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multisyllabic words. The students stored their words in the working memory and used them- retrieved them in the time of need. This result is consistent with Perry and Lauden (2019)

Recommendations of the study:

In the light of the findings of the study the following recommendations may be presented:

1. Vocabulary learning should be a major concern in teaching EFL in our classes as the lack of vocabulary knowledge affects all other elements of EFL negatively.
2. The program based on memory strategies should be included in the EFL courses writing to supplement vocabulary instruction.
3. It is recommended that the program based on memory strategies complement the textbooks of EFL in schools.
4. It is recommended that EFL teachers may design and develop their own program based on memory strategies that suit their students' needs and educational levels.

Suggestions for further research:

The following areas are suggested for further research:

1. A study using memory strategies- based activities to enhance EFL Students' vocabulary learning with different samples and settings. For example, primary stage and secondary stage.
2. A study using memory strategies - based activities program to enhance students' speaking skills.
3. Examine the use of Word Chain Game in other samples, such as the students in junior high school or senior high school who still need to study and master more deeply about the English vocabulary.

Results of the present study confirmed that there is a statistically significant difference between the mean scores of the participants of the present study in the pre- post assessment of EFL vocabulary learning in favor of post assessment”.

The discussion and interpretation of the results of the study:

Based on the statistical analysis of the results, it is clear that the students performed and acquired different degrees of vocabulary, form, meaning and use which may be due to the fact that the memory strategies which the students were exposed to these strategies addressed the students’ aptitude – the students need to take responsibility for learning, awareness- the need of the students as learners to be conscious of what approaches are being taken to acquire vocabulary including goals, content and sequence, monitoring and assessment this result is consistent with Khadmally (2019). This indicates that memory strategies focused on different information processing strategies- encoding, retrieval, visual imagery and generation.

The result of present study also revealed that the students made and achieved different degrees of progress in the vocabulary knowledge and depth of this knowledge and the breadth at the same time. This was reflected in their response to the test items related to vocabulary knowledge. These results may be attributed to the fact that the training program in one of its dimension focused on raising students morphological awareness during reading texts for vocabulary acquisition. This was centered around word recognition which involves decoding and language comprehension of words. At the same time, language comprehension in the training sessions involved vocabulary background knowledge, language structure, verbal reading and literacy knowledge. How to acquire vocabulary and use it at the same time. The morphological awareness in the texts used in the sessions increasingly took the form of multisyllabic words. Approximately, the students were exposed to 4.000 – 10.000 new words in the texts which were

Table (2): The mean scores, standard deviations, t-value and level of significance of the experimental group in the pre and post assessment in the form aspect of EFL vocabulary learning.

Skill	Application	N	Mean	S.D	T-value	D.F	Sig.
Form Aspect	Pre-	40	11.8250	3.85565	42.144	39	0.01
	Post-	40	33.3250	4.76304			

Table (3) presents the students' mean scores, standard deviations, t-value and level of significance of the experimental group in the pre- and post-assessment in the meaning aspect of EFL vocabulary learning where t-value is (34.357) which is significant at the (0.01) level of significance. Therefore, this hypothesis was verified.

Table (3): The mean scores, standard deviations, t-value and level of significance of the experimental group in the pre and post assessment in the meaning aspect of EFL vocabulary learning.

Aspects	Application	N	Mean	S.D	T-value	D.F	Sig.
Meaning Aspect	Pre-	40	8.7750	2.35870	34.357	39	0.01
	Post-	40	21.7000	2.84830			

Table (4) presents the students' mean scores, standard deviations, t-value and level of significance of the experimental group in the pre- and post-assessment in the use aspect of EFL vocabulary learning where t-value is (25.298) which is significant at the (0.01) level of significance. Therefore, this hypothesis was assured.

Table (4): The mean scores, standard deviations, t-value and level of significance of the experimental group in the pre and post assessment in the use aspect of EFL vocabulary learning

Aspects	Application	N	Mean	S.D	T-value	D.F	Sig.
Use Aspect	Pre-	40	8.3250	3.20566	25.298	39	0.01
	Post-	40	22.9250	4.50861			

Results of the study:

The results of the present study are presented in the light of the hypotheses of the study using the Statistical Package for Social Sciences (SPSS) program version (18). The present study contains four main hypothesis related to the EFL vocabulary learning test. Findings are stated as follows:

Table (1) presents the students' mean scores, standard deviations, t-value and level of significance of the experimental group in the pre- and post-assessment in the overall EFL vocabulary learning aspects. It is clear from table (1) t-value is (65.61) which is significant at the (0.01) level of significance. Therefore, this hypothesis was verified.

Table (1): The mean scores, standard deviations, t-value and level of significance of the experimental group in the pre and post assessment in the overall EFL vocabulary learning aspects.

Skill	Application	N	Mean	S.D	T-value	D.F	Sig.
EFL vocabulary learning	Pre-	40	28.9250	7.09781	65.611	39	0.01
	Post-	40	77.9500	10.07396			

Table (2) presents the students' mean scores, standard deviations, t-value and level of significance of the experimental group in the pre- and post-assessment in the form aspect of EFL vocabulary learning where t-value is (42.144) which is significant at the (0.01) level of significance. Therefore, this hypothesis was verified.

These results are consistent with previous research that proved the effect of the using encoding strategy on improving EFL vocabulary learning skills. For example, Prime (2016). found that applying encoding strategy as a memory strategy increased the students' acquisition of vocabulary. The training focused on the morphemes of the words which may be strategically used and manipulated to support their word learning. The instruction includes highly utilized academic word meaning, scaffolding word manipulation in instructional contexts and explicit instruction for breaking words apart using morphemes to build words as well as meaning of roots and affixes. Both of which the students used to build the needed skills for supporting academic vocabulary development.

Evaluation techniques

The students' progress was evaluated through the implementation of using encoding strategy using both formative and summative evaluation.

Formative evaluation:

Students were given some activities to perform at the end of each session to make sure that the students achieved the objectives of the sessions. Moreover, two sessions (6 and 11) were assigned as evaluative sessions through which the students performed some activities to make sure that the students acquired the intended skills.

Summative evaluation:

This was conducted at the end of using encoding strategy as a learning tool implementation. It included the administration of EFL vocabulary learning post-test. The major type of this type is to measure the achievement of the intended outcomes by using encoding strategy as a learning strategy. It also aimed at investigating using encoding strategy as a learning strategy to improve some EFL vocabulary learning aspects for the prospective teacher of English.

3- The monitoring stage:

The teacher monitors the students' learning of vocabulary through guiding them to:

- Spend more time on vocabulary learning inside and outside classroom.
- Select the words to learn from class texts rather than from a range of sources of interest and value to them.
- Select the words simply because they are unknown rather than considering frequency, area of specialization (academic or non-academic vocabulary) personal goals or previous meetings with the words.
- Be aware that the words they selected are of limited use to them.
- Focus on the meaning of the words in the copied sentences rather than also exploring the range of collocation and uses and creating their own sentences
- Use note learning and the working memory strategy they were taught and use the words in speaking, reading, and writing.
- Do not limit their learning to the short-term goal.
- Revise the words periodically.
- Leave that they are learning to be efficient vocabulary uses and do not alter their selection of words a learning procedures.
- Feel satisfied with their vocabulary learning.
- Retain many of the words they studied.
- Check their progress from time to time.
- Make a proportion of the words to be guessed from context.

- c. Monitoring and providing feedback on the students' control of the strategy.

2- The practice stage:

The teacher and the students participate in this stage as follows:

- The teacher models the strategy for the students.
- The steps of the strategy are practiced separately.
- The students apply the strategy in pairs supporting each other.
- The students report back on the application of the steps in the strategy.
- The students report on their difficulties and success in the use of the strategy.
- The teacher systematically tests the students and gives the feedback.
- The students consult the teacher on their use of the strategy seeking advice when needed.
- The teacher observes the students when using the strategy by giving them written questions from time to time.
- The teacher asks the students to think aloud while performing the task to be aware of what they do.
- The teacher provides the opportunities for the students to perform the task under normal condition and then when they have finished, they are asked to think back and describe what they did and what they were not able to do.
- This recall is ended by video tape of the task performance.

previous classes, by choosing very simple material, by allowing the students to control the task and by helping them to plan.

- 2- The activities should be meaning-focused, that is the students should be interested in and focused on the message they are sending or receiving.
- 3- There should be some encouragement to do the activity at a speed faster than the students' normal speed. This is possible to become the students are working with familiar material. The encouragement is in a form of time pressure, competition with other previous performance or with others or the opportunity to repeat the task.
- 4- The activities should involve a large quantity of language processing. That is, the students should read or write texts several hundred words long and learning for several minutes.

The present study program applied the four major strategies of memory instruction in a form of planning, finding information, establishing knowledge and presenting wide range of activities and practice as follows:

1- The planning stage:

Before starting to teach the working memory strategy, the teacher put a schema for planning which involves:

- a. Deciding how much time to spend on training and learning in working memory strategy.
- b. Working out a text for working memory strategy and a text for sub- strategy that covers the required knowledge and providing a plenty of opportunities for increasingly independent practice.

present study program consists of a variety of extensive reading texts including all types of vocabulary. These texts are distributed in proportion to 16 sessions. Every texts reflects different type of vocabulary learning as follows:

- 1- **Grammatical Function-** different parts of speech are taught separately become they occur in different sentences pattern and need to be sequenced.
- 2- **Links between areas of meaning-** the overlapping features between two different areas of meaning and the features of conceptual range for extension into other meanings.
- 3- **Positive interfere between areas of meaning-** it is used as a kind of association to solve misunderstanding.
- 4- **Usefulness-** the degree to which the vocabulary can be defined and used in different contexts.
- 5- **Frequency-** high frequency words and low frequency words.
- 6- **Definition-** either by:
 - **Demonstration:** abstraction (analytical definition)
 - **Contextual definition**

Criteria for selecting the context

Every text contains different activities to help students acquire vocabulary with its broader sense. To achieve this, the following criteria are applied:

- 1- The vocabulary activities should involve only known words- and preferably familiar content knowledge. This is achieved by working with material that has already been studied in the

- **Reliability of the post-test:**

- **Inter-rater method:**

Inter-rater reliability means two or more raters/observers give consistent estimate of the same test and this method is used to avoid the subjectivity factors in grading. Accordingly, the researcher gave an English language instructor a copy of students' answers to the EFL vocabulary learning post-test to score the students' answers. Comparing the results of the two raters, it was found that the Pearson correlation was (0.994) which is significant at the 0.001 level.

The EFL Vocabulary learning post-Test in its final version

Based on the suggestions of the jury members, the EFL Vocabulary learning post-test was modified in its final form (Appendix, 4); the EFL Vocabulary learning post-test consists of eleven questions: five questions were devoted to measuring form aspects, four questions were aimed at measuring Meaning aspects. Four questions were devoted to measure students' Use aspects.

Aim of the Study

The study aimed at developing some of the EFL vocabulary learning skills for fourth year students, enrolled in English section at Benha Faculty of Education. The researcher uses encoding strategy to accomplish the study aims, so by the end of the treatment students will be able to use the encoding strategy to develop their EFL vocabulary learning skills.

The Experimental Treatment

The experiment was carried out during the first semester of the academic year 2020/2021 and lasted for six weeks with about three sessions per week and each session lasted for about two hours. The

Four questions were devoted to measure the meaning aspects (Concept and referents- Associations). The questions asked the students to write a definition for word parts. The questions also included multiple choices about the meaning of words that have more than one meaning.

➤ **Use aspects**

The researcher set some question to test students' use of vocabulary. Some questions ask them to use correct word form to complete the sentence and use words in different contexts

Validity of the post-test

Two methods were used to ensure the validity of the EFL Vocabulary learning post-test: content validity and face validity.

Face Validity

To ensure face validity of the EFL Vocabulary learning post-test, it was developed through reviewing previous literature and related studies on the field of EFL Vocabulary learning assessment. This review was, to a large extent, accurate, comprehensive and systematic to determine the general form and items of the test. Consequently, the test can be interpreted as being valid and has face validity.

Content Validity

Concerning content validity of the EFL Vocabulary learning post-test, it was measured through submitting the test to a jury of specialists in EFL curricula and instruction (N=40), (Appendix, 6), to identify its validity. Some of the jury members (N=7) accepted the test as it was suggesting that it does not need any modifications either by adding or omitting any of the test items. However, the rest of the jury members suggested rearranging the order of some questions. Except for this, the jury members indicated that the test has clear instructions and is appropriate for measuring what it is intended to measure. Accordingly, it could be said that the EFL Vocabulary learning test has content validity.

The test-retest method:

The test in its final form was administered to a group of 4th year English section students at the Faculty of Education, Benha University (N=40) during the first semester of the academic year 2020-2021. Then it was administered to the same group again after two weeks. The Pearson correlation coefficient between the two administrations was (0.994) which is significant at the 0.00 level. This means that the EFL Vocabulary learning test is reliable.

Inter-rater method:

Inter-rater reliability means two or more raters/observers give consistent estimate of the same test and this method is used to avoid the subjectivity factors in grading. Accordingly, the researcher gave an English language instructor * a copy of students' answers to the EFL vocabulary learning pre-test to score the students' answers. Calculating between the two scores of the two raters, it was found that the Pearson correlation was (0.994) which is significant at the 0.001 level.

Description of the EFL Vocabulary learning post-test

The EFL Vocabulary learning post-test consisted of eleven questions: five questions were devoted to measuring form aspects, four questions were aimed at measuring Meaning aspects. Four questions were devoted to measure students' Use aspects.

➤ **Form aspects**

The researcher sets five questions in the test to measure the students' Form aspects (Spoken Form- Written Form- Word Parts- Form- Meaning connection). These five questions included one multiple choice question, one pronunciation question, question for writing a paragraph, and two questions for providing word family

➤ **Meaning aspects**

*Ghada Elsadek Abdallah -ESP English Language Instructor at Faculty of Education, Benha University

measuring Meaning aspects. Four questions were devoted to measure students' Use aspects.

Validity of the test

Two methods were used to ensure the validity of the EFL Vocabulary learning test: content validity and face validity.

Face Validity

To ensure face validity of the EFL Vocabulary learning pre-test, it was developed through reviewing previous literature and related studies on the field of EFL Vocabulary learning assessment. This review was, to a large extent, accurate, comprehensive and systematic to determine the general form and items of the test. Consequently, the test can be interpreted as being valid and has face validity.

Content Validity

Concerning content validity of the EFL Vocabulary learning pre-test, it was measured through submitting the test to a jury of specialists in EFL curricula and instruction (N=14), to identify its validity. Some of the jury members (N=7) accepted the test as it was suggesting that it does not need any modifications either by adding or omitting any of the test items. However, the rest of the jury members suggested rearranging the order of some questions. Except for this, the jury members indicated that the test has clear instructions and is appropriate for measuring what it is intended to measure. Accordingly, it could be said that the EFL Vocabulary learning test has content validity.

Reliability of the pre-test:

The reliability of the test was measured by using the following:

➤ **Use aspects**

The researcher set some question to test students' use of vocabulary. Some questions asks them to use correct word form to complete the sentence and use words in different contexts

Validity of the test

Two methods were used to ensure the validity of the EFL Vocabulary learning test: content validity and face validity.

Face Validity

To ensure face validity of the EFL Vocabulary learning pre-test, it was developed through reviewing previous literature and related studies on the field of EFL Vocabulary learning assessment. This review was, to a large extent, accurate, comprehensive and systematic to determine the general form and items of the test. Consequently, the test can be interpreted as being valid and has face validity.

Content Validity

Concerning content validity of the EFL Vocabulary learning pre-test, it was measured through submitting the test to a jury of specialists in EFL curricula and instruction (N=14), to identify its validity. Some of the jury members (N=7) accepted the test as it was suggesting that it does not need any modifications either by adding or omitting any of the test items. However, the rest of the jury members suggested rearranging the order of some questions. Except for this, the jury members indicated that the test has clear instructions and is appropriate for measuring what it is intended to measure. Accordingly, it could be said that the EFL Vocabulary learning test has content validity.

The EFL Vocabulary learning Pre-Test in its final version

Based on the suggestions of the jury members, the EFL Vocabulary learning pre-test was modified in its final form; the EFL Vocabulary learning pre-test consists of eleven questions: five questions were devoted to measuring form aspects, four questions were aimed at

- 8) Omitting the fourth main aspect “Frequency” Arguing that it is difficult to measure this aspect.
- 9) Omitting the fifth and sixth main aspect “Position” and “size”. Arguing that they are difficult to measure.

The EFL Vocabulary Learning check aspects in its final form

Based on the suggestions of the jury's members, the EFL Vocabulary Learning check aspects, was modified. In its final form, the EFL Vocabulary Learning check aspects, consists of three main skill2s:

- 1) Form aspect: include four sub aspects (Spoken Form- Written Form- Word Parts- Form-meaning connection).
- 2) Meaning aspect: including two sub aspects (Concept and referents- Associations)
- 3) Use aspects: including two sub aspects (Grammar- Collocates)

Description of the EFL Vocabulary pre-test

The EFL Vocabulary pre-test consisted of eleven questions: five questions were devoted to measuring form aspects, four questions were aimed at measuring Meaning aspects. Four questions were devoted to measure students' Use aspects.

➤ Form aspects

The researcher sets five questions in the test to measure the students' Form aspects (Spoken Form- Written Form- Word Parts- Form- Meaning connection). These five questions included one multiple choice question, one pronunciation question, question for writing a paragraph, and two questions for providing word family

➤ Meaning aspects

Four questions were devoted to measure the meaning aspects (Concept and referents- Associations). The questions asked the students to write a definition for word parts. The questions also included multiple choices about the meaning of words that have more than one meaning.

- 3) The sub aspect “Written Form” should include spelling the word correctly as a productive aspect and recognizing the correct spelling of a word as a receptive aspect.
- 4) The third sub-aspect “Word Parts” suggesting that it should refers to recognize the parts of a word (i.e. suffix, affix) and know the meaning of the word parts as receptive aspects and use the correct word parts and provide the meaning of the word parts as productive aspects.
- 5) The " Form-meaning connection” sub aspect should include recognize the meaning and relate it with the word form as a receptive aspect and express the word meaning as a productive aspect.
- 6) The second main aspect “Meaning” suggesting that summarizing its sub aspects into two sub- aspect “Concept and referents” which includes only two performance indicators: recognizing the multiple definition of a word as a receptive aspect and using the multiple definition of a word as a productive aspect. The second sub- aspect is “Association” that include two performance indicators which are recognize the words that have same pronunciation but different spelling as a receptive aspect and produce suitable synonyms and antonyms of a word as a productive aspect.
- 7) The third main aspect “Use” suggesting that omitting the third sub-aspect in it “constraint on use”. Arguing that it is inappropriate and remain the two sub- aspect “Grammar” and collocates.

Face Validity

To ensure the face validity of the EFL Vocabulary Learning check aspects, it was developed through reviewing the previous literature and related studies to the field of EFL vocabulary. This review was to a great extent; thorough, intensive, accurate, and systematic to determine the general form of the check aspect; its items; the types of these items; and how they should be graded. Accordingly, it could be said that the check aspect is comprehensive and representative of the EFL vocabulary learning aspects required for prospective teachers English section students. Consequently, the check aspect could be interpreted as being valid and having face validity.

Content Validity

In order to determine the content validity of the EFL Vocabulary Learning check aspects, it was submitted to a jury of specialists in curriculum and instruction (EFL) (N=14) to identify its validity. Six jury members accepted the checklist suggesting that it does not need any modifications either by adding or omitting any of the aspects or sub-aspects. However, the rest of the jury members suggested the following modifications:

- 1) Some of the jury members suggested that the check aspect should focus more clearly on both receptive and productive aspect of EFL vocabulary Learning.
- 2) The first sub aspect “Spoken form” under the main aspect “Form” was including “pronounce the word” and “read aloud” suggesting that changing into recognizing the stress and intonation of a word as a receptive aspect and produce suitable stress and intonation of a word as a productive aspect.

Delimitations of the study

The present study will be delimited to the following: -

- 1- A sample of fourth year students enrolled in the English section at the Faculty of Education, Benha University.
- 2-Some EFL vocabulary learning strategies that are required for fourth year students at the Faculty of Education.

Participants of the study

The participants of the present study were selected from prospective teachers (Fourth year, English Section students) at Faculty of Education, Benha University during the first semester of the academic year 2020-2021. The total number of students was (40). The sessions were divided into virtual sessions and physical session due to Covid-19 pandemic. They attended almost all the sessions of the implementation and the pre-and post- administration of the instruments of the study.

Instrument and material of the study

In order to fulfill the aim of the study, the researcher designed and applied three main instruments:

- 1)An EFL Vocabulary Learning Check list of aspects required for the fourth-year prospective teachers.
- 2)An EFL Vocabulary Learning Test (pre and post) to measure prospective teachers' EFL Vocabulary Learning
- 3)An EFL Vocabulary Learning rubric to score students' performance of the EFL Vocabulary Learning.

Description of the EFL Vocabulary Learning check aspects

The EFL Vocabulary Learning check aspects consisted of three main aspects: Form, Meaning and Use. Each of these aspects was divided into sub-aspects.

Validity of the EFL Vocabulary Learning check aspects

The researcher conducted a pilot study during the second semester 2018/2019 to investigate the problem of EFL fourth year students in English language section in the learning of vocabulary, the sample consisted of 20 students in the fourth year in the Faculty of Education, Benha University and she used a vocabulary test prepared by Deighton (1979). The results showed that 70% of students scored less than 40% of the final score while 30% of students scored from 40% to 50% of the final score. This confirms that there is a lack of EFL language vocabulary among the fourth-year students in the Faculty of Education.

According to the previous studies and the pilot study, fourth-year students were found to have a problem in learning and using EFL vocabulary, which in turn affects learning English language skills and language performance.

Statement of the problem

The problem of this study is that there is a lack of EFL vocabulary among fourth year students in the Faculty of Education. The study therefore aimed to use the encoding strategy to develop EFL vocabulary learning.

Questions of the study

The present study answered the following questions: -

1. How can encoding strategy be used for developing EFL vocabulary learning among fourth year students at the Faculty of Education?
2. What is the effectiveness of using encoding strategy for developing EFL vocabulary learning among fourth year students at the Faculty of Education?

(McGaugh, 2000). Support for this theoretical account, however, has mainly come from researches using item memory tasks, and thus testing this theoretical account using associative memory tasks is needed.

Third, previous experiments usually used negative feedback to elicit emotion (Madan, Scott, & Kensinger, 2018), making it unclear if positive emotion has a comparable effect. Valence is an essential feature of sentiment, in accordance with the circumplex concept suggested by (Russell, 1980). However, in research where positive emotion was directly triggered after encoding, the dependent variable was usually item memory (i.e., recollection or recognition), making the influence of post-encoding positive emotion on associative memory uncertain. Despite the evidence indicating the role of emotional valence (Meng, Zhang, & Liu, 2017) and (Wang & Fu, 2011), it is important to investigate the impact of post-encoding positive emotions on associative memory in order to achieve a thorough understanding of emotional influence.

Fourth, Quas, Rush, and Yim, (2016) were undergraduates in previous research on the impact of post-encoding sentiment. Considering that age is an significant variable in emotional memory, the results focused on undergraduates may not be appropriate for theoretical construction, although they have important consequences.

Context of the problem

Although it is important to learn EFL vocabulary as a foreign language for fourth-year students in the Faculty of Education, it does not receive the necessary attention in the educational process, and many studies have indicated that there is a deficiency in learning vocabulary, such as Abdelrahman, 2013; Ahmadi, 2017; Al-Dagel, 2009; Al-Darayseh, 2014; Khalafi, and Oroji 2016.

produce it myself (point to your mouth) and be motivated to do it (smile) (Mahdi, H. S., Gubeily, M. A. I., 2018).

- Whole -Part Whole

This method of encoding is useful in learning skills requiring procedural knowledge (as well as some declarative tasks). For example, in a sports situation, a learner might begin by swimming one lap in a pool. His coach observes him and gives feedback on the different parts that he needs to work on. The athlete then practices those different parts in isolation, moving focus from one to the next, gradually increasing the use of each. Whole - part - whole has been shown to be particularly effective for adults.

Despite some studies about the impact of emotion on episodic memory, there are still some questions to be asked. First, most recent scientific studies followed a model whereby learning stimuli act as the source of emotion, therefore controlling emotion during encoding (Wang & Fu, 2011). The effect of post-encoding emotion on episodic memory, by contrast, was little understood. As empirically demonstrated in a recent study by Goldfarb, Tomparry, Davachi, & Phelps, 2019, the impact of acute stress on associative and item memory varies over the whole memory period (e.g., before encoding, after encoding, or before restoration). Examining the influence of post-encoding emotion thus leads to a greater comprehension of the impact of emotion over various memory period time scales and to developing a comprehensive hypothesis for emotional effect on episodic memory.

Second, while it has been shown that post-encoding emotion influences item memory (Wang & Fu, 2010), its effect on associative memory has been barely studied. The theoretical explanation for the findings is that emotion contributes to the release of a variety of substances like norepinephrine which modulates hippocampus-dependent memory together with the activation of the amygdala

remember the order of the first five U.S Presidents Washington, Adams, Jefferson, Madison, and Monroe), I might create the following story:

I was in Washington, buying some Adam's apples, when my son, Jefferson asked if we could go to Madison square gardens. I told him we could go to Monroe (said like "tomorrow").

- **Keyword method**

In language learning, the keyword approach is often used. It means using one word that sounds like another word or word collection or reminds you of another. For example, to learn the word "here" in Spanish (aqui), I might think "Here is a key!" Wei (2015).

- **Loci-method**

The loci-method involves using locations to remember the items in a list. This works best when the learner uses a location s/he is very familiar with. For example, to remember a shopping list, you might create a story of where these items belong in your kitchen. Try it the next time you go shopping and see how accurate you are without writing anything down (Mahdi, H. S., Gubeily, M. A. I., 2018).

- **Peg-type mnemonic**

Peg-type mnemonics have been used to remember elaborating, long-lists of information. The notion is to "hang" each piece of information on a related set of "pegs." For example, to remember the four components to learning through modelling proposed by Bandura in his book, Social Learning, (attention, retention, production, motivation), my students came up with a peg-type mnemonic using the face. It went like this.

If I want to learn by watching somebody else, I attend to them (point to your eyes), remember/retain what they did (point to your brain),

in improved encoding. Third, several findings have found improved memory outcomes when new information is linked to completely irrelevant or unknown previous knowledge. That may be due to the fact that the connection speed oddity or uniqueness makes it easier to remember.

- **Mnemonics**

The association of unrelated details is a mnemonic. For example, while a desk and dental hygiene would appear to have nothing to do with each other, the desk might have been used to remind learners that they need to check in all the nooks and crannies and figure out what they want to get out of their mouth all the undesirables. Several working approaches were suggested by Wei (2015), such as:

• **First-Letter Mnemonics:**

An acronym literally takes each word's first letter into a list that a person needs to recall and produces a word out of it. You might use the acronym HOMES to recall, for example, the names of the 5 great lakes (Huron, Ontario, Michigan, Eerie, and Superior). Is it possible to describe what these mnemonics represent? Another mnemonic method with the first letter is an acrostic, which means constructing a statement from the first letter of the words that you are attempting to recall. For example, (Kings Play Chess on Fine Grained Sand) is a mnemonic I learned to remember the taxonomy of living things (Kingdom, Phylum, Class, Family, Genus, Species) in classification.

• **Chain mnemonic**

Anari, Sajjadi, Sadighi (2014) indicated that a chain mnemonic involves using one item to trigger the recall of the next item in a list. This is often done by putting the items into a story. For example, to

word acquisition and use different methods in vocabulary learning, teachers need to manipulate reading skills (Hulstijn, 2001; Webb, 2008; Hulstijn& Laufer, 2001).

Encoding Strategy

One way to remember things more effectively is to encode them (i.e., put them into long-term memory) effectively in the first place. A lot of different strategies have been proposed for getting things to stick to long term memory. There are practical techniques for the encoding strategy:

- **Elaborative Rehearsal**

While rote learning is merely repeating material over and over again, elaborate training allows a learner to elaborate on new ideas or apply specific importance explanation to them. Elaborative rehearsal puts emphasis on meaning repetition. This also includes using existing experience to apply new material to an awareness that has already been established. The focus of elaborative rehearsal is the actual meaning of the learned content. Craik and Lockheart (1972) proposed processing theory levels which stressed the way acquired memories are more important than the memory form itself. In fact, this proposition shifted the course of memory science when the emphasis was no longer on basic memory preservation, but on how the memories were placed into memory instead. Thousands of studies were performed that found that later, clarifying what information means and concentrating on its semantic meaning resulted in a stronger recollection of the data. Therefore, it can be an efficient method of encoding information to simply speak about a concept and what it means to a person. The study of Craik and Lockheart (1972) has indicated a few issues with the processing theory stages. First, it's hard to differentiate between the variations that contribute to "deep" vs. shallow "elaboration. Second, the extra time and effort involved with deep processing can potentially result

Introduction

The major aim of any foreign language learning and teaching for both teachers and students is to accomplish effective communication inside and outside the classroom interactions. Learning and teaching English as a foreign language (EFL) is a very enormous field as it includes learning different aspects such as lexical components, phonetics, morphology, writing, speaking, and listening (Goundar, 2019). Folse (2004) explained that learning a language requires learning numerous skills about that language, these include its pronunciation, pragmatics, writing system, syntax, rhetorical modes for reading and composition, culture, and spelling, -; however the most important aspect is vocabulary.

According to Nation (2005), vocabulary is the major part of any language as one cannot express intended ideas, actions or opinions without using words. Nowadays, it is widely approved that vocabulary learning is the main factor in the acquisition of a native language and the learning of a foreign language as well. However, vocabulary learning, and vocabulary retention are yet mattering of difficulty to language learners. The most difficult and challenging issue about vocabulary learning is not its acquisition but its retention or the ability to use them in language (Morra & Camba, 2009).

Learners of foreign language rarely use the language learned in communication outside the classroom. Vocabulary is taught interegrated into other skills. Hence, a lot of interest has to be presented to improve the productive vocabulary knowledge as it is the base to master a language especially in written and speaking skills. When teachers fix the level of vocabulary knowledge of learners in an indirect way, the strategies of teaching writing will be acquired efficiently. They also should be creative in giving instruction to fit the level of learners' knowledge (Maskor & Baharudin, 2016). In order to develop learners'



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A research Submitted by

Ansam El-Shamy