Exploring Memory Strategies to improve EFL Grammar to pre-university level.

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Abstract

This research investigates the effectiveness of applying memory methods to improve the acquisition of grammar by pre-university students. Many different memory strategies can help students improve their memory because the information is easy to remember and forget at times. As a result, this study is primarily concerned with specific memory techniques that are extremely useful for students learning new grammatical items for the first time. This study included 20 male and female participants EFL learners at the pre-university level who participated in an hour of Google Classroom instruction. They were randomly divided into two groups: an experimental group and a control group, with the experimental group receiving one hour of instruction. The experimental group received direct instruction on using memory methods while studying grammar. The post-tests were carried out to acquire the necessary information via multiple-choice questions. As a consequence of the study, the experimental group's retention of learned grammatical elements statistically improved, and the researchers concluded that there was a statistically significant difference between the two groups.

1. What is the purpose of this study?
The acquisition of English as a second language grammar may be affected by memory methods. how are pre-university EFL students taught to improve their grammar? And how are the memory methods used in this case?

2. Definition of problem
Using memory methods for EFL grammar improvement is the focus of this research.

3. Hypothesis
Memory methods will be employed to enhance the acquisition of EFL grammar, and they will have a good influence on rehearsing and memorizing grammatical features.
The scores of individuals in the experimental control and groups will differ statistically significantly.

4. Background Information
Memory techniques are a kind of cognitive activity that may be categorized. Many studies define strategies differently, but they are widely acknowledged as a cognitively taxing, goal-directed procedure to boost memory performance. A person's conscious mind has access to strategies since they can be controlled and executed consciously. Other cognitive processes and a wide range of external circumstances are also involved in developing strategies. (Courage & Nelson,2009, p2)

The Oxford (1990) improved language learning strategy system has two essential parts: direct and indirect strategies.
Using a direct strategy means using words from the target language in the planning process. For all of them, language processing is required.
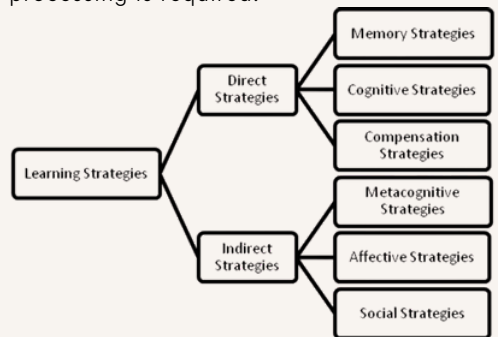

Figure 1. Classification of learning strategies (Oxford: 1990)

Our primary focus in this article will be on memory methods and how to use them to enhance the teaching of English as a Second Language grammar.
Methods of remembering Metacognitive methods like paying attention and affective strategies like lowering anxiety via deep breathing are demonstrably more successful when used in conjunction with mnemonics, often dubbed mnemonics.
Pairing different types of information is a common strategy for remembering information. The ability to combine the verbal with the visual in language acquisition is very beneficial for four reasons:
First, Visual information is more easily stored in the brain than spoken knowledge.
Second, visual representations are the most effective way to transmit information to long-term memory.

Third, visual pictures may be the most effective way to help people remember spoken information.

As the last point, a large number of students prefer visual learning.

Indirect methods are listed as the second kind of learner strategy by Oxford (1990). Metacognitive, emotional, and social tactics are all subcategories of these techniques. Students who use metacognitive methods, such as 'centering, organizing, planning, and assessing,' may better manage and organize their learning. The three approach categories are centered, arranged, and planned to learn: and assessing your learning (p. 137).

Affective strategies, as described by Oxford (1990), are ways that help language learners manage their moods, motives, and attitudes toward language acquisition in general (p. 71). The three main categories of affective methods she identified were reducing worry, encouraging yourself, and measuring your emotional temperature. One method of reducing anxiety recommended by Oxford University is gradual relaxation techniques, including breathing exercises and meditation. Other methods include listening to music and laughing. However, you may assess your emotional temperature by listening to your body, utilizing a checklist, creating a language learning journal, and talking about your emotions with someone else (pp. 140, 141).

Learning social techniques, according to Oxford (1990), is the ability to enable students to "facilitate connection with others, frequently in a discourse environment" (p. 71). She devised three kinds of social strategies: asking questions, partnering with others, and empathizing with other people. Questions may be asked for clarification, verification, or correction, depending on the nature of the query. On the other hand, Cooperative techniques include working together with others who are learning the new language and with native speakers.

There are four types of memory techniques, and each one has some subtypes, according to Oxford (1990).

A. Creating Mental Linkages.
Associating words together, grouping them, and putting them in context is all part of it.

B. Applying images and sounds.
Imagery, semantic mapping, keywords, and the representation of sounds in the mind's ear are all included.

C. Reviewing well.
It can be achieved through the strategy of structured reviewing.

D. Putting up a show.
Physical reaction or feeling, and mechanical method, are both examples of this strategy.

In order to assist students to learn grammar or any other component of the language, memory tactics including elaboration, mental imagery, mnemonics, organizing, and practice should be used to

help students recall knowledge. SANTROCK (2011), SCHUNK (2012), and WOOLFOLK (2013).

- **Elaboration.** To use the approach of elaboration is to give distinction to new knowledge. New information may be encoded and retrieved more easily if it is linked to earlier knowledge via elaboration, according to Woolfolk (2013).

- **Mental imagery.** Visualization in the mind's eye. The creation of mental pictures is facilitated by visualizing images of spoken information. Paivio, 1971, claims that activating both the verbal and nonverbal systems simultaneously lead to dual coding of information, enhancing the ability to retain linguistic knowledge.

- **Mnemonics.** The combination of images and words may serve as mnemonic devices to help with information retention. In order to remember things, people use a variety of mnemonic strategies. Some examples include rhymes (e.g., "righty tightly, lefty Loosey"), rules for spelling and grammar.

- **Organization.** Information may be organized so that remembering one thing also remembers other objects related to it via the use of connections. Santrock (2011) argued that organizing enormous volumes of data makes it easier and more meaningful to access and understand. Woolfolk (2013) suggested using hierarchy, chunking, or outlining to

arrange information into higher-order units that may be recalled as a single entity in mind.

- **Rehearsal.** Repeating knowledge over and over may marginally prolong the period it is retained in the long-term memory. Santrock (2011) stated that rehearsal is most effective for encoding and memorizing a shortlist of objects, but it is less effective for long-term memory retention. Reinforcement works well with highly overlearned content, such as multiplication tables or spelling words, but it does not function well for memorizing more detailed and essential information such as a play script. Even though the human mind can store around 100 trillion bits of information, humans cannot access this vast store without utilizing memory methods. (Oxford 1990, p. 38). This study demonstrates the effect of using memory strategies, particularly "applying images and sounds" and "employing acting", on students' ability to remember grammatical items, present simple and past simple, use auxiliary verbs and adjectives to describe things and parts speech in EFL learners.

5. Literary analysis

This section aims to do a literature study on language learning methods, with a focus on memory techniques. Many studies have examined the use of memory tactics to help students build their vocabularies, but few have examined the use of memory strategies to help students acquire EFL grammar. There have been just a few research on memory methods to improve grammar.

It was discovered by Heuer (1999) that in order for new information to be stored in long-term memory, it must be linked to a pre-existing schema. When a new piece of information is linked to existing schemata, it affects two "variables": how much processing is done and how much new information is linked (pp. 23, 24). On the other hand, if the new information does not "fit" any existing memory structure or schema, we should utilize mnemonic devices to "commit" the new information to memory, he went on to point out.

Such studies focus on how instructors use these tactics in the classroom. According to Pressley, Allington, Wharton-McDonald, Block, and Morrow (2001), the intensity of instructors' training in memory techniques is insufficient. The use of methods and metacognitive questions (questions about students' understanding of how memory works) to assist pupils to retain material varies greatly across instructors, according to Ornstein, Coffman, and Grammar (2009).

The importance of learning cannot be overstated, but the importance of remembering what you have learned should not be overlooked. Retention of language items refers to the capacity to recollect information after some time has elapsed. For students to retain grammatical rules and vocabulary learned in class, "it may be necessary to apply a variety of memory tactics, to engage students' attention, and/or to use things that are important to them" (Richards & Schmitt, 2002, p. 457).

A mnemonic is a strategy or device, verbal or visual in nature, that enhances the preservation of new knowledge and how it may be remembered, according to Solso (1995). When it comes to remembering information, mnemonics have been demonstrated to be incredibly helpful. It is far easier to recall information presented in a manner that connects to what we already know, so retrieval via verbal or visual cues is much easier. For example, instructors might use mnemonic or memory tactics to help students remember new material and connect it to what they have previously learned.

As Thompson (1987) said, mnemonic devices may help learners learn quicker and remember better by integrating new content into existing cognitive units and by providing retrieval clues for new data. All ages have benefited from the use of mnemonic devices. Low-level pupils will find the most beneficial since they will be doing many remembering and recalling material (Levin, 1993).

One of the most efficient ways to study EFL Grammar is to use memory methods, which are powerful mental tools. If memory procedures are not developed to assist students, Oxford (1990: 38) estimates that the human brain can store 100 trillion pieces of information. Associating several kinds of information is a shared memory strategy. As a result, they aid in the acquisition of new grammatical concepts and their long-term retention.

"Operations utilized by the learner to help in the acquisition, storage, retrieval, and application of knowledge" is how Oxford (1990) describes LLSs (p. 8). This concept was later expanded to include "particular activities made by the student to make learning simpler, quicker and more pleasurable, more self-directed, more successful and more transferrable to other situations" (p. (ibid, p. 8). However, Weinstein and Mayer (1986) said that LLC is "behaviors and ideas" that learners participate in when learning and that impact the "encoding process" of the learner (p. 60).

There are various methods students may use to help them better retain and use both language and content-area knowledge, including LLSs, which are described in detail by Chamot (1987). (p. 71).

Memory techniques (mnemonics) were defined by Schmitt (1997) as methods for connecting new information to previously acquired information via the use of imagery or grouping (p. 216). By processing words or vocabulary items in working memory, MSs may be stored and retrieved from long-term memory, according to Macaro (2001). He went on to say that the methods used to retrieve the text will be the same as those used to save it (p. 118).

Memory methods have a critical part in enhancing learning and remembering as rapidly as possible, learning new grammatical concepts and how to remember them. Students' goals, instructors' responsibilities, memory-boosting techniques and resources, and instructional methods are part of a larger educational package.

6. Methodology
A. Study design
To gather the necessary data, this study used an experimental design that included randomly selecting two groups and administering pre-and post-tests to determine the baseline knowledge of each group.

B. Participants.
Both groups were composed of volunteers drawn at random from the same high school, although they were of different genders. There will be a total of 20 kids participating, with ten in each group.

C. This category includes:
Tests, online lectures, and a multi-question questionnaire collected data from both the control and experimental groups. The results were then analyzed to determine the impact of independent variables on dependent variables and answer research questions that remained open.

In this research, twenty pre-university level EFL learners used Google classroom to participate. All of the participants were adult female and male students who were picked at random.

D. Procedure
It was divided into three stages:
- the participants were evaluated before they used the memory procedures in class; thus, this is just a pre-test. To get a sense of the pupils' prior knowledge, this is done. This phase is scheduled to last thirty minutes. Each group was given ten questions, and each question bears a value of one point (1 M).
- In the second phase, participants were divided into two groups: one was given a lesson, and the other was given a presentation, but the control group was not given any memory tactics or different therapy. A presentation was delivered to the experimental group that used specific memory tactics, such as acting, picture and sound, and mnemonics. This particular face has been allotted one hour of time.
- In the third part, it is postponed after the exam. Students' recollection of EFL grammar was the independent variable, and the use of memory methods in teaching grammar was the dependent variable. For the experiment's final analysis, the subjects were examined one week later to determine whether there was a noticeable difference between the two groups. Both groups were given a 25-question exam.

Teaching simple and present tense, auxiliaries, adjectives, and cause and effect clauses were all covered in the two PowerPoint presentations given sequentially in the classroom.

Group A is the one that will be subjected to the experiment. Subjects were introduced to the notion of strategy via a presentation that included short definitions and examples of the two types of memories and a description of each approach. Group B was taught without using any effective memory methods, merely a repetition strategy, and items were delivered in various ways in each kind of approach.

7. Analyze the data

Firstly, A descriptive and statistical analysis of the experiment's results was carried out. The data obtained from instruments were analyzed using SPSS (Version 20). (pre-test and post-test). Due to our initial interest in better understanding both groups' backgrounds, we began examining the pre-treatment data of both groups to find a slight similarity and no discernible difference between them.

Experimental	3	3	4	3	4	5	3	4	4	5
Control	4	3	3	2	3	4	5	5	5	2

Table (1). The results of pre-tests

Group Statistics					
	VAR00 001	N	Mean	Std. Deviation	Std. Error Mean
Post-test	1.00	10	2.4000	1.07497	.33993
	2.00	10	2.4000	1.07497	.33993

Using SPSS and the t-test, an independent sample test was conducted to compare experimental and control groups' means based on post-test scores. The experimental group had a mean of (5.5) and a standard deviation of (1.7), while the control group had a mean of (1.5) and a standard deviation of (0512).

Experimental	6	7	7	6	8	8	8	8	8	7
Control	6	5	5	4	6	3	5	7	5	2

Table (2) The results of the post-test.

Group Statistics					
	VAR000 01	N	Mean	Std. Deviation	Std. Error Mean
Post-test	1.00	10	6.8000	1.39841	.44222
	2.00	10	4.3000	.94868	.30000

Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Post- test	20	4.00	8.00	6.5500	2.73129
VAR00001	20	2.00	3.00	2.5000	.51299
Valid N (listwise)	20				

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Post-test	Equal variances assumed	.775	.390	5.678	20	.000	2.50000	.53437	1.37732	3.62268
	Equal variances not assumed			5.678	15.836	.000	2.50000	.53437	1.36622	3.63378

8. Conclusion

This study looked at how well EFL students retained grammatical elements after using memory procedures like those described in this article. It also looked at the connection between students' memory and the retention of grammatical elements. The findings of this study contribute to our understanding of how memory strategies should be used in EFL lessons. Using statistical analysis, it was observed that the post-test mean scores of the experimental and control groups were significantly different, indicating that the use of memory methods may influence the acquisition of EFL grammar. A significant difference in students' grammar learning retention may be seen between teaching using standard methods and teaching with memory strategies.

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