Using an Electronic Interactive Program for Developing EFL Critical Reading skills of Secondary Stage Student

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استخدام برنامج الكتروني تفاعلي لتنمية مهارات القراءة الناقدة في اللغة الإنجليزية للطلاب الاجنبي في المرحلة الثانوية

المستخلص:

هدف هذا البحث لتحقق من فاعلية استخدام برنامج الكتروني تفاعلي لتنمية مهارات القراءة الناقدة باللغة الإنجليزية لدى طلاب المرحلة الثانوية. واستخدم تصميم شبه تجريبي. شارك في البحث ستون طالبًا وطالبة في السنة الأولى بمدرسة الغردقة الثانوية الرسمية لغات. وقد تم اختيار ثلاثين طالبًا وطالبة كمجموعة خبرية ومجموعة ضابطة من ثلاثين طالبًا وطالبة. وقد تضمنت مواد والآدات البحث: برنامج الكتروني تفاعلي مكون من ست وحدات وقائمة بمهارات القراءة الناقدة الأساسية واختبار لمهارات القراءة الناقدة. ولقد أسفرت نتائج الاختبار عن أن طلاب المجموعة التجريبية تفوقوا عليهم في نظرائهم في المجموعة الضابطة في التطبيق البعدي. وأشارت نتائج البحث إلى أن استخدام برنامج الكتروني تفاعلي قد ساعد في تنمية مهارات القراءة الناقدة لدى طلاب الصف الأول الثانوي.

الكلمات المفتاحية: برنامج إلكتروني تفاعلي، قراءة ناقدة.
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ABSTRACT:

The present research has been conducted to investigate the effectiveness of using an electronic interactive program for developing EFL critical reading skills of secondary stage students. The research used the quasi-experimental design. Sixty students in the first year at Hurghada secondary official language school participated in the research. They were assigned to an experimental group of thirty students and a control group of thirty students. The materials and instruments of the research included: an electronic interactive program which comprised six units, a list of basic critical reading skills and a test of critical reading skills prepared by the researcher. Results of the research revealed that the students in the experimental group outperformed those in the control group in the pre-post test. Findings of the research indicated that using an interactive program had positive effects on the students’ critical reading skills.

Key words: An electronic interactive program, critical reading
Introduction

Writing and reading are essential skills for acquiring English language. They play vital roles for learning English language. As for reading, it is seen as a process of interaction between readers and texts. To read well means to get what the writer tries to introduce in his/her writing. This means that a reader needs prior knowledge and competence during reading. The word analytical is explained as the act of understanding fully while reading is elucidated as making meaning of writing. Therefore, when combining reading to criticism, the outcome will be critical reading which means the capability of reader to construct and criticize the meanings communicated by texts. Zaki, Z. (2015) asserts that the importance of reading for EFL/ESL students is not less than the importance of writing for them to master. Anderson (2003) asserts that the command of reading skill enabled ESL/EFT students to make progress in English learning as well as in other content-based classes that needed proficiency of English reading.

AL Youssef (2006) mentions that there is a series of learning objectives that should be achieved by the students; the ability to read an extensive variety of English texts, the capability to build language awareness which encourages reading, the possibility to build knowledge of schema, the ability to adjust the style of reading as indicated by the reading purpose (e. skimming and scanning), the capability to develop the structure awareness of English written texts, and the possibility to take a critical situation to the texts contents. Chitchuen& Sanpatchayapong (2016) state that reading has played a vital role in overall advancement in skills of language and even academic achievement for decenniums. It is paramount for students to broaden their awareness of the language and various cultures of the world. Through reading various materials such as books, novels, journals, and newspapers, students are able to acquire more information. The significance of teaching reading is to construct the students’ capability and knowledge.
Sattayatham & Ratanapinyowong (2008), state that the students can benefit from the written texts they read as the texts supply them with a wide sight and aspects of culture. They mention that the capability of the students to express themselves widely in their own words can be obtained from their personal experience and what they read. Kemper Et al, Meyer, Van Rys & Sebranek (2018) state that there is a mutual relation between reading and writing and the students cannot successfully finish academic reading assignments without using some type of writing, even though that writing does not include more than a list of ideas or short free writing exercises.

In terms of reading, the teachers of English adopt the regular way of teaching reading. They present the reading topic by asking general questions, followed by an explanation of key words. The teachers ask the students to silently read the passage and answer some questions, whose answers are clearly stated in the passage, without giving any instruction about their methods of organization and certain signal words used by writers. The students should be taught how to criticize texts and deal with the real objectives of the writer.

The most characteristic features of critical reading are that the student will examine the evidence or arguments presented; check out any influences on the evidence or arguments; check out the limitations of study design or focus; examine the interpretations made; and decide to what extent he is prepared to accept the authors’ arguments, opinions, or conclusion. Critical thinking is a process of analyzing, synthesizing and evaluating information independently to guide a person’s actions and beliefs. It encourages and facilitates higher order learning. To be able to read critically, the students need to distinguish facts from opinions, consider writer’s background, assumptions and purposes, know their own beliefs and biases, identify evidence and conclusions, consider various
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perspectives and interpretations, identify details being emphasized and evidence being included.

Reading effectively requires approaching texts with a critical eye: evaluating what the students read for not just what it says, but how and why it says it. Effective reading is central to both effective research (when the students evaluate sources) and effective writing (when the student understand how what they read is written, they can work to incorporate those techniques into their own writing). Being an effective reader also means being able to evaluate their own practices, working to develop their critical reading skills.

Widdowson (2012) mentions that reading critically is not a fast process. Many students do not set aside enough study time for reading (and rereading), and read everything either too quickly or at the same speed. If they know what they’re reading for, they can better distinguish information that can be skimmed from that which should be more closely examined, and make better use of their reading time. Preview or survey the text before detailed reading begins, looking for clues related to its purpose, its relevance, its difficulty, and how it connects with ideas or information they already know. Be willing to struggle with the text in order to understand it – but don’t get hung up on single, tough details in first readings. Rather, hold confusing passages in mental suspension, and continue to read with the idea that what seems difficult to understand now may be cleared up as they go along.

Alderson & Bachman (2009) make a distinction between the process of reading and the result of that process, which is the product. The process refers to the interaction of the reader and the text, and what the reader can get as the meaning of a text. They further suggest that the process of reading is not a static process; rather it is a dynamic one. Similarly, Nuttall (2005) maintains that reading, like conversation, is interactive; that is, readers and writers depend on one another. Interactive reading in another sense refers to a continual shift from one focus to another, now adopting a top-
down approach to predict the probable meaning, then moving to the bottom-up approach for checking that meaning. Some authors (Alderson & Bachman, 2009; Brown, 2011), therefore, suggest that both top-down and bottom-up processes are important, and a combination of these two processes, i.e., interactive reading, is necessary for reading.

Critical reading is reading actively with the goals of identifying arguments, weighing evidence, evaluating sources, looking for conflicts of interest, and questioning underlying assumptions. It is distinctly different from the passive reading associated with reading novels, which many students mistakenly apply to academic texts. Regardless of discipline, critical reading is an important skill that will help students become more informed and, hopefully, more effective citizens. Consequently, electronic learning became a necessity nowadays because of the covid-19 pandemic. The strategy of learning should be changed to face the new requirements.

**Context of the Problem**

The problem of the present research is that a great number of first year secondary stage students lack the ability to read well which reflect badly on their critical reading. Results of the critical reading test revealed that about 78.5% of the pilot research sample got below average scores (less than 30%). Results of reading test revealed that about 71.4% of the pilot research sample got below average scores (less than 30%).

Critical reading refers to individuals’ thinking about what they read, assessing what they have read, and using their own judgment about what they have read. In order to teach critical reading skills to students, a teacher is expected to have knowledge about text selection, use of appropriate methods, preparation of functional learning and teaching processes, among other qualities; teachers must display critical reading skills as well. Apparently, most of the teachers and students lack these abilities and skills.
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Furthermore, the Covid-19 pandemic is forcing schools, universities, learning and development professionals to shift rapidly from in-person to online learning. It made providing of effective e-learning contents more important. Consequently, the development of e-learning products and provision of e-learning opportunities is one of the most rapidly expanding areas of education and training. The growth of e-learning application is accelerating through both offline and online system. Using online technologies such as the internet can enable learners to collaborate together even if they are separated by distance. E-Learning has been seen as “mind tools”. These tools give an opportunity to create modern tests, various quizzes and interactive tasks for checking students’ knowledge.

For achieving the progress of students in critical reading skills included in the program, the researcher is intending to develop the performance of students in critical reading skills by: inferring the writer’s purpose, inferring the main idea, identifying the organizational pattern, using graphic organizers and identifying the transitional words. Accordingly, a training program based on well selected material has been designed by the researcher to assist these students to use some of the electronic interactive skills to develop their critical reading.

Statement of the problem

(Questions of the research):

The previous discussion pinpoints that a great number of first year secondary school students have problems in critical reading skills. The problem of the research can be manipulated through answering the following question:

What is the effectiveness of the electronic interactive program on developing the critical reading skills?
Aims:
This research aims at:

- Shedding light on an electronic interactive program as a new method in TEFL.
- Identifying the effectiveness of using an electronic interactive program in developing critical reading skills of first year secondary school students.
- Providing a reliable test instrument for evaluating critical reading.

Significance:
The current research may be important for the:

1). Students:
   a- It may develop their critical reading skills.
   b- It may enhance their self-organization while reading the different tasks of their school subjects.
   c- It may motivate their awareness of various text organizations and their sorts which, in turn, may enhance their cognitive, structural and social knowledge of various topics.

2)- EFL Teachers:
   a- It may help to increase their awareness of new methods of teaching reading.
   b- It provides them with a teacher's book and a student's book that may help them in teaching and in developing their students' reading skills which, in turn help in high achievement and getting high scores in the exams.

3) - Curriculum designers:
   It provides them with an accurate picture of the electronic interactive program in order to design programs for different
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educational stages based on these skills to develop their critical reading skills.

Hypotheses:

The present research is conducted to test the following hypotheses:

a) There is statistically significant difference between the mean scores of the experimental group in the pre and posttests of the critical reading (in favor of the posttest).

b) There is statistically significant difference between the mean scores of the experimental and the control groups in the posttest of the critical reading (in favour of the experimental group).

Design

This research is conducted on first year secondary stage students at Hurghada secondary official language school. It is a quasi-experimental design. Two groups are exposed to pre/post control/experimental group design; one acts as a control group and the other as an experimental one. The experimental group is trained on critical reading skills by using an electronic interactive program while the control group receives regular instruction.

Participants

The participants of the research are (60) students of the first stage of secondary students in Hurghada secondary official language school.

Delimitations:

1- Participants of the research are (60) students of the first stage of secondary students at Hurghada secondary official language school
2- Some skills of critical reading (identifying the writer's purpose, finding the main idea, identifying the organizational pattern of the text, integrating the information using graphic organizer, and identifying the signal words).

**Material and instruments:**

The electronic interactive program includes:

1- A teacher’s guide.
2- A student’s book with CD.
3- Critical reading skills test which include two parts in critical reading. (Prepared by the researcher).

**Definition of Terms:**

**An electronic interactive program**

Knott (2012, p. 157) defines electronic interactive learning program as “it has been referred to as “technology-enhanced learning” and more recently as “digital learning” An electronic interactive program describes a set of technology-mediated methods that can be applied to support student learning and can include elements of assessment, tutoring and instruction”.

Teng (2019, p. 143) defines electronic interactive learning program as a learning system based on formalized teaching but with the help of electronic resources. In which teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of it.

It’s defined operationally “an electronic interactive program is a pedagogical approach that incorporates social networking and urban computing into course design and delivery. It is the delivery of learning and training through digital resources. It is provided through electronic devices such as computers, tablets and even cellular phones that are connected to the internet.
3-Critical Reading:

Horowitz (2006) defines critical reading as “It is a strategy to match reader's expectation and existing knowledge related to text. Critical reading is an interaction of reader and text that lies on reader's prior knowledge about the text topic which becomes reference”.

It’s defined operationally as “critical reading is reading actively with the goals of identifying arguments, weighing evidence, evaluating sources, looking for conflicts of interest and questioning underlying assumptions. It is different from the passive reading. It’s the building block for larger analysis.

Procedures of the research:

To answer the questions of the research, the following procedures will be followed:

- Reviewing of related literature
- Selecting and equalizing the members of the sample for both control and experimental Group.
- Designing a list of some critical reading skills.
- Establishing the validity of basic critical reading checklist by jury of EFL specialists.
- Establishing the validity of critical reading activities by a jury of specialists.
- Designing the research program following these steps:
  - Designing the frame of the program.
  - Designing the sequence of activities and exercises that comprise the research program.
5. 2 The Findings

The following findings were reached:

1- There was a statistically significant difference (favoring the experimental group) between the mean scores obtained by subjects of the experimental group and those of the control group in critical reading post-test. The difference indicates the effectiveness of the study program in developing those students' critical reading skills.

In light of the above findings, it can be concluded that the program in some organizational skills has positive effects on the students' critical reading. Thus the main aim of the study was achieved proving its effectiveness.

The hypothesis predicted that the experimental group would outperform the control group in post-performance on critical reading test. Analysis showed that the experimental group achieved significantly higher than the control group on the critical reading test, as t-value 44.86 was significant at (0.05) level and eta value was 0.97.
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Table (1)

Means, standard deviations, t-value and significance of differences of the experimental group in the pre and post-performance on the test of critical reading skills.

<table>
<thead>
<tr>
<th>Test</th>
<th>Pre</th>
<th>Post</th>
<th>df</th>
<th>t-value</th>
<th>Sig</th>
<th>D</th>
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</thead>
<tbody>
<tr>
<td>Mean</td>
<td>St-dv</td>
<td>Mean</td>
<td>St-dv</td>
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<td>-----</td>
</tr>
<tr>
<td>Identifying the writer’s purpose</td>
<td>1.00</td>
<td>1.06</td>
<td>7.90</td>
<td>0.99</td>
<td>29</td>
<td>24.79</td>
</tr>
<tr>
<td>Identifying the main idea and details</td>
<td>0.56</td>
<td>0.87</td>
<td>7.10</td>
<td>1.42</td>
<td>29</td>
<td>23.74</td>
</tr>
<tr>
<td>Identifying the organizational pattern</td>
<td>3.33</td>
<td>2.74</td>
<td>9.69</td>
<td>0.18</td>
<td>29</td>
<td>13.09</td>
</tr>
<tr>
<td>Using graphic organizer to integrate information</td>
<td>0.00</td>
<td>0.00</td>
<td>5.46</td>
<td>1.27</td>
<td>29</td>
<td>23.40</td>
</tr>
<tr>
<td>Identifying the transitional word</td>
<td>0.00</td>
<td>0.18</td>
<td>8.86</td>
<td>1.38</td>
<td>29</td>
<td>34.89</td>
</tr>
<tr>
<td>Total score</td>
<td>4.90</td>
<td>3.02</td>
<td>39.30</td>
<td>2.05</td>
<td>29</td>
<td>54.81</td>
</tr>
</tbody>
</table>

Tabulated’ = 1.98 at 0.05

Note: N=30

Table No.(1) shows that the mean scores of the experimental group in the post-performance of all skills and the total score were higher than that obtained in the pre one All t-values were significant.
regarding identifying the purpose of the writer, \( t=24.79 \), identifying the main idea and details, \( t=23.74 \), identifying the organizational pattern \( t=13.09 \), using graphic organizer to integrate information identifying the transitional words \( t =34.89 \), and the total score \( t =54.81 \). The effect size was 20.35, which affirms the positive effect of the study program in developing critical reading skills of the experimental group.

However, the control group achieved significant development as the "t" value 13.19 was significant at 0.05 but lower than that was of the experimental group \( t =54.81 \) as it was shown in the following table.

**Table No. (2)**

Means, standard deviations, \( t \)-value and significance of differences of the control group in the pre and post-performance in the test of critical reading skills.

<table>
<thead>
<tr>
<th>Test</th>
<th>Pre</th>
<th>Post</th>
<th>df</th>
<th>( t )-value</th>
<th>Sig</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>St-dv</td>
<td>Mean</td>
<td>St-dv</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identifying the writer’s purpose</td>
<td>1.13</td>
<td>1.43</td>
<td>3.60</td>
<td>1.24</td>
<td>29</td>
<td>10.08</td>
</tr>
<tr>
<td>Identifying the main idea and details</td>
<td>0.56</td>
<td>1.07</td>
<td>1.33</td>
<td>1.39</td>
<td>29</td>
<td>1.70</td>
</tr>
<tr>
<td>Identifying the organizational pattern</td>
<td>2.60</td>
<td>1.97</td>
<td>4.33</td>
<td>1.82</td>
<td>29</td>
<td>3.82</td>
</tr>
<tr>
<td>Using graphic organizer to integrate information</td>
<td>0.14</td>
<td>0.52</td>
<td>0.42</td>
<td>0.83</td>
<td>29</td>
<td>1.44</td>
</tr>
<tr>
<td>Identifying the transitional</td>
<td>1.33</td>
<td>0.18</td>
<td>2.13</td>
<td>0.34</td>
<td>29</td>
<td>1.76</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>words</th>
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<tbody>
<tr>
<td>Total score</td>
<td>5.76</td>
<td>3.15</td>
<td>11.81</td>
<td>2.65</td>
<td>29</td>
<td>13.19</td>
</tr>
</tbody>
</table>

Tabulated’ = 1.98 at 0.05 Note: N. =30

**Table No.(2)** shows that the mean scores of the control group in the post-performance were higher than the obtained in the pre one but not all t-values were significant. Regarding identifying the main idea and details, (t = 1.70), using graphic organizer to integrate information (1.44), identifying the transitional words (t = 1.76). On the contrary, all t – values of the experimental group were significant and the total score (t = 54.81) was higher than that of the control group (t = 13.19)
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