Faculty of Graduate Studies

English Department

A Comparative Study of English and Palestinian Word Associations and their

Implications for the Teaching of English to Palestinian Learners

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Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master in

Applied Linguistics and Teaching of English, Faculty of Graduate Studies & Academic

Research, Hebron University

2017

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Declaration

I declare that the thesis submitted for the degree of Master is my own original work. This thesis is not submitted, in whole or in part, for any other degree. I confirm that this thesis is written by Wafa' Taha Abu Zeinah and supervised by Prof. Ahmad Attawneh.

Dedication

This thesis is dedicated

to my dear husband (Shareef)

for his continual positive outlook, support and faith;

to my parents, and my sisters

for their constant prayer and support;

to my beloved daughters Lamar, Rahaf, and Leya;

to the souls of martyrs.

Acknowledgements

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Abstract

A foreign language should be taught within the context of its culture. For this purpose, it has been decided to investigate the word associations in both English and Arabic cultures to find out the differences for benefitting the teaching of English as a foreign language. This study aims at investigating word associations of English majors in Palestinian universities in order to find the types of associations students make and the similarities and differences between students in Palestine and students in England in relation to word associations. Palestinian learners' word associations were compared to the British associations in (Amer, 1980). The pedagogic implications for the teaching of English to Palestinian learners are discussed. Subjects for this study were 160 English majors in Hebron University and An-Najah University. The Word Association Test was adapted from Amer (1980) covering 20 categories like body parts, fruits, animals, clothes, foods, family and socials….etc. The stimuli are 125 classified as nouns, verbs, and adjectives. Results show variations between the British norms and the Palestinian norms in associations with some similarities between them. For example, 61.3% of the Palestinian students in this study relate "pig" with words as: disgusting, forbidden, and ugly. However, English students associate the word "pig" with different words such as pork, bacon and eat. Other associations show that the British family has less emotional connectivity than the Palestinian family. The affective responses for mother is 74% of the Palestinian responses whereas they were nearly absent in the English responses. Given these variations, teachers should introduce their students to such differences to help in learning English more efficiently. This study aimed to answer two questions: 1) what are the reasons behind the differences and the similarities between the English word associations and the Palestinian word associations? 2) what are the different linguistic

categories of Palestinian associations? In data analysis, the multidimensional approach is adopted along three dimensions: Linguistic, Cognitive, and Cultural.

Arabic Abstract

ملخص الدراسة

ينبغي أن تُدرس اللغة الأجنبية في سياق ثقافتها الأصلية. من أجل هذا الهدف، تم اختيار بحث ارتباطات الكلمة في كل من الثقافة العربية والثقافة الإنجليزية من أجل معرفة الفروق بين الثقافتين للإفادة في تعليم اللغة الانجليزية كونها لغة أجنبية. تهدف هذه الدراسة لبحث ارتباطات الكلمة عند الطلاب المتخصصين في اللغة الانجليزية في الجامعات الفلسطينية من أجل معرفة أنواع الارتباطات التي يقدمها الطلاب ومعرفة التشابه والاختلاف في ارتباطات الكلمة بين الطلاب في فلسطين والطلاب في بريطانيا. وقد تم موازنة ارتباطات الكلمة للطلاب الفلسطينيين مع ارتباطات الكلمة للبريطانيين المأخوذة من عمرو عام ١٩٨٠. وتم مناقشة آثارها التربوية في تعليم اللغة الانجليزية للطلاب الفلسطينيين. تشمل عينة هذه الدراسة ١٦٠ طالباً متخصصاً في اللغة الانجليزية في جامعتي الخليل والنجاح. اعتمد امتحان ارتباط الكلمة الذي استخدمه عمرو في عام ١٩٨٠ ويشمل الامتحان عشرين فئة مثل أجزاء الجسم، الفواكه، الحيوانات، الملابس، الطعام، العائلة والعلاقات الاجتماعية...الخ. تشمل المحفزات ١٢٥ كلمة مصنفة كأسماء أو أفعال أو صفات. أظهرت نتائج الدراسة تباين بين النماذج البريطانية والنماذج الفلسطينية في ارتباطات الكلمة مع وجود قليل من التشابه بينهما. على سبيل المثال، يربط ٦١,٣% من الطلاب الفلسطينيين في هذه الدراسة كلمة "خنزير" بكلمات مثل "مُقرف"، "مُحرم"، "بشع". لكن يربط الطلاب البريطانيين كلمة "خنزير" بكلمات مختلفة مثل "لحم خنزير"، "لحم خنزير مقدد"، "أكل". تُظهر ارتباطات أخرى أن العائلة البريطانية لديها ارتباط عاطفي أقل من العائلة الفلسطينية. تُشكل الردود العاطفية لكلمة "أم" نسبة ٧٤% من ردود الفلسطينيين في حين أن هذه الردود غير موجودة تقريبا في الردود البريطانية. ونظراً لهذه الاختلافات، ينبغي على المعلمين أن يقدموا لمثل هذه الاختلافات للمساعدة في تعليم اللغة الانجليزية بشكل أكثر كفاءة. وتهدف هذه الدراسة للإجابة عن سؤالين: ١) ما الأسباب وراء الاختلاف والتشابه بين ارتباطات الكلمة عند البريطانيين وارتباطات الكلمة عند الفلسطينيين؟ ٢) ما هي الفئات اللغوية المختلفة لارتباطات الكلمة عند الفلسطينيين؟ وقد اعتمد في تحليل بيانات هذه الدراسة النهج المتعدد الأبعاد الذي يحتوي ثلاثة أبعاد هي البعد اللغوي، البعد المعرفي، والبعد الثقافي.

الكلمات الدالة: ارتباطات الكلمة، ثقافة، امتحان ارتباط الكلمة، المعجم العقلي.

Definition of Key Terms

- **Culture:** is defined as the knowledge that is socially acquired by specific people as they are members of a particular society (Jafari & Mahadi, 2012).

- **Association:** this term was originally used in psycholinguistics to point to the relation between ideas, concepts, or words that exist in the human mind (Sinopalnikova, 2004).

- **Word association (WA):** is an association between words. An appearance of one word requires the appearance of the other in the mind (Sinopalnikova, 2004).

- **Word association test (WAT):** is one of the oldest methods that is used by psychologists in order to study semantic relations. The test explores the mental lexicon and shows how the words are stored and linked in the mental lexicon. The test consists of a list of words and these words are called stimuli. The subjects are asked to respond to each stimulus with the first word that comes into their minds (Carroll, 2008).

- **The mental lexicon:** is "a person's mental store of words, their meanings and associations" (Richards and Schmidt, 2002, p. 327).

- **A semantic network:** contains interconnected elements that are concepts or nodes. Words in the mind appeared as "nodes" and linked to other words through different relations in the semantic network (Carroll, 2008).

- **Syntagmatic associations:** the response and the stimulus are from different word classes. For example, verb-adjective pairs (Richards, 2000).

- **Paradigmatic associations:** the response and the stimulus are from the same word class. For example, noun-noun pairs. Paradigmatic associations are more semantic in nature than syntagmatic associations (Richards, 2000).

Chapter One

Introduction

1.1 Overview

Vocabularies, like fingerprints, are never identical as claimed by Hook (1965). They vary because of differing experiences, degree of intelligence, and the way words are regarded by the child's parents, peers, and teachers (Hook, 1965).

Vocabulary teaching in Palestinian schools has not received much emphasis as grammar, reading and writing skills. Diebold cited in (Hymes, 1964) explains that when L2 learners learn the target language, they should learn elements from L2 cultural system. Moreover, learning vocabulary items within its cultural context is essential for learners' vocabulary building and growth (Wang, 2007).

Palestinian learners who learn English as a foreign language should learn vocabulary in connection with cultural reference. Amer (1980) states that word associations can predict the linguistic behavior of certain people affected by their world view and experience. Researchers can use word associations as a credible technique in order to compare various cultures because word associations give worthy information about the attitudes, beliefs and cognitive structures of cultures and language. Moreover, teachers should provide their students with the variations of word associations (p. 10).

Believing that L2 should be taught within the context of the culture of the native country, it has been chosen to investigate word associations in both Arabic and English cultures to find out the differences for benefitting the teaching of English as a foreign language. A comparative study of English and Arabic word associations will be carried out and the pedagogic implications for the teaching of English to Palestinian learners will be

discussed. Students at Palestinian high schools learn English as a foreign language. Therefore, teachers should introduce their students to word associations of English culture. It is known that English cultural associations are good reference in relation to English language because they could be considered native norms. Usually EFL teachers and learners aspire to come close to native norms. The contrastive analysis hypothesis will not be addressed here because there will be no contrast of the linguistic systems.

Knowing different associations for a word helps learners understand its full meaning. In addition, these associations help them remember the word form and its meaning in specific contexts (Nation, 2001). Amer (1980) also explains that word associations introduce those associative meanings that native speakers agree upon socially. Moreover, speakers can communicate if they have meanings in common. These common meanings are determined by the existence of common associative structures among different people. If speakers don't agree on the same connotation or associations of words, they will misuse language. Therefore, Palestinian learners of English should be able to understand those associative structures that native speakers of English use in their communication. This can be achieved by introducing the Palestinian learners to the words and their associations that closely match the native norms. Richards (2000) believes that the lexicon of native speakers is arranged in an organized pattern. Therefore, it is beneficial if L2 learners could organize their lexicon in the same manner.

1.2 Rationale

Lack of studies conducted on English as a Foreign Language in Palestine in the field of vocabulary associations lead the researcher to conduct this study. The problem of the study stems from the poor level of connecting the culture of English with the teaching of

vocabulary. The main objective of teaching the foreign language in Palestinian schools is not only knowing the linguistic system, but it is also preparing the students for future contact with the native speakers of English if possible. Students who are familiar with FL culture can probably achieve more effective communication with the native speakers. Moreover, learners should not learn English within their local associations, but they should learn it within its native cultural associations because English is not used by the local community of the learners.

Gairns and Redman (1986) believed that when learners of English are in an English-speaking environment or they are intending to live in one, the teacher must deal with the target language cultural associations in order to help the learners "survive in the community".

The Palestinian ministry of education states the general objectives for teaching English in Palestine. The sixth objective focuses on enhancing the Palestinian and the Islamic cultural heritage and family backgrounds. In addition, the seventh objective shows that students have to understand the target culture and other cultures in order to strengthen their understanding and appreciation of the Palestinian culture (cited in Al-Masri, 2012). Consequently, the cultural and situational contexts represented in the textbooks are intentionally local. The characters, the vocabulary, the situations and activities reflect the learners' own environment. We can't be against appreciating local culture, but it is necessary to know the foreign culture in order to understand and use English as a foreign language correctly.

Almazloum (2007) conducted a study that aimed at evaluating the content of tenth grade textbook: *English for Palestine.* The aim of his study was to find out if this textbook matches the standards agreed upon by the Ministry of Education and Macmillan Press. The findings show that the English culture poorly appeared in this textbook although it was one of the most significant issues that English language curriculum for public schools emphasized.

Therefore, syllabus designers in Palestine should introduce English word associations in the material in order to present English vocabulary in its cultural context, and thereby, enhance the learners' understanding of English culture.

1.3 Objectives

This study aims at investigating word associations of English majors in Palestinian universities in order to find the types of associations students make and if there are any similarities or differences between students in Palestine and students in England in relation to word associations. A comparison between the English results of Amer's study in (1980) and the results of this study in Palestine will be made in order to explain the differences in word associations between the two cultures, and to show how different cultures affect students' responses. Lado (1957) explains that textbooks should introduce the language and cultural patterns that native speakers of the foreign language use.

1.4 Significance of the Study

Syllabus designers can use this research in order to know if they introduce English vocabulary in its cultural context or if they introduce vocabulary items out of context. The research also guides syllabus designers and teachers to supplement or change the content of the material that is used for teaching English in Palestine. In other words, the research may guide teachers and syllabus designers to design and use activities and exercises that enhance vocabulary learning.

1.5 Research Questions

This study aims to answer two questions:

1. What are the reasons behind the differences and the similarities between the English word associations and the Palestinian word associations?

2. What are the different linguistic categories of Palestinian associations?

1.6 Hypotheses

1. It is hypothesized that the differences and similarities in word associations depend on the variations in both L1 and L2 cultures. English word associations and Palestinian word associations are different because the environments and social structure are different.

2. Palestinian responses are expected to show paradigmatic and syntagmatic relationship with the stimuli depending on the level of the subjects' proficiency in language and on the word class of the stimulus.

1.7 Limitations of the Study

This study uses quantitative method, but it could be better to use qualitative method as well because students can explain the responses and give reasons for choosing their responses. In spite of this limitation, findings of this study provide clear results about the word associations and the similarities and differences between the L1 and L2 word associations and culture.

Chapter Two

Literature Review

2.1 Culture and Language

Since language and culture are connected, this section will discuss such connectivity. It will show the relationship between language and culture and how culture changes or affects language.

Culture is defined as the knowledge that is socially acquired by specific people as they are members of a particular society. Language as mean of expression for society is defined as the symbolic presentation of a specific culture. Each language has its distinctive literary words, expressions, and characteristics that are dissimilar to those of other languages. It is also believed that misunderstanding may happen in teaching L2 because of cultural variations. Therefore, language and culture should be studied together, and L2 learners must be familiar with the target culture in order to understand the words, expressions and literary terms of the target language (Jafari & Mahadi, 2012).

Sapir (1929) also stated that language is the symbolic guide to the scientific study of a specific culture. In addition, he explained that language determines the individual's thinking about "social problems and processes". Liang (2011) also believed that language may enhance certain ideas and emphasize attention towards them and help people to express their emotions. The relationship between language and culture was introduced by Hymes (1964). He believed that language is one aspect of culture, and people acquire language like other aspects of culture. He explained that the relation between language and culture is so close, and the linguistic symbols of a specific language reflect its culture. The lexical features of language may be added or rearranged because of these cultural changes. He introduced three

causes for the semantic changes. First, when a specific group acquires new cultural innovations by invention or borrowing, new vocabulary items appear in the lexicon. Sapir (1929) also explained that it is essential to know the history of inventions in order to understand the vocabulary items that are connected with cultural objects and ideas. Second, the formulation of new compounds or similar derivations are meant to express new elements of culture. Third, meaning shifts in older words to convey some cultural changes are also considered to be one cause for the semantic changes.

2.2 Language, Culture, and Thought

As language and culture are connected, it is worthy to introduce some hypotheses which clarify the relationship between language and culture. Reviewing such a relationship, the theories of Sapir-Whorf and Humboldt are mentioned in this regard.

Humboldt was the first to assert that the differences among cultures revealed in language. He believed that an individual's world view differs from that of another individual because of the differences in the 'internal structure' of their languages. In addition, he believed that "the internal structure of language is something like the semantic labeling of reality" (Penn, 1972 cited in Amer, 1980, p. 110).

Sapir (1921) explained that language is "a fully formed functional system within man's psychic or "spiritual" constitution". He added that language has its functional influence on individuals' thoughts (p.9). He hypothesized in his article "The Status of Linguistics as a Science" that the "real world is to a large extent unconsciously built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached" (Sapir, 1929, p. 209).

Benjamin Lee Whorf was the first linguist who thought seriously about the relationship between language and culture. He hypothesized two assumptions. First, language determinism which clarifies that thoughts are determined by language. Second, language relativity which means that "every language embodies a definite world view" (Amer, 1980, p.109). Liang (2011) also explained that linguistic determinism means that each language determines to some extent the way in which people of that language view and think about the world around them. He added that linguistic relativity means that each language expresses its own cultural meanings. Whorf's view in his book *Language, Thought, and Reality* is shown in the following quotation:

> Man's thinking itself is in a language-in English, in Sanskrit, in Chinese. And every language is a vast pattern-system, different from others, in which are culturally ordained the forms and categories by which the personality not only communicates, but also analyzes nature, notices or neglects types of relationship and phenomena, channels his reasoning, and builds the house of his consciousness (Whorf, 1956, p.252)

2.3 Some Whorfian Examples

Whorf provided a number of examples that support linguistic determinism and relativity. He introduced lexical and grammatical examples. Whorf looks at the number of words in a lexicon of specific language in a particular domain (birds, colors..etc) and compares these words with the words that exist in the same domain in another language. For example, the American Indian language of Hopi has one word that means everything that flies except birds. The Hopi use the same word for insects, airplanes,..etc (Whorf, 1956). However, English language uses specific words to refer to animals that fly such as bugs, insects,…..etc.

Another example is that English speakers have the same word which is "snow" that is used to mean "falling snow", "snow in the ground", "slushy snow"…etc. However, people who live in Eskimo see snow differently and their language includes more sophisticated words that distinguish different forms of snow (Whorf, 1956). Liang (2011) also believes that even English people don't have the same words that are used by people who live in Eskimo, English people have the ability to distinguish the characteristics that distinguish different types of snow.

In the above example, the Eskimo language uses different concepts to divide the domain of existing life experiences. English and Eskimo use different ways of expression to mirror the same experience. Therefore, in an FL situation, it is important to know the target culture and the way of thinking of L2 native speakers in order to know how the target language is used by its native speakers.

To study the influence of language on thoughts, the cognitive differences between different linguistic communities have been studied by researchers. There are different studies in the field of linguistics that are intended to test Whorf hypothesis. Kay and Kempton (1984) conducted two experiments in order to test Whorf hypothesis. They compared the performance of English speakers with people who speak Tarahumara. Carroll (2008) explained that Tarahumara is "a Mexican Indian language that has a single term for the blue-green color but not separate terms for blue and green" (p.403-404).

In the first experiment, Kay and Kempton (1984) asked English speakers and Tarahumara speakers to distinguish between the two colors 'blue' and 'green'. They used eight color chips which have different shades of green and blue. English and Tarahumara speakers saw three chips at a time. Two chips were clear examples of blue and green and the third chip was between the two. The subjects were then asked to determine if the third chip

was closer to the first color chip or to the second color chip. Therefore, subjects were allowed to make subjective judgments of similarity among the three different colors. In this example, when English subjects saw the three chips (A,B,C), they said that (A) and (B) are both called green whereas (C) is called blue and pick (C) as most different. Kay & Kempton concluded that a Whorfian effect is shown by this experiment and that English speakers discriminate and differentiate colors according to the blue-green lexical category boundary, while Tarahumara didn't discriminate colors.

Kay and Kempton (1984) wanted to know the "cognitive mechanism" that may have caused the differences in the English and Tarahumara answers. They wanted to have a more cognitive explanation for the Whorfian effect, so they assumed that English subjects used a "name strategy". In the name strategy hypothesis, the subjects have to make classificatory judgment by using the lexical classification of the objects. To test this possibility they conducted another experiment in which they removed the 'name strategy'.

In the second experiment, 21 English subjects participated. It was quite similar to the first experiment as the same stimuli were judged by the subjects. However, the name strategy was blocked in the second experiment. The following example shows how the "name strategy" is blocked. In triad (A,B,C), experimenter displayed a pair (A,B) and said to the subjects that (A) is greener than (B). All subjects agreed with the experimenter. Then the chips (B, C) were displayed. The experimenter said that (C) is bluer than (B) and all subjects agreed. Then the experimenter asked if the greenness between the first two chips was larger than the blueness between the last two chips. When the participants made distinctions, they based on the distance between colors and not on the lexical category. They couldn't reasonably ask themselves whether chip B is called green or blue because they have already

agreed with the experimenter who called it green and called it blue. This way, the subjects were prevented to make their own distinctions based on lexical discriminations.

The English subjects showed the same results as the Tarahumara did in the first experiment. The second experiment asserted the name strategy interpretation and there was no Worfian effect shown in this experiment.

Kay and Kempton (1984) concluded from the two experiments that the extreme belief of Whorf hypothesis, which states that all thoughts are determined by language is not true. On the other hand, the opposite belief which states that language does not influence thought at all is also false (p. 77). Carroll (2008) states that the color domain supports the weak version of linguistic relativity. The weak version which clarifies that there are some cultural differences in the semantic associations of concepts and words is acceptable nowadays. Linguistic structures don't constrain what people think but only influence what they routinely think. In addition, language reflects cultural "preoccupations". Consequently, context is important in completing the "meanings encoded in the language" (Liang, 2011). Carroll (2008) explained that since the cognitive processes vary in different languages, speakers of different languages think differently. Therefore, learning a new language changes the individual's way of thinking.

Another point to consider is that translation between one language and another is problematic and sometimes impossible according to Sapir-Whorf hypothesis. Untranslatability is favored by romantic literary theorists. They believe that translation can't convey the intended meanings of some words which have connotative, emotional, and personal meanings. (Chandler, 1994).

Gairns and Redman (1986) also believe that translation equivalent is not always effective because some items appear to be similar on the surface, but there are often cultural

differences. In some cases, there may be an equivalent of a word, but this equivalent doesn't have the same exact meaning. For example, the taste and the look of English "bread" is different from the French word "le pain" in France. In other cases, equivalents don't exist. For instance, the words "mug", "cup", and "bowl" don't have three equivalent words in Chinese. This means that learning the lexical items of the foreign language is not fully achieved by the process of translating FL items and replacing new names for existing items and concepts. However, learners must recategorize some areas of vocabulary, and they must learn the connotations that relate to specific words.

2.4 Dimensions of Word Knowledge

Carroll (2008) stated that when a person knows a word, he/she knows its phonological, morphological, syntactic, and semantic features. He added that knowing the meaning of a word implies that a person knows both sense and reference meanings of it. The following section provides kinds of word knowledge that people store in the mental lexicon.

2.4.1 Phonological Knowledge. Phonological knowledge includes phonological structure or pronunciation of a word. People experience the tip-of-the-tongue (TOT) phenomenon. This phenomenon happens with words that are homophones which are words that have the same pronunciation, but they have different spelling. In this case, people can't retrieve or recall a particular word but they can remember something about how this word sounds.

When a person can't remember a word, he/she may invoke the rhythm of the lost word but can't mind its sound. Otherwise, the initial vowel or consonant of the word may be known, but a word is not recognized. Carroll (2008) illustrated that people sometimes activate words by their sounds. However, when people make speech errors, they "sometimes

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substitute a similar-sounding word for the intended word" (p.105). In WAT, students may produce clang associations if they evoke words that have the same pronunciation.

2.4.2 Syntactic Knowledge. This knowledge is about the syntactic category of a word, or part of speech to which a word belongs. From a psychological perspective, syntactic categories may be divided into two groups. First, open-class words (content words) : they include nouns, verbs, adjectives, and adverbs. Second, closed-class words (function words): they include determiners, pronouns, prepositions, conjunctions, and interjections.

This distinction appears to be related to the organization of words in the human brain. Neurologists have noticed that patients may suffer from a condition that is called agrammatism. Agrammatic patients repeatedly delete closed-class words from their sentences. However, they preserve open-class words better than closed-class words. Carroll (2008) concluded that "syntactic categories are included in the lexical entries in our mental lexicons" (p.105).

Multi-word verbs is a term used to describe the verbs which consist of two, or sometimes three parts. The students in this study were asked to respond to the verb "see off". See appendix(1). This verb consists of the base verb "see" plus the adverbial particle "off". The researcher noticed that the meaning of this verb was not known for most of the students. They asked about its meaning. Gairns and Redman (1986) believed that as the adverbial particle influences the base verb consistently in some instances, teachers should introduce the adverbial particle that is associated with a specific verb and its meaning. For example, the particle "off" "often implies a general sense of separation". The following verbs show the influence of the particle "off" on the root verb:

1. take off ⟶ being removed

2. turn off ⟶ being disconnected

2.4.3 Morphological Knowledge. This knowledge helps in determining the size of a person's mental lexicon, and knowing the number of words that the person knows. Carroll (2008) tried to know what counts as a word. He believed that "There is no limit to the number of new words in a language" because people can add morphemes to form different alternative forms of root words (p.106). It is possible to know the meaning of a word with a morpheme by knowing the meaning of its root. However, morphemes may affect the meaning of the root word and change it in some cases.

2.4.4 Semantic Knowledge

Sense and reference are "complementary aspects" of the meaning of a word. The relation between words and things in the world is called the reference of a word. This aspect of meaning is essential in determining whether or not a given statement is true (Carroll, 2008). For instance, in the following statement:

*There is a yellow bird whistling on the tree. When we understand the meaning of this sentence, we realize its real situations and conditions. In this instance, there must be a bird, it must be yellow, and it must be whistling on the tree. That is, we must estimate if the events in the world correspond to the referents of the words yellow, tree, bird, whistling.

Some words have visible meanings, but it is difficult to know their referents. For example, abstract words, such as justice. Other words have clear meaning but they don't have

real referents, such as unicorn. Moreover, the sense of a word shows the relation between a specific word and other words in the language (Carroll, 2008).

2.4.4.1 *Functions of Sense Relations.* It is important to teach students different types of sense relations such as synonyms, hyponyms, antonyms,…etc since these relations help FL and SL students understand semantic boundaries. Therefore, students will be able to know where and when to use a specific item. In other words, they will be able to "see where meaning overlaps and learn the limits of use of an item.". Moreover, these relations help students to infer the meaning of unknown items. In other words, they guess the meaning of the unknown words from other related words (Gairns & Redman, 1986).

2.5 Word Associations

Believing that Word Association (WA) method is a way of comparing cultures, it is important to know what it means. Scholars from the time of Plato were interested in associations when they "associatively cluster word stimuli with the same word responses". Then, they have recognized that word association method may be used as a credible technique in order to compare cultures because it can predict people's responses and those repetitive patterns which reflect the peoples' world view and experiences (Amer, 1980, p.10).

The term 'association' was originally used in psycholinguistics to point to the relation between ideas, concepts, or words that exist in the human mind. An appearance of one concept requires the appearance of the other in the mind; thus WA is an association between words (Sinopalnikova, 2004). Clark (1970) believed that an 'associative' link is formed between words in the mind when they occur together. He added that if they occur together frequently, they have stronger 'association'. Moreover, Kuehn (2015) clarified that children

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acquire their native language through word associations. They store mental pictures of concrete and abstract words through their senses. For example, the word "sweet" is associated with words such as 'cookies' 'candy', 'cake', and 'ice cream'. These associative words help the children understand the meaning of the word "sweet".

2.6 Word Association Test (WAT)

2.6.1 Definition of WAT. Carroll (2008) believes that word association test is one of the oldest methods that is used by psychologists in order to study semantic relations. The test explores the mental lexicon and shows how words are stored and linked in the mental lexicon. Rothman (2009) also believes that word association test is a method that is used to explore vocabulary organization in the mind. Sinopalnikova (2004) also states that this test consists of a list of words and these words are called stimuli. Stimuli are introduced to the subjects of the test either orally or in writing. The subjects are asked to respond to each stimulus "with the first word that comes into their minds".

It is essential here to introduce word association norms (WAN) and the thesaurus which depend on associations and word family relations. WAN are tables that include the results of free association test series. This series contains various hundreds stimuli and a few thousand subjects who respond to these stimuli. However, thesaurus is a more sophisticated form of WAN because thesaurus is larger than WAN because it includes several thousands of stimuli (Sinopalnikova, 2004).

2.6.2 History of WAT. The test was designed in 1879 by Sir Francis Galton, and was also applied by the Swiss psychoanalyst Carl Jung. The first extensive study for English was done

by Kent and Rosanoff in 1910, who read aloud a list of words (stimuli) to the subjects who were asked to give the first word that comes to their mind other than the stimulus word itself. The test was applied on 1,000 men and women who have different occupations and levels of education (Carroll, 2008).

2.6.3 Types of WAT. Ingwersen and Nielsen (1999) explain that there are two types of Word Association Tests:

A. Free association test (FAT): Sinopalnikova (2004) clarifies that FAT is the simplest experimental technique to reveal the association mechanism. The subjects in this test are allowed to associate freely.

B. Controlled association test: the subjects' responses are limited to specific semantic categories, to particular synonyms, or to terms within a certain context. The subjects in this test may choose responses from other alternatives.

2.7 WAT as a Predictor of Frequency

This section shows how WAT is used as a predictor of frequency. The first part shows that people's responses to WAT stimuli represent their linguistic behavior in real life. The second part shows how WAT reveals different semantic frequencies. It is believed that when the subjects of WAT respond to specific stimulus with the first words that come to their mind, it is assumed that these automatic responses have the strongest connections or relations with the stimulus in the subjects' lexicon.

2.7.1 WAT and Verbal Behavior in Unstructured Situations. Word association test can be used in order to analyze the verbal behavior of certain group (Amer, 1980, p.54-56). Amer

depends on Howes' comparison between verbal behavior in structured and unstructured situations. Howes concludes that verbal behavior in the word association test in structured situations and the verbal behavior in unstructured situations are similar.

2.7.2 WAT and Frequency. Word associations can measure different semantic frequencies as follows (Amer, 1980, p. 56-57):

a. Word associations show the frequency of different senses of a specific word. For example, the word 'short' can be associated with the words "hair", "sighted", "time"…etc.

b. In addition, word associations show the frequency of the different homographs which are words that have the same spelling, but they have more than one meaning. These words may have similar or different pronunciation. e.g. "feet" and "building" in response to 'flat'.

c. Furthermore, word associations predict the frequency of occurrence of several collocations. For example, the stimulus "chocolate" yield the responses "cake", "brown"……etc.

2.8 Variables Affecting Associative Responses

There are different variables that affect students' responses in WAT as introduced by Amer (1980). These variables are stimulus variables, subjective variables, and independent variables.

2.8.1 Stimulus Variables. They are affectivity, frequency, context, and part of speech. First, stimulus affectivity indicates the feelings that students have toward stimuli. For example, being forbidden, taboo, hated…etc. Second, stimulus frequency affects the number of different responses that students give to a stimuli. Third, the order of items in the list of WAT. For example, groups of words such as antonyms, synonym…etc may be placed

together in the list, or throughout the list. This order affects the types of responses that are given to these stimuli. Fourth, part of speech. The grammatical classes of the stimuli affect the categories of associations as being paradigmatic, syntagmatic, or clang associations (p. 34-36).

2.8.2 Subjective Variables. Subjective variables are gender, age, socioeconomic status, social class and educational level, and occupation (p. 37-40).

2.8.3 Independent Variables. Independent variables include instructions and conditions of the test…etc (p. 40-43).

2.9 The Mental Lexicon

In WAT, students' responses are chosen from their mental lexicon. Therefore, it is essential to know what is the mental lexicon in order to know how words are selected by both EFL students and L1 students.

2.9.1 Definition of the Mental Lexicon. Richards and Schmidt (2002) explain that the mental lexicon is "a person's mental store of words, their meanings and associations" (p.327). Carroll (2008) believes that "the organization of word knowledge in permanent memory is called the internal lexicon" (p. 103). He explains that the mental lexicon contains semantic networks. A semantic network contains interconnected elements that are concepts or nodes. Words in the mind appeared as "nodes" and linked to other words through different relations in the semantic network (p.110).

Aitchison (2012) says that "the human word-store is often referred to as the "mental dictionary" or, perhaps more commonly, as the mental lexicon". In addition, she provides some differences between the mental dictionary and a book dictionary. These differences are related to both organization and content (p.11-13).

1. Organization

Richards (2000) believes that the lexicon is organized and words are not stored randomly in the mind. The meaning of a word must be taken into consideration in the organization of human mental dictionaries. Humans often confuse words that have similar meanings. Book dictionaries list words alphabetically. However, words in the lexicon are not arranged alphabetically.

2. Content

A book dictionary contains a constant number of words that can be counted. However, people can add new words all the time to the mental lexicon, and they can alter the meaning of existing words. The mental lexicon also contains more information than the book dictionary.

2.9.2 Lexical Access. It is important to know how people access words from the mental lexicon. Carroll (2008) defines lexical access as the process by which word knowledge is activated in the mind. Words in the mind may be activated in different ways. First, when people perceive the phonetic or orthographic properties of a word, they identify it as a recognizable word and bring their knowledge of the word. Second, meaning of a word may be activated through other words. He believed that words invoke related words and that words are organized in downward order of frequency. Therefore, more frequent words are searched before lower-frequency words.

2.9.3 Differences in the Lexicon. Sharifian (2001) believes that "The human conceptual system is made up of concepts that are associated with each other in various ways" (p.1). Amer (1980) also explains that "Lexical differences involve the ways in which things are labeled, and this can include the number of labels or words for things, the ways in which concepts are categorized, and the presence or absence of superordinate categories" (p.115).

Foreign language culture should be presented to the foreign learners in order to introduce them to a different way of looking at the world. In other words, "different cultures and languages categorize the physical world differently "this categorization appears in the lexical system of each language. Therefore, from the pedagogic point of view, EFL students don't learn the target language vocabulary by finding an equivalent for each word through translating that word or by "substituting new names for already attained concepts ". In contrast, they have to recategorize the physical world and learn different connotations from the target culture (Amer, 1980, p. 67-68) .

The FL learner is likely to face the following possibilities when learning the FL vocabulary (Amer, 1980, p. 68-69):

a. A concept which has the same denotations in the native and the target languages, but has different connotations. In this case, the learner has to learn the connotations of the concept in the target language.

b. A concept which exists in the learner's native language, but it doesn't exist in the FL. This concept doesn't cause a problem for the learner.

c. A concept which is absent in the native language of the learner but is present in FL. The learner has to learn that concept.

d. A concept which has one word in the learner's native language, but it has different words in the target language. The learner has to learn a set of lexical items .If the case is the reverse there is no problem for the learner.

e. A concept which is expressed in the native language by using a single word, but by a phrase in the foreign language. The learner has to memorize these phrases.

 f. A concept which is found in the native and target languages, but it is classified differently. The learner has to learn the new lexical classification.

Nation (2001) states that it is essential to know how the lexicon may be organized because this organization guides teachers and syllabus designers to use limited vocabularies for defining words and for text simplification. Believing that different languages categorize the physical world differently, Palestinian learners of English have to understand the different ways of categorizing experience made by the English people. This is better achieved by learning English in its English cultural context rather than the Palestinian cultural context. Teachers and syllabus designers should introduce the Palestinian learners to English cultural associations.

2.10 The Importance of Word Associations

Word association method is very beneficial since it provides specific information about people's culture, linguistic behavior, and affective status. It also provides information that helps foreign language learners understand the meanings of the foreign language words.

Word associations "reveal the respondents' verbal memories, thought processes, emotional states, and personalities" (Ingwersen & Nielsen, 1999, p. 17). In addition, these associations reveal the conceptual systems that are shaped by cultural experiences. (Sharifian, 2001). Korshuk (2005) also explains that these associations show the mental links between

words. Moreover, FAT provides information about the construction of knowledge in the mind. The frequency of response to specific word reflect "the strength of semantic relations between words" (Sinopalnikova, 2004, p. 200).

Knowing different associations for a word helps learners understand its full meaning. In addition, these associations help learners remember the word form or its meaning in specific contexts. Nation (2001) clarifies that a word and its associations are related with each other according to different meaning systems. For example, synonyms, family members of the same general headword, words in a part-whole relationship, and superordinate and subordinate words.

Moreover, Gairns and Redman (1986) believe that students should learn the word and its associations in order to understand the word fully and use it effectively. They explain that students must know what a word refers to and the boundaries that separate the word from other words of related meaning. For example, the words "sink", and "washbasin". "Sinks are found in kitchens and used for washing dishes and pans, while washbasins are found in bathrooms and used for personal hygiene.".From this example, it is clear that the word "sink" is associated with words such as "kitchens", "dishes", and "pans". Therefore, syllabus designers should take these meanings into consideration while choosing the lexical content of FL materials (p. 13).

Word associations show the associative and affective meanings that a specific group has in response to different words. People who have the same culture tend to give the same responses to specific stimulus word because they have experienced the same word in the same social contexts. Moreover, they have the same denotative and connotative meanings of the word. Connotative meaning of the word is derived from the culture. Therefore, it is important to understand the culture in order to realize the connotative meaning. Connotative

meaning is also related to peoples' attitudes and emotional reactions to a specific word. In addition, word associations show the linguistic behavior of the native speakers of the FL. They also give worthy information about the attitudes, beliefs and cognitive structures of people who have the same culture (Amer,1980, p. 61, p.196).

Hymes (1964) also believes that some words have connotative meanings. These meanings are known according to the cultural values that are related to specific ideas, status groups, and situations. He explains that it is difficult to translate these meanings from one language to another, particularly when L1and L2 have very different cultures.

2.11 Categories of Word Associations

There are three categories of word associations. Richards (2000) introduces them as the following:

A. Clang associations. The response and the stimulus have similar form, but they are not related semantically. For example, reflect- effect.

B. Syntagmatic associations. The response and the stimulus are from different word classes. For example, adjective-noun pairs. Moreover, the response has a syntactic relationship with the stimulus.

C. Paradigmatic associations. The response and the stimulus are from the same word class. For example, verb-verb pairs. Paradigmatic associations are more semantic in nature than syntagmatic associations. Paradigmatic pairs are sometimes synonymous.

Association studies report that subject's responses tend to shift from being syntagmatic to being paradigmatic with the growing of the child. Subjects' responses may be change in two ways. First, the change in children responses from syntagmatic associations to paradigmatic associations. Second, the change from acoustic associations to semantic associations (Amer, 1980). There are various studies that reveal the categories of associations that different subjects made. For example, Wang (2007) conducted a word association study on forty-six subjects from Indiana University of Pennsylvania in order to find the type of associations that are made by NS and NNS. The results of the study show that there is a difference in responses between the NSs and the NNSs in all three types of association. Paradigmatic responses and syntagmatic responses appear most frequently with NSs while NNSs produce both phonological and orthographical responses and some other random responses. He also found that NSs produced more semantic associations than the NNSs.

Moreover, Atawneh (1983) conducted a study on his three children. They were Arabic-speaking children who acquired English as a second language. He used WAT in order to determine the degree of correspondence of the subjects' responses to the social English norms taken from Amer (1978). In addition, he wanted to know the effect of the new culture on the linguistic behavior of the subjects. The results of the study revealed that the new culture affected the subjects' linguistic behavior as they developed their linguistic competence according to their age and cognitive development. In addition, the results showed that most of their responses have a syntagmatic relationship with the stimulus words. The paradigmatic responses have hyponyms and superordinates relationships with the stimulus words.

2.12 Word Associations and Culture

Because word association method is used to compare cultures, it is important to know the relationship between word associations and culture.

Korshuk (2005) believes that free word association experiment is an adequate tool that is used in intercultural studies. It is used to show how a language reflects the characteristics of specific culture.

WAT reveals the linguistic features and the cultural features of specific language. Word associations show the affective meaning that is known by language users of a specific culture. These associations reveal the repetitive, systematized patterns or norms that people of a certain culture tend to give to particular stimuli. These cultural norms are items of vocabulary that belong to specific categories. The norms are obtained from a large sample of population by using WAT and they are listed according to their frequencies. These norms show the linguistic behavior of the native speakers. From sociolinguistic point of view, these norms indicate that these people have experienced the words in the same social context. Therefore, they comprehend and realize words with the same denotations and connotations (Amer, 1980).

2.13 Denotative and Connotative Meanings

As people of a certain culture comprehend and realize words with the same denotations and connotations, it is important to define the denotative meanings and the connotative meanings of words.

2.13.1 Denotative Meaning. It is sometimes called conceptual meaning. It is the dictionary meaning of a word. It includes several information. First, phonological information

(pronunciation). Second, orthographic information (spelling). Third, syntactic information (part of speech). Fourth, semantic information (various meanings). Fifth, morphological information (related words). Finally, other information such as the word's etymology (Carroll, 2008, p. 103).

2.13.2 Connotative Meaning. It is also called affective meaning. It refers to the emotional meaning or meanings that are related to a specific item of vocabulary. These meanings are called "connotations". Synonyms are words that have the same denotative meaning, but they may have different connotations (Gairns and Redman, 1986). The following statements clarify the affective meaning of the two word "single" and "spinster".

1. Sara is a single woman.

2. Sara is a spinster.

The two words have similar conceptual meaning which is "unmarried woman". However, the word 'spinster' has different emotional associations. These associations are "old", "isolated" , "on the shelf", "a sad person",…etc. In this case, native speakers of English understand these associations, however, non-native speakers of English may misunderstand or not know these emotional associations. Therefore, it is better to introduce the word and its associations which help the FL learners to understand the intended meaning of the word (Gairns and Redman, 1986, p. 18).

2.13.2.1 *Areas of Connotations***.** There are three areas of connotations as explained by Gairns and Redman (1986, p. 18-19).

1. Items which "intrinsically have a positive or negative connotation" (p. 18). For example, the word "complacent" always has a negative connotation. It is used to denote selfishness.

2. Items which have different affective meanings. These meanings are determined according to the speaker's attitude or according to the situation. These items are common in social grouping and political language.

3. Items which have socio-cultural associations. FL learners have problems and difficulties when they deal with these items. "Native speakers of a language have a whole series of associations with certain items and these associations are common to the society as a whole" (p. 19). For example, a British native speaker may associate "Friday the 13th " with words such as "sad luck", "broken mirrors",..etc. These socio-cultural concepts are "parts of the way of life of a culture which may or may not be shared by foreigners" (p. 19). They introduced different items that have strong cultural associations such as, proper names, place names, food, drink, clothes, and traditions.

2.14 Criteria for Vocabulary Selection

Teachers should choose vocabulary items that are useful to the students, and shouldn't choose items randomly. The following criteria which are described by Grains and Redman (1986, p. 58-61) guide teachers to the right way of vocabulary selection.

2.14.1 Frequency. Grains and Redman (1986) introduced some of the work on frequency word-counts. For example, the General Service List of English Words (1953), the Kucera and Francis List Words (1967), the Threshold Level (1975), and the Cambridge English Lexicon(1980).

2.14.2 Cultural Factors. Grains and Redman (1986) believed that word-counts have one drawback as it is "based on the utterance of native speakers", and these word-counts reflect the culture of native speakers of the target language (p. 59). L2 learners should be aware of

L2 culture because the main purpose for learning L2 is to use it for communicative purposes with native speakers of the target language.

2.14.3 Need and Level. L2 learners have different needs and they learn L2 for different purposes. Some of them learn L2 in order to use it in their native country. For example, to read reports. Other learners learn English in order to use it in English-speaking countries. For example, to study or work in English- speaking countries. Therefore, these learners should learn different vocabulary items. In addition, selection of lexis depends on the level of the students (advanced students, or elementary students).

2.14.4 Expediency. Expedient vocabulary items that are introduced to the students in the classroom allow the students to understand their teacher, fellow students, or the activities.

2.15 Grouping of Items of Vocabulary

Groupings of vocabulary items can be done through semantic fields which are known as lexical sets. These fields include sets of items that are semantically similar (Gairns & Redman1986, p. 69-72). Teachers can revise and expand these sets according to the students' level. These sets include wide categories such as "life" and "living things" , and smaller fields such as "kinship relations" (e.g. son, daughter) and provide a clear context for practice. The same word may occur in different fields. The following groupings of vocabulary items contain different types of semantic, phonological, and grammatical sets.

1. Items related by topic: types of fruits, living room furniture…etc.

2. Items grouped as an activity or process (also topic relating): buying a house..etc.

3. Items which are similar in meaning: different types of walking (e.g. Falter, limp, tiptoe, amble, etc.).

4. Items which form "pairs": synonyms and antonyms (e.g. old/new).

5. Items along a scale or cline, which illustrate differences of degree: (e.g. describing an article-excellent/very good…..etc)

6. Items within "word families": (e.g. derivatives …pleasant/unpleasant)

7. Items grouped by grammatical similarity (e.g. prepositions), and notional similarity (e.g. group noun with irregular verbs)

8. Items which connect discourse: (the grouping of sentence adverbials: unless, otherwise).

9. Items forming a set of idioms or multi-word verbs: (e.g. see off, ring back).

10. Items grouped by spelling difficulty or phonological difficulty: this can be related to a topic area. For example, food vocabulary: menu, pie, recipe..etc.

11. Items grouped by style: (e. g. words that are neutral or colloquial: cigarette=ciggy)

12. An item which has different meanings: (e.g. sentence: which mean grammatical unit consisting of clauses or phrases or it means a punishment given by a judge).

13. Items which cause particular difficulty within one nationality group: (false cognates, phonological difficulties that are common to one group).

Amer (1980) believes that lexical sets are subjective because they are organized and written by the linguist on the basis of his own intuitions. However, word associations represent semantically related words on a communicative basis. Moreover, word associations reflect verbal behavior outside the test situation in unstructured situation.

Pedagogically, teachers should not introduce to learners the whole structure of a lexical set. However, teachers should only introduce those more useful or more frequent words. In other words, a word and its associations should be introduced to the learners. This is explained clearly in the pedagogic implications and implementations section.

Chapter Three

Methodology

3.1 Data Collection

In order to examine the word associations of the students, a Word Association Test (WAT) which was adopted from Amer (1980) was used in this study (see appendix1). The permission of the author was obtained by email to respect the right of publication. The test was used to allow comparison with the associative norms of the English subjects in Amer's study. Amer selected the lexical items and the taxonomic categories from different pedagogic sources because he intended to use the data of the test for pedagogic purposes. Though it was done in 1980, the items are still relevant in today's life. In this respect, Atawneh (1983) compared vocabulary studies in 1983 with vocabulary studies by native speakers: Mateer (1908), Nice (1917), and Row (1913). The test includes wide range of categories and items in order to make the findings reliable. It includes the following twenty categories:

1. Parts of the body
2. Professions and occupations
3. Vegetables
4. Fruits
5. Foods (other than vegetables, fruits) and drinks.
6. Types of human dwelling (shopping)
7. Transportation
8. Furniture
9. Animals
10. Time relations
11. Clothes
12. Weather
13. Illness
14. Sports and games
15. Entertainment
16. Buying and selling
17. Tourism
18. Colors
19. Family and social
20. Miscellaneous

The grammatical classes of stimuli are clear in the sense that each stimulus word has a definite grammatical class. The total number of stimuli in the original test is 250 classified as follows: 194 nouns, 36 verbs, and 20 adjectives. These figures cover the ratio of distribution in a dictionary. The preposition "to" is used before verbs in the test. Amer (1980) used in his study two versions of WAT (Arabic version and English version). In the current study, the English version was only used in order to know the competency level of Palestinian students in English language.

Amer (1980) explained that there are two types of relations among the items of a category. First, items that occur together in real life. For example, when we think of the word "farm", words such as "hen", "cow", "farmer"….etc may come to mind. Second, items that don't necessarily occur together in the real world. For example, when a concept such as "pointed objects" is thought of, items such as "pencil", "arrow",…etc are called to mind. These items share the same feature. Moreover, some categories may overlap in some cases. For example, "liver" may be included under two categories which are "parts of the body" and "food". The items of WAT were arranged randomly because the category names may affect the responses of the students. The students may misunderstand the purpose of the test. For example, if they read the category name "parts of the body", they may respond with other parts of the body (p. 80).

3.1.1 Pilot Study Alteration: Administering the Test. To explore the willingness and competency of school students in answering the test, 145 test sheets (250 items) were distributed to 65 girls and 65 boys tenth graders as planned. The results were greatly disappointing because none of the subjects finished the test in 30 minutes as planned. Instructions were typed in English and translated into Arabic. Sample answers were given, yet no much success in giving answers as expected. Therefore, it was decided to move to

university students. Thirteen students were given the test. Answers were better than schools in the sense that more answers were given. Such findings show three things:

1. Competency level of the 10th graders in both gender is low for such a test. That is why they left many items unanswered.

2. The time which is 30 minutes seems to be less than needed for them to finish the test. This is also an indication of low competency.

3. Going to freshmen university students did not help either.

Therefore, it was decided to change the plan by choosing higher level university students (3rd and 4th years) and to make the test less time consuming. It was also decided to cut the test by half. That is to take every other word from the 250 words (See appendix 1). By this change, it is hoped that better results will be achieved. English majors were asked to write the first word that comes into their minds. The students were given seven seconds for each stimulus word. Therefore, the whole test was done in fifteen minutes. Instructions were given in L2 and some example were made before starting the test. The students were allowed to answer in Arabic if they found it difficult to give an English response.

WAT that is used in this study consists of a large number of words which is 125. Wright (2001) explained that word association test with a small number of words cannot exactly reflect the L2 mental lexicon, but can provide some possible trends of how learners associate words, such as strong collocate, synonyms and co-ordinate links,….etc.

3.2 Subjects

Subjects for this study were one hundred and sixty English majors third year and fourth year students in Hebron university, Hebron, and Al-Najah university, Nablus. Seventy students are from Hebron university and ninety students are from An-Najah university. The subjects represent twenty-six male students and one hundred and thirty-four female students.

Results of associations for subjects in this study were compared with the associations of the British high school students in Amer's study in 1980. It was viewed that the norms produced by the British high school students who represent the English sample would be a good reference to native norms in word associations.

Chapter Four

Results and Analysis

This chapter presents the data collected from the respondents from Hebron university and An-Najah university. All responses were counted and ranked according to their frequencies. The most frequent responses were taken as primary responses. Believing that people who share the same language and culture provide different responses to the same stimulus word, five responses for each stimulus were taken into consideration when analyzing the results of test. Then the English results of Amer's study in 1980 were compared to the results of this study in Palestine. Before analyzing the data, the following points should be stated:

1. Two stimuli were excluded from the test: "eggplant" and "mosque" because they were not known by the majority of the English subjects.

2. It has been decided that responses which fall in more than one form class will be classified as syntagmatic responses or as being ambiguous. For example, "work" in response to "servant", and "smell" in response to "flower".

3. Only the first five responses of each stimulus word were analyzed and discussed (see appendix 2). As there is a large body of data, the most frequent responses, which were thought to be significant were used as examples to clarify some points of discussion.

The multidimensional approach that Amer (1980) used in the analysis of word associations was adopted in this study. This approach contains three dimensions: linguistic, cognitive, and cultural. They are interdependent on each other.

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4.1 The Linguistic Dimension

Reviewing all models of analysis mainly Deese's (1962) which deals with associations and students' responses in terms of their syntactic structure and Clark's (1972) which deals with associations and students' responses in terms of their semantic structure, it has been decided to present the different word categories (nouns, verbs, and adjectives) in relation to the paradigmatic and syntagmatic relations.

4.1.1 Syntactic Analysis. The article "Form Class and the Determinants of Associations" in the *Journal of Verbal Learning and Verbal Behavior* was written by Deese (1962). Deese shows in the article the grammatical relations between stimuli and responses. He provides a comparison of the frequency of paradigmatic and syntagmatic associates to stimuli of four form classes: nouns, verbs, adjectives and adverbs. He aims to know how word's form class affects the type of responses as being paradigmatic or syntagmatic associations. The findings show that nouns yield only 21% syntagmatic associations while verbs and adjectives produce syntagmatic associations 48% and 50% respectively, and adverbs produce 73% syntagmatic associations. In this section the paradigmatic and syntagmatic associations to nouns, adjectives, and verbs in both English and Palestinian responses are shown.

A. Nouns

According to Deese, nouns are paradigmatic. The data in this study confirms Deese's conclusion. Table 4.1.1.1. shows that 74.5% of the responses to the nouns in the English sample are nouns and 79.2% in the Palestinian sample. Table 4.1.1.1. shows the percentage of paradigmatic and syntagmatic associations to the stimuli that are nouns.

Table 4.1.1.1. Paradigmatic and Syntagmatic Associations to Nouns.

Form class of responses	Palestinian Total No. of responses	Percentage of Palestinian responses	Percentage of English responses as taken from Amer (1980)
Paradigmatic: nouns	5597	79.2%	74.5%
Syntagmatic: verbs	647	6.6%	6.7%
Syntagmatic: adjectives	747	10.1%	6.8%
Ambiguous	305	4.1%	12.0%
Total	7296	100%	100%

When the stimulus and responses are nouns, they can form a sentence. For example, cow is an animal; ugly girls are not beautiful. Therefore, it can be said that nouns are often paradigmatic. It is noticed that the results are nearly similar for both English and Palestinian students. Therefore, it may be right to say that both English and Palestinian students have high linguistics level. The results in this study confirm the results of Wright's study (2001) which investigates the word associations of L2 learners in order to determine the mental links between learned words and to understand the L2 mental lexicon. She uses both quantitative and qualitative tools that are a word association test , and a brief interview to clarify why

certain words were chosen. The WAT consists of eight words. The majority of participants learning English as a second language, and some of them are general English students and business students in Japan. The findings support the argument that lower level learners' responses have syntagmatic relations while advanced learners' responses have paradigmatic relations. General phonological links that relate to words with similar beginnings and or endings, and clang responses are not very frequent. However, beginners choose these responses more than intermediate and advanced students.

B. Adjectives

Table 4.1.1.2. shows that the paradigmatic responses to adjectives in the English sample represent 61% of the total responses while the paradigmatic responses in the Palestinian sample represent 28.5% of the total responses. In addition, 32.8% of the total responses to adjectives in the English sample are nouns. In contrast, nouns in the Palestinian sample represent 68% of the total responses. It is obvious that most of the syntagmatic responses to adjectives are nouns because adjectives are mainly used to describe nouns.

Table 4.1.1.2. Paradigmatic and Syntagmatic Associations to Adjectives.

Form class of responses	Palestinian Total No. of responses	Percentage of Palestinian responses	Percentage of English responses as taken from Amer (1980)
Paradigmatic: Adjectives	220	28.5%	61.0%
Syntagmatic: Nouns	525	68.0%	32.8%
Syntagmatic: Verbs	0	0.0%	1.9%
Ambiguous	26	3.5%	4.3%
Total	771	100%	100%

C. Verbs

Table 4.1.1.3. shows the paradigmatic and syntagmatic associations to verbs. The paradigmatic responses represent 32.5% of the English responses and 30.2% of the Palestinian responses. The results show that syntagmatic associations are slightly more than paradigmatic associations in response to verbs in both English results and Palestinian results.

Deese (1965) illustrates the relatively low paradigmatic responses to verbs in contrast with nouns and adjectives in both English results and Palestinian results. He believes that there is a close relation between verbs and nouns. First, nouns may be formed from "verb stems". Second, gerund may be derived from verbs. Third, many words in English can function either as verbs or as nouns (Deese, 1965 cited in Amer, 1980. P. 210). In addition, the relatively low paradigmatic responses may be explained by the fact that 18.6% of the English responses are ambiguous and that 20.1 of the Palestinian responses are ambiguous. Ambiguous words are words that may be assigned to more than one form class.

Table 4.1.1.3. Paradigmatic and Syntagmatic Associations to Verbs.

Form class of responses	Palestinia n Total No. of responses	Percentage of Palestinian responses	Percentage of English responses as taken from Amer (1980)
Paradigmatic: Verbs	300	30.2%	32.5%
Syntagmatic: Nouns	446	44.8%	39.4%
Syntagmatic: adjectives	49	4.9%	9.5%
Ambiguous	200	20.1%	18.6%
Total	995	100%	100%

4.1.2 Semantic Analysis. Following the previous analysis, students' responses will be analyzed in terms of their semantic structure. The chapter "Word Associations and Linguistic Theory" in *New Horizons in Linguistics* was written by Clark (1970). Clark (1970) introduces different associating rules and distinguishes between paradigmatic and syntactic responses. Clark's approach to word associations is a featural approach. It shows how subjects in WAT apply certain featural rules to stimulus words when producing certain responses. He adds that words have some features and these features may be syntactic or semantic. For example, man may be associated with features such as 'noun, animate, human, count, male, etc.'. It may be said that children under seven give syntagmatics more than paradigmatics because they don't have enough or complete knowledge of the features of words. The semantic features are hierarchically organized. For example, the word "man" has the semantic features in the following order (+ human), (+ animate); (+ adult); (+ male). If a noun acts as (+ adult) then it can occur as (+male). However, the reverse is not necessarily true.

4.1.2.1 *Paradigmatic Rules.*

A. The minimal-contrast rule

If a stimulus word has a common 'opposite', it will often evoke that opposite more than any word. These responses are the most frequent in word associations because they have the extreme number of mutual features. Opposites highly evoke each other with a change of the feature [±Polar]. Polar adjectives such as (active-passive/ good – bad… etc.) include words that have frequent single-feature contrasts. The minimal contrast rule interprets associations with different form classes. Polar prepositions, e.g. up-down, above-below…etc. Polar verbs such as give-take, sell-buy, go-come….etc. Nouns also show replacement of only one feature.

For example, when the feature [±Male] in animate nouns is reversed, we have polar nouns such male-female, man-woman, boy-girl, he-she, him-her, aunt-uncle, etc. It is also possible to change the feature (± adult) and (± male) together to have the words such as boy or girl (Clark, 1970, p. 275-276).

Man: (+ human), (+ animate); (+ adult); (+ male).

Woman: (+ human), (+ animate); (+ adult); (+female).

The results in this study show that 34.1% of the paradigmatic associations to adjectives are antonyms and that 30.1% of the paradigmatic associations to adjectives are synonyms in the Palestinian sample. The English results shows that 45.8% of the paradigmatic associations to adjectives are antonyms. It is obvious from the above discussion that the minimal-contrast rule produces antonyms.

B. The marking rule. This rule means that subjects in WAT change a feature from its marked value to its unmarked value. For example, the feature [±Plural] for nouns. [+Plural] is the marked value, and [-Plural] is the unmarked. In the results of WAT, it is common to find (dogs-dog) rather than(dog-dogs). Another example is unmarked form "long" and the marked form "short" (Clark, 1970, p. 276-277). This rule is "a particularization of the minimal-contrast rule" because these marked and unmarked forms can be produced by the minimal – contrast rule (Amer, 1980, p. 216). Since it is similar to minimal contrast rule, only one example from my data is provided here to clarify this rule. The response "boy" is primary response for the stimulus word "girl" in both the English and Palestinian results. Girl is the marked form while boy is the unmarked form. This could be produced by the minimal-contrast rule as the following:

Girl: (+animate), (+human), (+young), (+female).

Boy: (+animate), (+human), (+young), (+male).

C. The feature-deletion and −addition rules. The feature-deletion rule deletes features from the end of feature list. However, the feature- addition rule adds features to the end of feature list. Deletion of features produces superordinates, like "vegetable" from "onion"; "animal" from "pig", whereas addition of features produces subordinates like "banana" from "fruit". These rules produce synonyms, so they clarify word association data that include near synonyms, like house-home/seem-appear,…etc. Home appears to contain all the features of house plus some extras indicating that it is someone's usual residence. It is clear that synonyms usually have feature lists that are different on only a few features. In my data, the word "ill" is the response to the word "sick" (Clark, 1970, p. 278-279). Amer (1980) explains that Clark doesn't explain how this rule is applied and doesn't clarify how subordinates produce subordinates. For example, how the word "banana" produces "orange".

D. The category-preservation rule. Applying this rule, features at the bottom of the list should be changed first and features high on the list should be kept as it is such as the features [+Noun) and [+Adjective]. Therefore, it deals with stimuli and responses that belong to the same grammatical class and produces paradigmatic associations (Clark, 1970, p.280). Amer (1980) explain that because the minimal-contrast rule also produces paradigmatic such as girl - boy; orange-banana, there is no need for this rule.

4.1.2.2 *Syntagmatic Rules.*

A. The selectional feature realization rule. The features for a word often contains selectional features which partly specify the meaning of the word. For example, the word "young" "has

selectional restrictions on the nouns it can modify as specified in the feature (+Det (+ Animate) be -)" (Clark, 1970, p. 281). When this feature is realized by the respondents, responses such as boy, child, girl, man and people are evoked. When subjects produce these responses, they take some features from the list such as [+Noun, +Animate] and add other features to give the results. For example, subjects may add (-adult) and respond with words such as boy, girl, and child. The selectional feature realization rule interprets the differences in the number of syntagmatic responses that respondents give to nouns, verbs, adjectives, and so on (Clark, 1970). Chomsky (1965) cited in Clark believes that nouns don't have selectional features, but verbs, adjectives, and other categories have selectional features. Therefore, nouns should evoke high proportion of paradigmatic responses and low proportion of syntagmatic responses in comparison to verbs and adjectives. Table 4.1.1.1. confirms this: syntagmatic responses to nouns represent 13.5% of the total responses in the English sample while it represent 16.7% of the total responses in the Palestinian sample. However, paradigmatic responses represent 74.5% and 79.2% respectively.

Moreover, the features for adjectives often contains selectional features which characterize the nouns they modify. Therefore, adjectives should evoke nouns as the most frequent syntaginatic responses. My data also confirms this. Table 4.1.1.2. shows that 32.8% and 68% of the syntagmatic responses to adjectives are nouns for the English sample and the Palestinian sample respectively. However, 1.9% and 0.0% of the syntagmatic responses to adjectives are verbs for the English sample and the Palestinian sample respectively.

Similarly, Verbs also contains selectional features which characterize the subjects and objects that govern the verb. Therefore, verbs should evoke nouns as the most frequent syntagmatic responses. My data confirms this. Table 4.1.1.3. shows that 39.4% and 44.8% of

the syntagmatic responses to verbs are nouns for the English and the Palestinian samples respectively.

B. The idiom-complete rule. This rule illustrates some idiomatic phrases among such as: white-house, cottage-cheese, justice-peace, so-what. "The rule might be Stated: "find an idiom of which the stimulus is a part and produce the next main word" (Clark, 1970, p. 282).

The significant implication of Clark's featural approach is that it shows that "word associations can be a means of studying semantic memory". These associations show that the stimulus and the response have common features. In addition, the two words "are stored in memory in terms of their featural characteristics and the different relationships among them" (Amer, 1980, p. 220).

4.2 The Cognitive Dimension

To analyze the associative data from the cognitive view, English and Palestinian associations have been judged according to the cognitive grouping reported by (Bruner and Olver, 1974 cited in Amer, 1980, p. 192). They provide three types of hierarchical grouping which show the cognitive development as children grow up. These types are perceptual, arbitrary functional, and appropriate functional.

1. Perceptual: the person in this stage knows the perceptual features and attributes of objects such as colour, size, shape, pattern, etc.

2. Arbitrary functional: the person knows the unusual use of objects regardless of their usual use. For example, making a noise with a newspaper.

3. Appropriate functional: the person knows the usual use of objects. For example, potato, peach, bread are characterized to be eaten. The cognitive growth means that the use of perceptual features of objects as a basis for grouping is declined and the use of functional basis for grouping is increased.

Amer (1980) believes that the Syntagmatic-Paradigmatic shift is cognitive rather than linguistic in nature. He explains this in the following examples. The perceptual features for the word "book" include "red, big, new", to "ball" include "round, big, red". As children grow older they move towards the arbitrary then the appropriate functional features. Their responses to "book" and "ball" will be "read, magazine, story" and "play, match, football" respectively (p. 193).

The results from my data and the English results from Amer's study are shown in the following points:

1. The majority of responses in the Palestinian sample fall in the category of "appropriate functional features".

2. Most of the English responses fall within the "appropriate functional features" category. However, the English responses that fall in the "perceptual" and "arbitrary functional features" are greater than those in the Palestinian sample. This phenomenon may be explained by two facts:

A. Mental ability: Amer (1980) noticed that "perceptual" and "arbitrary" responses in the English samples were given by low ability students. Idiosyncratic responses were also given by these students. This is also true for the Palestinian respondents. Low ability students "have not yet developed the abstract hierarchical structure that enables them to produce the

common responses which fall in the category "appropriate functional features"". (Amer, 1980, p. 222).

B. Commonality: three indices of commonality are used in this study: commonality of the primary response, commonality of the first three responses, and commonality of the first five responses.

Commonality is the percentage of the first three or five responses to the total of responses and it indicates if these responses have high or low frequency. High commonality means high frequency (Atawnah, 1983). The commonality shows how many of the Palestinian responses are similar to the first three or five responses in the English norms. The commonality measures the degree of conformity of Palestinian responses to the English norms.

The idiosyncratic responses (Id) are those responses that can't be found in the English norms. They show how far the students' responses are from the English norms that is given by native English students. They reveal the individual idiosyncratic understanding of his world. Id responses reveal how the private world of the student could be reflected in his associative responses (Atawnah, 1983). There are various idiosyncratic responses that are given by the sample in this study. For example, "hate" and" jealousy" in response to the stimulus word "uncle". These answers seem to be odd. A person is expected to love and respect his uncle. However, these responses have weak semantic links with the stimulus word.

Table 4.2.1. Idiosyncratic, Excluded and Left Responses; Commonality of the First Five Responses; Commonality of the First Three Responses; Commonality of the Primary Response.

Type and number of responses	English	%	Palestinian	%
Commonality of the first response	5293	16.4%	1299	33.6%
Commonality of the first three responses	11794	22.6%	2804	37.9%
Commonality of the first five responses	14518	23.1%	3716	40.3%
Idiosyncratic, excluded, and left responses	10346	11.4%	6035	30.2%

Table 4.2.1. shows that the commonality is higher in the Palestinian sample in the three indices. High commonality means that students move towards social uniformity or maturity. From the cognitive point of view, the indices of commonality in Table 4.2.1. may be interpreted as an indication of cognitive maturity. It means that the Palestinian subjects have

developed a higher level of cognitive abstraction and, consequently, are cognitively more mature than the English subjects. This may be explained by the fact that the university Palestinian learners have a higher level of education and are older in age. Thus, it is true to say that word associations can measure the cognitive development of the students (Amer, 1980).

The idiosyncratic responses in the Palestinian sample are remarkably higher than in the English sample: 8% and 5.3% respectively. This may be explained in terms of the influence of local culture of Palestinian subjects on their responses since they don't learn English within its native cultural context.

Excluded (odd) and left responses (unanswered) represent 22.2% of Palestinian responses and 6.1% of English responses. Excluded and left responses are higher in Palestinian responses. Some of the Palestinian students complete the test in the exact time. However, left responses are found because some students had difficulty in recalling associations.

4.3 The Cultural Dimension

The semantic content of associations cannot be fully understood and explained unless the associations are interpreted in their cultural context. From a comparative point of view, linguistic and cognitive explanations for associations cannot interpret the differences in the semantic content of associations from one culture to another (Amer, 1980, p. 226).

There are many religious responses to different stimuli in the Palestinian sample. For example, 61.3% of the Palestinian students in this study relate the word "pig" with the words "disgusting", "forbidden", "ugly". However, English students associate the word "pig" with

different words such as "pork", "bacon", "eat"...etc. These responses reveal a significant difference not only in eating habits, but also in beliefs and attitudes. Another example is the responses "Mosque", "Al fajer" and "Mecca" to the stimulus "to pray" in the Palestinian responses while the English subjects responded with words such as "church" and "Bible". Mecca is considered as the holiest city in the religion of Islam and a pilgrimage to it is obligatory for all Muslims. Mecca is home to the Kaaba which is the direction of Muslim prayer. A Muslim woman wears scarf when doing prayers. The differences in associative clustering of these stimuli between the English and the Palestinian cultures indicate that they have different mode of thinking. It is obvious that both of the students provide different responses because they have different experiences and thoughts. These thoughts are affected by different religions: Islam and Christianity. Table 2.3.1. provides two examples that illustrate these differences.

Table 2.3.1. Main English and Palestinian Responses to "Pig" and "to Pray".

Stimuli	Main Palestinian Responses	Main English Responses
Pig	Disgusting, animal, Jews, ugly, forbidden, dirty, hate, pink, fear.	sty, bacon, pork, cow, farm, smell, fat, animal, eat.
To pray	God, mosque, peace, Mecca, Al Fajer, Islam, Muslims, scarf.	God, church, worship, Jesus, Bible, ceremony, religion, prayer.

In addition, there are some differences in the "eating habits", for example, stimuli such as: bread, butter, potato, tomato, bean, and sweet reveal these differences. Some of the

responses are culture-specific. For instance, "loaf", "slice", "commodity", and "bakery" for "bread"; "margarine" and "lard" for butter; "squash" and "juice" for "tomato"; "baked", "runner", "soya" and "Heinz" for bean; "toffee" and "honey" for sweet in the English sample. In the Palestinian sample, culture-specific responses appeared for these stimuli: "falafel", "Molokhia" and "mom" for "bread"; "cake" for butter; "paste" and "hummus" for tomato; "meat" and "hummus" for beans; "kunafa" and "muhallabia" for sweet. The meanings of some words are explained in the following points:

1. Molokhia is Corchorus olitorius or jew's mallow. In Palestine, Molokhia leaves are cooked and served with rice or bread. Therefore, it seems logical to cluster "bread" with Molokhia.

2. Falafel is a popular Palestinian sandwich. This word is associated with "bread". Moreover, "mom" is a response to "bread" because mothers in Palestine sometimes make bread at home.

3. Kunafa and Muhallabia are popular types of Palestinian sweets.

There are other culture specific responses in this study. For example, the stimulus word "king". In the English sample, it evokes "Henry", "Edward", and "George" while in the Palestinian sample it reveals "King Lear", "story". "King Lear" is the second response in the Palestinian sample because it is a play that is taught to the Palestinian students in their last year at school.

Further evidence for the influence of cultural factors is evident in the responses to the stimulus word "holiday". In the English sample, it reveals responses such as "abroad", "rest", "Spain", "France" whereas in the Palestinian sample it evokes responses such as "Friday", "sleep", "home", "T.V". These responses show that English students travel abroad on holiday and visit other countries such as Spain or France. However, it is noticed that Palestinian students stay at home, sleep, and watch Television on holiday. These associations reflect the

differences that English and Palestinians have. At the same time, they reflect their different ways of categorizing experience.

It is also important to know that there are some stimuli which evoke similar responses for the English and the Palestinian learners such as: "bell", "rain", "dress",….etc. These responses may indicate that both students have similar experiences with these stimuli. In other words, both cultures have some similar aspects. Baoguo (2008) tried to answer the following question: Do people from different cultures store English words in their minds differently?. He used a word association test. About 20 participants were selected from multicultural contexts, like the US, Middle or South America, Europe, Africa, China (Mainland), China (Hong Kong and Taiwan), and other Asian countries, such as India, Nepal and Japan. Moreover, the word association test consists of fifty nouns with various semantic categories. There are five more frequent words of these fifty words. The five words are dog, snow, father, table and bed. The researcher used high frequency words. Those words are from different categories such as animals, people, trees, and flowers. He also applied the WAT on three friends. These participants were required to respond orally to the following five prompt words: table, green, work, car and quickly.

The findings of Baoguo's study indicated that cultural factors only play a secondary role on determining people's mental lexicon. However, the linguistic elements such as the phonological structure, the syntactic category, the morphological structure, and the presence of semantically related words play a major role in this stage. The findings also showed that three participants who share the same cultural background, Chinese culture, responded to five stimuli words differently. They provided paradigmatic, syntagmatic and clang responses. However, in the same test people who have different cultures sometimes produce the same

responses. Therefore, he believed that the cultural elements affected students' responses to some extent as these elements played a minor role in determining students' responses. He also explained that linguistic elements such as the students' levels determine the type of their responses.

4.3.1 Analysis of some Categories. The following is an analysis of some words to show that word associations reflect the culture of the respondents.

A. Family kinship: the words "mother", "wife", and "uncle" are analyzed here.

Table 4.3.1.1. Palestinian First Five Responses to the Word "Mother".

Responses	Frequency	Percentage
Love	60	62.5%
Warm	11	11.5%
Life	10	10.4%
Father	8	8.3%
Paradise	7	7.3%

The results in table 4.3.1.1 show that the affective responses represent 74% of the Palestinian responses whereas they were nearly absent in the English responses in Amer's study (1980). In addition, 7.3% of the Palestinian students respond with the word "paradise" while this response is absent in the English responses.

The following table (Table 4.3.1.2.) shows that "husband" is the primary response to the word "wife". It represents 85.3% of the English responses and 48.6% of the Palestinian responses. The response "sacrifice" represent 10% of the Palestinian responses while it is absent in English responses.

Table 4.3.1.2. Palestinian First Five Responses to the Word "Wife".

Responses	Frequency	Percentage
Husband	34	48.6%
Love	12	17.1%
Life	9	12.9%
Children	8	11.4%
Sacrifice	7	10%

The following table (Table 4.3.1.3.) presents the Palestinian responses to the word "uncle".

Table 4.3.1.3. Palestinian First Five Responses to the Word "Uncle".

Responses	Frequency	Percentage
Father	24	33.8%
Love	20	28.2%
Aunt	11	15.5%
Relatives	10	14.1%
Family	6	8.4%

In English, uncle evokes the opposite sex: "aunt" with a frequency of 75.8%. "Father" represents 33.8% of Palestinian responses, but this response is absent in English responses. These results mean that 33.8% of Palestinians relate the word "uncle" with their father's brother and not their mother's brother. Moreover, the response "love" represents 28.2% of Palestinian responses, but it is absent in English responses. This means that affective responses are dominant in Palestinian responses.

B. Foods

Table 4.3.1.4. shows the Palestinian first five responses to the word "onion". Generally, the responses to the word "onion" are similar in both samples. The English primary response is "cry" (36.8%). For the Palestinians, the primary response is "tears" (57.8%). However, there are some culture-specific responses. For example, "Musakhan" is only given by Palestinian subjects. Musakhan is a traditional Palestinian dish which consists of chicken and fried onion.

Table 4.3.1.4. Palestinian First Five Responses to the Word "Onion".

Responses	Frequency	Percentage
Tears	70	57.8%
Smell	22	18.2%
Crying	12	10%
Vegetable	9	7.4%
Food	8	6.6%

C. Occupations and professions

Table 4.3.1.5. reveals the first five Palestinian responses to the word "worker". The important cultural difference between English and Palestinian responses to the word "worker" is the absence of the response "tired" in the English associations. However, it is the primary response in the Palestinian responses and it represents 44.9% of the Palestinian responses. It reflects the bad situation of the Palestinian workers. In addition, 6.7% of the Palestinian responses is the word "fighter". Other Palestinian responses such as "struggle", and "dirty" mirror the bad situation of workers.

Table 4.3.1.5. Palestinian First Five Responses to the Word "Worker".

Responses	Frequency	Percentage
Tired	40	44.9%
Money	21	23.6%
Hard	15	16.9%
Dad	7	7.9%
Fighter	6	6.7%

D. Miscellaneous

Table 4.3.1.6. shows that the English primary response to the word "tourist" is "holiday" (18.9%). It shows the strong relation between the two words. The English people usually travel when they are on a holiday, so they become "tourists" while the word "holiday"

is absent in the Palestinian first five responses. Table 4.3.1.6. shows that 22% of the Palestinian students associate "tourist" with the word "Jerusalem". Jerusalem is the capital of Palestine and is considered as a holly city. This response appears because "Jerusalem" receives a large number of tourists as it has religious significance for different religions. This response shows the effect of the local culture of the Palestinian students on their responses.

Table 4.3.1.6. Palestinian First Five Responses to the Word "Tourist".

Responses	Frequency	Percentage
Guide	12	24%
Jerusalem	11	22%
Foreign	10	20%
Travel	9	18%
Funny	8	16%

Chapter Five

Pedagogic Implications and Conclusions

5.1 Pedagogic Implications

Word associations reflect English culture, so they help EFL syllabus designers and teachers to select vocabulary items and topics in an objective way. As items are stored in a complex network of associations, FL words should be introduced to FL learners as parts of a network, or interrelated meanings. Peppard (2007) believed that "words are meaningfully connected in the mental lexicon and should therefore be taught in a similar way" (p.23). Pedagogical implications include language instructions and activities that call learners' attention to the frequency of particular words, their synonyms, collocations, antonyms, common meaning in language, affective meaning.....etc. This section shows different pedagogic implications of word associations that EFL teachers and syllabus designers can use in teaching English vocabulary. All the examples in this section are from this study.

First, teachers can use different activities that focus on different types of sense relations among words. Baoguo (2008) believes that ESL teachers should be aware of the lexical knowledge such as semantic relations. This awareness can help ESL teachers in teaching English vocabulary more effectively. He also explains that as there is a particular link between specific word and another word, it is important to explore the links between the individual words. Different types of sense relations are explained here. The semantic relations among words that WAT shows can be employed in the teaching of foreign language

vocabulary. Word associations may guide course designers in deciding which meaning of a word is more frequent.

Linguists have distinguished various types of sense relations. The first five relations are introduced by Carroll (2008) and the other relations are introduced by Gairns and Redman(1986).

A. Synonymy: this term means that different words have a general sense or meaning. Therefore, it is acceptable in a limited number of contexts to change one of these words and use another word which has the same general sense. The words "to welcome" and "to greet" are synonyms. "Policeman", "cope", and "officer" are also synonyms. The use of synonyms is usually an effective way that is used to clarify unknown words.

B. Coordination: two words are at the same level in a hierarchy; for example, apple and banana which exist under the heading of fruit.

C. Hypernymy: it is the relation of " superordination within a hierarchy". For example, fruit is a superordinate of apple.

D. Hyponymy: it is acceptable to say that the meaning of "vegetable" is included in the meaning of "potato", as it is in the meaning of "cabbage", and "onion". When a foreign language teacher wants to explain this type of sense relation, he/she says that "vegetable" is a superordinate and that "cabbage", "onion"..etc are all hyponyms of "vegetable" or subordinates. The words "cat", "buffalo", "pig", and "cow" are hyponyms of the superordinate "animal". The following diagram provides another examples of hyponymy.

Diagram 5.1.1. Examples of Hyponymy.

Vegetable

Potato   cabbage   onion
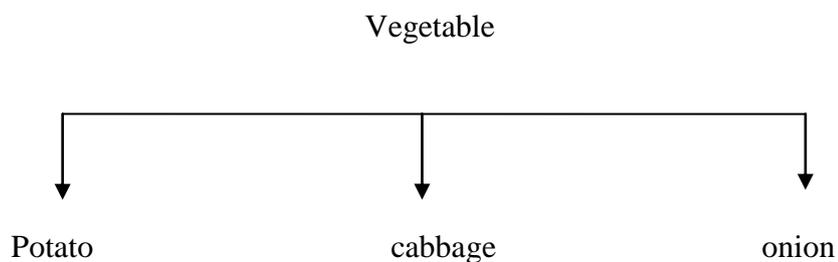
E. Meronymy: it refers to the parts of specific object. For example, arms and legs are meronyms refer to parts of a chair.

F. Polysemy: this term means that a single word has "several different but closely related meanings.". Therefore, L2 learners should look at polysemy in order to recognize the boundaries between lexical items. For example, the words "man" and "book" are polysemous. The English and Palestinian responses to the word "man" are (woman, boy, human) and (human, woman, boy) respectively. Both English and Palestinian responses are nearly similar. According to these responses, the word man seems to have three different but related meanings. First, the humankind (man versus animal). Second, males of the humankind (man versus woman). Third, adult males of humankind (man versus boy). The other example is the word "book". The English and Palestinian responses to "book" are (read, pages, to book) and (read, pen, knowledge) respectively. These responses indicate that the word book has two meanings. First, collection of pages. Second, to make reservation. Only English students give this meaning.

G. Homonymy: this term means that a word has "several different meanings which are not closely related,". For example, the words "sweet" and "flat" are homonyms. The English and Palestinian responses to the word "sweet" are "sugar", "music", "kids" and "chocolate", "sister", "behavior" respectively. These responses show that the word "sweet" has two different, unrelated meanings. First, it means that the taste of something is like sugar. Second, it means that something or somebody is kind or friendly. Another example is the word "Flat". English and Palestinian responses are "home", "building", "level", "upright" and "home", "feet", "apartment", "building" respectively. These associations indicate that the word "flat" have two meanings. First, a set of rooms that are part of a building. Second, feet that are level and not curved. It is clear that the two meanings are not related. Therefore, the learner can understand the meaning of the word according to its context. The following sentences have the same words with different meanings.

1- Babies may be born with flat feet.

2- Leya lives in a small flat.

H. Antonymy: a word which has the opposite meaning of another word. For example, the words "beautiful" and "ugly" are antonyms. "Polite" and "impolite" are also antonyms.

I. Collocation: "When two items co-occur, or are used together frequently, they are said to collocate,". These "items may co-occur simply because the combination reflects a common real world state of affairs.". For example, "Black and white" appear in this order because of collocation. Teachers can introduce collocations to the students by using collocational grids. These grids are used to show items that may collocate together. As "there are no rules of

collocation", the researcher believes that students should learn the word and its association. These associations include the collocations of the word.

The following activity that is provided by Gairns and Redman (1986) is used in teaching collocations. In this activity, students are asked to cross out the adjectives or nouns that can't be used with the nouns in the boxes. Look at the following example:
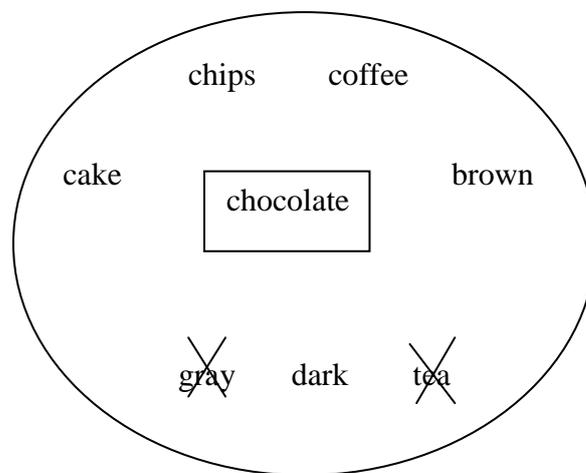
Following this, the teacher may ask the students to write down the right order of these collocations and explain to the students that "cake", "chips", and "brown" come after the word "chocolate", while, "coffee", and "dark" come before the word "chocolate".

J. Other types of relations

1. Cause and effect relations : these relations are called notional relations. They provide clues when learners don't know the meaning of a word and want to guess the meaning from the

context. In the following sentence, for example, students can guess the meaning of the word "joke" from the context of the sentence if they know the meaning of the words "laughed", and "friends".

* "The girl laughed with her friends; they said a joke"

2. Part-whole relations: parts of body is an example of this type of sense relation. These parts are arm, hand, leg,.....etc. This type of relation is different from hyponymy. Onion is a kind of vegetable; however, leg is not a kind of body, but part of the body.

3. Items commonly associated with: this type of sense relation depends on the person's knowledge of the world. "God", "comfort", "peace", "worship", "prayer", "religious", and "faith" are items that are associated with "to pray". Gairns and Redman (1986) believed that there may be a certain amount of individual differences, but the items which are provided by native speakers of specific language "are likely to be similar.". They added that it is possible to have different items according to the culture. For example, native speakers of English respond to the word "to pray" with words such as "church", "bible", and "Jesus". However, Palestinians respond to the same word differently by providing items such as "mosque", "Mecca", and "Islam". It is obvious that both of the students provide different responses because they have different experiences and thoughts. These thoughts are affected by different religions: Islam and Christianity. Table 5.1.1. presents the different types of sense relations and provides examples about these relations.

Table 5.1.1. Examples of Different Types of Sense Relations.

	Stimuli	Responses
Similarity or synonym	Policeman	Officer
Coordinate classification	Apple	Banana
Superordinate classification	Apple	Fruit
Subordinate classification	Fruit	Apple
Meronymy	Chair	Legs
Polysemy	Man	boy/human
Homonymy	Flat	feet/apartment
Contrast or antonymy	Sweet	Bitter
Collocation	Chocolate	Brown

Second, Abdullah (1993) introduces some activities that help learners in organizing words in their minds according to specific concepts or topics. He believes that teachers should use activities that give learners the opportunity to recycle vocabulary, thereby, facilitate automatic lexical access. Syllabus designers and teachers can use word associations in designing these activities. Four of these activities are presented here:

1. Word prediction (predicting vocabulary from a given topic): the teacher in this activity writes a topic on the board. For example, social relations. Students are asked to predict the words that would be associated with the topic. Students are given a passage on the same topic

and are asked to predict the words that may appear in the passage. Then, the students provide the words that come to their minds and give reason for their choice of words. Then, the students read the passage in order to check their predictions. When students explain their choices, they refine their understanding of the words and activate other words that are related to the topic, " thus "automatising" their knowledge of lexical co-occurrence" (Abdullah, 1993, p. 112).

2. Word prediction (predicting topic from given vocabulary). The teacher in this activity writes some key words that are related to specific topic on the board, and asks the students to predict the topic (p.113). For example, the teacher may provide the following words and ask the students to predict the topic from these words:

A. Love   B. responsibility

C. couples   D. children

E. party   F. home

After students predict the topic which is marriage, they can predict other words that are related to the same topic.

3. The odd man out: students select the odd word that is different from other words in a list, and give reasons for their choice. For example, students are asked to select the odd word from the following words "flat", "building", "strong", "apartment", "home". Students in this activity have to discuss their answers in order to understand the meaning of the words and the relationship among these words. Therefore, this activity increases the students' knowledge of collocations and associations.

4. Vocabulary map: this exercise is used at the end of a unit. Students are asked to say aloud any words they can remember that are related to specific topic they have covered in a unit. For example, transportation. The teacher writes the words on the board. When the key items appear on the board, the teacher asks the students to draw a vocabulary map and to classify the words under related titles or categories. This activity helps the students to store in their minds various groups of words. Each group has words that are related according to specific category.

Vocabulary map on transportation

Land: bus, subway, train, bike, van, truck.

Water: ship, boat, canoe, steamer.

Air: plane.

Third, since different cultures have different ways of categorizing experience. Palestinian learners of English should learn the different ways of categorizing experience made by the English people by learning English in its English cultural context rather than the Palestinian cultural context. This is achieved by reorganizing or recategorizing experiences. Teachers and syllabus designers should introduce to the students the English ways of categorizing experience and Palestinian learners should modify their categorization of experience in order to accept English ways of categorization. These categories include "family kinship, weather, food, family and social relations, animals,…etc". The following examples show how both English and Palestinians categorize different experiences, and present the modified ways of categorizing these experiences.

Palestinian learners may classify animals in terms of eating habits as in diagram 5.1.2.

Diagram 5.1. 2. Palestinian Classification of Animals in Terms of Eating Habits.

Animals

Whose meat can be eaten   whose meat cannot be eaten

Cow   buffalo   pig   cat
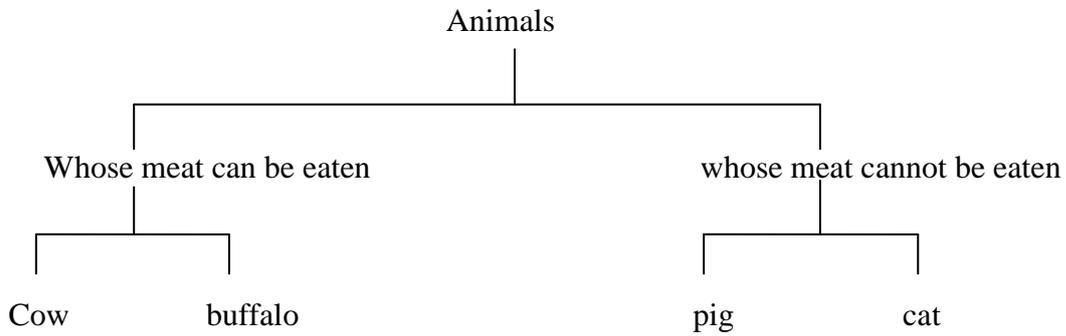
English learners may classify animals in terms of eating habits as in diagram 5.1.3.

Diagram 5.1.3. English Classification of Animals in Terms of Eating Habits.

Animals

Whose meat can be eaten   whose meat cannot be eaten

Cow   buffalo   dog   cat
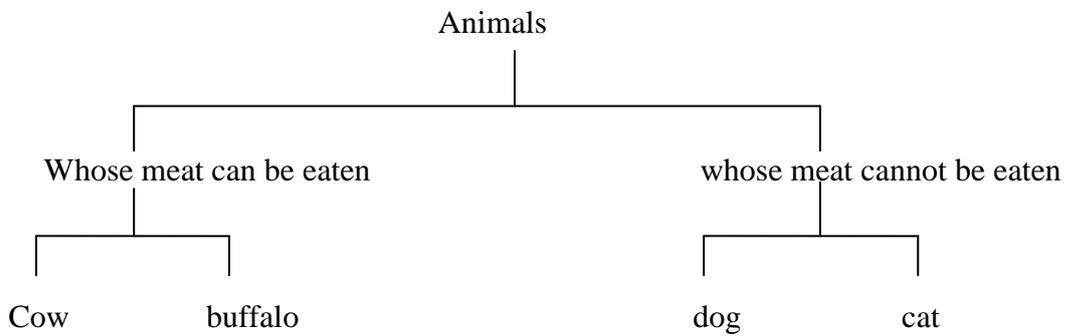
In learning English, the Palestinian learners should modify their classification and accept that the English people eat the meat of pigs, as follows (Diagram 5.1.4.)

Diagram 5.1.4. Modified Classification of Animals in Terms of Eating Habits.

Animals

whose meat can be eaten   whose meat cannot be eaten

cow   buffalo   pig   pig   cat
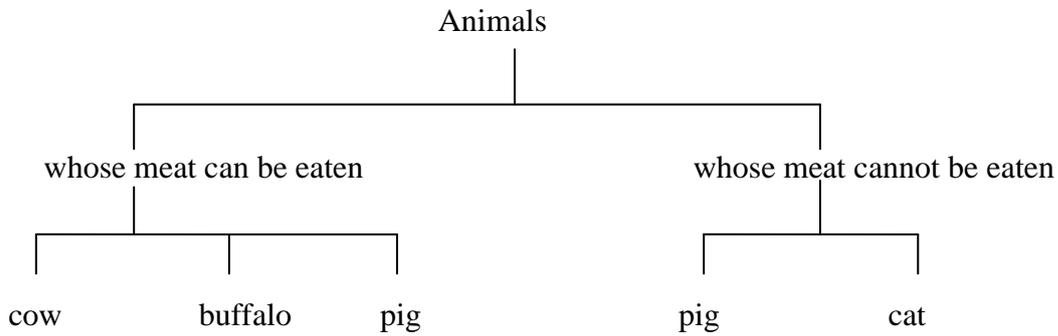
(for some people including the English)   (for some people including the Palestinians)

Another category is "social relations". The Palestinian learners may have the following classification (Diagram 5.1.5.)

Diagram 5.1.5. Palestinian Associative Classification of Social Relations.

Social relations

legal   illegal

friend   marriage   girl

brother   sister   friend
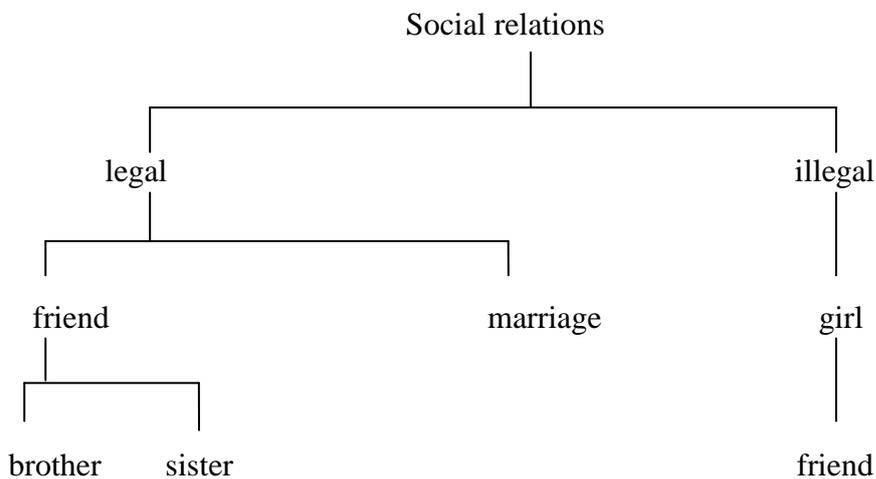
The English learners, in contrast, may have the following classification as shown in Diagram 5.1.6.

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Diagram 5.1.6. English associative classification of social relations.

Social relations (all these relations are legal)

```
                    friend              girl              marriage

               girl        boy         friend
```
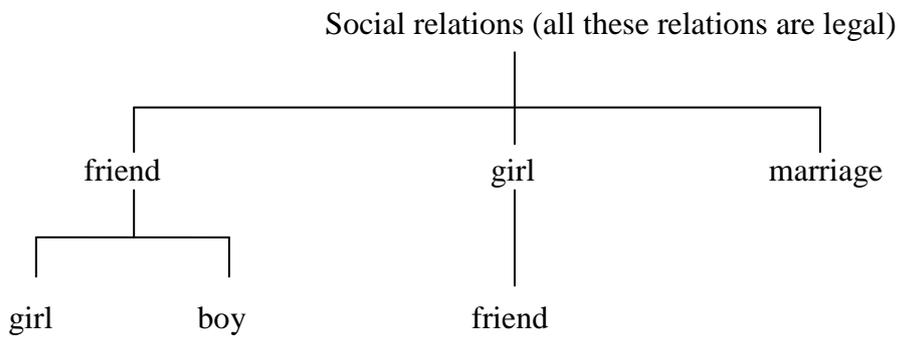
Thus, in learning English, Palestinian learners have to modify their classification to the following Diagram.

Diagram 5.1.7. Modified Associative Classification of Social Relations.

Social relations

```
        legal                                    illegal

   friend                      girl    marriage    girl

boy              brother      friend              friend
(for some people including   (for some people    (for some people including
the English)                 including the English)   the Palestinians)
```
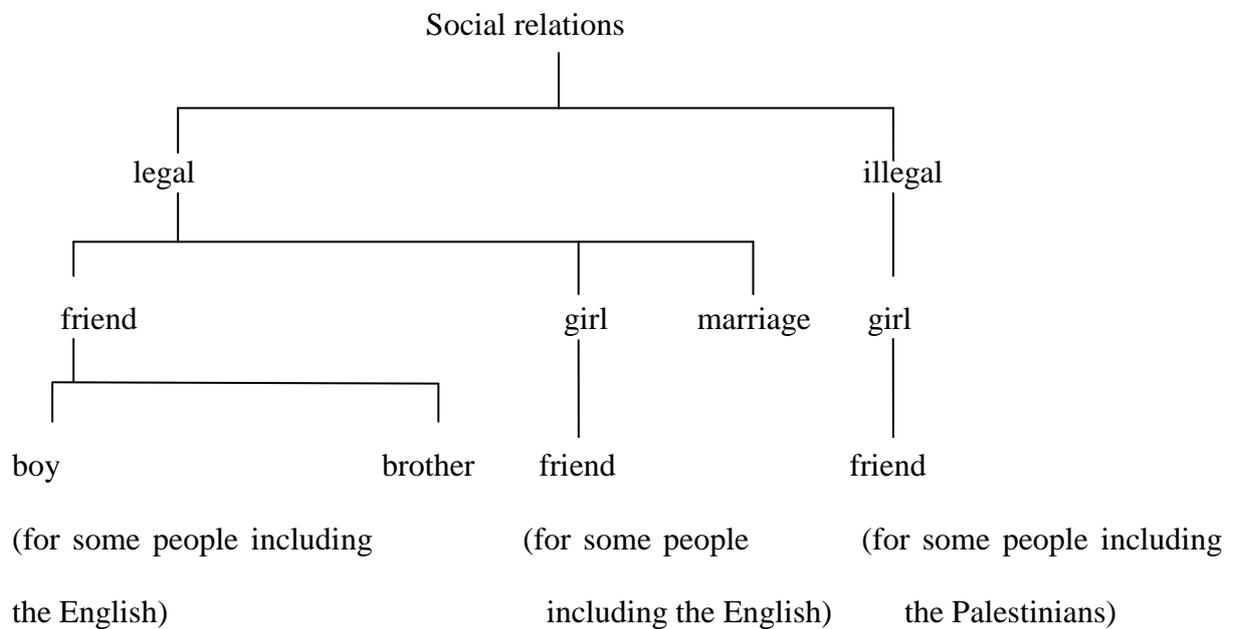
Fourth, when we look generally at the results of WAT, it is noticed that categories of experience are interrelated. It is observed that Palestinian students prefer using affective responses in response to different categories of experience. Affective responses are the emotional responses to stimuli. The words love, merciful, confident, hate,...etc are examples of affective responses. Amer (1980) says that English students rarely use these affective responses. Analysis of associations in different categories reveals that affective associations are present in some categories as follows:

1. Parts of the body: 8.7% of the Palestinian responses to "eye" are affective. Affective associations to the same word are absent from the English sample.

2. Professions: To the stimulus "nurse", 11.1% of the responses in the Palestinian sample are affective while 10.2% of the English responses are affective.

3. Animals: In the Palestinian sample, 11.4% of the associations to "buffalo" are affective. Affective associations to this stimulus are nearly absent from the English sample.

4. Colors: In the Palestinian sample, 11.1% of associations to "yellow" are affective. For the stimulus "black" 33.3% of the Palestinian responses are affective in contrast with only 4.5% in the English responses.

In the Palestinian sample, 13.6% of associations to "holiday", 41% of associations to "friend", and 33.3% of associations to "chocolate" are the word "love". This response is absent in English responses to "holiday", and "chocolate". While just two English students respond with the word "love" to the stimulus "friend".

These responses indicate that there is a common cognitive difference between English and Palestinians, i.e. affective versus non-affective. As Palestinian responses to different categories are affective while English responses to different categories are not affective, it is true to say that categories or domains of experience are interrelated and may mirror a general cultural feature. Teachers and syllabus designers should focus on non-affective kind of responses of these stimuli because these responses reflect the English culture.

5.2 Pedagogic Implementations of Associations

This section presents some possible uses of responses in designing pedagogic exercises for teachers and material writers. In these exercises, the responses that reflect differences between English and Palestinian cultures are introduced. Such exercises were adopted from Amer (1980). He introduced different types of exercises. For example, "transformation exercises (i.e. transform masculine to feminine), dialogue, story, definitions, reporting, questions, comprehension, etc" (p. 270).

Exercise 1:

This exercise is a game. The teacher uses a box on which the word "pig" is written. There are some cards inside the box. One word of the English associations to "pig" is written on each card. The teacher asks some students to pick these cards in order to form meaningful sentences. The students then write these sentences on the board and try to write a short paragraph by using the same sentences. The teacher helps and guides the students when writing the sentences. Then they may discuss the meanings of these sentences. During this discussion the teacher may refer to the fact that in the English culture "pig" is not considered

as a taboo. However, it is an animal whose meat is eaten. The aim of the exercise is to convey to the learner the full meaning of "pig" in the English culture.

Exercise 2:

As English and Palestinian people look at social relations differently, it is important to show such a difference. The teacher in this exercise may ask the students to rearrange the following words in pairs, following the example given below: girl friend, sister, boyfriend, marriage, brother.

I	II
boyfriend	marriage

Then, the teacher may ask the students to give the words in each column a "name" or a "title". He/she may ask the following question: " what do the words in the first column have in common?" If the students don't know the answer, the teacher may help them by saying that all the relations in the first column are "forbidden". Then he/she ask the following question" what do the words in the second column have in common?". Following this, the teacher may ask the students to give a name for each column. This exercise may be followed by a discussion about these relations and clarifying how different cultures have different views of the same relations. The teacher says "girlfriend", and "boyfriend" are legal relations in the English culture.

Exercise 3:

Each of the following words has some relation to the word "short": "tall", "fat", "small", "shorts", "hair", "man", "time", "bread", "cut", "story", "sighted", "stumpy".

The teacher in this exercise writes these words on the board and asks students to use each word with the word "short" to make a meaningful sentence. For instance:

1. Leya has a short hair.

2. She tried writing a short story.

3. She doesn't like short shorts.

4. Shortbread is a type of biscuit.

6. Ali wears classes because he is short-sighted.

The aim of the exercise is to convey to the learner the full meaning of "short" in the English culture. Therefore, the exercise may be followed by a discussion in order to explain the meanings of the sentences. For example, the teacher may explain that the word "short" in the first three sentences is the opposite to the word "tall". In addition, the biscuit in the fourth sentence is called "shortbread" because it is traditionally formed as one large circle. Moreover, Ali can't clearly see objects that are far to him, so he is short-sighted. Teacher may add that short-sighted may be used in other sentences to mean that someone lacks imagination or foresight.

Exercise 4:

Put ticks in the boxes for the words which go together

	Margarine	baked	Loaf	Butter	Crisp	Soya	Slice	Lard
Bread								
Bean								
Potato								
Butter								

This exercise is used for teaching words that collocate together. The teacher may ask the students to find collocations, to differentiate between the meanings of some words that are related together. For example, "lard, butter, and margarine" or "slice, and loaf".

Exercise 5:

English associations to the word "pig" are "bacon", "ham", and "pork". Moreover, English associations to "bean" are "Heinz", "baked" and "soya", " These associations are absent in the Palestinian responses. Therefore, teachers may provide the definitions of these associations by asking the following questions. For example:

What is "Heinz"?

1. it is a type of beans.

2. it is a food processing company.

3. it is a cooked beans.

What is "bacon"?

1. it is a pig meat which is usually cured.

2. it is a cow meat which is rarely cured.

3. it is a buffalo meat which is never cured.

5.3 Conclusion and Recommendations

5.3.1 Conclusion. Word association method is considered as a very beneficial method since it provides specific information about people's culture, linguistic behavior, and affective status. It also provides information that helps foreign language learners understand the meanings of the foreign language words. WATs can also reveal a great deal about the mental lexicon of students. Furthermore, knowing different associations for a word helps learners understand its full meaning.

The aim of the study was to investigate word associations of English majors in Palestinian universities in order to find the types of associations students make and if there are any similarities or differences between students in Palestine and students in England in relation to word associations. A comparison between the English results of Amer's study in (1980) and the results of this study in Palestine was made in order to explain the differences in word associations between the two cultures, and to show how different cultures affect students' responses. Moreover, this study shows the different linguistic categories of Palestinian associations and compares these categories with linguistic categories made by English students. The multidimensional approach that Amer (1980) used in the analysis of word associations is adopted in this study. This approach contains three dimensions: (1) Linguistic, (2) Cognitive, and (3) Cultural.

The findings confirm the hypotheses in this study,

1. Differences and similarities in word associations depend on the variations in both L1 and L2 cultures.

2. The culture norms between L1 and L2 are different because the environments and social structures are different.

3. Palestinian responses show paradigmatic and syntagmatic associations according to the level of the students' proficiency in English.

The results show that the commonality is remarkably higher in the Palestinian sample in the three indices. High commonality means that students move towards social uniformity or maturity. From the cognitive point of view, the results may be interpreted as an indication of cognitive maturity. It means that the Palestinian subjects have developed a higher level of cognitive abstraction and, consequently, are cognitively more mature than the English subjects. This may be explained by the fact that the Palestinian learners have a higher level of education and a more effective use of language functions at university. But taking into consideration that Palestinian subjects are older than the English subjects. Palestinian sample represents students who are around twenty years old while English sample represents students who are fifteen years old.

From a cultural point of view, The remarkably high commonality of the Palestinian subjects indicates a higher level of conformity to the social norms standard in the English culture. The idiosyncratic responses in the Palestinian sample are remarkably higher than in the English sample: 8% and 5.3% respectively. This may be explained in terms of the influence of local culture of Palestinian subjects on their responses since they don't learn English within its native cultural context.

In the analysis of word associations, it is noticed that the semantic content of associations cannot be fully understood and explained unless the associations are interpreted in their cultural context. From a comparative point of view, linguistic and cognitive

explanations for associations of the two cultures (English and Palestinian) cannot interpret the differences in the semantic content of associations from one culture to another. It is important to know that there are some stimuli which evoke different responses for the English and the Palestinian learners. These responses reflect differences between English and Palestinian cultures in terms of eating habits, social relations, beliefs, religions….etc. It is also important to know that there are some stimuli which evoke similar responses for the English and the Palestinian learners such as: "bell", "rain", "dress",….etc. These responses may indicate that both students have similar experiences with these stimuli. In other words, both cultures have some similar aspects.

5.3.2 Recommendations. Although there has been an increase of research in word associations which investigate word associations, there is still a need for more research in order to build a clearer view of the differences between L1 and L2 word associations. This study could be extended to investigate and compare current word associations (Palestinian associations) with word associations of university students who have English as a native language. Investigating word associations for English and Palestinian university students would give an interesting and varied mixture of data to allow the researcher to make and draw stronger conclusions.

Another point to say here is that the qualitative research methods within word association test could be used in this study. The qualitative research methods would be also beneficial because students can explain their responses and give reasons for choosing these responses.

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Appendix 1

Word Association Test Format

<u>Please complete the following:</u>

Name: Age:

University: Gender: (Male - Female).

Instructions

Please read the following instructions carefully: On the following sheets you will see a list of 125 words. Please, read each word and in the space opposite to it write the first word that it makes you think of.

Do not write sentences.

Do not skip any words.

Do not change any word you have written.

Work as fast as possible.

You have only 15 minutes, i.e. 7 seconds for each word. Do not turn this sheet unless the Experimenter asks you.

<u>Thank you.</u>

No.	Word	Answer	No.	Word	Answer
1.	Job		35.	Bread	
2.	Chair		36.	Cow	
3.	House		37.	Rain	
4.	Strong		38.	Dress	
5.	to respect		39.	Cabbage	
6.	Sun		40.	Chess	
7.	Football		41.	Green	
8.	Apple		42.	Leg	
9.	Tourist		43.	Joke	
10.	Pain		44.	Deep	
11.	Bell		45.	Mother	
12.	to ride		46.	Hand	
13.	Butter		47.	to fear	
14.	Cat		48.	Radio	
15.	to build		49.	Hospital	
16.	Shirt		50.	Morning	
17.	Potato		51.	Chocolate	
18.	Book		52.	Mosque	
19.	Market		53.	to sleep	
20.	Blue		54.	Sky	
21.	Health		55.	Onion	
22.	Flower		56.	Black	
23.	Nurse		57.	Peace	
24.	Marriage		58.	Scale	
25.	Bed		59.	Worker	
26.	Room		60.	Pig	
27.	Trousers		61.	Pajamas	
28.	Bean		62.	Eggplant	
29.	University		63.	to welcome	
30.	to see off		64.	Fruit	
31.	Sick		65.	Justice	
32.	to buy		66.	Sailor	
33.	Story		67.	Washing machine	
34.	Eye		68.	Flat	

No.	Word	Answer	No.	Word	Answer
69.	to invent		97.	Ice	
70.	Umbrella		98.	Field	
71.	Sincere		99.	Sweet	
72.	Neighbor		100.	Daughter	
73.	Village		101.	Butcher	
74.	Wife		102.	Bench	
75.	Trade		103.	to travel	
76.	Policeman		104.	Bird	
77.	Hat		105.	Servant	
78.	Insect		106.	War	
79.	Arm		107.	Desert	
80.	Barber		108.	to read	
81.	Uncle		109.	Friend	
82.	Yellow		110.	Polite	
83.	Milk		111.	Long	
84.	Girl		112.	Science	
85.	Guest		113.	Man	
86.	King		114.	Year	
87.	Eating		115.	Unity	
88.	Grocer		116.	Beautiful	
89.	to rent		117.	People	
90.	Golden		118.	Brave	
91.	Telephone		119.	Taxi	
92.	to pray		120.	Weak	
93.	Buffalo		121.	Weapon	
94.	Active		122.	Tomato	
95.	Holiday		123.	Biscuit	
96.	Short		124.	Knife	
			125.	Young	

Thank you

Appendix 2
Palestinian Responses to WAT

Active:

1. Passive 18
2. Sport 14
3. Facebook 12
4. Energy 10
5. Boy 8
   Id: 12

Apple:

1. Red 22
2. Fruit 19
3. Healthy 16
4. Green 14
5. Food 10
   Id: 9

Arm:

1. Leg 12
2. Strong 8
3. Broken 6
4. Long 5
5. Hold 4
   Id: 19

Barber:

1. Hair 40
2. Boys 10
3. Shop 6
4. Blade 5
5. Scissors4
   Id:17

Bean:

1. Food 24
2. Green 12
3. Soap 10
4. Hate 8
5. Lunch 6
   Id: 12

Beautiful:

1. Girls 22
2. Flowers 21
3. Butterfly 14
4. Nice 10
5. Sweet 6
   Id: 16

Bed:

1. Sleep 86
2. Comfort 18
3. Relax 14
4. Room 8
5. Love 6
   Id: 6

Bell:

1. Noisy 24
2. School 22
3. Church 16
4. Ring 8
5. Warning 7
   Id: 9

Bench:

1. Comfort 14
2. Garden 12
3. Park 8
4. Sit 7
5. Wood 6
   Id: 12

Bird:

1. Fly 20
2. Freedom 17
3. Sing 16
4. Music 7
5. Colors 6
   Id: 7

Biscuit:

1. Tea 32
2. Sweet 19
3. Delicious 12
4. Chocolate 6
5. Sugar 5
   Id: 10

Black:

1. Sadness 24
2. Death 20
3. Elegance 11
4. Dark 10
5. White 7
   Id:20

Blue:

1. Sky 72
2. Sea 28
3. Eye 10
4. Color 9
5. Cold 4
   Id: 4

Book:

1. Read 28
2. Knowledge 14
3. Pen 11
4. Study 10
5. Boredom 9
   Id: 14

Brave:

1. Strong 20
2. Man 16
3. Heart 8
4. Hero 7
5. Soldiers 6
   Id:20

Bread:

1. Food 21
2. Eat 20
3. Hunger 12
4. Breakfast 9
5. Overweight 8
   Id: 7

Buffalo:

1. Animal 10
2. Fat 8
3. Wings 7
4. Meat 6
5. Fear 4
   Id: 7

Butcher:

1. Meat 58
2. Blood 8
3. Man 7
4. Harmful 5
5. Knife 4
   Id: 6

Butter:

1. Bread 20
2. Cake 16
3. Food 14
4. Toast 8
5. Breakfast 7
   Id: 4

Cabbage:

1. Food 17
2. Salad 14
3. Vegetable 9
4. Green 7
5. Lemon 6
   Id: 17

Cat:

1. Cute 22
2. Pets 21
3. Dog 20
4. Animal 14
5. White 6
   Id: 12

Chair:

1. Rest 30
2. Table 22
3. Wood 14
4. Sitting 12
5. Man 8
   Id: 11

Chess:

1. Clever 26
2. Game 16
3. Intelligence 11
4. Thinking 10
5. Playing 8
   Id:16

Chocolate:

1. Love 22
2. Delicious 16
3. Happiness 12
4. Sweet 10
5. Coffee 6
   Id: 12

Cow:

1. Milk 116
2. White and black 8
3. Farm 6
4. Grass 5
5. Sound 4
   Id: 4

Daughter:

1. Love 28
2. Son 18
3. Mother 10
4. Happiness 7
5. Marriage 6
   Id: 17

Deep:

1. Sea 36
2. Feelings 10
3. Ocean 8
4. Secret 7
5. Mysterious 6
   Id:20

Desert:

1. Hot 22
2. Camel 13
3. Sand 12
4. Water 6
5. Sweet 5
   Id: 20

Dress:

1. Party 48
2. Ladies 16
3. Clothes 8
4. Wedding 6
5. Beautiful 5
   Id: 12

Eating:

1. Food 28
2. Weight 10
3. Hungry 8
4. Love 6
5. Drinking 5
   Id: 11

Eye:

1. Vision 36
2. Brown 12
3. Beauty 8
4. Blue 7
5. Envy 6
   Id: 8

Field:

1. Green 28
2. Farming 8
3. Study 7
4. Trees 6
5. Plants 5
   Id: 13

Flat:

1. Home 16
2. Feet 12
3. Family 9
4. Apartment 8
5. Building 5
   Id: 24

Flower:

1. Beauty 46
2. Smell 22
3. Spring 18
4. Red 10
5. Garden 8
   Id: 4

Football:

1. Madrid 18
2. Messi 17
3. Game 15
4. Cristiano 10
5. Stand 8
   Id: 10

Friend:

1. Love 23
2. Laughing 10
3. Friendship 9
4. Fun 8
5. Brother 6
   Id: 16

Fruit:

1. Apple 24
2. Banana 22
3. Strawberry 18
4. Health 14
5. Colorful 8
   Id: 6

Girl:

1. Boy 26
2. Beauty 20
3. Cute 16
4. Hair 10
5. Pink 6
   Id: 14

Golden:

1. Ring 18
2. Silver 16
3. Necklace 8
4. Gold 7
5. Money 6
   Id: 27

Green:

1. Grass 28
2. Trees 22
3. Spring 16
4. Garden 9
5. Nature 8
   Id: 10

Grocer:

1. Vegetable 10
2. Shop 9
3. Food 8
4. Fruit 6
5. Orange 5
   Id: 17

Guest:

1. Welcome 30
2. Host 10
3. Noise 9
4. Sweet 8
5. Tea 6
   Id: 8

Hand:

1. Helping 32
2. Ring 24
3. Touching 9
4. Write 8
5. Leg 6
   Id: 13

Hat:

1. Sun 46
2. Summer 16
3. Hot 14
4. Head 7
5. Rose 6
   Id: 18

Health:

1. Sport 32
2. Happy 14
3. Care 12
4. Strong 8
5. Fruit 6
   Id: 9

Holiday:

1. Friday 17
2. Vacation 13
3. Relax 12
4. Sleep 9
5. Love 8
   Id: 15

Hospital:

1. Sickness 44
2. Pain 14
3. Doctors 10
4. Death 9
5. Diseases 8
   Id:17

House:

1. Safety 38
2. Family 34
3. Comfort 12
4. Sleeping 10
5. Parents 8
   Id: 12

Ice:

1. Ice cream 34
2. Cold 32
3. Summer 10
4. Winter 9
5. Snow 8
   Id: 17

Insect:

1. Disgusting 11
2. Fear 10
3. Noise 8
4. Summer 6
5. Flying 5
   Id: 20

Job:

1. Money 32
2. Translator 12
3. Boss 10
4. Future 9
5. Career 8
   Id: 6

Joke:

1. Laugh 48
2. Fun 43
3. Friends 9
4. Silly 7
5. Humor6
   Id: 5

Justice:

1. Court 24
2. Government 15
3. Fair 9
4. Peace 8
5. Law 6
   Id: 12

King:

1. Power 20
2. King Lear 19
3. Queen 18
4. Crown 17
5. Royal 8
   Id: 16

Knife:

1. Kill 17
2. Blood 16
3. Cut 12
4. Kitchen 10
5. Fork 6
   Id: 6

Leg:

1. Walk 49
2. Broken 16
3. Shoes 12
4. Long 8
5. Organ 6
   Id: 8

Long:

1. Short 18
2. Hair 16
3. Time 14
4. Road 7
5. Day 6
   Id: 24

Man:

1. Strong 20
2. Woman 18
3. Father 10
4. Responsibility 9
5. Human 8
   Id: 10

Market:

1. Shopping 38
2. Food 22
3. Money 16
4. Chocolate 15
5. Buy 14
   Id: 6

Marriage:

1. Love 22
2. Responsibility 14
3. Couples 12
4. Children 11
5. Party 6
   Id: 8

Milk:

1. Cow 46
2. White 32
3. Health 10
4. Cheese 6
5. Cornflakes 5
   Id: 11

Morning:

1. Sunshine 36
2. Coffee 19
3. Hope 13
4. Sleep 12
5. Active 8
   Id: 16

Mother:

1. Love 60
2. Warm 11
3. Life 10
4. Father 8
5. Paradise 7
   Id: 6

Neighbor:

1. Noise 23
2. Helping 12
3. Respect 9
4. Friend 8
5. Family 6
   Id: 17

Nurse:

1. White 20
2. Hospital 18
3. Doctor 14
4. Angel 12
5. Merciful 8
   Id: 4

Onion:

1. Tears 70
2. Smell 22
3. Cry 12
4. Vegetable 9
5. Food 8
   Id: 9

Pain:

1. Sick 32
2. Headache 16
3. Suffer 15
4. Tooth 14
5. Death 8
   Id: 14

Pajamas:

1. Sleep 53
2. Comfort 46
3. Clothes 10
4. Night 8
5. Bed 6
   Id:6

Peace:

1. White 24
2. War 22
3. Dove 11
4. Palestine 10
5. Free 8
   Id:28

People:

1. Crowd 12
2. Gossip 9
3. Community 8
4. Talking 7
5. Group 6
   Id: 12

Pig:

1. Disgusting 28
2. Animal 18
3. Jews 11
4. Ugly 10
5. Forbidden 8
   Id: 14

Policeman:

1. Safety 30
2. Accident 9
3. Problems 8
4. Blue 7
5. Man 6
   Id: 20

Polite:

1. Respect 20
2. Child 14
3. Good 8
4. Nice 6
5. Smile 4
   Id: 20

Potato:

1. Vegetables 17
2. Food 16
3. Fried 14
4. Meal 12
5. Chips 10
   Id: 15

Radio:

1. News 29
2. Music 24
3. Listen 14
4. Songs 12
5. Old 10
   Id: 7

Rain:

1. Water 20
2. Winter 18
3. Love 12
4. Umbrella 10
5. Life 8
   Id: 5

Room:

1. Privacy 22
2. House 14
3. Bed 13
4. Relax 11
5. Sleep 8
   Id: 12

Sailor:

1. Sea 52
2. Boat 14
3. Ship 12
4. Fish 7
5. Lonely 5
   Id: 8

Scale:

1. Weight 20
2. Justice 7
3. Numbers 6
4. Measurements 5
5. Average 4
   Id: 23

Science:

1. Smart 9
2. Chemistry 8
3. Invention 7
4. Studying 6
5. School 5
   Id: 18

Servant:

1. To work 20
2. Help 8
3. Slave 6
4. King 5
5. Poor 4
   Id: 26

Shirt:

1. Summer 32
2. Clothes 18
3. Trousers 12
4. Wear 7
5. Boy 6
   Id: 6

Short:

1. Long 18
2. Strong 12
3. Vacation 9
4. Girls 8
5. Life 6
   Id: 20

Sick:

1. Ill 22
2. Pain 20
3. Tired 10
4. Flue 6
5. Sad 5
   Id:9

Sincere:

1. Friends 19
2. Love 18
3. Letter 14
4. Faithful 9
5. Honest 8
   Id: 8

Sky:

1. Blue 50
2. Birds 12
3. Freedom 9
4. Hope 8
5. Stars 7
   Id: 10

Story:

1. Enjoyment 16
2. Entertainment 14
3. Reading 12
4. Imagination 8
5. Fun 7
   Id: 10

Strong:

1. Muscles 16
2. Power 12
3. Father 8
4. Lion 7
5. Mind 6
   Id: 14

Sun:

1. Hot 48
2. Light 16
3. Yellow 10
4. Summer 9
5. Hope 8
   Id: 10

Sweet:

1. Chocolate 19
2. Candy 18
3. Sugar 14
4. Kunafa 8
5. Cake 6
   Id: 20

Taxi:

1. Yellow 46
2. Driver 24
3. Car 12
4. Transport 8
5. University 6
   Id: 6

Telephone:

1. Call 20
2. Numbers 14
3. Mobile 10
4. Speaking 9
5. Connecting 8
   Id: 12

To build:

1. House 48
2. Future 12
3. Palace 10
4. Worker 8
5. To construct 6
   Id: 7

To buy:

1. Money 24
2. Car 20
3. Clothes 16
4. To sell 10
5. To pay 6
   Id: 13

To fear:

1. Darkness 12
2. Scared 10
3. Snakes 9
4. Dogs 8
5. Horror 6
   Id: 23

To invent:

1. Discover 43
2. Medicine 28
3. Cars 16
4. Phones 10
5. Technology 8
   Id: 19

To pray:

1. God 30
2. Mosque 24
3. Comfort 8
4. Peace 5
5. Makah 4
   Id: 21

To read:

1. Book 46
2. Novel 13
3. Story 12
4. To live 7
5. Knowledge 6
   Id: 12

To rent:

1. House 44
2. Car 12
3. Money 8
4. To pay 6
5. Help 5
   Id: 12

To respect:

1. Parents 38
2. Elders 22
3. Kind 18
4. People 10
5. To love 6
   Id: 8

To ride:

1. Car 60
2. Bike 34
3. Horse 12
4. Trip 5
5. Fun 4
   Id: 2

To see of:

1. Goodbye 14
2. Sad 8
3. Blind 7
4. Travelling 6
5. Tears 5
   Id: 10

To sleep:

1. Rest 42
2. Bed 22
3. To relax 14
4. Dreams 8
5. Happy 6
   Id: 18

To travel:

1. Plane 12
2. Happiness 9
3. Paris 8
4. Airport 7
5. Turkey 6
   Id: 26

To welcome:

1. Guests 29
2. Visitors 20
3. Hello 11
4. Hostility 7
5. Hypocrisy 5
   Id: 14

Tomato:

1. Red 36
2. Salad 24
3. Paste 12
4. Ketchup 8
5. Potato 5
   Id: 10

Tourist:

1. Guide 12
2. Jerusalem 11
3. Foreign 10
4. Travel 9
5. Funny 8
   Id: 20

Trade:

1. Money 44
2. Mark 14
3. Travel 8
4. Sell 7
5. Goods 6
   Id: 13

Trousers:

1. Shirt 20
2. Jeans 16
3. Clothes 10
4. Black 8
5. Going out 7
   Id: 8

Umbrella:

1. Rain 142
2. Colors 4
3. Protection 3
4. Safety 3
5. Coat 2
   Id: 3

Uncle:

1. Father 24
2. Love 20
3. Aunt 11
4. Relatives 10
5. Family 6
   Id: 14

Unity:

1. Family 9
2. Home land 8
3. Group 7
4. Strength 6
5. Cooperation 5
   Id: 14

University:

1. Studying 18
2. Friends 16
3. Success 14
4. Students 12
5. Hard 8
   Id: 11

Village:

1. Calm 16
2. Trees 14
3. City 12
4. Nature 7
5. Traditions 6
   Id: 16

War:

1. Violence 13
2. Peace 12
3. Israel 8
4. Fight 7
5. Destruction 6
   Id: 23

Washing machine:

1. Clothes 41
2. Clean 36
3. Mother 8
4. Easier 7
5. Water 6
   Id: 15

Weak:

1. Strong 16
2. Elders 10
3. Children 11
4. Thin 8
5. Ill 6
   Id: 18

Weapon:

1. War 26
2. Gun 16
3. Kill 12
4. Army 6
5. Israel 5
   Id: 15

Wife:

1. Husband 34
2. Love 12
3. Life 9
4. Children 8
5. Sacrifice 7
   Id: 17

Worker:

1. Tired 40
2. Money 21
3. Hard 15
4. Dad 7
5. Fighter 6
   Id: 12

Year:

1. Month 23
2. Time 11
3. Days 10
4. New 9
5. Age 8
   Id: 8

Yellow:

1. Sun 29
2. Lemon 14
3. Flowers 12
4. Sickness 9

5. Jealousy 8
   Id: 12

Young:

1. Children 26
2. Old 15
3. Baby 14
4. Innocent 6
5. Immature 5
   Id: 10