after the treatment. Therefore, the target words are suggested to be unknown for the majority of the students.

The choice of instructing the target words is based on frequency corpora of 600 words in each level of Paul’s (2009) six books. They are considered as the most useful words in English. The choice of these words is also motivated by
considering them taken by analysis of a collection of English course books from various levels in the primary, secondary and tertiary school systems. The choice of these words is justified by high occurrence range in different levels of these materials (Paul, 2009).

The motives of accepting the choice of the aforementioned words is also justified by the following characteristics:
1 The utility and value of the words in both spoken and written English.
2 The chosen words are highly-frequent (high-frequency words) which permits students to take effort in learning the words which is well repaid because of the chance and the number of times learners have while encountering or using them.
3 The target words are part of books which cover a large proportion of the words in any spoken or written text because they cover at least 90% of the words in conversation, at least 80% of the words in newspapers and academic texts, and at least 90% of the words in novels (see Introduction in Paul, 2009).

3.5.3 Administering the vocabulary pre-test, post-test, and delayed posttest

Five vocabulary-learning tasks were designed with the twelve target words before and after the instruction. (See Appendix 3). The time interval between the pre-test and post-test was six weeks and two weeks between the post and delayed posttests. The treatment was conducted two weeks after the pretest. Pre-post tests and delayed posttests used identical tasks. However, the order of tasks differed in the pre- and post-tests. This way of ordering and organizing tasks differently in both tests helps eliminate extraneous factors such as order or practice effects from one side, and allow optimal comparison from the other side.

The students were asked to perform the tests with time limits piloted before with the third group. The time allocated was 40 minutes. The pilot test helped the researcher establish the reliability of the test.
The five vocabulary-learning tasks were administered with the twelve target words. The aim was to measure the students’ vocabulary learning with regards to: (task 1) sentence comprehension with four target words: refuted - medieval- impose- dependence, (task 2) oppositeness with four target words: managerial- Prestige--drawbacks- obsolete, (task 3) synonymy with four target words: fad- diminish - spectacular- benevolent, (task 4) filling the gaps in sentences with the twelve target words, and (task 5) cloze test: filling the gaps in the text with the twelve target words.

The sentences in the tasks are different from those occurred in the treatment. This helps students to recall the meanings of the words and suit them to the context of the tasks. This, in turn, helps students understand the target words according to different uses.

The first three tasks were taken as they are from Nation’s (2009) fifth level of 4000 Essential English Words except the target word “dependence” in the first task which instead substituted the word reliance used originally by Nation (2009) (see the sentence “Children’s reliance on their parents decreases as they get older” used by Nation (2009)). The other tasks were adapted by the researcher. The fourth task used sentences adapted from the internet and dictionary resources where the students were asked to fill the gaps in sentences with the twelve target words. The researcher in the fifth task used the original text “The weaving Machine” as a cloze test. The term cloze took it’s origin from closure in Gestalt theory. According to this theory, individuals perceive objects as being whole when they are not complete; For example, having missing parts in a whole picture would lead our perception to fill in the visual gap. The students in the cloze test were asked to fill the gaps in the text with the twelve target words.

The students while replacing the missing words are required to understand the context in order to determine the correct vocabulary belonging to the original text. The twelve missing words were deleted selectively because they were judged by the researcher to be unfamiliar to the two groups based on a rapid test (see text and words selection).
3.6 Data Analysis

The collected data of the interaction were analyzed and interpreted both qualitatively and quantitatively. With regards to qualitative analysis, the researcher selected turns and extracts of classroom discourse tied to interactional features as evidences of interactional competence. In here, the qualitative data in relation to classroom discourse are conditioned with a selection of appropriate choices as evidences to illustrate one’s argument (Christie, 1995, 2002; Gibbons, 2003).

As far as the quantitative analysis of interaction is concerned, each interactional turn or move gathered from the data was categorized under one of the types of interactional features (interactures). Then, the frequency of each interactional feature for both groups was counted and calculated accurately based on word count that are systematically used in Microsoft Word (using every single word without blank space, or extra data such researcher’s comments and nonverbal sounds) with regards to the number of words in relation to the total of running words for each group transcript.

Data in relation to scoring students’ vocabulary learning and retention were analysed after using pre, post and delayed posttests. The researcher used SPSS techniques and means to analyse the data collected. Scores in pre tests and post tests were calculated and compared to determine the differences between the two group conditions in the different tasks in relation to vocabulary learning. Scores in post and delayed post tests were calculated and compared to determine the retention of words in the experimental group. Therefore, Scores in the different tests were calculated and compared to determine whether or not there are any significant effects of the applied instruction on the performances of the students.

In order to test for moderation (interaction effect) the researcher considers the interaction between vocabulary instruction and interactional competence. In here, the researcher used the SPSS version of PROCESS. The latter was used to test moderation
using a regression in which the outcome (vocabulary learning for the experimental group) is predicted from a predictor (using vocabulary instruction for the experimental group), the moderator (interactional competence that occurred in the experimental group as a result of interaction between the teacher and students) and the interaction of these variables.

The SPSS version of PROCESS helps make predictors to be centred before the analysis. The interaction of the independent variable (predictor) and the moderator variable is equivalent to the scores on the two variables multiplied together. Using regression helps the researcher to check the significance of interaction effect and to decide if moderation exists or not. Then, if moderation is present, the analysis is followed up with simple slopes analysis. The latter helps the researcher to determine the relationship between the predictor and outcome at low, mean and high levels of the moderator.

The data obtained through the questionnaires were analysed with the use of SPSS techniques and the bootstrap method. The researcher used bootstrap method to estimate parameters and confidence intervals, and to compare the mean responses to questionnaires scales. The researcher placed the answers filled out in the questionnaires in tables with means and percentages of students' responses. Then these tables were numbered and given titles. This way permitted the researcher to analyse the questionnaires neatly and appropriately according to a well planned and organised method.

The researcher depends on statistical procedures such as frequencies, percentages and statistical means in analysing and interpreting the data using SPSS techniques. Furthermore, each table is followed by a commentary in an attempt to shed light on the important findings that drew the readers' attention to important issues.

3.7 Summary

This chapter gives a clear overview on the methodology followed in carrying out the present study. It gives details and information with respect to population, the sample and how the participants were selected. It also describes the instruments and tools used, the procedure adopted for data collection, and statistical techniques used for analysing data.
Chapter Four: Statistical Analysis and Results

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4.2 Qualitative Data Analysis and Results.................................................................171
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CHAPTER FOUR: STATISTICAL ANALYSIS AND RESULTS

4.0 Introduction

This chapter reports the results of the collected data related to the questions raised by the study. Descriptive and inferential statistics were used to analyse the students’ scores in post and delayed post tests. The students’ scores were calculated and compared for both groups and submitted as dependent variables. The aim to use statistics is to determine whether or not there were significant differences in the different tasks in relation to vocabulary learning between the two groups’ conditions, and retention of words in the experimental group. The interaction effect was tested with the use of SPSS version of PROCESS procedure to check interactions in regression. Thus, regression was used to check whether or not the effect of vocabulary instruction on vocabulary learning was affected by interactional competence.

Students' responses to the questionnaires for both groups were basically treated using the Statistical Package for Social Sciences (SPSS) 20 software. Therefore, percentages, frequencies, mean, standard deviation, Cronbach Alpha coefficient, Pearson correlation, and T-Test were calculated and used to answer the research question and to test the research hypothesis in relation to students’ attitudes and the correlations. The findings of the questionnaires are described, narrated and illustrated in tables. Tables have the same reference established by the researcher applying the SPSS outputs (see table 4.1, for example, for the sake of avoiding repetition). The aim to use statistics is to determine whether the observed frequencies had statistically significant differences with the expected ones or they had just occurred by mere chance.

This chapter also treats and analyses the qualitative data in terms of turns and interaction analysis. The qualitative data are also treated quantitatively in terms of codes and frequency counts. This division in research analysis reflects the mixed approach mentioned earlier in the study design based on both quantitative and qualitative data.

4.1 Quantitative Data Analysis and Results

Hypothesis 1

Hₒ There is no statistically significant difference between the mean scores of the experimental and the control groups in the total vocabulary learning scores across all tasks
**H1** There is a statistically significant difference between the mean scores of the experimental and the control groups in the total vocabulary learning scores across all tasks

**Table 4.1.** T-Test Group Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>experimental</td>
<td>22</td>
<td>16.68</td>
<td>9.678</td>
<td>2.063</td>
</tr>
<tr>
<td>control</td>
<td>22</td>
<td>15.18</td>
<td>8.342</td>
<td>1.778</td>
</tr>
</tbody>
</table>

**Reference:** Established by the researcher applying the SPSS outputs

**Table 4.2.** Independent Samples Test: Means of the experimental and control groups in the pre tests before running the treatment

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1,124</td>
<td>.295</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.551</td>
<td>41,106</td>
</tr>
</tbody>
</table>

A Levene’s test was conducted to check the homogeneity of the variances of the two groups on the pre test. With $F (1,124) = .295$, $p = .551$ (two-tailed), it was decided that there was no statistically significant difference between the variances of the two groups on the pre test before conducting the treatment. In addition, an independent sample $t$-test was conducted to ensure the homogeneity of the two groups’ mean scores on the two groups pre tests. With the Sig (2-Tailed) value = .585, it was confirmed that there was no
significant difference between the means of the experimental and control groups in the pre tests before running the treatment.

**Table 4.3.** Bootstrap Specifications pre-post tests for experimental and control groups

<table>
<thead>
<tr>
<th>Sampling Method</th>
<th>Simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Samples</td>
<td>1000</td>
</tr>
<tr>
<td>Confidence Interval Level</td>
<td>95.0%</td>
</tr>
<tr>
<td>Confidence Interval Type</td>
<td>Percentile</td>
</tr>
</tbody>
</table>

**Table 4.4.** T-Test: Group Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>Statistic</th>
<th>Bootstrap$^a$</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bias</td>
<td>Std. Error</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>22</td>
<td>20,18</td>
</tr>
<tr>
<td>post test</td>
<td>Mean</td>
<td>7,713</td>
<td>1,644</td>
</tr>
<tr>
<td>experimental</td>
<td>Std. Deviation</td>
<td>1,164</td>
<td>14,86</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>22</td>
<td>16,68</td>
</tr>
<tr>
<td>control</td>
<td>Mean</td>
<td>7,530</td>
<td>1,605</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td></td>
<td>1,164</td>
<td>15,18</td>
</tr>
<tr>
<td>Std. Error</td>
<td>Mean</td>
<td>2,063</td>
<td>8,342</td>
</tr>
<tr>
<td>Std. Error</td>
<td>Mean</td>
<td>1,778</td>
<td>1,164</td>
</tr>
</tbody>
</table>

$^a$. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples
Table 4.5. Independent Samples Test: homogeneity of variance

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>post test</td>
<td>.009</td>
<td>.926</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.1,124</td>
<td>.295</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.551</td>
<td>.585</td>
</tr>
</tbody>
</table>

In table 4.5 the Levene’s test for equality of variances indicates that the significance value is 0.926. The latter is greater than the significance level 0.05 which scientifically means that the variability in the two conditions is not significantly different. Therefore, there is homogeneity of variance.

Table 4.6. Bootstrap for independent samples test

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
<th>Bootstrapa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bias</td>
<td>Std. Error</td>
</tr>
<tr>
<td>post test</td>
<td>Equal variances assumed</td>
<td>5,318</td>
</tr>
</tbody>
</table>

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In the table 4.6 related to Bootstrap for independent samples test, the Sig (2-Tailed) value is 0.022 which is less than the significance level (0.1). This result indicates that the difference in means is statistically significant. Because of this, we reject the null hypothesis; therefore, there is a statistically significant difference between the mean scores of the experimental and the control groups in the total vocabulary learning scores across all tasks.

Sub-hypothesis 1

2. H1 There is a statistically significant effect of vocabulary instruction on the students’ vocabulary learning in favour of the experimental group.

Table 4.7. T-Test for the experimental group: paired samples statistics

<table>
<thead>
<tr>
<th>Pair</th>
<th>pre test</th>
<th>post test</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.86</td>
<td>3.32</td>
<td>1.68</td>
<td>2.27</td>
<td>2.05</td>
<td>2.45</td>
</tr>
<tr>
<td></td>
<td>post test1</td>
<td>post test2</td>
<td>post test3</td>
<td>post test4</td>
<td>post test5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.86</td>
<td>3.32</td>
<td>1.68</td>
<td>2.27</td>
<td>2.05</td>
<td>2.45</td>
</tr>
<tr>
<td>2</td>
<td>5.14</td>
<td>6.18</td>
<td>5.00</td>
<td>5.91</td>
<td>5.14</td>
<td>5.00</td>
</tr>
<tr>
<td>3</td>
<td>2.86</td>
<td>3.32</td>
<td>1.68</td>
<td>2.27</td>
<td>2.05</td>
<td>2.45</td>
</tr>
<tr>
<td>4</td>
<td>5.14</td>
<td>6.18</td>
<td>5.00</td>
<td>5.91</td>
<td>5.14</td>
<td>5.00</td>
</tr>
<tr>
<td>5</td>
<td>2.86</td>
<td>3.32</td>
<td>1.68</td>
<td>2.27</td>
<td>2.05</td>
<td>2.45</td>
</tr>
</tbody>
</table>

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples
Table 4.8. T-Test for the experimental group: paired samples correlations

<table>
<thead>
<tr>
<th>Pair</th>
<th>Differences</th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>pre test1 &amp; post test1</td>
<td>22</td>
<td>-.003</td>
<td>.989</td>
</tr>
<tr>
<td>Pair 2</td>
<td>pre test2 &amp; post test2</td>
<td>22</td>
<td>.690</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 3</td>
<td>pre test3 &amp; post test3</td>
<td>22</td>
<td>.851</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 4</td>
<td>pre test4 &amp; post test4</td>
<td>22</td>
<td>.909</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 5</td>
<td>pre test5 &amp; post test5</td>
<td>22</td>
<td>.880</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4.9. T-Test for the experimental group: paired samples test

<table>
<thead>
<tr>
<th>Pair</th>
<th>Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>pre test1 - post test1</td>
<td>-1.800</td>
<td>21</td>
<td>.086</td>
</tr>
<tr>
<td>Pair 2</td>
<td>pre test2 - post test2</td>
<td>-3.245</td>
<td>21</td>
<td>.004</td>
</tr>
<tr>
<td>Pair 3</td>
<td>pre test3 - post test3</td>
<td>-2.881</td>
<td>21</td>
<td>.009</td>
</tr>
<tr>
<td>Pair 4</td>
<td>pre test4 - post test4</td>
<td>-2.978</td>
<td>21</td>
<td>.007</td>
</tr>
<tr>
<td>Pair 5</td>
<td>pre test5 - post test5</td>
<td>-2.339</td>
<td>21</td>
<td>.029</td>
</tr>
</tbody>
</table>

There are differences statistically significant in pairs 2, 3, 4, 5. The Sig (2-Tailed) value is respectively 0.004, 0.009, 0.007, and 0.029 which is less than the significance
level (0.05) for each. There is also a significant statistical difference in pair 1 with Sig (2-Tailed) value (0.086) which is less than the significance level (0.1).

**Table 4.10.** T-Test: paired samples statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre test</td>
<td>16.68</td>
<td>22</td>
<td>9.678</td>
<td>2.063</td>
</tr>
<tr>
<td>post test</td>
<td>20.18</td>
<td>22</td>
<td>7.713</td>
<td>1.644</td>
</tr>
</tbody>
</table>

**Table 4.11.** T-Test: paired samples correlations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>22</td>
<td>.965</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Table 4.12.** T-Test: Paired Samples Test

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td>95% Confidence Interval of the Difference</td>
<td>Lower</td>
</tr>
<tr>
<td>Pair 1</td>
<td>pre test - post test</td>
<td>-3.500</td>
<td>.644</td>
<td>-4.839</td>
</tr>
</tbody>
</table>

With the Sig (2-Tailed) value = .000 (see table 4.12.), it was confirmed that there was a significant difference between the mean scores of the experimental group before and after the treatment. This result implies the rejection of the null hypothesis. Therefore, we accept the alternative hypothesis which indicated the existence of a statistically significant difference between the total mean scores of the experimental group across all the tasks before and after the treatment. This means the existence of statistically significant effect of vocabulary instruction on the students’ vocabulary learning in favour of the experimental group.
**Hypothesis 2**

**Ho** There is no difference of statistical significance in the learners’ long-term vocabulary retention across all tasks in the experimental condition.

**H1** There is a difference of statistical significance in the learners’ long-term vocabulary retention across all tasks in the experimental condition.

**Bootstrap**

**Table 4.13.** Bootstrap specifications for the experimental group: paired samples statistics (between post and delay tests)

<table>
<thead>
<tr>
<th>Sampling Method</th>
<th>Simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Samples</td>
<td>1000</td>
</tr>
<tr>
<td>Confidence Interval Level</td>
<td>95,0%</td>
</tr>
<tr>
<td>Confidence Interval Type</td>
<td>Percentile</td>
</tr>
</tbody>
</table>

**Table 4.14.** T-Test for the experimental group: paired samples statistics (between post and delay tests)

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Bootstrap&lt;sup&gt;a&lt;/sup&gt;</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bias</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Mean</td>
<td>20,18</td>
<td>1,57</td>
</tr>
<tr>
<td>N</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>7,713</td>
<td>-.243</td>
</tr>
<tr>
<td>Std. Error</td>
<td>1,644</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>20,00</td>
<td>1,61</td>
</tr>
<tr>
<td>N</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>7,886</td>
<td>-.239</td>
</tr>
<tr>
<td>Std. Error</td>
<td>1,681</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples
Table 4.15. Paired samples correlations for the experimental group (between post and delay tests)

<table>
<thead>
<tr>
<th>Pair</th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
<th>Bootstrap for Correlation(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bootstrap for Correlation(^a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bias</td>
<td>Std. Error</td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
<td>22</td>
<td>,995</td>
<td>,000</td>
<td>,003</td>
</tr>
</tbody>
</table>

\(^a\)Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Table: 4.16. Paired samples test (for experimental group between post and delay tests)

<table>
<thead>
<tr>
<th>Pair</th>
<th>Paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error</td>
<td>95% Confidence Interval of the Difference</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
<td>,182</td>
<td>,795</td>
<td>,169</td>
<td>-,171</td>
</tr>
<tr>
<td></td>
<td>post test - delaypost test</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table: 4.17. Bootstrap for paired samples test

<table>
<thead>
<tr>
<th>Pair</th>
<th>Mean</th>
<th>Bootstrap(^a)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bias</td>
<td>Std. Error</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
<td>,182</td>
<td>,015</td>
<td>,161</td>
</tr>
<tr>
<td></td>
<td>post test - delaypost test</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

In the table 4.17 related to Bootstrap for paired samples test, the Sig (2-Tailed) value is 0.309 which is above the significance level (0.1). This result indicates that the difference in means is not statistically significant. Because of this, we accept the null hypothesis; therefore, there is no difference of statistical significance in the learners' long-term vocabulary retention across all tasks in the experimental condition.
<table>
<thead>
<tr>
<th></th>
<th>post test</th>
<th>pre test1</th>
<th>pre test2</th>
<th>pre test3</th>
<th>pre test4</th>
<th>pre test5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>44</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

According to the results shown in table 4.18 the correlation at the 0.05 level is not statistically significant only between pretest (Task1) and pretest (Task2), pretest (Task3) and pretest (Task2). Accordingly, we discover a statistically significant correlation between all the scores in the pre tests of the remaining tasks. The table also reveals a statistical significant correlation between the mean score of the experimental group in the post test and the pre test of all the five tasks.
Calculation of Interactional competence (IC) across all tasks in the experimental group

Before testing the third hypothesis and running correlation and regression, interactional competence for each task in the experimental group was calculated according to the following equation:

Interactional competence (IC) task1 = Zpretest task1 * Zposttest task1.

Interactional competence (IC) task2 = Zpretest task2 * Zposttest task2.

Interactional competence (IC) task3 = Zpretest task3 * Zposttest task3.

Interactional competence (IC) task4 = Zpretest task4 * Zposttest task4.

Interactional competence (IC) task5 = Zpretest task5 * Zposttest task5.

Correlations

Table 4.19. Correlations between the mean score of the post tests, pre test 1, and Interactional competence (IC1)

<table>
<thead>
<tr>
<th></th>
<th>post test</th>
<th>pre test1</th>
<th>IC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>post test</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>,540**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>,000</td>
<td>924</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>pre test1</td>
<td>Pearson Correlation</td>
<td>,540**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>,000</td>
<td>771</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>IC1</td>
<td>Pearson Correlation</td>
<td>-,022</td>
<td>,066</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>,924</td>
<td>,771</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Table 4.20. Correlations between the mean score of the post tests, pre test 2, and Interactional competence (IC2)

<table>
<thead>
<tr>
<th></th>
<th>post test</th>
<th>pre test2</th>
<th>IC2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>1</td>
<td>,670**</td>
<td>,618**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,000</td>
<td>,002</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>,670**</td>
<td>1</td>
<td>,298</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,000</td>
<td>,178</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>,618**</td>
<td>,298</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,002</td>
<td>,178</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.21. Correlations between the mean score of the post tests, pre test3, and Interactional competence (IC3)

<table>
<thead>
<tr>
<th></th>
<th>post test</th>
<th>pre test3</th>
<th>IC3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>1</td>
<td>,501**</td>
<td>,323</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,001</td>
<td>,143</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>,501**</td>
<td>1</td>
<td>,248</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,001</td>
<td>,265</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Pearson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>,323</td>
<td>,248</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,143</td>
<td>,265</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Table 4.22. Correlations between the mean score of the post tests, pre test4, and Interactional competence (IC4)

<table>
<thead>
<tr>
<th></th>
<th>post test</th>
<th>pre test4</th>
<th>IC4</th>
</tr>
</thead>
<tbody>
<tr>
<td>post test</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>( .887^{**} )</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>pre test4</td>
<td>Pearson Correlation</td>
<td>( .887^{**} )</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>IC4</td>
<td>Pearson Correlation</td>
<td>( .704^{**} )</td>
<td>( .689^{**} )</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.23. Correlations between the mean score of the post tests, pre test5, and Interactional competence (IC5)

<table>
<thead>
<tr>
<th></th>
<th>post test</th>
<th>pre test5</th>
<th>IC5</th>
</tr>
</thead>
<tbody>
<tr>
<td>post test</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>( .906^{**} )</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>pre test5</td>
<td>Pearson Correlation</td>
<td>( .906^{**} )</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.006</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>IC5</td>
<td>Pearson Correlation</td>
<td>( .596^{**} )</td>
<td>( .563^{**} )</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.003</td>
<td>0.006</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Hypothesis 3

H0 There is no statistically significant interaction effect between the independent variable (Vocabulary Instruction) and moderator variable (Interactional Competence) on dependant variable (the students’ vocabulary learning).

H1 There is a statistically significant interaction effect between the independent variable (Vocabulary Instruction) and moderator variable (Interactional Competence) on dependant variable (the students’ vocabulary learning).

This hypothesis has been tested with the use of SPSS version of PROCESS procedure to check interactions in regression. The file process.spd is downloaded from Andrew Hayes’ web-site: http://www.afhayes.com/spss-sas-and-mplus-macros-and-code.html. The SPSS version of PROCESS helps make predictors to be centred before the analysis. The interaction of the independent variable (predictor) and the moderator variable is equivalent to the scores on the two variables multiplied together. Using regression helps the researcher to check the significance of interaction effect and to decide if moderation exists or not. This helps testing the null hypothesis that there is no significant interaction effect between vocabulary instruction and interaction on the students’ vocabulary learning, versus the alternative hypothesis that there is statistically significant interaction effect of vocabulary instruction and interactional competence on the students’ vocabulary learning.

The statistical model is written according to the following equation:

\[ Y_i = (b_0 + b_1X_1i + b_2X_2i + \ldots + b_nX_{ni}) + \varepsilon_i. \]

Therefore, the basic regression model would be: Vocabulary learning \( i = (b_0 + b_1 \text{ Vocabulary instruction}_i + b_2 \text{ Interactional competence}_i) + \varepsilon_i \)

In order to test for moderation we need to consider the interaction between vocabulary instruction and interactional competence. The \( b \) parameters have a specific meaning when including an interaction term in the model: for the individual predictors they represent the regression of the outcome on that predictor when the other predictor is zero. In the equation cited above, \( b_1 \) represents the relationship between vocabulary learning and vocabulary instruction when interactional competence is zero, and \( b_2 \)
represents the relationship between vocabulary learning and interactional competence when vocabulary instruction have a score of zero.

To test whether W moderates the effect of X (vocabulary instruction) on Y (vocabulary learning) the following regression model is used based on different stages.

Model: 1
Y: (vocabulary learning)
X: (vocabulary instruction)
W: Interactional competence

Sample Size: 22

Outcome variable: y (vocabulary learning)

Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.9738</td>
<td>.9482</td>
<td>3.5919</td>
<td>109.9327</td>
<td>3.0000</td>
<td>18.0000</td>
<td>.0000</td>
</tr>
</tbody>
</table>

Model

- Constant: 19.1824 ± 0.5740
- X2: 0.7378 ± 0.0581
- IC: -1.7563 ± 0.9446
- Int_1: 1.1578 ± 0.0644

Product terms key:
- Int_1: X2 x IC

Test(s) of highest order unconditional interaction(s):

<table>
<thead>
<tr>
<th>R2-chng</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0076</td>
<td>1.0000</td>
<td>18.0000</td>
<td>.0247</td>
<td></td>
</tr>
</tbody>
</table>

Focal predict: X2 (X)
Mod var: IC (W)

Conditional effects of the focal predictor at values of the moderator(s):

<table>
<thead>
<tr>
<th>IC</th>
<th>Effect</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.0069</td>
<td>.5789</td>
<td>.0933</td>
<td>6.2034</td>
<td>.0000</td>
<td>.4171</td>
<td>.7407</td>
</tr>
<tr>
<td>0.0000</td>
<td>.7378</td>
<td>.0581</td>
<td>12.6928</td>
<td>.0000</td>
<td>.6370</td>
<td>.8386</td>
</tr>
<tr>
<td>1.0252</td>
<td>.8996</td>
<td>.0812</td>
<td>11.0817</td>
<td>.0000</td>
<td>.7588</td>
<td>1.0403</td>
</tr>
</tbody>
</table>

There are no statistical significance transition points within the observed range of the moderator found using the Johnson-Neyman method.

Conditional effect of focal predictor at values of the moderator:
<table>
<thead>
<tr>
<th>IC</th>
<th>Effect</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.0069</td>
<td>0.5789</td>
<td>0.0933</td>
<td>6.2034</td>
<td>.0000</td>
<td>0.4171</td>
<td>0.7407</td>
</tr>
<tr>
<td>-0.7980</td>
<td>0.6119</td>
<td>0.0831</td>
<td>7.3603</td>
<td>.0000</td>
<td>0.4677</td>
<td>0.7560</td>
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<td>8.7147</td>
<td>.0000</td>
<td>0.5165</td>
<td>0.7731</td>
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<tr>
<td>-0.3800</td>
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<td>10.2163</td>
<td>.0000</td>
<td>0.5628</td>
<td>0.7929</td>
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<td>0.0608</td>
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<td>0.0578</td>
<td>12.8658</td>
<td>.0000</td>
<td>0.6435</td>
<td>0.8440</td>
</tr>
<tr>
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<td>13.4097</td>
<td>.0000</td>
<td>0.6763</td>
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<td>0.9157</td>
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<tr>
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<td>12.6071</td>
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<td>0.7268</td>
<td>0.9586</td>
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<td>0.7463</td>
<td>1.0051</td>
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<tr>
<td>1.0830</td>
<td>0.9087</td>
<td>0.0838</td>
<td>10.8378</td>
<td>.0000</td>
<td>0.7633</td>
<td>1.0541</td>
</tr>
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<td>1.2920</td>
<td>0.9417</td>
<td>0.0941</td>
<td>10.0077</td>
<td>.0000</td>
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</tr>
<tr>
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<td>0.9747</td>
<td>0.1051</td>
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<td>.0000</td>
<td>0.7925</td>
<td>1.1569</td>
</tr>
<tr>
<td>1.7100</td>
<td>1.0076</td>
<td>0.1166</td>
<td>8.6441</td>
<td>.0000</td>
<td>0.8055</td>
<td>1.2098</td>
</tr>
<tr>
<td>1.9190</td>
<td>1.0406</td>
<td>0.1284</td>
<td>8.1015</td>
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<td>0.8179</td>
<td>1.2634</td>
</tr>
<tr>
<td>2.1280</td>
<td>1.0736</td>
<td>0.1406</td>
<td>7.6353</td>
<td>.0000</td>
<td>0.8298</td>
<td>1.3174</td>
</tr>
<tr>
<td>2.3370</td>
<td>1.1066</td>
<td>0.1530</td>
<td>7.2330</td>
<td>.0000</td>
<td>0.8413</td>
<td>1.3719</td>
</tr>
<tr>
<td>2.5460</td>
<td>1.1396</td>
<td>0.1655</td>
<td>6.8840</td>
<td>.0000</td>
<td>0.8525</td>
<td>1.4266</td>
</tr>
<tr>
<td>2.7550</td>
<td>1.1725</td>
<td>0.1782</td>
<td>6.5793</td>
<td>.0000</td>
<td>0.8635</td>
<td>1.4816</td>
</tr>
<tr>
<td>2.9640</td>
<td>1.2055</td>
<td>0.1910</td>
<td>6.3115</td>
<td>.0000</td>
<td>0.8743</td>
<td>1.5367</td>
</tr>
<tr>
<td>3.1730</td>
<td>1.2385</td>
<td>0.2039</td>
<td>6.0748</td>
<td>.0000</td>
<td>0.8850</td>
<td>1.5920</td>
</tr>
</tbody>
</table>

Data for visualizing the conditional effect of the focal predictor:

DATA LIST FREE/

X2 IC X3
BEGIN DATA.

-9.6776 -1.0069 15.3488
0.0000 -1.0069 20.9509
9.6776 -1.0069 26.5530
-9.6776 0.0000 12.0425
0.0000 0.0000 19.1824
9.6776 0.0000 26.3224
-9.6776 1.0252 8.6761
0.0000 1.0252 17.3818
9.6776 1.0252 26.0875

End data.

Graph/scatterplot= x2 with x3 by ic.

Analysis notes and errors

Level of confidence for all confidence intervals in output:

90, 0000

W values in conditional tables are the minimum, the mean, and 1 SD above the mean.

NOTE: One SD below the mean is below the minimum observed in the data for W,
So the minimum measurement on W is used for conditioning instead.
NOTE: The following variables were mean centered prior to analysis:
   IC       X2

End matrix

**Figure 4.1** Output from the PROCESS procedure for SPSS for a simple moderation analysis of the interactional competence data.

In the first stage, in model 1 y (vocabulary learning) is predicted from x and w and based also on squared multiple correlation (r-sq) estimating correlations between m and y and x and y, respectively.

**Model Summary (Output 1)**

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.9738</td>
<td>.9482</td>
<td>3.5919</td>
<td>109.9327</td>
<td>3,0000</td>
<td>18,0000</td>
<td>.0000</td>
</tr>
</tbody>
</table>

According to the model summary (see **Output 1**) the determinant coefficient R Square is significant at a percentage equal to 94.82%. This explains the goodness of the regression model and that the percentage of variance in Y is explained by the predictors X and W. In other ways, the independent variable X (vocabulary instruction determined by pretest) and the moderator variable W (interactional competence) explain 94, 82% of the variability occurred in dependent variable Y (students total mean score of vocabulary learning)

**Model (Output 2)**

<table>
<thead>
<tr>
<th></th>
<th>coeff</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
<td>19.1824</td>
<td>.5740</td>
<td>33.4164</td>
<td>.0000</td>
<td>18.1870</td>
<td>20.1778</td>
</tr>
<tr>
<td>X2</td>
<td>.7378</td>
<td>.0581</td>
<td>12.6928</td>
<td>.0000</td>
<td>.6370</td>
<td>.8386</td>
</tr>
<tr>
<td>IC</td>
<td>-1.7563</td>
<td>.9446</td>
<td>-1.8593</td>
<td>.0794</td>
<td>-3.3942</td>
<td>-1.183</td>
</tr>
<tr>
<td>Int_1</td>
<td>.1578</td>
<td>.0644</td>
<td>2.4510</td>
<td>.0247</td>
<td>.0462</td>
<td>.2695</td>
</tr>
</tbody>
</table>

Product terms key:
   Int_1 : X2 x IC

Test(s) of highest order unconditional interaction(s):

<table>
<thead>
<tr>
<th></th>
<th>R2-chng</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>X*W</td>
<td>.0173</td>
<td>6.0076</td>
<td>1,0000</td>
<td>18,0000</td>
<td>.0247</td>
</tr>
</tbody>
</table>
The outcome shown above (Output 2) indicates the existence of a significant interaction effect and that moderation exists. The result also indicates that interaction is highly significant, \( b = 0.1578 \), 95% CI [0.0462, 0.2695], \( t = 2.4510 \), \( p < .05 \). Therefore, the relationship between the vocabulary instruction and vocabulary learning is moderated by interactional competence. Because of this, we reject the null hypothesis; therefore, there is a statistically significant interaction effect between the independent variable (Vocabulary Instruction) and moderator variable (Interactional Competence) on dependant variable (the students vocabulary learning) in the experimental condition.

(Output 3) Conditional effects of the focal predictor at values of the moderator(s):

<table>
<thead>
<tr>
<th>IC</th>
<th>Effect</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1,0069</td>
<td>.5789</td>
<td>.0933</td>
<td>6.2034</td>
<td>.0000</td>
<td>.4171</td>
<td>.7407</td>
</tr>
<tr>
<td>.0000</td>
<td>.7378</td>
<td>.0581</td>
<td>12.6928</td>
<td>.0000</td>
<td>.6370</td>
<td>.8386</td>
</tr>
<tr>
<td>1,0252</td>
<td>.8996</td>
<td>.0812</td>
<td>11.0817</td>
<td>.0000</td>
<td>.7588</td>
<td>1,0403</td>
</tr>
</tbody>
</table>

(Output 3) shows the results of three different regressions:
The regression for vocabulary instruction as a predictor of vocabulary learning (1) when interactional competence is low at -1,0069; (2) when interactional competence is at a mean value .0000 ; and (3) when the value of interactional competence is high at 1,0252.
The three regressions are interpreted based on the value of \( b \) (Effect), and its significance as follows:

1 When interactional competence is low, there is a significant positive relationship between vocabulary instruction and vocabulary learning, \( b = .5789 \), 90% CI [0.4171 , 0.7407], \( t = 6.2034 \), \( p = .0000 < .001 \).

2 At the mean value of interactional competence, there is a significant positive relationship between vocabulary instruction and vocabulary learning, \( b = 0.7378 \), 90% CI [0.6370, 0.8386], \( t = 12.6928 \), \( p = .0000 < .001 \).

3 When interactional competence is high, there is a significant positive relationship between vocabulary instruction and vocabulary learning, \( b = 0.8996 \), 90% CI [0.7588, 1.0403], \( t = 11.0817 \), \( p = .0000 < .001 \).

The three results mentioned above indicate that the relationship between vocabulary instruction and vocabulary learning is positive in all cases and occurs at
different levels (low, mean, and high) of interactional competence exhibited in classroom between the teacher and the students.

**Hypothesis 4**

**H0** There is no difference of statistical significance between groups (the experimental and control groups) means in their total attitudes.
**H1** There is a difference of statistical significance between groups (the experimental and control groups) means in their total attitudes.

This hypothesis has been tested with the use of Bootstrap for T-Test for independent samples. The t-test for the difference in means is a hypothesis test that tests the null hypothesis that the means for both groups are equal, versus the alternative hypothesis that the means are not equal (2-tail).

**Reliability of the questionnaires**

Cronbach Alpha coefficient was used to establish the reliability of the questionnaires and to check whether or not the results will reveal stability and consistency in the answers.

| Table 4.24. Case Processing Summary in relation to reliability statistics |
|---|---|---|
| Cases | N | % |
| Valid | 22 | 100,0 |
| Excluded<sup>a</sup> | 0 | .0 |
| Total | 22 | 100,0 |

<sup>a</sup> Listwise deletion based on all variables in the procedure.

| Table 4.25. Results of Cronbach's Alpha which measures the reliability of the Study |
|---|---|---|
| Cronbach's Alpha | N of Items |
| **Group 4** | .827 | 28 |
| **Group 5** | .868 | 28 |
Table 4.26. Results of Cronbach's Alpha which measures the reliability of the study in relation to questionnaire items (Total Statistics)

<table>
<thead>
<tr>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 4</td>
<td>Group 5</td>
<td>Group 4</td>
<td>Group 5</td>
</tr>
<tr>
<td>1- I could enrich my vocabulary knowledge.</td>
<td>105,95</td>
<td>92,68</td>
<td>107,85</td>
</tr>
<tr>
<td>2- I could increase my skills in learning vocabulary.</td>
<td>105,86</td>
<td>92,64</td>
<td>112,79</td>
</tr>
<tr>
<td>3- I am more motivated in learning vocabulary because they are easier to learn that way.</td>
<td>105,64</td>
<td>93,18</td>
<td>110,43</td>
</tr>
<tr>
<td>4- It is enjoying to learn vocabulary.</td>
<td>105,95</td>
<td>93,00</td>
<td>106,61</td>
</tr>
<tr>
<td>5- Guessing the meaning of words in context is one of the best ways to learn vocabulary.</td>
<td>106,09</td>
<td>92,86</td>
<td>104,46</td>
</tr>
<tr>
<td>6- When it comes to vocabulary learning I can perform more in meaning in relation to sentence comprehension (deciding whether it is correct or not).</td>
<td>106,18</td>
<td>93,09</td>
<td>106,25</td>
</tr>
<tr>
<td>7- When it comes to vocabulary learning I can perform more in meaning in relation to synonyms more than antonyms.</td>
<td>106,36</td>
<td>93,27</td>
<td>110,24</td>
</tr>
</tbody>
</table>
When it comes to vocabulary learning I can perform more in meaning in relation to the extended context within a whole passage more than single sentences.

It is easier to learn new words when they are presented in context.

| Item | The use of dictionary is not as essential as context for learning new vocabulary. |
| Item | Learning words only through definitions without context is not the best way. |
| Item | I start Verifying the appropriateness of the inferred meaning by checking it against the wider context. |
| Item | I can’t be bothered trying to understand the meaning of words within context. |
| Item | I can continue reading to figure out the meaning of new words no matter how hard it is. |
| Item | I make a point of trying to understand the meaning of words. |

| Item | Scale Mean if Item Deleted |
| Item | Scale Variance if Item Deleted |
| Item | Corrected Item-Total Correlation |
| Item | Cronbach's Alpha if Item Deleted |

| Item | 106,23 | 93,50 | 104,755 | 131,024 | .325 | -.027 | .823 | .875 |
| Item | 106,23 | 92,82 | 104,184 | 122,632 | .420 | .511 | .819 | .861 |

| Item | Scale Mean if Item Deleted |
| Item | Scale Variance if Item Deleted |
| Item | Corrected Item-Total Correlation |
| Item | Cronbach's Alpha if Item Deleted |

| Item | 107,36 | 94,27 | 98,909 | 134,684 | .477 | -.215 | .816 | .878 |
| Item | 106,59 | 93,73 | 95,110 | 120,970 | .667 | .382 | .806 | .865 |
| Item | 106,05 | 93,09 | 105,665 | 126,944 | .468 | .240 | .819 | .867 |
| Item | 106,41 | 93,05 | 100,539 | 127,474 | .582 | .354 | .812 | .865 |
| Item | 105,91 | 93,50 | 109,134 | 119,500 | .131 | .670 | .831 | .857 |
| Item | 106,05 | 92,64 | 106,712 | 126,242 | .328 | .629 | .823 | .863 |
16-I start asking questions about the text, words, or the meaning already inferred.

17-When I am exposed to difficult words, I ignore distractions and pay attention to my task.

18-I remember the new words along with the context in which they occur.

<table>
<thead>
<tr>
<th>Item-Total Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale Mean if Item Deleted</td>
</tr>
<tr>
<td>19-I can remember the meaning of words I learnt easily.</td>
</tr>
<tr>
<td>20-I visualize and create a mental image of the new word to help me remember it</td>
</tr>
<tr>
<td>21-It gives me a mental connection of the word and definition which helps me remember them easily.</td>
</tr>
<tr>
<td>22-I can remember the meaning of words by connecting them to synonyms and antonyms.</td>
</tr>
<tr>
<td>23-I am more confident with my speaking when I use it.</td>
</tr>
</tbody>
</table>

106,2  
106,2  
106,6  
106,7  
105,7  
106,0  
105,9  
105,6  
7  
3  
4  
7  
7  
9  
5  
8  
94,09  
93,05  
93,64  
93,59  
93,86  
93,86  
94,14  
92,91  
109,82  
103,61  
103,29  
107,32  
105,23  
104,37  
102,52  
106,22  
9  
3  
0  
7  
2  
2  
2  
7  
113,22  
127,09  
119,38  
120,82  
111,26  
112,40  
109,26  
125,03  
,119  
,520  
,406  
,206  
,651  
,418  
,480  
,471  
,732  
,190  
,574  
,521  
,645  
,827  
,754  
,411  
,831  
,816  
,819  
,853  
,869  
,859  
,828  
,816  
,819  
,860  
,855  
,850  
,816  
,851  
,864  

24-I am more involved in interaction with my classmates.
25-I can negotiate meaning easily with my classmates.
26-The method used to understand the meaning of words within context in combination to interaction are at one, and working together in a more convergent way.

<table>
<thead>
<tr>
<th>Item</th>
<th>Total Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale Mean if Item Deleted</td>
</tr>
<tr>
<td>24</td>
<td>105,9 1</td>
</tr>
<tr>
<td>25</td>
<td>106,4 5</td>
</tr>
<tr>
<td>26</td>
<td>106,1 8</td>
</tr>
</tbody>
</table>

**Item-Total Statistics**

<table>
<thead>
<tr>
<th>Item</th>
<th>Total Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale Mean if Item Deleted</td>
</tr>
<tr>
<td>27</td>
<td>106,1 4</td>
</tr>
<tr>
<td>28</td>
<td>105,5 0</td>
</tr>
</tbody>
</table>

Alpha coefficient ranges from 0 to 1. Alphas above 0.9 are great, above 0.8 are good, above 0.7 are ok, above 0.6 are borderline. According to the table 5.25, the study has a good percentage of reliability with 0.827 and 0.868 which indicates that the questionnaires are valid and the study is subject of reliable analysis.
The trend of the students’ responses: In order to recognize the responses of the sample respondents and their trends the researcher calculated the weighted mean using the five-point Likert scale.

The five-point Likert scale was adopted to recognize the level of agreement of students’ answers. The level of agreement of students’ answers was determined by the following equation:

\[
\text{Interval Width} = \frac{\text{maximum point} - \text{minimum point}}{\text{number of levels}} \quad (5-1\div5= 0.8)
\]

- strongly disagree = from 1 to 1.79
- disagree = from 1.8 to 2.59
- neutral = from 2.60 to 3.39
- agree = from 3.40 to 4.19
- strongly agree = from 4.20 to 5

Table 4.27. Descriptive Statistics of the experimental group

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary Learning Attitudes</td>
<td>22</td>
<td>4,2386</td>
</tr>
<tr>
<td>Contextualizing Vocabulary learning Attitudes</td>
<td>22</td>
<td>3,6558</td>
</tr>
<tr>
<td>Attitudes in relation to cognitive and mental efforts involved in the task</td>
<td>22</td>
<td>3,9394</td>
</tr>
<tr>
<td>Memorization Context</td>
<td>22</td>
<td>3,8455</td>
</tr>
<tr>
<td>Classroom interactional competence</td>
<td>22</td>
<td>4,1136</td>
</tr>
<tr>
<td>total attitudes</td>
<td>22</td>
<td>3,9318</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.27 reveals the statistical description of variables through mean for the totality of questionnaire items on the total axis that are related to students’ attitudes in relation to vocabulary learning, contextualizing vocabulary learning, cognitive and mental efforts involved in the task, memorization context, and classroom interactional competence. The general percentage of mean is equal to 3.9318 with a standard deviation equal to .37987. This shows that the majority of students who answered the questionnaire agreed on the totality of questionnaire items. Therefore, EFL students have a positive level of attitudes towards the five axes of the questionnaire. The same table shows that the most agreement on the questionnaire items is related to vocabulary learning attitudes with a mean equal to 4.2386 respectively followed by attitudes in relation to classroom interactional competence, cognitive and mental efforts involved in the task, memorization context, and finally contextualizing vocabulary learning attitudes with the least mean equal to 3.6558.

Table 4.28. Descriptive statistics of the control group

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary Learning Attitudes</td>
<td>22</td>
<td>3.8977</td>
</tr>
<tr>
<td>Contextualizing Vocabulary learning Attitudes</td>
<td>22</td>
<td>3.4091</td>
</tr>
<tr>
<td>Attitudes in relation to cognitive and mental efforts involved in the task</td>
<td>22</td>
<td>3.5379</td>
</tr>
<tr>
<td>Memorization Context</td>
<td>22</td>
<td>2.9545</td>
</tr>
<tr>
<td>Classroom interactional competence</td>
<td>22</td>
<td>3.5530</td>
</tr>
<tr>
<td>total attitudes</td>
<td>22</td>
<td>3.4705</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>

The general percentage of mean is equal to 3.4705 with a standard deviation equal to .42239 which means that the majority of students who answered the questionnaire agreed on the totality of questionnaire items. However, the same students had neutral attitudes towards the items in relation to memorization context with a mean equal to 2.9545.
### Table 4.29. Bootstrap specifications for questionnaires

<table>
<thead>
<tr>
<th>Sampling Method</th>
<th>Simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Samples</td>
<td>1000</td>
</tr>
<tr>
<td>Confidence Interval Level</td>
<td>90.0%</td>
</tr>
<tr>
<td>Confidence Interval Type</td>
<td>Percentile</td>
</tr>
</tbody>
</table>

### Table 4.30. T-test: Group statistics for questionnaires

<table>
<thead>
<tr>
<th>groupe</th>
<th>Statistic</th>
<th>Bootstrap&lt;sup&gt;a&lt;/sup&gt;</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bias</td>
<td>Std. Error</td>
<td>90% Confidence Interval</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
<td></td>
</tr>
<tr>
<td>total attitudes</td>
<td>N</td>
<td>22</td>
<td>3.9318</td>
<td>,0007</td>
</tr>
<tr>
<td>group4</td>
<td>Mean</td>
<td>,37987</td>
<td>,08099</td>
<td>- ,01506</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
<td>,27272</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Error</td>
<td>,05092</td>
<td>,32281</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>3.4705</td>
<td>,09005</td>
<td></td>
</tr>
<tr>
<td>group5</td>
<td>Std. Deviation</td>
<td>,32281</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Std. Error</td>
<td>,05092</td>
<td>,32281</td>
<td></td>
</tr>
</tbody>
</table>

### Table 4.31. Group statistics for questionnaires

<table>
<thead>
<tr>
<th>groupe</th>
<th>Statistic</th>
<th>Bootstrap&lt;sup&gt;a&lt;/sup&gt;</th>
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<tr>
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<td></td>
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<td>90% Confidence Interval</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total attitudes</td>
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<td>4.0739</td>
<td></td>
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<td>group4</td>
<td>Mean</td>
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<tr>
<td></td>
<td>Std. Deviation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Std. Error Mean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>3.6226</td>
<td></td>
<td></td>
</tr>
<tr>
<td>group5</td>
<td>Mean</td>
<td></td>
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</tbody>
</table>
### Table 4.32. Independent samples test for questionnaires

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed total attitudes</td>
<td>.569</td>
</tr>
<tr>
<td>Equal variances not assumed total attitudes</td>
<td></td>
</tr>
</tbody>
</table>

In Table 4.32 the Levene’s test for equality of variances indicates that the significance value is .455. The latter is greater than the significance level 0.05 which scientifically means that the variability in the two conditions is not significantly different. Therefore, there is homogeneity of variance.

### Table 4.33. Bootstrap for independent samples test for questionnaires

<table>
<thead>
<tr>
<th>Mean Difference</th>
<th>Bootstrap</th>
<th>Bias</th>
<th>Std. Error</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed total attitudes</td>
<td>.46136</td>
<td>.00038</td>
<td>.12385</td>
<td>.001</td>
</tr>
<tr>
<td>Equal variances not assumed total attitudes</td>
<td>.46136</td>
<td>.00038</td>
<td>.12385</td>
<td>.002</td>
</tr>
</tbody>
</table>

Continued
<table>
<thead>
<tr>
<th>Total Attitudes</th>
<th>Bootstrap 90% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Equal Variances Assumed</td>
</tr>
<tr>
<td></td>
<td>Equal Variances Not Assumed</td>
</tr>
</tbody>
</table>

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

In the table 4.33 related to bootstrap for independent samples test for the questionnaires, the Sig (2-Tailed) value is 0.01 which is less than the significance level (0.1). This result implies the rejection of the null hypothesis; therefore, there is a difference of statistical significance between groups (the experimental and control groups) means in their total attitudes.

4.2 Qualitative Data Analysis and Results

The qualitative data are treated and analysed in terms of turns and interaction analysis, and also subjected to a categorisation and coding procedure. The attempts to analyse the qualitative data in terms of content are meant to understand the interaction and analyse classroom discourse based on group work tasks with a focus on interactional features (interactures) as evidences for interactional competence. However, in the qualitative analysis of data the researcher focused only on the fourth group, i.e., the experimental group. Nevertheless, the possible differences that might emerge from the interaction of the two classes were compared quantitatively.

4.2.1 Qualitative analysis of qualitative data

In order to analyse the qualitative data qualitatively, the following features are selected as evidences for interactional features:

**A. Scaffolding:** The term scaffolding describes “the ways in which teachers provide learners with linguistic ‘props’ to help self-expression” (Walsh, 2006, p.120). There are three main types of scaffolding: First, reformulation (rephrasing a learner’s contribution). Second, extension (extending a learner’s contribution). Third, modelling...
(providing an example for learner(s). Scaffolding is used to assist learners, i.e., to create learning opportunities. To do so, teachers are required to help learners, when needed, ‘feeding in’ specific words or structures which is a skill “similar to the one possessed by many parents when helping their young children struggling to find the right word at a given moment” (Walsh, 2011, p.34)

1. **Reformulation** (rephrasing a learner’s contribution)

The teacher reformulates the students’ utterances in a different way, but in a clearer form, more accurate, and a more precise form to ensure that the discourse is more understood so that learning is maintained. (See turns 79 , 210).

77  S2: normally there is clear evidence that shows us that the mother is imposing something on her baby

78  S4: no, because imposing something can’t be done gently

79  T: so imposing something requires force

209  S4: (3sec) someone who has prestige means that he has done something that is eh… eh eminent or eh

210  T: eminent, do you want to say something which is prominent, eminent, and outstanding somehow? Good

2. **Extension (extending a learner’s contribution)**

Another type of scaffolding is extending a learner’s contribution. This happens when shaping learners’ utterances which help them, in turn, to develop their language in general and their vocabulary in particular (See turns 44, 88, 127).

41  S: yes, the first person is perhaps telling the second one that he is wrong

42  T: ah

43  S: or maybe he proposed for him a deal or something and he refused

44  T: and he is trying maybe to prove that there is something wrong?

45  S: yes

86  S1: ugly person she is, he has no mind (the student means the baby is still too young, thus he is not responsible yet)

87  S4: she may ask the child to stay home

88  T: so here the disagreement revolves around picture 3 and 4

125  S10: the suitable picture is number 6
126 T: the sixth one
127 T: so, first of all she says dependence goes hand in hand with the third choice “a situation in which somebody relies on something else” and it matches picture 6
128 SS: yes

3. Modelling (providing an example for learner(s))

There is clear evidence that the teacher in group four did not model or provide examples for learners which is a sign of a complete absence of modelling.

B. Direct repair (Correcting an error quickly and directly)

Direct repair is a strategy that goes in tandem with the teacher’s pedagogic goals. Good Direct repair involves correcting the student’s error quickly and directly so that the flow of interaction is maintained without breaking the exchange structure (See turn 147).

146 S12: it means “the quality of having an inferior or less favorable position and considered synonymous to disadvantage” /ˌdɪs.ədˈvɑːn.tɪdʒ/
147 T: disadvantage (correcting the student’s mispronunciation) /ˌdɪs.ədˈvɑːn.tɪdʒ/
148 T: what do you think please is it really choice number 3 (4 sec)?
149 SS: yes, yes
150 T: definitely?
151 SS: yes

There is evidence here that the teacher is maintaining the flow of interaction to avoid discourse disruption without breaking the exchange structure; however it was discovered that only one turn where the teacher corrected directly the learners’ errors.

C. Content feedback (Giving feedback to the message rather than the words used).

Content feedback plays an important role in developing learning opportunity. In here, evidence of content feedback lies in the teacher’s responses to the message rather than the linguistic forms. According to Richards and Lockhart (1996) there are many strategies the teacher takes when providing feedback in relation to content. For example, acknowledging a correct answer, indicating an incorrect answer, praising, modifying, repeating, summarising and criticising an answer (cited in Jones, 2011, p. 11). There is plenty of evidence of content feedback that can be illustrated in the following turns: (6, 15, 32, 44, 71, 75, 79, 88, 122, 139, 144, 180, 200, 202, 226, 242, 277).

5 S: so, the first word is medieval, it’s an adjective
6 T: ahaa (acknowledging a correct answer)
13 T: why exactly it’s the first definition, why not the third or the sixth one for example?
14 S: because it comes from the word mid or middle ages
15 T: ah, good (praising)
31 S: plus it comes from the word refute which means to reject something
32 T: ah now please, do you think that the word refute as a verb means to reject something?
43 S: or maybe he proposed for him a deal or something and he refused
44 T: and he is trying maybe to prove that there is something wrong? (modifying)
69 T: why it’s not number 9 NAME?
70 S1: no, there is a girl who is playing a hoola hoop or something
71 T: no place, no margin to impose something upon something else (modifying)
74 S6: teacher in picture number 4 the man tries to impose his ideas on those people who are listening to him
75 T: ok, so there is a man who is trying to impose his idea on a group of people (repeating)
78 S4: no, because imposing something can’t be done gently
79 T: so imposing something requires force (modifying)
87 S4: she may ask the child to stay home
88 T: so here the disagreement revolves around picture 3 and 4 (acknowledging a correct answer)
121 S1: well I have a way to solve the problem, let’s just skip this one and deal with the other words
122 T: yes, that’s perfect exactly (praising)
138 S4: the picture shows the man is kind which will be discussed later with a different meaning
139 T: ok, maybe this is an argument so at any rate it can’t be picture 6
143 S4: another thing, concerning picture 6 we may say that the young man has a bad day and he asks the help of someone, but in picture 7 the baby needs his mother
144 T: ok, good, good so, I do agree with you that it’s picture 7 and the meaning is the third one “a situation in which somebody relies on something else” (acknowledging a correct answer)
179 S12: = eh (3 sec) the man is like in a high position than the others who are listening
180 T: so we can say it’s perfectly related to a manager or management (modifying)
196 T: and which picture represents the meaning?
197 SS: number 8
198 T: number8
199 SS: yes
200 T: ah typewriter, yeah kind of machine (acknowledging a correct answer)
201 S4: that is used for typing texts and messages
202 T: yes, good (praising)
224 T: and what is the relationship between lowliness and prestige?
225 S14: it’s the opposite
226 T: it’s the opposite yes (repeating and acknowledging a correct answer)
242 T: being kind and generous is synonymous with the word benevolent
276 S16: well, the first choice fits more the word spectacular within that context
277 T: exactly, definitely I do agree with you it’s the first choice (acknowledging a correct answer)

D. **Extended wait-time** (Allowing sufficient time (several seconds) for students to respond or formulate a response). The teacher employed extended wait-time as a tool for creating learning space. The role of extended wait-time is to allow the learner to have enough space in the interaction and time to think before replying. It can be said as advocated by Tobin (1987), Thornbury (1996) and Walsh (2002) that extended wait-time from three to five seconds would help to improve the interaction between the teacher and learners. (See turns 4, 148, 156, 170, 216, and 220.)

4 T: try to speak loudly (3 sec) yes please, you are sharing the same responsibility you have to discuss the meaning
148 T: what do you think please is it really choice number 3 (4sec)
149 SS: yes, yes
150 T: definitely?
151 SS: yes
156 T: can you explain more please (3sec)
157 S1: the car is considered to be found in a less favourable position as there is a problem in its wheel
170 T: now, the last one managerial. It’s very important please (5 sec)
171 S12: “managerial describes something related to a manager or management”
T: yes, picture 2 that means the choice is number 4 and not number 1 lowliness (3 sec)

S13: I think because prestige is something or feeling that is so high with respect and not modesty

T: can you explain more please? (2 sec) it depends on how people see you and not how you see yourself

S4: because I can’t say I’m prestigious, it’s people who describe me as prestigious

**E. Referential questions** (Genuine questions to which the teacher does not know the answer). In the following turns, the teacher uses referential questions that lead learners to interact and get involved in the discourse. This helps students to extend their language and participation, especially by means of argumentation and justifying their replies (See turns 13, 38, 40, 220, 224.)

T: why exactly it’s the first definition, why not the third or the sixth one for example?

S: because it comes from the word mid or middle ages

T: ok, why not matching the word refute with another definition like “to give freedom or free movement to someone or something”?

S: because there is no relationship at all==

T: ==no relationship at all? but I see some movements there in the picture

S: yes, the first person is perhaps telling the second one that he is wrong

T: can you explain more please? it depends on how people see you and not how you see yourself

S4: because I can’t say I’m prestigious, it’s people who describe me as prestigious

T: and what is the relationship between lowliness and prestige?

S14: it’s the opposite

**F. Seeking clarification**

**1. Teacher asks a student to clarify something the student has said.** Following are some examples that illustrate this type of teacher talk. There is clear evidence that meaning is broadly negotiated which create learning opportunities (See turns 156, 192, 194, 196, 207, 210, 211, and 220.)

T: can you explain more please?

S1: the car is considered to be found in a less favourable position as there is a problem in its wheel
T: why not number 2 innovative? what is the relationship between number 2 and obsolete?
S4: it’s totally the opposite
T: it’s totally the opposite?
SS: yes
T: and which picture represents the meaning?
SS: number 8
T: why so?
S11: eh… the idea of admiration
S4: (3sec) someone who has prestige means that he has done something that is eh… eh eminent or eh
T: eminent, do you want to say something which is prominent, eminent, outstanding somehow? Good
T: can you sustain this justification with the picture?
S4: yes
S13: “the young actress gained much prestige after she won an award” so after she won an award she gained much prestige, respect and admiration
T: can you explain more please? it depends on how people see you and not how you see yourself.
S4: because I can’t say I’m prestigious, it’s people who describe me as prestigious

Confirmation and Comprehension check (if the receiver has correctly understood the message. Confirming understanding of a student’s or teacher’s contribution plus any expression designed to establish whether the speaker's own preceding utterance has been understood by the addressee). Confirmation and comprehension check help make meaning negotiated between the teacher and the students. Following are different turns selected as evidence for confirmation and comprehension check (See turns 17, 48, 51, 150, 165, 184, and 227).

T: why exactly it’s the first definition, why not the third or the sixth one for example?
S: because it comes from the word mid or middle ages
T: ah, good
S: where there were horses, castles and wars
T: so, that picture represents…?
S: a castle and I think that the other definitions don’t match the picture
2. Student asks teacher to clarify something the teacher has said

It was discovered that the students’ questions to the teacher to clarify something the teacher has said were very limited. In here, the students asked only one question (see turn 243). This fact indicates that the students were positively involved in the interaction, and that almost every single turn was clear for them.
Students’ meaning negotiation with no teacher intervention.

One of the most important features of interaction is the students’ negotiation of meaning. Learners successfully manage interaction with no teacher intervention as they start to negotiate meaning themselves, i.e., the absence of teacher intervention can lead to an increase in learner/learner interaction. The following turns demonstrate a range of meanings that are negotiated by students themselves, and how students were able to resolve some communication problems at the level of vocabulary meaning. Thus, negotiating meaning by students themselves with no teacher intervention can lead to language learning opportunity.

77 S2: normally there is clear evidence that shows us that the mother is imposing something on her baby
78 S4: no, because imposing something can’t be done gently
83 S4: picture 3
84 S2: yes, yes
85 S4: it must be 3 because there is a woman who tries to impose something on her child
86 S1: ugly person she is, he has no mind
87 S4: she may ask the child to stay home
91 S1: but even when we are here in groups I can impose my idea
92 S4: in order to impose your idea you have to be superior
94 S4: because you are looking to impose your idea
96 S1: maybe in picture 4 the man is a CEO and he is imposing some direction on the employees
97 S5: teacher in picture 4 I don’t see any symbol of force, everybody is relaxed the man also talks in an ordinary way without any hint of force
110 S1: still we are not convinced
112 S5: teacher I believe the idea will be clearer later while dealing with the other words
113 S4: just a point please being a CEO in a firm doesn’t mean that he has the right to impose himself on the employees, i.e. his position as a CEO is an administrative status it doesn’t give him a position to exercise superiority It’s just a job
116 S9: NAME can you tell us which definition matches the word impose?
117 S1: well, it’s number 4 “to interrupt or force your ideas on other people”
118 S9: then does this definition go with picture 4 and how can you see that man in a meeting imposes his ideas?
S2: it can’t be, it can’t be
SS: noise
S1: well I have a way to solve the problem, let’s just skip this one and deal with the other words

S4: which picture?
SS: number eleven
S1: yes
S7: why exactly it’s number 2?
S4: because those charitable people can’t be unkind while helping poor people
S13: or hurting people
SS: no
S4: The word fad means “a trend or something that is popular for a short time”
S16: I think it’s picture 5 instead of 4
SS: yes it’s picture five

Students questions
There were 13 questions asked by students in group 4. However, there were no questions asked by students in group 5. This shows the students interest in group 4 to get involved in the interaction and seeking to negotiate meaning and get answers for their inquiries. (See turns 12, 63, 103, 116, 118, 152, 215, 235, 237, 243).

S: NAME, do you have something to ask?
S2: to impose?! (Asking herself and reflecting upon the meaning)
S7: what about picture 4?
S9: NAME can you tell us which definition matches the word impose?
S9: then does this definition go with picture 4 and how can you see that man in a meeting imposes his ideas?

S4: which picture?
S1: picture number 2?
S7: = =teacher please may I ask him a question?
S7: why exactly it’s number 2?
S7: picture number…?
G. Extended learner turns (Learner turn of more than one utterance)

In addition to extended teacher turns, interaction construct is characterised by extended learner turns. Therefore, there is more opportunity for interactional space in which the participation of the students is encouraged so that students talk time (STT) is increased. Following are some examples: (See turns 10, 14, 16, 29, 47, 58, 77 85, 113, 143).

10  S: I believe that if something is medieval it comes from the period between 650 and 1500 CE.
14  S: Because it comes from the word mid or middle ages
16  S: Where there were horses, castles and wars
29  S: because the other definitions don’t match the word.
47  S: we are not really sure about it but we think it’s the fourth “one to interrupt or force your ideas on other people”
58  S4: I believe that my classmate is mistaken because picture 4 shows someone who shares ideas with his colleagues rather than imposing ideas. So, I go for picture three
77  S2: normally there is clear evidence that shows us that the mother is imposing something on her baby
85  S4: it must be 3 because there is a woman who tries to impose something on her child
113 S4: just a point please being a CEO in a firm doesn’t mean that he has the right to impose himself on the employees, i.e. his position as a CEO is an administrative status it doesn’t give him a position to exercise superiority it’s just a job

143 S4: another thing, concerning picture 6 we may say that the young man has a bad day and he asks the help of someone, but in picture 7 the baby needs his mother

H. Teacher echo (Self-repetitions):

Teacher echo is one way which determines how ‘space for learning’ is created. This type of teacher talk includes two types: First, repairing means a talk in which the teacher repeats or paraphrases some part of his previous utterance to help establish or develop the topic of conversation. Second, reacting which means a talk in which the teacher repeats or paraphrases some part of a learner’s contribution to help establish or develop the topic of conversation.

(1) Repairing:  The speaker repeats/ paraphrases some part of one of his previous utterances to help establish or develop the topic of conversation (See turn 158).

157 S1: the car is considered to be found in a less favourable position as there is a problem in its wheel
T: ahh ok, ok and there is here something to elevate, to mention here please. I mean maybe you may argument; you supplement your answer saying that there is totally the opposite in the examples, the choices. don’t you think there are antonyms in the examples that totally oppose the exact meaning?

(2) Reacting (The speaker repeats/ paraphrases some part of the other speaker's utterance in order to help establish or develop the topic of conversation) (See turns 75, 180, 200, 220, 226.)

S6: teacher in picture number 4 the man tries to impose his ideas on those people who are listening to him

T: ok, so there is a man who is trying to impose his idea on a group of people

S12: = =eh (3 sec) the man is like in a high position than the others who are listening

T: so we can say it’s perfectly related to a manager or management

SS: number 8

T: number8

SS: yes

T: ah typewriter, yeah kind of machine

S4: (3sec) someone who has prestige means that he has done something that is eh… eh eminent or eh

T: eminent, do you want to say something which is prominent, eminent, and outstanding somehow? Good

S4: I think it’s about the way people see you not how you see yourself

T: can you explain more please? it depends on how people see you and not how you see yourself

S14: it’s the opposite

T: it’s the opposite yes

I. Teacher interruptions (Interrupting a learner’s contribution). It was found that the teacher did not interrupt learners which indicates that the teacher did not disrupt or break down the flow of interaction.

Student interruptions: This gives students opportunities to interrupt the teacher and ask a question in which students want to get more clarification. (See turns 179, 235.)

T: ok, managerial and what do you think? = =

S12: = =eh (3 sec) the man is like in a high position than the others who are listening
J. Extended teacher turn The teacher contribution of more than one utterance. In here, the role of the teacher is to pave the way for learners to contribute in constructing the discourse. Therefore, the students’ turns are involved in extended teacher turns.

13 T: why exactly it’s the first definition, why not the third or the sixth one for example?
14 S: because it comes from the word mid or middle ages
19 T: ok, what do you think, what do you think please? is it really the correct answer? is it number one?
20 SS: yes
40 T: ==no relationship at all? but I see some movements there in the picture
95 T: ahh, superiority here NAME, there is no room for superiority in picture 4
114 T: NAME would you please give the chance later for further explanation regarding picture 4 maybe picture 4 holds a different meaning
127 T: so, first of all she says dependence goes hand in hand with the third choice “a situation in which somebody relies on something else” and it matches picture 6

144 T: ok, good, good so, I do agree with you that it’s picture 7 and the meaning is the third one “a situation in which somebody relies on something else”
158 T: ahh ok, ok and there is here something to elevate, to mention here please. I mean maybe you may argument, you supplement your answer saying that there is totally the opposite in the examples, the choices don’t you think there are antonyms in the examples that totally oppose the exact meaning?
214 T: please, why not saying that the fourth choice is more suitable “lowness (humble in attitude)”? don’t you think so? you know showing kind of modesty being humble and modest, don’t you think so NAME?

K. Turn completion (Completing a learner’s contribution for the learner): In addition to the more previous features of teacher talk, the teacher completes a learner’s contribution. However, it was discovered that there were only two turns completion which means that the teacher rarely interrupts his learners or completes turns for them.

(See turns 135, 210.)
134 S4: I think this is the …
135 T: This is the justification. ok, now maybe we may move
S4: (3sec) someone who has prestige means that he has done something that is eh… eh eminent or eh

T: eminent, do you want to say something which is prominent, eminent, and outstanding somehow? Good

L. Display questions (Asking questions to which the teacher knows the answer)
There is clear evidence that the majority of questions the teacher ask are display ones with a rate of 37 out of 60 turns. This means that most questions are display ones (See the following turns):

48 T: it’s picture…?=  
51 T: three, really?  
62 T: yes NAME, what do you think? is it picture 4, 3?  
98 T: do you think that picture 3 is the suitable one?  
129 T: what do you think? is it really true?  
164 T: yes drawback and why not number1 which is totally the opposite? why not number one, please?  
205 T: it’s number 1?  
211 T: can you sustain this justification with the picture?  

232 T: is it number 2 Kind and generous?  
240 T: ahaa so, the only possibility is number 2?  
244 T: and it’s picture number?  
254 T: and which picture matches the word diminish?  
272 T: is it number1 really?

M. Form-focused feedback (Giving feedback on the words used, not the message)
In contrast to content feedback, form feedback sheds light on the accuracy of students' contributions and words rather than giving feedback on the message. There is only one turn where the teacher provided a form-focused feedback (see turn 147).

145 T: the other word please, drawback, drawback, drawback  
146 S12: it means “the quality of having an inferior or less favorable position and considered synonymous to disadvantage” /ˌdɪs.ədˈvɑːn.tɪdʒ/  
147 T: disadvantage /ˌdɪs.ədˈvɑːn.tɪdʒ/ (correcting pronunciation)
4.2.2 Quantitative analysis of qualitative data

Table 4.34. Comparative quantitative data relative to teacher and students’ talk and questions.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Group 4 (Experimental group)</th>
<th>Group 5 (Control group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Talk</td>
<td>52.50 %</td>
<td>73.01%</td>
</tr>
<tr>
<td>Teacher Turns</td>
<td>144/278 turns = 51.80 %</td>
<td>128/225 turns = 56.88%</td>
</tr>
<tr>
<td>Teacher questions</td>
<td>69/82 = 84.14 %</td>
<td>79/79 = 100%</td>
</tr>
<tr>
<td>Students Talk</td>
<td>47.50 % 134/278 turns</td>
<td>26.99 %</td>
</tr>
<tr>
<td>Students Turns</td>
<td>134/278 turns = 48.20%</td>
<td>97/225 turns = 43.12%</td>
</tr>
<tr>
<td>Students questions</td>
<td>13/82 = 15.86 %</td>
<td>0/79 = 0%</td>
</tr>
</tbody>
</table>

The comparison of the two groups in table 4.34 reveals that the amount of teacher talk in group four is less than in group 5 with a percentage of 52.50 % vs. 73.01%. The same table shows that the amount of teacher talk is balanced with the amount of students’ talk in group 4 more than that in group 5 (52.50 % with 47.50 % vs. 73.01% with 26.99 %). The table also reveals that there are more questions asked by the teacher and students in group 4 in comparison with group 5 (82 questions Vs 79 questions). Another thing that is noticed is that students in group 4 asked more questions than students in group 5 do (13 questions vs. none).

Table 4.35. Comparative quantitative data relative to features of teacher talk as evidence for interactional competence

<table>
<thead>
<tr>
<th>FEATURES OF TEACHER TALK</th>
<th>DESCRIPTION</th>
<th>Group 4 278 turns</th>
<th>Group 5 225 Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Scaffolding</td>
<td>1. Reformulation (rephrasing a learner’s contribution)</td>
<td>04 Turns 1.43 %</td>
<td>5 Turns 2.22%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Extension (extending a learner’s contribution)</td>
<td>12 Turns 4.31% 8 Turns 3.55%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Modelling (providing an example for learner(s))</td>
<td>0 Turns 0% 1 Turns 0.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 Turns 5.75% 14 Turns 6.22%</td>
<td></td>
</tr>
<tr>
<td>B. Direct repair</td>
<td>Correcting an error quickly and directly.</td>
<td>1 Turns 0.03% 1 Turns 0.4%</td>
<td></td>
</tr>
<tr>
<td>C. Content feedback</td>
<td>Giving feedback to the message rather than the words used.</td>
<td>38 Turns 40 Turns 17.77%</td>
<td></td>
</tr>
<tr>
<td>D. Extended wait-time</td>
<td>Allowing sufficient time (several seconds) for students to respond or formulate a response.</td>
<td>14 Turns 14 Turns 17/77%</td>
<td></td>
</tr>
<tr>
<td>E. Referential questions</td>
<td>Genuine questions to which the teacher does not know the answer.</td>
<td>23 Turns 13.66% 13 Turns 5.77%</td>
<td></td>
</tr>
<tr>
<td>F. Seeking clarification</td>
<td>1. Teacher asks a student to clarify something the student has said.</td>
<td>23 Turns 8.27% 16 Turns 7.11%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Student asks teacher to clarify something the teacher has said.</td>
<td>1 Turns 0.03% Turns 0%</td>
<td></td>
</tr>
<tr>
<td>Confirmation and Comprehension check</td>
<td></td>
<td>27 Turns 9.71% 28 Turns 12.44%</td>
<td></td>
</tr>
<tr>
<td>Students’</td>
<td></td>
<td>31 Turns 11.15% 2 Turns 0.8%</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
<td>Learner turn of more than one utterance.</td>
<td>31 Turns 11.15%</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>G. Extended learner turn</td>
<td>Learner turn of more than one utterance.</td>
<td></td>
<td>31 Turns 11.15%</td>
</tr>
<tr>
<td>H. Teacher echo Self-repetitions:</td>
<td>(1) repairing The speaker repeats/paraphrases some part of one of her previous utterances to help establish or develop the topic of conversation. 1. Teacher repeats teacher’s previous utterance.</td>
<td></td>
<td>5 Turns 1.91%</td>
</tr>
<tr>
<td></td>
<td>(2) reacting The speaker repeats/paraphrases some part of the other speaker's utterance in order to help establish or develop the topic of conversation. 2. Teacher repeats a learner's contribution.</td>
<td></td>
<td>11 Turns 3.95%</td>
</tr>
<tr>
<td>I. Teacher interruptions</td>
<td>Interrupting a learner's contribution.</td>
<td></td>
<td>Turns 0%</td>
</tr>
<tr>
<td>Student interruptions</td>
<td></td>
<td></td>
<td>2 Turns 0.07%</td>
</tr>
<tr>
<td>J. Extended teacher turn</td>
<td>Teacher turn of more than one utterance.</td>
<td></td>
<td>22 Turns 7.91%</td>
</tr>
<tr>
<td>K. Turn completion</td>
<td>Completing a learner's contribution for the learner.</td>
<td></td>
<td>2 Turns 0.07%</td>
</tr>
<tr>
<td>L. Display questions</td>
<td>Asking questions to which the</td>
<td></td>
<td>37 Turns 13.3%</td>
</tr>
</tbody>
</table>
teacher knows the answer.  

| M. Form-focused feedback | Giving feedback on the words used, not the message. | 1 Turns 0.03% | 1 Turns 0.4% |

**N.B Confirmation and Comprehension check:** (if the receiver has correctly understood the message) Confirming understanding of a student’s or teacher’s contribution and any expression designed to establish whether the speaker's own preceding utterance has been understood by the addressee.

Table 4.35 shows that there is clear evidence that group 5 is overloaded with display questions more than the fourth group (37 turns with a percentage of 13.3 for group 4 vs. 38 turns with a percentage of 16.88% for group 5). In addition, more referential questions are a sign of genuine communication which is apparent in group 4 (23 Turns 13.66% vs. 13 Turns 5.77%). Therefore, it is likely to have a greater quantity of classroom interaction in group 4 more than in group 5. This fact is also supported with the more balanced talk amount between the teacher and the students in group 4 (see 4.34).

The process of ‘shaping’ contributions by seeking clarification, scaffolding, and repairing learners input is also more frequent in group 4 than in group 5 with a total of 41 turns (14, 38 %) vs. 30 turns (13,77 %). This is more apparent when the teacher asks students to clarify something they have said or reformulating and extending their contributions.

Another frequent feature that differentiates remarkably the two groups’ interaction is the students’ attempt to negotiate meaning with no teacher intervention. This is clearly evidenced with the quantity of interaction made by students in group 4 with 31 turns vs. 2 turns in group 5. Negotiation is also supported with two different interaction features: 1 comprehension check ( checking if the message is understood by the receiver) ; 2 confirmation check ( if the receiver has correctly understood the message) with almost the same total number of turns in both groups (27 Turns 9.71% in group four) vs. (28 Turns 12.44% in group five).
Another distinguishing interactional feature observed in the table 3.35 is the extended learner turns with 31 turns in group 4 that generate 24.34% of the talk invested in the interaction vs. 26 turns in group 5 that generate 19.43% of the whole interaction talk. This indicates that students are really able to produce more quantity of interaction that is qualified with the opportunity to have better learning space.

**Summary**

The qualitative and quantitative results of the present study in conjunction with classroom discourse are tied with the objective of not only to describe classroom interaction but also to look at what is being learnt, and to understand how teaching and learning are connected together. The study determines the experimental group as the outperforming group with better vocabulary gain. Consequently, the researcher decided to check word retention and interaction effect in relation to the experimental group. The data indicate that the relationship between vocabulary instruction and vocabulary learning is moderated by interactional competence and that the interaction effect between vocabulary instruction and interactional competence on the students’ vocabulary learning is highly significant. The results also indicate that the relationship between vocabulary instruction and vocabulary learning is positive in all cases and occurs at different levels (low, mean, and high) of interactional competence exhibited in classroom between the teacher and the students.

In addition, the quantitative and qualitative analyses of qualitative data indicate that interactional competence in the experimental group in comparison with the control group is mostly featured with more negotiation that is supported with the students’ attempt to negotiate meaning with no teacher intervention, and two different interaction features: 1 comprehension check; 2 confirmation check. Besides, more extended learner turns with less amount of teacher talk associated with more questions asked by the teacher and students are significantly more frequent in the experimental group. The study also evaluates the two vocabulary instruction conditions with interactional competence through students’ attitudes towards the total axes. The latter proves to be more positive in the experimental group, and thereby promoting more opportunities for vocabulary learning.
Chapter Five: Summary, Conclusions, and Recommendations

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CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The aim of this study was to determine whether or not the effect of vocabulary instruction on vocabulary learning was affected by interactional competence. In other terms, the purpose of the present study was to check if the relationship between the vocabulary instruction and vocabulary learning is moderated by interactional competence. Additionally, from one side, the aim was to check statistically the extent of the interaction effect between vocabulary instruction and interactional competence on students’ vocabulary learning. From the other side, based on the qualitative and quantitative analyses of qualitative data, the aim was to determine the interactional features that are most salient in favor of the outperforming (experimental) group.

5.1 Discussion of Findings

The findings of the present research are discussed based on both the quantitative and qualitative data.

5.1.1 Discussion of quantitative data

1- The result indicates the existence of significant difference between the mean scores of the experimental and the control groups in the total vocabulary learning scores across all tasks (sentence comprehension, oppositeness, synonymy, filling the gaps in sentences, cloze test: filling the gaps in the text) in favour of the experimental group. The results also reveal the existence of statistically significant effect of vocabulary instruction on the students’ vocabulary learning in favour of the experimental group.

The results are related to incidental vocabulary learning. This is clearly mentioned by Wesche (1999) when he admitted that the acquisition of new lexical items happens when learners focus on understanding meaning rather than on the explicit goal of learning new words. Shujing (2007) also explained that incidental
learning involves the learning of one thing such as vocabulary while the learner’s primary objective is to do something else.

The results of the experiment found clear support for incidental learning that is based mostly on attention to meaning (as opposed to form) (Ellis et al., 2009, p.264), or communication (Hulstijn, 2007 p.8). It is also important to interpret the results by the opportunity, such as a good oral situation to consolidate vocabulary knowledge, the students have when encountering new words. This is clearly mentioned by Wu (2009) when he considered activities with partners or group members as a good medium to increase students’ word knowledge and consolidate new words.

The results of the experiment in terms of vocabulary learning are supported with Laufer & Hulstijn’s (2001) view that the incidental method is best used with advanced learners because they exert an amount of energy which involves both noticing and consciousness. However, the same idea opposes Gass’s (1999) view that the amount of lexical development occurs incidentally with less cognitive processing as learners do not invest much energy to memorise words.

It is also worth mentioning that the design of the present experiment, based on context; definition; pictures through small groups’ interaction, fosters vocabulary learning to occur incidentally. This idea has been pointed out by many researchers. For example, Krashen (1989) maintains that vocabulary is most efficiently acquired incidentally through the act of reading when learners guess the meaning of the unknown words from context, i.e., through exposure to input (Nation, 2001), and meaning-focused instruction (DeKeyser 1998). Similarly, Ahmad’s (2012) suggestion that vocabulary can be learnt more effectively when learners infer meaning through context supports the present findings. This is mainly because the experiment helped the
students to sharpen their ability to guess and understand the meaning of vocabulary with more cognitive process.

The results of the present study also tie well with Jenkins, Stein, & Wysocki, (1984); Nagy, Herman, & Anderson (1985); Saragi, Nation, & Meister (1978) views that context is very important for vocabulary incidental learning. The same argument is called by (Beck & McKeown, 1991; Carnine et al., 1984) which is known as the context method. The latter is preferred also by Gambrell and Headley (2006) because, unlike the use of dictionaries, little interruption of the comprehension process is invested while trying to detect the meaning of the word with deeper and richer understanding of a word.

The design of the present study delivered significantly better results due to the use of richer context clues. This goes in accordance with Gambrell and Headley (2006) claims that context clues are pivotal to decipher the meaning of unknown words without the use of other resources, such as dictionaries. The same researchers consider words, sentences, and paragraphs as a good environment that determines a context in which an unknown word exists. The present finding are also supported by Kennedy & Weener (1974); Buikema & Graves (1993); Kuhn & Stahl (1998) call for the use of context as an effective way that leads to positive vocabulary learning.

The results of the experiment found clear evidence for the utility of some ways, summarised by Pavičić (2008), under which a teacher can present and instruct vocabulary through a context of one sentence only or several sentences in which the word appears. This clearly can help the learner to guess the meaning on the basis of the cumulative effect of the sentences. Besides, as noted by Nagy, Anderson and Herman (1987) contexts in combination with definitions, or replaced known words with nonsense words provide useful information about the nature of learning from context.
In addition, the findings found evidence for the importance of context to be at the top of the list of vocabulary learning strategies, as stated by Nation (2001, p. 420).

In relation to instruction of new lexical items, the result of this study can be compared with Stahl and Fairbanks (1986) study where they reported a meta-analysis of studies concerned with the effects of vocabulary instruction on the learning of word meanings and on comprehension. Their study suggested that the most effective vocabulary teaching methods included both definitional and contextual information in their programs, involved the students in deeper processing, and gave the students more than one or two exposures to the learned words. As suggested by Stahl (1983, 1985), this implies that knowing a word requires both definitional and contextual information, such as synonyms or a dictionary and development from exposure to words in context.

In relation to Krashen’s comprehensible input hypothesis learners were given access to the next level “i+1” with the use of the adopted instruction because it lead them to understand and express meaning. In this sense, Krashen claims that in order for a second language learning to occur, input must be exposed in a comprehensible manner, i.e., ‘comprehensible input’. This means that language is best acquired when input is comprehended or understood at a level that can be slightly beyond the current level of competence. Therefore, the adopted instruction guaranteed a kind of input that is comprehensible and sufficient for the occurrence of vocabulary learning.

Following Krashen’s comprehensible input hypothesis, then, it can be interpreted that the adopted instruction in the experimental condition delivers significantly better results due to fact that it provided learners with richer information (context, definition, and pictures). This yielded increasingly better results and helped input to be more comprehensible for them comparing with the instruction in the control condition.
Krashen’s comprehensible input hypothesis also is important to correctly interpret the results because it gives prominence to input with the emphasis on the message rather than form which gives rise to meaningful communication in the classroom (Brown, 2000). It is also worth discussing the positive results based on McLaughlin’ view (1987) that Krashen’ input hypothesis gives prominence to communicative language teaching (CLT) approach rather than the previous rule- or grammar-based approaches. In here, it must be pointed out that comprehensible input based on the instruction in the experimental condition was also sustained with interaction that provoked more interactional features (mainly due to negotiated meaning) comparing with the control group.

It is also worth considering that input will not contribute alone in the language acquisition. This is because, as Corder (1967) claimed, intake should be associated with language learning processing. That is, learners, while internalizing the language being learned, they contribute in making it part of their inter language system. Also, in order for input to be comprehensible, learners must notice the forms to be acquired (Schmidt, 1994) which means that comprehensible input must become intake.

In the present study noticing the forms was reached by highlighting the target words in the text (See appendix number four). As stated by Nation and Meara (2010) highlighting in the text is a major condition that is required to be met in order for such learning to occur with non-native speakers. The same view also is supported by Schmidt (1990; 1995; 2001). In this vein, he stated that both noticing and understanding are two essential levels of awareness. As far as noticing is concerned, it is a necessary condition to facilitate intake and it must be associated with attention which is necessary for the conversion of input into intake (Schmidt, 1993). Understanding as a second level of awareness, is the outcome of deeper learning.
It is also worth mentioning that the results in the experimental condition are substantially better than in the control condition because comprehensible input is supported with more production of interaction and communication. Accordingly, the results of the present study provides evidence to Long’s Interaction Hypothesis (HI) (1983b, 1983c, 1996) which claims that comprehensible input is most effective when it is modified through the negotiation of meaning.

Negotiation of meaning leads to good results because it is a fundamental component of interaction as students communicate and collaborate together to develop mutual understanding to prevent breakdown in communication and interactional trouble. In this sense, Krashen (1981) has conceptualised “comprehensible input” with an access to input obtained via interaction and considered language competence as a result of interaction between a learner’s input and output.

Turn taking in association with negotiated meaning is an important component that helps understanding the results of the present study. This may be explained by the fact that turn taking is a basic ingredient in making input comprehensible when turn-taking comes to be associated with break downs. In this sense, there is a need to signal that something important is happening in the conversation. Turn taking as an important component in the construction of conversation, then, serves to explain the positive obtained results. This is clear when Gass (2005) asserts that ‘conversation is not only a medium of practice, but also the means of which learning takes place’.

The results of the present study in relation to vocabulary learning support Long’s (1983) interaction hypothesis because more interaction is produced in the experimental condition. According to Long’s hypothesis interactional adjustments make input comprehensible, and comprehensible input promotes acquisition, thus interactional adjustments promote acquisition. In addition, as claimed by Van Lier
(1988), the application of interaction through meaningful activities is a good medium between input and intake. Therefore, Long’s contribution suggested in his hypothesis is a good choice to confirm the supremacy of the experimental group.

More negotiation of meaning also delivers clearly better results and facilitates acquisition. This is supported by Palma’s (2014) view that negotiation of meaning helps input to be more comprehensible to the learner, and promotes acquisition because it connects input, internal learner capacities, mainly selective attention, and output in productive ways. In addition, the results of the present study based on the use of tasks designed in group works go in line with the trend suggested by researchers such as Gourlay (2005) and Harris (2005) who maintained that negotiation of meaning activates the students selective attention and interpersonal communication through task-based approach

2- Another promising finding was that students had long-term vocabulary retention across all tasks in the experimental condition. The implications of these findings, in relation to long-term vocabulary retention, are discussed in Hulstijn & Laufer (2001) who considered incidental vocabulary learning as helpful to retain words in a better way for a longer period of time through a deeper mental processing. Hulstijn’s (1992) claim that the amount and type of attention help retain words efficiently provides evidence to our findings because more mental efforts are required to decipher a word in context associated with definition and pictures through small groups’ interaction. In the same line of thought, Mondria & Wit-De Boer (1991) called for the fact that deeper cognitive and mental action of the word-form, can be established when learners make connections between the context and the prior knowledge.
In line with Laufer and Hulstijn (2001) involvement load hypothesis, better chance to retain vocabulary is more likely the result of deep word processing. Thus, the positive results of vocabulary learning and retention are supported with the claim that the role of involvement in learning tasks allows learners to be more involved with the target words while completing the activities, which leads to incidental learning. That is, the more learners are involved with words, the better the chance they will retain them.

In line with the ideas of involvement load hypothesis, it can be concluded that deep word processing is more beneficial to vocabulary learning and retention. In this sense, there is some empirical evidence on the involvement load hypothesis in several studies. For example, Keating (2008) conducted a study which revealed that better retention of meaning and form were obtained by beginning Spanish learners while completing a sentence-writing exercise after reading in comparison to a blank-filling exercise. Nevertheless, another study conducted by Lu (2013), showed that unlike the previous study the blank-filling task for lower-intermediate learners was more beneficial to vocabulary learning than the composition task, which is probably due to time constraints in FL classrooms.

Folse (2006) conducted a study about the effects of different writing tasks on the learning of L2 words by university students whose proficiency levels ranged from lower intermediate to advanced level. However, his study was not supportive to the involvement load hypothesis since the tasks were equally effective although they differently involve strong and moderate evaluation.

The findings of the present study also are consistent with what has been found in Makhlouf and Boulenouar (2017) study who attempted to investigate the effects of vocabulary instruction on translated word learning for first year EFL Master students of science in didactics at Saida University. The results were indicative because students
achieved positive learning results regarding the first task when engaging in tasks that require a deeper level of processing. The experimental group was assigned to vocabulary instruction through group work enhanced by short text context, definitions and examples. In the other side, the control group exhibited the same treatment without examples. However, their findings demonstrated the existence of statistically significant differences in favor of the experimental group in the post test between the means of the two test scores only in the first task (isolated word translation vocabulary).

Similar results were reported in the study conducted by Clark (1984) for fifty five seventh graders from an urban school. In his study, the learners were respectively exposed to three different vocabulary instruction methodologies (definitions- context- definitions and contextual sentence examples). However, it was discovered that the three methods improved the learners’ vocabulary knowledge with no single preferred method.

Some analogous results were obtained by Hulstijn and Laufer (2001) in Israel and the Netherlands universities in which each had experimental group with the same tasks. However, the three experimental conditions in Hulstijn and Laufer (2001) study were different only in evaluation indexes. As reported by Mohamed (2016) the findings supported the hypothesis because the amount of retention was related to the total involvement load. The participants were advanced English learners assigned to three different tasks: 1- reading comprehension with glosses (moderate need, no search, and no evaluation); 2- reading plus filling in target words (moderate need, no search, and moderate evaluation); and 3- composition writing using target words (moderate need, no search, and strong evaluation).
However, the results of the present study lead to opposing conclusion to Bensoussan and Laufer (1984); Carnine, Kameenui and Coyle (1984); Laufer and Sim (1985); McKeown (1985); Kelly (1989); Koster (1985); Stip and Hulstijn (1986); Mondria and Wit-De Boer’s (1991). These researchers contested inferring from context method for they claim that context does not always result in improved retention.

From these results it is clear that it is important to correctly interpret the positive results in terms of long-term vocabulary retention, based on the present study’s experiment design, where more negotiation occurred due to the tasks the students were involved in. This goes in line with previous studies; for example, that of De la Fuente (2002) where he investigated the effect of some tasks through the comparison of input, negotiation, and negotiation with ‘pushed output’ on receptive and productive word acquisition. In his study he concluded that both negotiation with or without pushed output are effective for receptive acquisition. However, the same study showed that a more positive productive word acquisition and retention can be the result of negotiation with pushed output rather than input alone.

The results also go in line with the ideas of Paivio (1986) dual coding theory (DCT), i.e. the linguistic and visual storing of information. It can be concluded that linguistic and visual storing of information helps meaning to be stored both linguistically and visually because, as explained by Nation (2001), objects and pictures often contain a lot of detail which sustain learners to determine the essential features of the concept. This in turn, reduces the possibility of incorrect guessing and helps reinforce the linguistic and visual storing of information. In addition, this method helps students to discover the word’s meaning and thereby enhances word retention as a result of the presentation of meaning with images.
The positive effect of the instruction in the experimental condition was probably a result of the principle of dual coding which accounts for both verbal and nonverbal cognition. The latter reinforces language learning through the use of images and helps enhance the visual memory in turn (Paivio, 1986). This may be explained by the effect of the nonverbal cognition (imagery) because its function is related to the generation of mental images (Sadoski, Goetz, Stricker & Burdenski Jr, 2003). This is an important finding in the understanding how words are easily remembered and learned when connected with images as a result of an object identity that is established through the visual system (David & Hirschman, 1998; Kellogg & Howe, 1971; Underwood, 1989 cited in Pyle, 2009).

The findings showed that students had long-term vocabulary retention across all tasks in the experimental condition. The positive performance of students in the second and third tasks (oppositeness, and synonymy) is also indicative because the present findings confirm the effect of the adopted instruction sustained with the use of oppositeness, and synonymy. The positive results across all tasks in the experimental condition and in the second and third tasks (oppositeness, and synonymy) cast a new light on sustaining context with some clues of oppositeness, and synonymy.

These findings also goes in accordance with findings reported by Clark (1978) who confirmed that students when instructed to generate synonyms they will make such responses more likely than when students free-associate to words. Another example related to antonyms, illustrated by Wynne et al. (1965) study, showed that adding antonym-evoking stimuli to the beginning of a free-association list increased the frequency of antonym responses for later items (cited in Clark & Paivio, 1991).

When comparing the results in the present study to those of previous studies, it is necessary to point out that the idea of dual coding has a great effect on vocabulary
learning and retention. For example, Mayer and Sims (1994) conducted two experiments with the aim to help students combine verbal and visual information to construct knowledge, and enable them in turn to understand such information so as to transfer the new material to new situations. Mayer and Sims (1994) experiments gave evidence for the positive effect of dual-coding theory because more cognitive resources to building referential connections between visual and verbal representations are devoted by low-experience, high-spatial learners, i.e. the instruction that carefully synchronizes the presentation of verbal and visual forms of scientific explanation was more beneficial especially for low-experience, high-spatial ability students.

The results of the present study are also consistent with Schultz and Woodall (1980) experiment on pictorial and narrative learning mediators conducted with 126 third and fourth grade students. The results of their study demonstrated that the pictorial mediator group outperformed the other groups with a higher recall of words. The findings were indicative because it supported the dual coding theory (cited in Yui, Ng, Perera, 2017).

A similar conclusion was reached by Hall, Bailey, and Tillman (1997) with a focus on illustration. In their study, Hall, Bailey, and Tillman compared three groups. One group received text alone and two groups received the text in addition to illustrations. However, one of the last groups used illustrations based on the learners’ own creation. The findings showed that there was no significant difference between the two groups receiving text with illustration. However, the two groups scored better than the third group receiving text without illustration.

The positive effect of vocabulary instruction on the students’ vocabulary learning and retention in the experimental condition gives clear evidence of the utility of imagery as a learning tool in a classroom situation as a means to master a greater
number of unknown university level words. Similar results are found in Stahl, and Neel (1987) study with a focus on (definition, sentence, and image). In their experiment the students received the word with the definition, the sentence using the word in context, as well as an image depicting the ideas in the sentence. They have demonstrated that the study supports the importance of Paivio's dual coding theory in learning because visual image helped students to improve their long term memory for the vocabulary items in the study, and proved that it can be used in the college reading program.

3- The results that were gathered in relation to the students’ total attitudes revealed the existence of a difference of statistical significance between the two groups’ (the experimental and control groups) means in their total attitudes. The aim behind exploring the student’s attitudes is to check which instruction generates more positive attitudes and, thereby, leads to promote more opportunities for vocabulary learning environment.

To achieve the aforementioned aim, the trend of the students’ responses was established to recognize the level of agreement of students’ answers across all the study axes (vocabulary learning, contextualizing vocabulary learning, cognitive and mental efforts involved in the task, memorization context, and classroom interactional competence). The results revealed that the experimental group showed more positive attitudes toward the adopted instruction.

The implications of these findings demonstrate that the majority of students who answered the questionnaire agreed on the totality of questionnaire items. This indicates that EFL students have more positive level of attitudes towards the five axes of the questionnaire in the experimental condition comparing with the control group. However, the most agreement on the questionnaire items is related to vocabulary learning attitudes respectively followed by attitudes in relation to classroom
interactional competence, cognitive and mental efforts involved in the task, memorization context, and finally contextualizing vocabulary learning attitudes.

The results in relation to attitudes confirm and consolidate the positive results related to quantitative data discussed previously in relation to the treatment through pre-post and delay-tests. The use of multi-method research design based on a combination of quantitative and qualitative research methods using both English language students' questionnaires (surveying the students’ attitudes toward the two vocabulary instructions), and pre-, post-, and delayed post- tests gives clear evidence and delivers significantly better understanding of the utility of instructing vocabulary to students in context and by definition enhanced with the use of pictures through small groups interaction.

From the results, it is then clear that students favour vocabulary instruction through interaction using context and definition enhanced by pictures mainly because they regard the following reasons:

1. They could enrich their vocabulary knowledge.
2. There is enough interactional space for them by which they are better able to contribute to the process of co-constructing meanings because they can negotiate meaning easily with their classmates.
3. The teacher is able to shape the students contributions by helping them to say what they mean through the use of the most appropriate language to do so.
4. The method used to understand the meaning of words within context in combination to interaction are at one, and working together in a more convergent way.
5. The instruction helps them to invest more cognitive and mental efforts when being involved in the task.
6 The instruction helps them to remember the new words along with the context in which they occur, and gives them a mental connection of the word and definition.

7 The instruction helps them to learn vocabulary and perform better in relation to different tasks (sentence comprehension, synonyms, antonyms, extended context within a whole passage and single sentences).

5.1.2 Discussion of qualitative data

The purpose of the last research question, based on the qualitative and quantitative analyses of qualitative data, was to determine the interactional features that are most salient in favor of the outperforming group. In accordance with this aim, the results of the study showed that the amount of teacher talk is balanced with the amount of students’ talk in the experimental group more than that in the control group. This result is characterised with the less amount of teacher talk. The result also goes in harmony with Nunan’s (1991) claim in such a way that excessive teacher talk is not advised if more opportunities for producing comprehensible output are most sought by learners themselves, and therefore increasing their chances for better learning (p. 190). In a similar way, the same findings are supported with Harmer (2000, p.4) claim who emphasised that “a good teacher maximizes STT and minimizes TTT.”

In addition, based on the interactional features proposed by Walsh (2006, 2011) self evaluation of teacher talk (SETT) framework, the aforementioned result is supported with Shamsipour and Allami (2012) findings. The latter found that extended learners turns are among the positive interactional features types generated from the teacher talk which can increase and create opportunities for learning a foreign language. Thus, students in the classroom should have a good chance to interact and to increase the amount of their talk.
The amount of students’ talk that was equilibrated with the amount of teacher talk is also justified by the frequent questions that were significantly asked by the teacher. In here, teacher’s referential questions are a sign of genuine communication. This indicates that the teacher was able to provoke students’ ability to produce more quantity of interaction. However, referential questions require greater effort and depth of processing on the part of the teacher.

Both genuine (referential) and display questions help the learner to acquire the vocabulary being learned. However, Long and Crookes (1987) underscored the fact that teachers should minimize the use of display questions because these hamper interaction, which in turn affects the acquisition through comprehensible input. Nevertheless, it can be implied that referential questions significantly assisted the teacher and the students in the experimental group to promote vocabulary learning through significant interactional competence level.

A similar result echoed in Shamsipour and Allami (2012) findings. They found that referential questions were part of the positive interactional features which helped create more opportunities for learning a foreign language. The following extract demonstrates how this is done.

**Extract 1 (referential questions)**

214  T:  please, why not saying that the fourth choice is more suitable “lowliness (humble in attitude)”? don’t you think so? you know showing kind of modesty being humble and modest, don’t you think so NAME? *(inviting another student from another group)*

215  S1:  picture number 2?
The extract above has been taken as an example of referential questions serving to extend students talk time. In lines 217, 219, and 221 the same student expressed his point of view and responded more abundantly to argument his answer. Therefore, it is clear that the teacher’s focus was on extending the student’s interaction by means of referential questions.

The qualitative and quantitative analyses of qualitative data also have revealed that the experimental group exhibited a set of interactional features that are mostly characterised with more negotiation that is supported with the students’ attempt to negotiate meaning with no teacher intervention, and two different interaction features: 1 comprehension check ; 2 confirmation check. Analyses of the data in extract 2 show how this is done.

**Extract 2 (confirmation and comprehension checks)**

13  T: why exactly it’s the first definition, why not the third or the sixth one for example?
14  S: because it comes from the word mid or middle ages
15  T: ah, good
The extract above has been taken as an example of confirmation and comprehension checks serving to negotiate meaning between the teacher and the students. It requests for clarification and confirmation which foster learning through negotiated meaning. Students in this case are more likely to be engaged with the learning process.

Similar to Alright (1991), comprehension check (checking if the message is understood by the receiver and confirmation check (if the receiver has correctly understood the message are among the major processing that result in input modification and, consequently, to language acquisition. In this vein, Long (1983, p. 214) following his model offered clear evidence on how negotiated interaction can lead to language acquisition which can be connected through comprehensible input.

As far as the students’ attempt to negotiate meaning with no teacher intervention is concerned, the students in the experimental group started to negotiate meaning themselves. This shows how successfully students manage interaction and negotiate meaning themselves with no teacher intervention. The following excerpt demonstrates a range of meanings that are negotiated by students themselves, and how students were able to resolve some communication problems at the level of vocabulary meaning. Thus, negotiating meaning by students themselves with no teacher intervention promoted language learning opportunity.
Excerpt 3

114  T: NAME would you please give the chance later for further explanation regarding picture 4 maybe picture 4 holds a different meaning (3 sec)

115  S1: yes

116  S9: NAME can you tell us which definition matches the word impose?

117  S1: well, it’s number 4 “to interrupt or force your ideas on other people”.

118  S9: then does this definition go with picture 4 and how can you see that man in a meeting imposes his ideas?

119  S2: it can’t be, it can’t be

120  SS: noise (many students speaking at once)

121  S1: well I have a way to solve the problem, let’s just skip this one and deal with the other words

122  T: yes, that’s perfect exactly

The extract above has been taken as an example of another type of negotiation serving to negotiate meaning between students themselves with no teacher intervention. This happens when students seek clarification or confirm intended meanings. Thus, raising the students interactional competence is conditioned with the teacher’s ability to manage learners’ contributions in such a way students produce a type of interaction that is more engaged and more focused on participation and negotiation of meaning. Therefore, this coincides with Walsh (2011) classroom interactional competence for there is ample evidence of successful classroom interaction that is based on teachers and learners abilities to use interaction as a tool for mediating and assisting learning.

The adopted instruction, based on negotiation of meaning, is best accomplished when students get involved in tasks that require interaction and various cognitive processes. At this level, tasks are supplemented with the aim to produce new words
with the possibility of generating feedback and negotiations. An effective interpretation is offered by Skehan (1998) who considered tasks as activities in which there is some communication problem to solve. According to him, meaning is primary for a task to be effective. In addition, there should be a goal which needs to be worked towards.

Johnson (1982) and Littlewood (1981) offered a useful interpretation of the utility of such tasks, when learners engage in meaning-focused activities, in promoting the learning process. They viewed negotiation of meaning as a supporting tool in the learning process. This can be explained by the meaningfulness of such communicative activities with their indispensable role in creating collaboration and scaffolding among peers through interaction which promotes learners’ cognitive and linguistic development.

In the same line of thought, as cited in Ellis (1991), it has been confirmed that tasks that provoke participants to exchange information with each other foster interactional restructuring. This works better when the objective is essentially based on meaning and reached by engaging in some form of social interaction (von Sydow, 2015). The positive results of the study also are supported by Crookall (1990) claims. He stated that the meaningfulness and motivation found in such activities are supplemented with the aim to produce new words with the possibility of generating feedback and negotiations.

A similar pattern of results was confirmed by Ellis (1994) and Newton (1995). They found that negotiation in communicative tasks is more productive in terms of vocabulary acquisition than those tasks with no negotiation. Ellis and He (1999) and Joe (1998) supported the same idea that activities which involve more production were more efficient for vocabulary acquisition.
The fact of getting positive results based on considerable amount of negotiated interaction in favor of the experimental group might be supported with Long (1983a) suggestion that a second language or the target language is best acquired through learners' negotiation of meanings and the various teachers' speech characteristics.

Results showed that vocabulary learning is best acquired in the experimental group. In here, it should be noted that the use of instruction in the experimental group is especially effective because language is used more productively. This coincides with Newton (1995) suggestion when vocabulary learning happens due to learning from meaning-focused output as language is used productively. According to Newton, (1995) this happens, mainly, because of two reasons: first, the use of pictures or definitions which stimulate the use of new vocabulary; second, involving learners in group work activities through speaking helps learners positively to negotiate the meanings of unknown words with each other.

Similarly, Ellis and He (1999); Joe (1998) stated that activities which involve more production were more efficient for vocabulary acquisition (cited in Már mol & Sánchez-Lafuente, 2013). The Results of Ellis and He (1999) experience with three groups, each of which was treated differently, showed that interaction and negotiation of new vocabulary, as learners could modify their own directions more than the others, help them to promote incidental vocabulary acquisition.

The findings of the present study are directly in line with previous findings of researchers who investigated the contribution of negotiation of meaning in 2 LA (Foster & Ohta, 2005; Gass & Vanoris, 1985, 1994; Jeong, 2011; Lee, 2005; Lee, 2006; Long, 1983 b, 1983c, 1983d, 1996; 2011; Luan & Sappathy, 2011; Pica, 1987 b,1994, Révész, et al, 2011; Yong, 1983), and in L2 vocabulary acquisition in particular (Pica, 1993, 1994; Long, 1996; Ellis, 1985, 1995; Loschky, 1994; Fuente,
For example, Pica (1993, 1994) claims that negotiated meaning in interaction may lead to lexical learning more than grammatical morphology. The results lead to similar conclusion reached by Ellis et al (1994) who remarked the positive effects of modified input through negotiation of meaning on vocabulary comprehension and acquisition than pre-modified input (simplified input).

The integration of interaction that is most featured with negotiation of meaning yields increasingly good results at the level of vocabulary learning and retention. Extensive results carried out by some researchers showed that this method improves the learners’ vocabulary learning and retention. This is supported by some studies which examined the effects of negotiation of meaning on learners’ ability to acquire and retain vocabulary items. Luan & Sappathy (2011) study with a group of primary school learners revealed that learners who negotiated for meaning in the two-way task had higher vocabulary performance in acquiring and retaining vocabulary items. Another study conducted by Yi and Sun (2013) with Chinese learners of English in the classroom setting showed that the college students who were exposed to pre-modified input (input that has been simplified and made more redundant) and negotiation of meaning (with their teachers or peers) outperformed the students who were exposed to pre-modified input (without negotiation of meaning) in terms of acquiring new words.

The present study also proved that the questions asked by students helped them to reach effective negotiated interaction and consequently vocabulary learning. This delivers significantly better results, as stated by Zhao & Bitchener (2007, p.446), due to negotiation of meaning in the linguistic difficulties that prompt more questioning in the learner-learner interactions, which enable them to search for immediate resolution of language difficulties. This is an important finding in the understanding of classroom
interaction. In this sense, Chaudron (1988) acknowledged that the extent to which communication can be jointly constructed between the teacher and learners has a great impact on the classroom learning events. In the same line of thought, Swain (1985) stated that interaction in which learners struggle to make output comprehensible is important for language development.

The results of the present study found clear support for communication of meaning as a helpful medium for vocabulary learning. In this respect, Marzano (2004) endorses the fact that discussing new terms assist learners to encode information in their own words which enable them to gain deeper understanding of words and getting the possibility to store them in permanent memory. The implications of these findings are emphasised by Lightbown & Spada (2013, p. 127) who consider the focus on meaning as helpful for students to acquire language in a way similar to natural acquisition (input is simplified and made comprehensible by the use of contextual cues., there is a limited amount of error correction on the part of the teacher, and meaning is emphasized over form).

The results of the study also suggest that the mental efforts exerted by students when negotiating meaning play a fundamental role in having a good range of vocabulary learning and retention. This is consistent with what has been found in various studies where the aim was to explain the effectiveness of some tasks in promoting L2 vocabulary acquisition. They claimed that tasks that require more mental effort on the learners’ part lead to a better retention of vocabulary. For example, De la Fuente (2006) confirmed that “from a cognitive perspective, tasks are specific language-learning activities that may facilitate optimal conditions for second language learning by triggering processes said to facilitate SLA”(p.264). Another example that showed the effect of some tasks through the comparison of input, negotiation, and negotiation with ‘pushed output’ on receptive and productive word acquisition has
been investigated by De la Fuente (2002). In his study he concluded that both negotiation with or without pushed output are effective for receptive acquisition. However, the same study showed that a more positive productive word acquisition and retention can be the result of negotiation with pushed output rather than input alone.

The results demonstrate, as claimed by (Walsh, 2011), that classroom interactional competence (CIC) is interpreted by the teacher and students ability to use interaction as a tool for mediating and assisting learning. The results also lead to similar conclusion where opportunities are openly offered to teachers and learners to mediate and assist each other in the creation of what Vygotsky (1978) called ‘zones of proximal development’. This is relevant to what Lantolf (2000) reports when he considers that collaboration within a social instructional network helps teachers and learners to create solid zones of proximal development and learning mental abilities.

It is safe to say that the interactional features that are most salient in favor of the experimental group contribute effectively in the quality of interaction. This, as claimed by Wu (2009), can have positive effect on the incidental learning. From the results, it can be confirmed that a good choice for interactional features can lead to the success of classroom interaction that is based on the teacher’s ability to manage learners’ contributions and raise their interactional competence. To put it differently, the production of a type of interaction that is more engaged and more focused on negotiation of meaning is at the centre of a successful classroom interaction. These findings found evidence for Lightbown & Spada (2013) claim that negotiation for meaning and genuine questions are among the important types of inputs and outputs exposure that assist the occurrence of incidental vocabulary learning.

The results now provide evidence to the contribution of negotiated interaction in promoting vocabulary learning. This leads us to correctly interpret the positive results
due to negotiation of meaning even if negotiation happens when there is a lack of understanding among the interactants. However, in line with the ideas of Nation (2001, p. 123), it can be concluded that vocabulary can be learned incidentally as students get the modified input.

5.1.3 Concluding discussions

It is worth discussing the general aim of the study revealed by the results of the present study with the attempt to bring the variables of the study all together. Therefore, this last part of discussion casts a new light on classroom discourse and has the goal to have an inclusive insight into the findings and contributions of the adopted instruction based on the interaction effect of vocabulary instruction and interactional competence on the students’ vocabulary learning, and consequently on vocabulary retention.

The findings from this study suggest the existence of a significant interaction effect and indicate that moderation exists. The result also indicates that interaction is highly significant, $b = 0.1578$, 95% CI [0.0462, 0.2695], $t = 2.4510$, $p < .05$. Therefore, the relationship between the vocabulary instruction and vocabulary learning is moderated by interactional competence. Because of this, we reject the null hypothesis; therefore, there is a statistically significant interaction effect between the independent variable (Vocabulary Instruction) and moderator variable (Interactional Competence) on dependant variable (the students’ vocabulary learning) in the experimental condition. In addition, the results indicate that the relationship between vocabulary instruction and vocabulary learning is positive in all cases and occurs at different levels (low, mean, and high) of interactional competence exhibited in classroom between the teacher and the students.
Based on what is found in this study, the positive effect of vocabulary instruction on vocabulary learning and word retention in the experimental condition, it can be concluded that learning outcome increases as the cognitive or generative process degree increases. This may be explained by analogous research suggested in the literature by researchers such as Joe (1995) who found that tasks involving a high degree of cognitive or generative process helped to achieve more positive incidental vocabulary acquisition than tasks producing a low degree of cognitive or generative process. This also is enhanced by the argument that more cognitive processing would generate more vocabulary learning and gain of new words.

Another study conducted by Paribakht and Wesche (1997) with the attempt to compare word learning in both ‘reading only’ and ‘reading plus’ conditions can confirm the findings of the present study. The first condition is supported with the use of eight texts (exposure to target words in texts), whereas the second one is supported with the use of four texts and different vocabulary exercises in which students were required to practice new words in post reading vocabulary focused exercises. The researchers remarked that students exposed to the second condition had better retention of vocabulary.

The aforementioned researches have a string tie to Bialystok (1983); Nation (1982); Nation and Coady (1988); Schouten-van Parrerren (1985), (1986) suggestion that when learners themselves infer the meaning of new words they learn them in a better way. A promising assumption that confirm the same suggestion was that of Craik and Tulving (1975); Jacoby (1978); Jacoby and Craik (1979) ; Jacoby, Craik and Begg, (1979) , (cited in Hulstijn, J.H, 1992). They assumed that inferring or deducing the solution of a problem will lead learners to invest more mental efforts in tasks and thereby can retrieve and recall information in a more positive way.
It is then worth discussing the results of the present study in light of Involvement Load Hypothesis proposed by (Laufer & Hulstijn, 2001) which suggested that task with higher involvement load leads to facilitate vocabulary learning and retention. In a case study conducted by Newton (1995), communicative activities that imply negotiation of words in task-based interaction lead to better retention words. To put it another way, tasks involving information that are processed at a deep level lead to a significantly higher level of vocabulary learning.

The results of the present study also support the trend that incorporating interaction into vocabulary instruction can improve vocabulary learning. In this spirit, Shayer (2002) conceived the idea that social and collaborative aspects of learning through interaction among peers helps to create a collective ZPD. This in turn effectively proves the efficacy of language pedagogical tasks. In other terms, cognitive tasks involving comprehension with the objective to focus on new vocabulary items can lead to incidental acquisition and retention of the vocabulary items.

It is also important to highlight the fact that the present research is positively affected by more opportunities for students to interact and negotiate meaning through task-based interaction that promotes vocabulary learning and retention. In line with the Hulstijn and Laufer's (2001) study, the degree of task involvement load is determined through the three components (need, search, and evaluation). In the present study the search component is higher in the experimental group than in the control group because students in the experimental group are required to find the meaning of the target word and also to combine it or match it with the corresponding picture. Therefore, the three components are described in the control and experimental groups respectively as follows: [+N, +S, +E] and [+N, ++S, +E].
Accordingly, the index value is 3 (1+1+1) for the control group and 4 (1+1+2) for the experimental group.

In this sense, the results of the study are supported with Pica’s (2013) claim that comprehensible input, interaction, and comprehensible/pushed output are necessary, but not sufficient for language acquisition. Therefore, learners need other opportunities such as tasks that activates cognitive processes and L2 outcomes through, a) Need (to understand meaning; b) Search (for answers); c) Evaluation (e.g. compare; apply to future context) based on Laufer & Hulstijn (2001) ‘Involvement Load Hypothesis’.

The results of the study can also be significantly understood through Park’s (2002) classification of comprehensible input. Park (2002) classified comprehensible input into three types: pre-modified input, interactionally modified input, and modified output. Pre-modified input is regarded as simplified input because it refers to the input which has been modified in some way as a result of simplification and contextual clues. Interactionally modified input results from negotiation of input through interaction. It is a type of input which has been modified in interaction with native speakers or more proficient non-native ones for the sake of comprehension. Modified output happens when learners are able to modify a previous utterance.

In light of the aforesaid classification, input in the present study, becomes comprehensible as a result of simplification by providing students with definitions of difficult vocabulary items definition and context enhanced by pictures. In addition, input becomes comprehensible by instructing the students vocabulary by definition and context enhanced by pictures through group interaction that is more featured with negotiation of meaning. This result ties well with Ellis (1994) suggestion that interactionally modified input is facilitative to comprehension more than other types of input because negotiation of meaning makes input comprehensible. Besides, modified output is interchangeable with interactionally modified input and serves as another
learner’s comprehensible input because language is adjusted so that learners can better comprehend the speaker’s meaning. This may occur, as Tavakoli (2013) has demonstrated, following feedback that may involve repair of an initial error or some other change.

5.2 Limitations of the Study

The present study had several limitations in relation to both the quantitative and qualitative data. Therefore, the limitations are presented respectively as follows:

1- The target words were exposed in one input oral session of approximately 30 minutes for each group. Because of this limitation, the students could have scored better in both groups if the target words had been exposed and spaced in several sessions following the principle of ‘distributed practice’ rather than ‘massed practice’ (Cepeda et al., 2006; Cepeda et al.2008). That is, better results of learning words could have happened due to repetitions spreading out over time on multiple occasions rather than instructing them within a close time period.

2- The sampling method is one of the study limitations because it is very difficult to judge the sample as really representative of the larger population. Therefore, the small sample size needs to be addressed as one of the limitations of the study. This would consider a larger number of students as a possible reason for having different results. In addition, limitations could be reduced by using the same instruments several times so that findings would be more reliable and valid on a larger extent.

3- The two sessions were recorded with no specialist equipment. Besides, the sessions were recorded in genuine classrooms as opposed to laboratory-type setting. Regarding these limitations, therefore, some parts of recording were exposed to background noise,
overlap, hesitation, and utterances that occurred at one time which made them unintelligible.

4- Another limitation in the present study is that paralinguistic and nonverbal features of communication such as body gestures were not included in the qualitative analysis and transcription because the researcher used only audio recordings. Instead, then, the database would have better included videos for more accurate analysis.

5- The inadequate atmosphere and the bad physical conditions where the students were learning are more likely to affect the quality and quantity of interaction. Therefore, more effective results could have happened in both groups because the classroom atmosphere can be either a motivating or demotivating place to learn.

5.3 Recommendations for Further Research

This section suggests different recommendations for further research based on both the quantitative and qualitative data. Therefore, the recommendations are provided respectively as follows:

1- Researchers and teachers are required to understand the moderate variables that might bring possible changes in the outcome (dependant) variables. This could provide more significant results rather than simply studying the separate effects of the main and secondary independent variables. This helps sustain comprehensible input into which teachers are expected to motivate learners and to develop better vocabulary learning environment. This means that the relationship between the independent and dependant variables could be moderated by at least one moderate variable. This in turn means that an interaction effect between the main independent variable and
the secondary independent variable (moderate variable) can be highly significant and affects the dependant variable.

2- Teachers should also be aware of the involvement load hypothesis and look more carefully into the type of instruction that helps process data more deeply so as to encourage vocabulary learning. This is possible when the degree of task involvement load has high index value. In this respect, it is highly recommended to select tasks that stimulate more search index because students are required to find the meaning of the target word and also to combine it or match it with the corresponding picture. This could be also justified by the amount of negotiation of meaning that helps to retain long-term vocabulary retention.

3- Additionally, it is recommended to use images in combination with vocabulary as a stimulating tool for students to remember lexical items as a result of visual storing of information. Based on Paivio (1986) dual coding theory, the presentation of meaning with images enables learners to connect them in their minds as a result of the linguistic and visual storing of information.

4- It is also recommended on the basis of the study findings that the choice of instructing the target words should be based on frequency corpora. Such choice is justified by different reasons; first, the utility and value of the words in both spoken and written English; second, words have high-frequency occurrence which permits students to learn them because of the chance and the number of times they have while encountering or using them; third, the target words are part of books which cover a large proportion of the words in any spoken or written text because they cover at least 90% of the words in conversation, at least 80% of the words in newspapers and academic texts, and at least 90% of the words in novels (see Introduction in (Paul, 2009)).
5- Teachers must also assess and decide how much and well vocabulary the students know based on a list of vocabulary that are most unfamiliar for them.

6-Research on classroom discourse should take into account interactional competence and vocabulary instruction as significant instructional goals in EFL classrooms with the hope to achieve more successful vocabulary learning and a richer interactional competence.

7- Teachers at higher education can use Walsh’s SETT (Self-Evaluation of Teacher Talk) framework as an evaluative method of their own use of language. This allows them to examine and have greater understanding of the quality of interaction they bring together with their students in classroom; hence, the interactional competence embedded with the interactional featured that most lead to more opportunities of vocabulary learning. This can be applied through recording, transcribing, and analysing their lessons.

8-More negotiation of meaning is favoured when teachers give students more opportunities to negotiate meaning without interrupting them. The negotiation of meaning is also favoured with two different interaction features: 1 comprehension check (checking if the message is understood by the receiver) ; 2 confirmation check ( if the receiver has correctly understood the message).

9-Based also on the study findings, in order to grant students better learning space with more extended learner turns, teachers are required to make a balance in the amount of their talk with that produced by the students. At the same time teachers need to be aware about the importance of the questions they and their students ask as a helping medium in making classroom interactional competence more successful and thereby promoting better vocabulary learning environment.
10- At the end, students’ attitudes allow detailed analysis of vocabulary instruction in combination with interactional competence in classroom setting at different levels mainly in relation to cognitive and mental efforts involved in the task, and memorization context. This helps evaluate vocabulary teaching practices for successful learning environment.

5.4 Summary

This chapter has discussed the findings described in the previous chapter. The chapter also presented conclusions, limitations, and recommendations for further research. The results were evaluated to be significant and indicate the positive effect of vocabulary instruction on vocabulary learning and consequently on word retention through interactional competence that is assigned to the experimental group. Overall, it would also be useful to consider the adopted vocabulary instruction in the experimental condition as a helpful tool for students to learn vocabulary and to engage in a more meaningful communicative interaction that facilitates for them the deep processing of words and their meaning.
General Conclusion

It has been widely agreed that input plays a fundamental role in language learning. Therefore, teachers are required to sustain learners while receiving input, help them comprehend the target language, and engage them in an interactive communication. As far as vocabulary learning is concerned, teachers are asked to pay a great attention to the ways students communicate the target vocabulary in order to make input more comprehensible for them through a more comprehensive instruction.

Learning vocabulary occurs incidentally based mostly on attention to meaning with the use of tasks as a good medium to increase students’ word knowledge and consolidate new words. It is also worth mentioning that context; definition; pictures through small groups’ interaction, foster vocabulary learning to occur incidentally. In this sense, the act of guessing the meaning of the unknown words from context helps the students to sharpen their ability to understand the meaning of vocabulary with more cognitive process.

Following Krashen’s comprehensible input hypothesis, then, it can be interpreted that instructing learners with richer information leads to positive vocabulary learning. This is clear because the students in the experimental group where instructed with vocabulary in context and by definition enhanced with the use of pictures through a type of interaction that gives rise to more interactional features.

In the same light of thought, the results of the study can also be significantly understood through regarding input as more comprehensible because it is interactionally modified for the sake of comprehension. In the present study, input becomes comprehensible by instructing the students vocabulary by definition and context enhanced by pictures through group interaction that is more featured with negotiation of meaning.

The positive results scored by students in relation to vocabulary learning are also supported with more production of interaction and communication. This gives clear evidence to Long’s ‘Interaction Hypothesis’ which claims that comprehensible input is most effective when it is modified through the negotiation of meaning. Therefore, negotiation of meaning helps input to be more comprehensible to the
learner, and promotes vocabulary learning. Besides, the results support the trend that social and collaborative aspects of learning through interaction among peers helps to create a collective ZPD which can be regarded as a bridge to help learners move to the next level of understanding in the learner’s interlanguage.

It can be concluded that the amount of negotiated interaction and the other important features of interactional competence, as a result of learners’ involvement in group work activities through speaking, help promote vocabulary learning. In this sense, the extent to which communication can be jointly constructed between the teacher and learners has a great impact on the classroom learning events. Thus, a richer interactional competence that is most featured with negotiation of meaning yields increasingly good results at the level of vocabulary learning and retention.

The implications of the present findings also lead us to consider the adopted vocabulary instruction helpful to retain words in a better way for a longer period of time through a deeper mental processing. This is mainly because more mental efforts are required to decipher a word in context associated with definition and pictures through small groups’ interaction. That is, the more learners are involved with words, the better the chance they will retain them. Besides, it is important to correctly interpret the positive results in terms of long-term vocabulary retention, based on the more negotiation that occurred due to the tasks the students were involved in.

It can also be concluded that linguistic and visual storing of information due to correct guessing from context, definitions with the use of pictures through groups’ interaction helps meaning to be stored both linguistically and visually. This is because objects and pictures often contain a lot of detail which sustain learners to determine the essential features of the concept, and thereby easily remember and learn vocabulary.

All in all, the present study attempted to investigate the effects of vocabulary instruction on developing vocabulary learning through interactional competence. It also attempted to determine whether or not the effect of vocabulary instruction on vocabulary learning was affected by interactional competence. In other terms, the purpose of the present study was to check if the relationship between the vocabulary instruction and vocabulary learning is moderated by interactional competence.
The positive effect of vocabulary instruction on the students’ vocabulary learning and retention gives clear evidence of the utility of context, definitions, and imagery as a learning tool in a classroom situation through interactional competence that is most salient with negotiation of meaning. This proves that the adopted instruction can be used in the university oral program.

The present study has determined that students have progressed in learning vocabulary and maintained long-term vocabulary retention across all tasks in the experimental condition. The results of the study also revealed that vocabulary instruction in the experimental condition through interactional competence enhanced by context, definitions and pictures is significantly more positive than the same vocabulary instruction without pictures. This indicates that the relationship between vocabulary instruction and vocabulary learning is moderated by interactional competence and that the interaction effect between vocabulary instruction and interactional competence on the students’ vocabulary learning is highly significant. The results also indicate that the relationship between vocabulary instruction and vocabulary learning is positive in all cases and occurs at different levels (low, mean, and high) of interactional competence.

Besides, the quantitative and qualitative analyses of qualitative data have proved that the adopted vocabulary instruction in the experimental condition makes it possible to offer students more opportunities for negotiation of meaning that are mostly supported with no teacher intervention, comprehension check and confirmation check. The same analyses determine the students’ ability to produce more quantity of interaction that is qualified with the opportunity to have better learning space through extended learner turns. The study also is characterised with the amount of teacher talk that is more balanced with the amount of students’ talk, which is associated with more questions asked by the teacher and students in the experimental group.

The study also shows that students reveal more positive attitudes in relation to all the five axes: vocabulary learning, contextualizing vocabulary learning, cognitive and mental efforts involved in the task, memorization context, and classroom interactional competence in favor of the experimental group.
comparison of the two groups’ attitudes more significantly reveals the disparity of the students’ evaluation of the two instructions at the level of memorization.

At the end, we may conclude that much of the difference in the score tests can be attributed to the interaction effect between vocabulary instruction and interactional competence on the students’ vocabulary learning. Therefore, the adopted instruction helps students to learn vocabulary at different levels (low, mean, and high) of interactional competence, maintain long-term vocabulary retention across all tasks, and engage in a more meaningful communicative interaction that facilitates for them the deep processing of words, their meaning; and, thereby, better vocabulary learning environment.
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Appendices

Appendix Number One: A test of verbal speed…………………………..262
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This is a timed test. In no more than three minutes (time yourself, or have someone time you), decide whether the word in column B is the same (or approximately the same) in meaning as the word in column A; opposite (or approximately opposite) in meaning; or whether the two words are merely different. Circle S for same, O for opposite, and D for different. You will not have time to dawdle or think too long, so go as fast as you can.

<table>
<thead>
<tr>
<th>COLUMN A</th>
<th>COLUMN B</th>
<th>same</th>
<th>opposite</th>
<th>different</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. sweet</td>
<td>sour</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>2. crazy</td>
<td>insane</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>3. stout</td>
<td>fat</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>4. big</td>
<td>angry</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>5. danger</td>
<td>peril</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>6. help</td>
<td>hinder</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>7. splendid</td>
<td>magnificent</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>8. love</td>
<td>hate</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>9. stand</td>
<td>rise</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>10. furious</td>
<td>violent</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>11. tree</td>
<td>apple</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>12. doubtful</td>
<td>certain</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>13. handsome</td>
<td>ugly</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>14. begin</td>
<td>start</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>15. strange</td>
<td>familiar</td>
<td>S</td>
<td>O</td>
<td>D</td>
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<tr>
<td>16. male</td>
<td>female</td>
<td>S</td>
<td>O</td>
<td>D</td>
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<tr>
<td>17. powerful</td>
<td>weak</td>
<td>S</td>
<td>O</td>
<td>D</td>
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<tr>
<td>18. beyond</td>
<td>under</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>19. live</td>
<td>die</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>20. go</td>
<td>get</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>21. return</td>
<td>replace</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>22. growl</td>
<td>weep</td>
<td>S</td>
<td>O</td>
<td>D</td>
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<td>23. open</td>
<td>close</td>
<td>S</td>
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<td>D</td>
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<tr>
<td>24. nest</td>
<td>home</td>
<td>S</td>
<td>O</td>
<td>D</td>
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<tr>
<td>25. chair</td>
<td>table</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>26. want</td>
<td>desire</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>27. can</td>
<td>container</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>28. idle</td>
<td>working</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>29. rich</td>
<td>luxurious</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
<tr>
<td>30. building</td>
<td>structure</td>
<td>S</td>
<td>O</td>
<td>D</td>
</tr>
</tbody>
</table>
Scoring:

If you have up to 10 correct answers, credit your score with 25 points.
If you have 11–20 correct answers, credit your score with 50 points.
   21–25 correct answers—75 points.
   26–30 correct answers—100 points.
Appendix Number Two: Placement Test

Choose the right word for the given definition.
1. bad or hurting others (a. afraid b. clever c. cruel d. hunt)
2. at last or at the end (a. angry b. clever c. finally d. reply)
3. to try to fight or hurt (a. attack b. middle c. pleased d. trick)
4. to not let others see (a. agree b. hide c. safe d. well)
5. the lowest part (a. bottom b. lot c. moment d. promise)

Choose the right definition for the given word.
1. Possess (a. to look for b. to own c. to pick up d. to put in)
2. Desire (a. to want b. to make up of c. to have d. to say)
3. Intent (a. an area of land b. an organ c. a plan d. a feeling)
4. Shine (a. to learn b. to make light c. to have something fall out d. to move fast)
5. Polite (a. thoughtful b. worried c. fast d. excited)

Choose the answer that best fits the question.
1. Which of the following is a form of money?
2. If you meet a boy on the street, you________ him.
a. exceed b. occupy c. encounter d. sustain
3. Which of the following is a good feeling?
4. Which one is part of a house?
a. Forge b. Compensate c. Arise d. Chimney
5. Which word relates to the word religion?

Match the phrases to make complete sentences.

| 1 A soothing cup of tea_________ | a. includes work from the 21st century |
| 2 The odor of the cheese_________ | b. feels so smooth |
| 3 The pot’s texture___________ | c. was too strong to be enjoyable |
| 4 The chemical is toxic_________. | d. to insects and small animals |
| 5 The contemporary fiction class______ | e. is good for a sore throat |
Fill in the blanks with the correct words from the word bank.

1. prairie 2. arid 3. moisture 4. fast 5. rugged

Traveling across the _____________ was more difficult than it seemed.
The ground was very _____________, and the grass was high.
John had been in a place with a(n) _____________ climate for a long time.
He forgot that in a humid place everything was covered with _____________.
The people who attend that church _____________ for two weeks in March.

Choose the answer that best fits the question.

1. An overdose of something is ________.
   a. expensive b. too much c. not true d. not enough

2. What might cause someone to gasp?
   a. Falling asleep b. Getting a surprise party c. Eating too much d. Laying on a bed

3. What is something that can be sipped?
   a. A plate of rice b. A bowl of fruit c. A glass of soda d. A piece of chicken

4. If you knew that a snake was benign, you would probably feel like this:

5. She felt apologetic about ___________.
   a. calling her friend back b. walking home alone c. forgetting her friend’s birthday d. giving to charity.
Appendix Number Three: Pre-Test

A) Write C if the underlined word is used correctly. Write I if the word is used incorrectly.

Prestige- fad-- diminish- obsolete- spectacular- managerial- refute -drawbacks –
benevolent- medieval- impose- dependence

1. Knights in armor and their squires were common sites in medieval times.
2. I don’t want to impose on my father to help me with my homework. He’s very busy.
3 He refuted me because I didn’t wash the plates after dinner.
4. Children’s dependence on their parents increases as they get older.
   fad- diminish - spectacular- - refute–
   managerial- Prestige--drawbacks- obsolete

B) Choose the one that is opposite in meaning to the given word.

1. managerial
   a. entry-level  b. legislative  c. ruling  d. supervisory
2. Prestige
   a. fame  b. honor  c. sin  d. lowliness
3. Drawback
   a. artist  b. benefit  c. disadvantage  d. boost
4. Obsolete
   a. old  b. innovative  c. stale  d. bright

C) Choose the one that is similar in meaning to the given word.

1. benevolent
   a. crazy  b. kind  c. angry  d. dark
2. Diminish
   a. buy  b. decide  c. ignore  d. decrease
3. Spectacular
   a. unusual  b. sad  c. amazing  d. sudden
4. Fad
   a. trend  b. annoyance  c. equipment  d. sale

D) Fill the gaps in the sentences with the following words:
Prestige- fad- diminish- medieval- obsolete- spectacular- managerial- drawbacks- refute-
impose- dependence – benevolent

1-There is a special exposition of .......... farming implements in the museum.
2- I don't want them to .......... their religious beliefs on my children.
3- When the kids you're babysitting swear they brushed their teeth, you can .......... their claim by presenting the dry toothbrushes.

4-. She has developed a deep dependence on him
5-Nancy has a ......................position at the bank.
6-The company has gained international......................
7-One of the ......................of living with someone is having to share a bathroom.
8-Gas lamps became ......................when electric lighting was invented.
9-He was a ......................old man, he wouldn't hurt a fly.
10-I don't want to ......................her achievements, but she did have a lot of help.
11-He scored a ......................goal in the second half.
12-There was a ......................for wearing ripped jeans a few years ago.

E) Fill the gaps in the text with the following words:

Prestige- fad-- diminish- obsolete- spectacular- managerial- refute -drawbacks – benevolent- medieval- impose- dependence

The Weaving Machine

Mr. Joseph Franklin invented a machine that could weave cloth. It wove faster and straighter than anyone could weave by hand. He decided to take it to two cities on a peninsula, Netherton and Wilton. In these cities, a large proportion of the people worked in weaving. Joseph felt sure he could sell his machine there.

Joseph first took his machine to the mayor of Netherton. “Think of the money you will earn from this machine!” Joseph said to him.

But the mayor was a ..........man. He knew about the people’s ..........on weaving for their livelihood. If he bought the machine, the people would lose their jobs. So he refused to buy it.

Joseph said, “We are no longer in the ..........age! Soon everything will be made by machines. Cloth made by hand will soon be .......... If you don’t change your archaic ways, your town’s income will ..........!”

But the mayor said, “I don’t like capitalism. Don’t ..........your radical ideas on my town. Go away!”

So Joseph took his machine to the mayor at Wilton. This mayor thought Joseph’s machine was ..........and spent a long time looking at its different components made of brass. The mayor couldn’t ..........the fact that the machine had ..........that would affect the people’s jobs. But he realized the machine could bring money and
So he ordered Joseph to build twenty of them.

Within a year, Wilton was a wealthy city, famous for its wonderful cloth. People no longer wove but worked in unknown jobs at cloth factories instead. Nobody bought the cloth from Netherton anymore. The people of Netherton became poor and hungry.

Finally, the mayor of Netherton called Joseph and said, “Now I realize that your machine is not just a passing... To succeed in business, we must be willing to change.” He then ordered twenty weaving machines. After that, both Netherton and Wilton became rich cities, famous throughout the land for their wonderful cloth.
Appendix Number Four: Experiment

Based on the context of these following bold sentences, what is the best definition for the twelve underlined words?

A) medieval /ˌmed.iˈəvl/ adj.

We visited a castle that was built during medieval times.
If something is medieval,

1 it comes from the period between 650 and 1500 CE.
2 it is occurring in or belonging to the present time.
3 it is of the present or recent times.
4 it describes something that is characterized by mystery, horror, and gloom.
5 it is belonging to an early stage of technical development; characterized by simplicity and (often) crudeness.
6 it is made in or typical of earlier times and valued for its age.

B) – refute /rɪˈfjuːt/ v

The bank manager has refuted the claims that he lied to his customers.
To refute something means

1 to make it possible for someone to do something, or to not prevent something from happening; give permission.
2 to agree with and give encouragement to someone or something because you want them to succeed.
3 to show a particular result after a period of time.
4 to prove that it is false or incorrect.
5 to give freedom or free movement to someone or something.
6 describes something that is generally or officially accepted as being correct or satisfactory.

C) impose /ɪmˈpəʊz/ v

He imposes on his wife every morning by expecting her to make breakfast
To refuse to do something that you are told to do.
2 to give something to someone or to take something for yourself.
3 to give not enough care or attention to people or things that are your responsibility.
4 to interrupt or force your ideas on other people.
5 to force something or someone out of its usual or original position.
6 to fail to notice or consider something.
D) dependence /dɪˈpɛndəns/ n.

Young children have a dependence on their parents.

1 the trait of remaining calm and seeming not to care; a casual lack of concern.

2 the trait of not believing in the honesty and reliability of others.

3 is a situation in which somebody relies on something else.

4 lack of attention and due care.

5 they should never favor one team over another.

6 is the refusal to believe that something is true.

E) drawback /ˈdrɔːbak/ n.

The drawback of having a car is that it is very expensive to maintain.

1 is something that aids or promotes well-being and considered as a benefit.

2 is permanence by virtue of the power to resist stress or force and considered synonymous to strength.

3 the quality of having an inferior or less favorable position and considered synonymous to disadvantage.

4 is the state of being without a flaw or defect and considered synonymous to perfection.

5 is the quality of being suitable and considered synonymous to fitness.

6 the quality of being useful and convenient.

F) managerial /ˈmænəriəl/ adj.

Richard has a managerial position at the bank.

Managerial describes something:

1 related to a manager or management.

2 at or relating to the lowest level of an organization, type of work, etc and considered synonymous to entry-level.

3 casual, without or seeming to be without plan or method; offhand.

4 insignificant, of little importance or influence or power; of minor status.

5 minor, inferior in number or size or amount.

6 a person or thing which has the same purpose as another one in a different place or organization and considered synonymous to counterpart.
G) **obsolete** /ˈɒb.səl.ət/ **adj.**

*Since computers became inexpensive, typewriters have become obsolete.*

If something is **obsolete**, it is

1. not used anymore because something better exists.
2. innovative (being or producing something like nothing done or experienced or created before).
3. bright (emitting or reflecting light readily or in large amounts timely at an opportune time).
4. fitting in harmony with the spirit of particular persons or occasion.
5. modish (fashionable and stylish. in the current fashion; stylish).
6. faddish in style, often for a brief length of time.

H) **prestige** /prepˈtiːdʒ/ **n.**

*The young actress gained much prestige after she won an award.*

Prestige is connected to:

1. admiration or respect.
2. **disregard** (when someone shows no care or respect for something).
3. **sin** (the offence of breaking, or the breaking of, a religious or moral law).
4. **lowliness** (humble in attitude).
5. **Insignificance** (lack of importance or consequence).
6. **Humility** (the quality of not being proud because you are conscious of your bad qualities).

I) **benevolent** /bəˈnev.əl.ənt/ **adj.**

*My father was a benevolent man and gave lots of money to charity.*

If someone is **benevolent**, they are:

1. intensely enthusiastic about or preoccupied with something.
2. kind and generous.
3. having a strong feeling against someone who has behaved badly, making you want to shout at them or hurt them.
4. lacking enlightenment or knowledge or culture.
5. having the quality of being cruel and causing tension or annoyance
6. having or showing no mercy.
J) diminish /dɪˈmɪn./ verb [ I or T ]

As the economy got worse, my savings diminished.
To diminish means:
1. to obtain by purchase; acquire by means of a financial transaction.
2. to increase the volume of something.
3. to make something stronger.
4. to refuse to acknowledge.
5. to reach, make, or come to a decision about something.
6. to reduce, decrease, or get smaller.

K) fad /fæd/ n.

The hula hoop was a fad for a few years, but it soon lost its popularity.
A fad is:
1. something or someone that causes trouble; a source of unhappiness
2. an instrumentality needed for an undertaking or to perform a service
3. a trend or something that is popular for a short time.
4. an occasion (usually brief) for buying at specially reduced prices
5. the feeling of being bored by something tedious
6. the quality of arousing fear or distress

L) Spectacular /ˈspek.ˈtæk.jʊ.lər/ adj.

There was a spectacular fireworks display in the park at New Year.
If something is spectacular:
1. it looks or sounds very impressive.
2. it is different from others of the same type in a way that is surprising, interesting or attractive.
3. it is happening or done quickly and without warning.
4. it is ordinary or usual; the same as would be expected.
5. it is plain or ordinary, but pleasant.
6. it is existing or happening repeatedly in a fixed pattern, with equal or similar amounts of space or time between one and the next; even.
Appendix Number Five: Pictures
Appendix Number Six : Questionnaire

The following questions ask about your attitudes towards using vocabulary instruction you were exposed to using the Likert scale that consists of five points:

<table>
<thead>
<tr>
<th>Strongly Disagree  (S D)=</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree (D) =</td>
<td>2</td>
</tr>
<tr>
<td>Neutral (N) =</td>
<td>3</td>
</tr>
<tr>
<td>Agree (A) =</td>
<td>4</td>
</tr>
<tr>
<td>Strongly Agree (S A) =</td>
<td>5</td>
</tr>
</tbody>
</table>

**English Language Learners’ Attitudes towards the Vocabulary Instruction**

After being exposed to vocabulary instruction using pictures, context and definition I have recognized that I have the following attitudes:

1. **Vocabulary Learning Attitudes**

<table>
<thead>
<tr>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
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<tbody>
<tr>
<td>1</td>
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</table>

2. **Contextualizing Vocabulary Learning Attitudes:**

<table>
<thead>
<tr>
<th>SD</th>
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<th>N</th>
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<td>8</td>
<td>9</td>
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</tr>
</tbody>
</table>
3. **Attitudes in relation to cognitive and mental efforts involved in the task**

<table>
<thead>
<tr>
<th>Item</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I start verifying the appropriateness of the inferred meaning by checking it against the wider context.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I can’t be bothered trying to understand the meaning of words within context.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I can continue reading to figure out the meaning of new words no matter how hard it is.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I make a point of trying to understand the meaning of words.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I start asking questions about the text, words, or the meaning already inferred.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. When I am exposed to difficult words, I ignore distractions and pay attention to my task.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

4. **Memorization Context**

<table>
<thead>
<tr>
<th>Item</th>
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<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I remember the new words along with the context in which they occur.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2 I can remember the meaning of words I learnt easily.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I visualize and create a mental image of the new word to help me remember it</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. It gives me a mental connection of the word and definition which helps me remember them easily.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I can remember the meaning of words by connecting them to synonyms and antonyms.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5. **Classroom interactional competence**

<table>
<thead>
<tr>
<th>Item</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I am more confident with my speaking when I use it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2 I am more involved in interaction with my classmates.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I can negotiate meaning easily with my classmates.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. The method used to understand the meaning of words within context in combination to interaction are at one, and working together in a more convergent way.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. There is enough interactional space for students by which they are better able to contribute to the process of co-constructing meanings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. The teacher is able to shape the students contributions by helping them to say what they mean through the use of the most appropriate language to do so.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix Number Seven: Transcription Convention

The transcription system is adapted from Atkinson and Heritage (1984b, pp. ix-xvi), Johnson (1995), Slade and Thornbury (2006), van Lier (1988). The aim being to represent the exchanges as they occurred in the classroom. The finer details of transcription are ignored, such as pitch direction and other paralinguistic phenomena.

Each speaker turn is numbered. An explanation of any variant conventions will be found alongside the data. Commentary has been included when needed to give details necessary for understanding the transcript, or to give a fuller representation of the situational context. This is indicated in bold type, e.g. Please try to ask each other (asking the students to pay attention to their classmate’s explanation)

T: – teacher
S: – student (not identified)
S1: S2: etc. – identified student
SS: – several students at once or the whole class
/yes/yes/yes/ – overlapping or simultaneous utterances by more than one learner

[do you understand?]
[I see] – overlap between teacher and student

• equals sign: a double equals sign is used to represent overlap phenomena, such as
  • simultaneous utterances, i.e. where two speakers are speaking at the same time:

T: why it’s not number 9 NAME?

S1: no, there is a girl who is playing a hoola hoop or something

T: ==no place, no margin to impose something upon something else

S1: ==plus she is alone then how come!

• overlapping utterances: the point where the second speaker begins talking is shown by = preceding the point in the first speaker’s turn

• contiguous utterances: a) turn continues at the next identical symbol on the next line
b) if inserted at the end of one speaker's turn and the beginning of the next speaker's adjacent turn, it indicates that there is no gap at all between the two turns
Speaker 1: no relationship at all
Speaker 2: no relationship at all?

. . . pause of one second or less marked by three periods.

(4sec) – silence; length given in seconds
((4sec)) – a stretch of unintelligible speech with the length given in seconds

NAME – are used anonymously for proper nouns

• **question marks**: these are used to indicate utterances that, in their context, function as questions, irrespective of their grammatical form or their intonation
• **exclamation marks**: these are used conservatively to indicate the expression of surprise or shock
• **capital letters**: words or syllables in capital letters are used conservatively to indicate emphasis. For example, GOOD.

• **quotation marks**: double quotation marks are used to signal that the speaker is reporting the sentence as it appears in the task without changes “to force something or someone out of its usual or original position”.

Editor’s comments (in bold type) (*asking the students to pay attention to their classmate’s explanation*)
### APPENDIX NUMBER EIGHT: Features of Teacher Talk

<table>
<thead>
<tr>
<th>FEATURES OF TEACHER TALK</th>
<th>DESCRIPTION</th>
<th>Group 4 278 Turns</th>
<th>Group 5 225 Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Turns:</strong> Number and Percentage</td>
<td><strong>Turns:</strong> Number and Percentage</td>
<td></td>
</tr>
<tr>
<td><strong>A. Scaffolding</strong></td>
<td>1. Reformulation (rephrasing a learner’s contribution)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Extension (extending a learner’s contribution)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Modelling (providing an example for learner(s))</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B. Direct repair</strong></td>
<td>Correcting an error quickly and directly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. Content feedback</strong></td>
<td>Giving feedback to the message rather than the words used.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D. Extended wait-time</strong></td>
<td>Allowing sufficient time (several seconds) for students to respond or formulate a response.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E. Referential questions</strong></td>
<td>Genuine questions to which the teacher does not know the answer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F. Seeking clarification</strong></td>
<td>1. Teacher asks a student to clarify something the student has said.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Student asks teacher to clarify something the teacher has said.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Confirmation and Comprehension check</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Students’ meaning negotiation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with no teacher intervention.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G. Extended learner turn</strong></td>
<td>Learner turn of more than one utterance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>H. Teacher echo</strong></td>
<td>(1) repairing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-repetitions:</strong></td>
<td>The speaker repeats/ paraphrases some part of one of her previous utterances to help establish or develop the topic of conversation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Teacher repeats teacher’s previous utterance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) reacting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The speaker repeats/ paraphrases some part of the other speaker's utterance in order to help establish or develop the topic of conversation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Teacher repeats a learner’s contribution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>I. Teacher interruptions</strong></td>
<td>Interrupting a learner’s contribution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Student interruptions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>J. Extended teacher turn</strong></td>
<td>Teacher turn of more than one utterance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>K. Turn completion</strong></td>
<td>Completing a learner’s contribution for the learner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>L. Display questions</strong></td>
<td>Asking questions to which the teacher knows the answer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M. Form-focused feedback</strong></td>
<td>Giving feedback on the words used, not the message.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary

The present study investigated the effects of vocabulary instruction on developing vocabulary learning environment through interactional competence for first year LMD English students at Saida University. The study determined that vocabulary instruction enriched by context, definitions, and images through interactional competence help the students to have greater vocabulary learning gain and positive retention of the target words. The data indicated that the relationship between vocabulary instruction and vocabulary learning was moderated by interactional competence and that the interaction effect between vocabulary instruction and interactional competence on the students’ vocabulary learning was highly significant. The results also indicated that the relationship between vocabulary instruction and vocabulary learning was positive in all cases and occurred at different levels (low, mean, and high) of interactional competence. In addition, the quantitative and qualitative analyses of qualitative data indicated that interactional competence was mostly featured with more opportunities for negotiation of meaning, more opportunities to have better learning space through extended learner turns, and more balanced teacher and students’ talks amount, which were associated with more questions asked by the teacher and students.

Résumé

La présente étude vise à examiner les effets de l’instruction du vocabulaire sur le développement d’environnement d’apprentissage du vocabulaire à travers la compétence interactionnelle pour les étudiants de première année ‘LMD’ à l’Université de Saida. L’étude permet de déterminer que l’instruction de vocabulaire enrichi par le contexte, les définitions et les images à travers la compétence interactionnelle a pu aider les étudiants d’avoir un plus grand gain d’apprentissage de vocabulaire et rétention positive des mots cibles. Les données indiquées que la relation entre l’instruction du vocabulaire et l’apprentissage du vocabulaire était modérée par la compétence interactionnelle et que l’effet d’interaction entre l’instruction de vocabulaire et la compétence interactionnelle sur l’apprentissage du vocabulaire étaient très significatif. Les résultats ont également indiqué que la relation entre l’instruction de vocabulaire et l’apprentissage du vocabulaire est positif dans tous les cas et s’est déroulé à différents niveaux de compétence interactionnelle (bas, moyenne et élevée). En outre, les indicateurs quantitatifs et qualitatifs des analyses de données qualitatives ont indiqué que la compétence interactionnelle était principalement décrite avec plus d’opportunités de négociation de sens, plus d’opportunités pour avoir un meilleur espace d’apprentissage par le biais de tournures d’apprenant étendues, et de quantités des discours plus équilibrées entre l’enseignant et les étudiants, qui étaient associés avec plus de questions posées par l’enseignant et étudiants.