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The Effectiveness of Using Encoding Strategies in Developing Reading Comprehension Skills for El-Azhar preparatory School Pupils

A Research Proposal
Submitted for M.A. Degree in Education (Curriculum & Instruction) (EFL)

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Abstract

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By

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The current study aimed at developing EFL prospective pupils reading comprehension skills (Literal-inferential-critical) via encoding strategies among preparatory second year pupils at El-Azhar preparatory institute Monof ,Monofia governorate were the participants of this study .They were assigned to two groups experimental group(N=30) and control one (N=30). Instruments of the study consisted of checklist , a pre- and post-test and teacher s guide .The experimental group was taught through encoding strategies and the control group received regular instrument . The experimental took place during the first semester of the academic year 2020-2021.The data obtained were statistically analyzed .Findings revealed that using encoding strategies was effective in developing EFL reading comprehension skills for the second year at El-Azhar preparatory schools.

Key words :encoding -reading comprehension
عنوان الدراسة / فعالية استخدام استراتيجيات الترميز في تطوير مهارات الفهم القرائي لدى تلاميذ المرحلة الإعدادية بالمعهد الأزهرى

الباحثة / Rabab Mostafa Saeed Sharouda

العنوان: "مستخلص

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اسم الباحثة / Rabab Mostafa Saeed Sharouda

عنوان الدراسة / فعالية استخدام استراتيجيات الترميز في تطوير مهارات الفهم القرائي لدى تلاميذ المرحلة الإعدادية بالمعهد الأزهرى

هدفت الدراسة الحالية إلى تطوير مهارات الفهم القرائي لدى تلاميذ المرحلة الإعدادية الأزهرية بمعهد منوف محافظة المنوفية باستخدام استراتيجيات الترميز. وتكونت عينة الدراسة من مجموعتين مجموعة تجريبية وكأن عدد (30) والمجموعة الضابطة عدد (30). وكانت أدوات الدراسة: قائمة بمهارات الفهم القرائي، اختبار مهارات الفهم القرائي قبل وبعد، دليل المعلم. تم تدريس استراتيجيات الترميز على المجموعة التجريبية، وتمت دراسة عادية على المجموعة الضابطة. وتمت الدراسة التجريبية خلال فصل الدراسي الأكاديمي 2020-2021. تم تحليل البيانات التي تم الحصول عليها بشكل خاص. وكانت النتائج التي توصل إليها الباحث باستخدام استراتيجيات الترميز فعالة في تطوير مهارات الفهم القرائي لدى تلاميذ المرحلة الإعدادية الأزهرية.

الكلمات المفتاحية: التشفير (الترميز)-الفهم القرائي.

المجلة " التربية في القرن 21 لدراسات التربية والنفسية "- كلية التربية- جامعة مدينة السادات العدد الثاني عشر أبريل 2021م
Introduction

Reading is the most important skills for those who learn language, as it develops language vocabulary and culture, besides, maintaining fluency and competence in speaking, listening and writing (Abdel Fattah, 1997). Callahan and Clark (1988) stated that reading is an active process. It does not happen to the student and it is not done for him, since it requires attention and it is not mechanical. The readers feeling of purpose is the motivation and effective sustaining force. According to Burnes (1994), reading is the process of constructing meaning from written text. It is a complex skill requiring the coordination of a number of interrelated sources of information. The text is no longer the primary stimulus for comprehending. The reader is viewed as a strategic learner who actively uses learning strategies to construct meaning from text. Readers construct meaning using prior knowledge and contextual clues for successful comprehension.

Reading is the interpretation of symbols that are printed or written within the core of reading and the message that the author is trying to relate to the reader (Serran, 2002; Ibrahim, 2007). Reading as the third skill of language is a mental activity that involves eliciting information or meaning from a graphic material written or printed. Unoh (1991:11) defined reading as "a complex language processing behavior that entails interpreting or getting meaning from written or printed materials". He added that a good reading must be total and all-encompassing in terms of multi-sensory involvement. This means an art of reading comprehension should also include the comprehension of the meaning that sounds signify. Reading as an activity involves many human senses: the eyes, the mind and brain.

According to Fengjuan (2010), reading is a process which involves the interaction between the reader and the text. In reading a text, the reader needs to precede the information that he or she gets from the text into his or her brain. Students are constantly upgrade themselves with new information, particularly once they have a progress from novice up to elementary, and transition from learning to read into reading to learn.

Comprehension is the reason for reading. If readers can read the words but do not understand the meaning, they are not really reading. Being able to understand a printed passage is an important academic task and forms the basis for learning in academic subjects (Poole, 2010). Reading comprehension are a process through which pupils elicit meaning from a text. The students who possess good reading comprehension skills is able to go beyond the information given … by asking questions, making
hypotheses, seeking evidence, and validating assumptions. Reading comprehension is a dynamic process, since a pupils’ final understanding of a text is subject to change with time, as a result of conversations with others, the reading of other works, pondering and reflection. Readers who look below the surface, who can apply a little inference, will come up with quite a complex story compared to the few short words on the page…that’s the kind of reader we want to help our students become: readers who can move beyond the literal and who can interpret the text (Belet, 2011).

Despite the great importance of EFL reading comprehension skills, pupils show severe weakness in these skills. Most EFL learners are unable to skillfully identify the main idea(s) and supporting details, identify, verify or recall ideas that are explicitly or implicitly stated in the text, make predictions, infer the meaning of difficult words from context, or make inferences. In addition, they lose the meaning of sentences as soon as they are decoded, read in short phrases, seldom skip words as unimportant and view words as equal in their contribution to total phrase meaning, and have a negative self-concept as a reader (Grabe, & Stoller, 2016).

Encoding is the process of getting information into memory. If information or stimuli never get encoded, it will not be remembered. Encoding is the first stage of the memory process. Encoding occurs when information is translated into a form that can be processed mentally. Information from the environment is constantly reaching one’s senses in the form of stimuli. Encoding allows one to change the stimuli so that one may put it into his memory. It is similar to librarians classifying books before placing them on a shelf. Encoding –processing incoming information so it can be entered into memory. Encoding requires paying attention to information and linking it to existing knowledge in order to make the new information meaningful and thus easier to remember (Kirchhoff, Smith, & Luntz, 2017).

Statement of the Problem

The problem of the current study lies in the weakness of prep pupils at Al_Azhar in their reading comprehension skills. preparatory institute EFL reading
comprehension skills. Thus, the present study attempts to investigate the effectiveness of encoding strategies in developing reading comprehension skills among 2nd prep pupils at Al_Azhar preparatory institute.

Questions of the Study

The current study attempts to answer the following main question:

What is the effectiveness of using encoding strategies in developing reading comprehension skills among prep school pupils?

Out of this main question, the following sub questions are derived:

1) What are the reading comprehension skills required for prep school students?
2) To what extent do they master such skills?
3) What is the effectiveness of encoding strategies on the development of reading comprehension skills as a whole?

Hypotheses of the Study

1. There will be a statistically significant difference (0,05) between the mean scores of the control and the experimental group pupils in the post administration of overall EFL reading comprehension skills test in favor of the experimental group.
2. There will be a statistically significant difference (0,05) between the mean scores of the control and the experimental group pupils in each of reading comprehension skills posttest in favor of the experimental group.
3. There is a significant educational and statistically significant effect of using encoding strategies in developing reading comprehension skills among middle school students.
Aim

The present research aimed at developing EFL prospective pupils reading comprehension skills (literal, inferential, critical, creative) via using some engagement strategies (the proposed 6C Model) as well as exploring their satisfaction with using this model in learning.

Terminology

Reading comprehension

Reading comprehension is the ability to process text, understand its meaning, and to integrate with what the reader already knows (García-Madruga, Elosúa, Gil, el.al., 2013).

National Center for Education Statistics (2012). defines reading comprehension as the process of simultaneously extracting and constructing meaning through interaction and involvement with written language.

It is the construction of the meaning of written communication through a reciprocal, holistic interchange of ideas between the interpreter and the message. (Zoghi, Mustapha, Rizan, el.al. 2010).

The reading comprehension is defined procedurally in the present study as the ability of Alzhar prep. Pupils at Monoufyia a reading text and interact with it.

In the present study researcher adapts Leshikar, Gutchess, (2010) Encoding strategies are the process of getting information into memory. They include hearing versus saying words, silent versus overt rehearsal, levels of processing, and instructions to identify critical words.
Encoding strategies: refer to learners’ conscious attempts to encode information into long-term memory in ways that are meaningful to the individual (Lilienthal, Rose, Tamez, el.al, 2015)

Procedures of the Study

1. Reviewing literature and previous studies related to EFL reading comprehension skills, and encoding strategies.

Related studied
Mamdoh Ghanem, 1994 aim of identified the impact of academic specialization on encoding strategies for sample of students of scientific and phenomenon of students included 100 male students they were distributed in four groups evenly the task of preparation consisting of the preparation was used from 0 to 9 random distribution .The task of the letters that was selected from the eight girls eighth two-Mischemical and the museum verified of the abstract words . Individuals were tested in an individual way , each task offered to be presented for accurate test of the presence of the preparation and letters of the preparation and two minutes in the rest of the tasks. After each task , the individual is required to write a protocol where the way you use is saved to the task. After the end of all tasks gives the individual calls for possible information and in order .In some of its results, the study indicated that there was no impact of academic specialization on strategies used by the individual in encoding.

Lunn(1997) aware of the knowledge of the relationship of the encoding strategies and skills beyond knowledge that a decline in the level of collection of medium-stage students with learning difficulties.

The study was composed of 68 pupils. Some findings indicated that individuals with learning disabilities used less effective strategies for encoding information in memory and strategies associated with higher performance level that did not show a correlation with achievement level.

ALI (2013) investigated the effect of using newspaper based instruction on developing some reading comprehension skills among EFL secondary school
students. Participants were 76 EFL divided into two groups: a control group (N=38) and the experimental group (N=38). Tools of study were EFL reading comprehension test, a rubric to assess EFL reading comprehension and newspaper-based instruction. The findings of the study showed that EFL reading comprehension skills of the experimental group improved due to the effect of newspaper-based instruction than the students of the control group.

Also, Chiang (2005) investigated the effects of two different types of graphic organizers, teacher and student-generated, on 50 Taiwanese freshmen students EFL reading comprehension and attitudes towards reading in English. To reading comprehension tests were designed: one as a pre-test and one as a post-test. Results of the post-test showed that student-generated graphic organizers had a significantly positive impact on students reading comprehension and attitudes towards EFL reading.

Abdel-Haq (2006) investigated the effectiveness of reciprocal teaching in improving strategic reading and reading comprehension skills of College of Education English majors. Participants were 66 EFL students. They were divided into two groups: a control group (N=36) and an experimental group (N=30). Tools of the study were a strategic Reading Questionnaire (SRQ), a Strategic Reading Interview (SRI), a strategic Reading Checklist (SRQ) with think aloud protocol and a Reading Comprehension test (RCT). Results revealed that reciprocal teaching was effective in improving EFL students strategic reading and reading comprehension skills.

Al-soufi (2017) investigated the effect of reciprocal teaching strategy on developing Yemeni secondary stage students EFL. Reading comprehension skills and self-efficacy. A reading comprehension skills questionnaire prepared to identify the appropriate skills for students level, a pre and post reading comprehension test and an EFL scale adapted to uncover self-efficacy concept of students reading comprehension. The validity and reliability of the study instruments were established before their use in the study. The study adopted the quasi-experimental design. The sample of the study consisted of (80) male and female students purposely selected.
from first year secondary stage students in two major cities (Sana a and Taiz) in the 2014-2015 academic year where 40 students represented two experimental groups and 40 represented the other two control groups. Results of the study showed that reciprocal teaching strategy led to improvement in students reading comprehension, and self-efficacy.

**Abdel Maksoud (2012)** investigated the effectiveness of transactional teaching approach in developing strategic reading and reading comprehension skills in English language among first year secondary school students. Participants were 72 EFL students. They were divided into two groups: control group (N=35) and the experimental group (N=37). Tools of the study were reading comprehension skills checklist (RCSC), a pre-post strategic reading questionnaire (SRQ), strategic reading interview (SRI), strategic reading checklist with think-aloud protocol (SRCTP) and reading comprehension test (RTC). Results showed that the program (TTAP) proved to be highly effective in developing first year secondary school students’ EFL strategic reading and reading comprehension skills.

**Attia (2013)** investigated the effectiveness of shared reading strategy in developing the primary stage pupils early reading skills” aimed at improving EFL primary pupils’ early reading skills. To achieve this aim, shared reading strategy was implemented. The main instrument designed and used in the current study was: A PRE-POST Early Reading Skills Test for assessing EFL primary pupils’ early reading skills before and after receiving the treatment. The study adopted the experimental design using one control group and one experiment group. The participants of the study were 70 pupils (second year primary pupils). Results of the study indicated that there was a statistically significant difference between the mean scores of the experimental group and control group on post-administration of the early reading skills test in favor of experimental group. This indicates that the shared reading strategy is effective in enhancing the primary stage pupils early reading skills.

**Alsamadani (2008)** explored Saudi Pupils use of reading strategies and their effect on pupils reading comprehension. One hundred and forty Students of
different academic levels were included in the study. There were 35 freshmen, 35 sophomores, 35 juniors, and 35 senior from King Faisal University, Teachers Collage in Al-Asha, King Abdul-Aziz University, and teacher collage in Jeddah, respectively. The study employed both qualitative and qualitative methods to obtain information about Saudi pupils' perceived use of reading strategies as well as their comprehension level. A reading strategies questionnaire, a reading comprehension test, and follow-up interviews were the main instruments. The results showed that EFL learners in Saudi Arabia showed significantly more perceived use of planning strategies than attending strategies and evaluating strategies. They also perceived the environment as the most important factor affecting their reading comprehension. The results of the study showed no significant relationship between Saudi EFL learners' comprehension level and their use of reading strategies. Saudi pupils perceived other factors such as prior knowledge, enthusiasm for reading, time on task, the purpose for reading and vocabulary as having much effective contribution to their final comprehension. Gender differences favoring female learners were evident in almost all analyses conducted in the study. Significant differences were found favoring female Students on overall strategy use, comprehension level, and the use of evaluating strategies.

Claudia & Thomas (2010) explored different aspects of encoding strategy use in primary school children by including (a) an encoding strategy task in which children's encoding strategy use was recorded through a remote eye-tracking device and, later, free recall and recognition for target items was assessed: and (b) tasks measuring resistance to interference (flanker task) and inhibition of attention to task irrelevant stimuli (distractibility). Results revealed that the ability to inhibit distraction and resist interference undergoes developmental changes between the ages of 7-10 years. At the same, children's capability to strategically focus on task-relevant aspects also continues to improve in primary school years. Although there were substantial relationships between encoding strategies and later recognition, encoding strategies appeared to be underrated to basic aspects of intentional control.

Cut Intan & Sofyan (2016), This study is about the implementation of Know, Want, Learned (KWL) strategy to enhance students reading
comprehension. The desire to conduct the research toward this study is to investigate how the proper implementation of KWL helps the students increasing their ability in terms of reading skill. This study was approached quantitatively, specifically through an experimental method using the design of one group pretest-posttest. The population of this study was VII-9 class which consisted of 30 students which was chosen randomly. The data for this study were obtained by using repeated measures T-test in order to prove the hypothesis. The calculation result showed that null hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was accepted, because the result of t-test calculated was 5.07, higher than t-table 2.04. Therefore, the writer concludes that comprehension at STMPN 3 Banda Aceh.

**Bailey Fred and Deanna Friesen (2019)**. Reading comprehension performance is predicted by decoding skill and linguistic comprehension (e.g., Hoover & Gough, 1990; Joshi & Aaron, 2012; Scarborough, 2001). However, the type of strategies that readers recruit to build a discourse should also contribute to success in first and second language reading comprehension. Sixty-six French immersion elementary students were assessed in English and French in (1) language proficiency measures, and (2) reported strategy selection during a reading comprehension task. Although students reported different strategy use in each language, similar strategies (e.g., inferencing and reliance on text structure) accounted for reading comprehension performance in English and French. These strategies explained unique variance in addition to language measures, suggesting that reliance on these strategies either reflects greater understanding of text or enables the reader to better consolidate the text into memory for later retrieval.

**Fitri, A. (2017)**, Reading skill is a crucial skill for both English as a second Language (ESL) and English as Foreign Language (EFL) students. To improve the students reading, Encoding, Annotating, and Pondering (REAP) strategy becomes an alternative strategy to be applied in teaching reading. Therefore, this study was aimed to identify the effectiveness of applying REAP strategy in improving students reading skill. The study was conducted on second semester students of English education department of University of Islam Malang. The method used in this study was
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The researcher did a treatment by applying Reading, Annotating, and Pondering (REAP) strategy to the experimental class, while on the other hand, conventional method or lecturer centered was applied in the control class. The result of the study showed that the t-test of these research is 58 and the T-table of this research is 2.9260. It can be seen from the calculation of reading test result between the experimental class and the control class, Ho is rejected, and the Ha is accepted because 58>2.926 or the T-test>T-table, and p=1.367>0.05. It meant that Reading, Encoding, Annotating and Pondering (REAP) was effective to improve students reading skill, and there was a significant difference between students who taught by applying REAP strategy and those who did not.

Amaliatul Khoiriyah. (2017), this research investigates the effectiveness of read, Encode, Annotate, Ponder (REAP) strategy in improve students reading comprehension on analytical exposition text. The research is conducted based: 1. how is the students reading comprehension using REAP strategy? 2. Is there any significant effect of REAP strategy in comprehending Exposition reading text. The objectives of this research were find out the ability of the eleventh grade students in obtain the effect of using REAP strategy toward reading comprehension.

To answer the questions, the writer collected from 46 students, by divided them into two classes, one class as the experiment class as much as 23 students and the other control class as much as 23 students. The population as much as 156 students of the eleventh grade of Islamic Senior High School Mathla ul Anwar Menes Center. The method of this research is experiment method. The instrument use tests there are pre-test and post-test.

In this research, the writer used t-test, the alternative hypothesis is accepted, so there is significant effect of using REAP Strategy to improve students reading comprehension, as much as Ha: to >tt. The writer used level significance 1% and 5%. Based on table with level significance 5%=2,02 with ttable level significance 1%=2,70 and count =2,88 so 2,02<2,88>2,70 so Ha=to>tt. Using REAP Strategy in Reading Exposition Text more effective than without REAP strategy. The writer concludes that REAP strategy...
can be applied by teacher to improve students reading comprehension especially exposition text.

2. Selecting the participants of EFL second year prep school students and divide them two groups.

The sample consists of (60) preparatory stage pupils enrolled in El – Azhar preparatory school, Menof , Menofia Governorate .They were assigned to two groups. THE experimental group consisted of(30) pupils and they were exposed to application of encoding strategies .The other group was assigned to be control group .It consisted of (30) pupils and this group had regular English reading lessons with no additional activities. Both groups were taught by the same teacher (the researcher).The spread of pupils and the pathways were taken into account during the application of the sessions.

3. Preparing the study instruments and materials which will include :
1- a Checklist of reading comprehension skills that is required for preparatory school pupils.
2- pre/post- reading comprehension skills test.
3- A teacher s guide and worksheet.

These instruments and materials are presented in detail as follows:
- The EFL Reading comprehension Skills Checklist
- The purpose of reading comprehension skills checklist
The reading comprehension skills checklist was designed to
determine the reading skills that are relevant to prep school pupils.

4. Validating the study instruments by submitting them to panel
   of jurors.
5. Piloting the study instruments and materials.
6. Pre-testing the study groups.
7. Conducting the experimental procedure in which experimental
group will be taught using the encoding strategies while the
control group will receive regular instruction.
8. Post-testing the two groups.

Findings and Discussion

- SPSS (Statistical Package for the Social Sciences, version 18) was used to analyze
  students' scores on the pre and post-tests. Results are shown in the light of the
  study hypotheses and questions.

- Hypothesis One

"There will be statistically significant differences between the mean scores
of the control and the experimental group students in the post test on the
overall EFL reading comprehension skills in favor of the experimental
group."

In order to validate this hypothesis, data had been described and summarized through
calculating the mean, the standard deviation, minimum and maximum of the two
groups; the experimental group and the control group as shown in table (1).

Table (1): Descriptive Statistics to the Scores of Students of the Control Group and
the Experimental Group in the overall EFL Reading comprehension skills.
Table (1) shows that the value of the overall EFL Reading comprehension skills mean score of the experimental group was (26.37) which is higher than that of the control group which was (16.17). As table (1) shows, there existed a raise in the scores of the experimental group than those of the control group in the post administrations of overall EFL Reading comprehension skills test. It also shows the increasing homogeneity of grades of the experimental group than the control group due to teaching the experimental group through Encoding strategies.

This is represented graphically in figure (1).

![Bar Charts of the Mean Scores of the Control Group and the Experimental Group in the Post EFL Reading comprehension skills Administration.](image)

It was shown from the previous diagrams that significant differences existed between the scores of the two groups.
To study the significance of the differences, t-value was calculated for the difference between the mean scores of the two groups; as illustrated in table (1):

**Table (1): The t-Value to Signify the Difference between the Mean Scores of the Two Groups in the Post adm.**

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t-value</th>
<th>d.f</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall EFL reading comprehension skills</td>
<td>Experimental</td>
<td>26.37</td>
<td>1.43</td>
<td>24.312</td>
<td>58</td>
</tr>
<tr>
<td>Control</td>
<td>16.17</td>
<td>1.80</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from table (1) that the calculated value of "t" (24.312) is higher than the tabulated value of "t" at 58 degrees of freedom and significant skills "0.01"; which meant that the difference between the mean scores of the two groups reached the skills of statistical significance.

Thus, the hypothesis was accepted which indicated that "There is a statistically significant difference between the post-test adms. mean scores of the experimental and the control groups in overall EFL Reading comprehension skills in favor of the experimental group."

- **Hypothesis Two:**

"There will be statistically significant differences between the mean scores of the control and the experimental group students in the posttest on each of the EFL reading comprehension sub skills in favor of the experimental group."

1- **Sub-Hypotheses one:**

There will be statistically significant differences between the mean scores of the control and the experimental group students in the post test on the Literal skills in favor of the experimental group.

In order to validate this hypothesis, data had been described and summarized through calculating the mean, the
standard deviation, minimum and maximum of the two groups; the experimental group and the control group as shown in table ( ).

Table ( ) shows that the value of the Reading comprehension skills (the literal skills) mean score of the experimental group was (5.47) which is higher than that of the control group which was (3.07). As table ( ) shows, there existed a raise in the scores of the experimental group than those of the control group in the post administrations of EFL Reading comprehension skills (the literal skills) test. It also shows the increasing homogeneity of grades of the experimental group than the control group due to teaching the experimental group through Encoding strategies. This is represented graphically in figure ( ).

<table>
<thead>
<tr>
<th>Test</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean difference</th>
<th>total score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reading skills</strong></td>
<td>Experimental</td>
<td>30</td>
<td>5.47</td>
<td>0.68</td>
<td>4</td>
<td>6</td>
<td>2.4</td>
<td>6</td>
</tr>
<tr>
<td>(The literal skills)</td>
<td>Control</td>
<td>30</td>
<td>3.07</td>
<td>0.94</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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Figure ( ) Bar Charts of the Mean Scores of the Control Group and the Experimental Group in the Post EFL Reading comprehension skills ( the literal skills ) Administration.

It was shown from the previous diagrams that significant differences existed between the scores of the two groups.

To study the significance of the differences, t-value was calculated for the difference between the mean scores of the two groups; as illustrated in table ( ):

Table ( ): The t-Value to Signify the Difference between the Mean Scores of the Two Groups in the Post adm.

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t-value</th>
<th>d.f</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading skills (the literal skills )</td>
<td>Experimental</td>
<td>5.47</td>
<td>0.68</td>
<td>11.287</td>
<td>58</td>
</tr>
<tr>
<td>Control</td>
<td>3.07</td>
<td>0.94</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from table ( ) that the calculated value of "t " (11.287) is higher than the tabulated value of "t" at 58 degrees of freedom and significant skills "0.01" ; which meant that the difference between the mean scores of the two groups reached the skills of statistical significance.
Thus, the hypothesis was accepted which indicated that "There is a statistically significant difference between the post-test adms. mean scores of the experimental and the control groups in EFL Reading comprehension skills (the literal skills) in favor of the experimental group."

2- Sub-Hypotheses two:
There will be statistically significant differences between the mean scores of the control and the experimental group students in the post test on the inferential skills in favor of the experimental group."

In order to validate this hypothesis, data had been described and summarized through calculating the mean, the standard deviation, minimum and maximum of the two groups; the experimental group and the control group as shown in table ( ).

<table>
<thead>
<tr>
<th>Test</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean difference</th>
<th>total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading skills (The inferential skills)</td>
<td>Experimental</td>
<td>30</td>
<td>10.63</td>
<td>1.07</td>
<td>9</td>
<td>12</td>
<td>4.4</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>30</td>
<td>6.23</td>
<td>1.01</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table ( ) shows that the value of the Reading comprehension skills (the inferential skills) mean score of the experimental group was (10.63) which is higher than that of the control group which was (6.23). As table ( ) shows, there existed a raise in the scores of the experimental group than those of the control group in the post administrations of EFL Reading comprehension skills (the inferential skills) test. It also shows the increasing homogeneity of grades of the experimental group than the control group due to teaching the experimental group through Encoding strategies.

This is represented graphically in figure ( )
Figure ( ) Bar Charts of the Mean Scores of the Control Group and the Experimental Group in the Post EFL Reading comprehension skills ( the inferential skills ) Administration.

It was shown from the previous diagrams that significant differences existed between the scores of the two groups.

To study the significance of the differences, t-value was calculated for the difference between the mean scores of the two groups; as illustrated in table ( ):

Table ( ): The t-Value to Signify the Difference between the Mean Scores of the Two Groups in the Post adm.

<table>
<thead>
<tr>
<th>Test</th>
<th>Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t-value</th>
<th>d.f</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading skills (the inferential skills)</td>
<td>Experimental</td>
<td>10.63</td>
<td>1.07</td>
<td>16.438</td>
<td>58</td>
<td>Significant at (0.01)</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>6.23</td>
<td>1.01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from table ( ) that the calculated value of "t" (16.438) is higher than the tabulated value of "t" at 58 degrees of freedom and significant skills "0.01" ; which meant that the difference between the mean scores of the two groups reached the skills of statistical significance.
Thus, the hypothesis was accepted which indicated that "There is a statistically significant difference between the post-test adms. mean scores of the experimental and the control groups in EFL Reading comprehension skills (the inferential skills) in favor of the experimental group."

1. Analyzing data statistically and interpreting the results.

After analyzing the data of the test statically, it is obvious that there are significant differences in developing the reading comprehension skills between pupils in the experimental group and their counterparts in the control one in favor of the experimental group. The results of the study indicated that pupils in the experimental group were more aware of the
reading comprehension skills. Having taught pupils using encoding strategies, post testing results revealed significant differences in favor of the experimental group pupils who were taught via encoding strategies.

The results, related to verifying the first hypothesis showed that there was improvement in the pupils overall reading comprehension skills. This was due to using reading comprehension approach and the different activities related to this approach.

The results, related to verifying the second hypothesis showed that there was improvement in the pupils literal reading comprehension skills.

As for the fourth result, there was improvement in the pupils inferential reading comprehension skills.

These findings indicated that encoding strategies proved to have a positive effect on developing the experimental group pupils reading comprehension skills.

2. Providing recommendations and suggestions for further research.

Recommendations

1- Training of the educational guide to the use of information encoding strategies to raise them on storage in memory and better returning to study.

2- Direction educational institutions to take advantage of the current search results and holding the loss of evaluation of their awareness and the use of the best appropriate method to age groups.
3-Awareness of parents and parents through the boards and parents teachers to use the encoding strategies and increase memory absorption.

4-The director of the preparation and training prepared teachers and develop programs to develop them in the use of these strategies.

4-All future teachers should be trained in pedagogical and interactive use of the encoding strategies.

5-Students should be provided with specific training programs to prepare them use the encoding strategies.

**Suggestions for further research**

1-The effectiveness of using encoding strategies in developing reading comprehension skills for El-Azhar primary school Pupils.

2-Using encoding strategies to develop writing skills of preparatory stage pupils

3-The effect of using encoding strategies on developing other EFL skills (speaking and writing).

4-The effect of using encoding strategies on developing pupils motivation towards learning EFL, and teachers attitudes towards using encoding strategies.
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Research Title: The Effectiveness of Using Encoding Strategies in Developing Reading Comprehension Skills for El-Azhar preparatory School Pupils


