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The Effectiveness of a Suggested Program in Enhancing EFL Critical Reading and Writing Skills for the Secondary Students in light of Connectivism Theory

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Abstract

The current study aimed at investigating the effectiveness of a suggested Program in enhancing EFL critical reading and writing skills for first year secondary Students in light of Connectivism theory. The researcher adopted the quasi-experimental approach. The participants of the study were two intact classes of (80) students. They were selected from Abu Bakr Al-Seddeek Official Language School, Sheikh Zayed Educational Directorate. The researcher designed a program based on Connectivism theory for enhancing critical reading and writing skills, which was used in teaching the experimental group, while the regular method was used in teaching the control one in the first term of the academic year 2018 / 2019. A critical reading and writing skills test was designed and validated to be used as a pre and post test for the two groups of students. The data were analyzed statistically using a t-test to measure the difference between the performance of the experimental group in the pre-post-test and the difference between the performance of both experimental and control groups in the critical reading and writing skills post-test. The effectiveness of the Connectivism theory-based program in enhancing first year secondary students' EFL critical reading and writing skills, was measured using the effect size technique (Eta Square). The study results revealed that there was a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the experimental group on the pre-test and post-test in the critical reading and writing skills in favour of the post-test. There was also a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the control group and the experimental group on the post-test in the critical reading and writing skills in favour of the experimental group.

Key Words: Connectivism theory; critical reading skills; critical writing skills; secondary students.

Introduction

English is the basic international language of knowledge, business, media, diplomacy and tourism. Hence, it has an influential position in technology, social media, science, business and policy. A great deal of the world publications in all fields of knowledge are written in English. Consequently, EFL learning is a must all over the world as well as in Egypt both inside and outside schools, institutes and universities. By dint of learning English, EFL learners can enhance the confidence for communicating and interacting efficiently in listening, speaking, reading and writing English. For this reason, learning English can be incumbent all over Egypt (Egyptian Ministry of Education, 2014).

Sadiku (2015) illustrates that while learning a language, there are four basic skills for communicating well, they are listening, speaking, reading and writing. As any language in the world, English consists of these skills. EFL learners can be efficient in English via mastering these skills. Reading and writing are indispensable skills in English for communicating and interaction.

Harmer (2010) states that reading is an important skill for verbal communication in social, academic or recreational purposes. Reading effectively and efficiently needs dealing with texts critically. Critical reading is mandatory for both effective writing and research. Furthermore, it helps learners to be creative and innovative. It is also important all over stages of learning languages.

EFL critical reading skills enable learners to analyze, synthesize and evaluate what they read well. Meanwhile, they can think critically (Abd kadir et al., 2014). There are different definitions for critical reading. Wallace and Wray (2011) state that critical reading is the process of evaluating what is read. Tran (2015) indicates that critical reading is the ability of learners for drawing inferences, making conclusions and decisions, solving problems, developing reasoning, comparing ideas, formulating hypotheses and evaluating ideas, situations, characters and events.

According to writing, the success of learners depends on their abilities to communicate effectively, convey their feelings, opinions and needs in written words. Writing is a crucial skill in English. It is considered as a means for promoting and consolidating other language skills. Moreover, writing enables learners to express and convey their ideas effectively. Hence, it should be developed at the early stages of learning.

Nowadays, writing critically for learners is necessary to understand and communicate effectively. Kailani and Muqattash (2012) state that critical writing is crucial for developing thinking and communication. Critical writing needs developing arguments or points of view using reasons, examples and information from sources (EAP Foundation, 2018). Critical writing does not necessarily mean writing about topics negatively. It simply means considering all parts of an argument. A critical writer should consider all views in writing

for illustrating their awareness of the topic issues (University of Leicester, 2009).

Utilizing recent technology in education can change ways of learning and instruction. Accordingly, applying and using modern technology-based teaching strategies and theories in traditional classes can be an effective teaching way. Hence, EFL teachers have the ability to design a convenient technological environment for attracting learners' attention and motivating them to learn well. Moreover, it may help learners to deal with authentic situations. Utilizing technology in classes can be more useful if it is supported by good educational theories and models (Sabzian et al., 2013). Connectivism theory is a modern theory that calls for using and applying modern technology in learning and getting knowledge.

Connectivism is one of learning theories for describing learning and teaching in the digital age. Connectivism depends on complexity and interrelatedness. It incorporates the principle that learning begins with connections. These connections take place on conceptual, social and neural levels (Siemens, 2006; Murdoch et al., 2013). For Connectivism; learning can be considered to be the ability for constructing and traversing connections (Downes, 2010).

Learners connect a network for sharing and finding out new information. Their beliefs can be modified based on new learning (Kop &

Hill, 2008). Knowledge is allotted via networks of technology and people promoting learning for creating and accessing networks (Siemens & Tittenberger, 2009; Downes, 2010). Connectivism -based environment can be defined as an environment for inspiring learning via founding a network resources, sharing and exploring new information using technology(Darrow, 2009; ŞAHİN, 2012; Şahin & Abu Safieh, 2012; Kuna, 2014; Techakosit & Wannapiroon, 2015).

Statement of the Problem

Although EFL critical reading and writing skills are important, reality clarifies that EFL learners are weak in both critical reading and writing skills. Most EFL learners find so many difficulties in reading and writing English critically. For these learners, critical reading and writing skills can be difficult skills to master. Bae and Bachman (2010) state that critical writing learning is one of the hardest tasks a learner encounters.

Apparently, the number of studies conducted in the field of critical reading writing skills was rare. Hence, there was a need for investigating critical reading writing skills and integrating them into the area of EFL learning and teaching. Previous studies indicated that EFL learners had problems with EFL critical reading and writing. They were exposed to futile traditional teaching methods and approaches and have a poor attitude towards

critical reading and writing. They did not have sufficient or convenient opportunities to practice critical reading and writing.

EFL learners' teachers did not have the chance to utilize modern technology-based strategies or theories that could help them to read and write EFL critically. This seems to be an international issue tackled in various studies related to critical reading skills (Balqacim, 2006; Makhyoun, 2008; Khonamria & Sana'atib, 2014; Haromi, 2014; Amer, 2017; Alqatanani, 2017; Attia, 2018; Sabet et al., 2018) and various studies related to critical writing skills (El-Attar, 2013; Abd -Allah, 2016; Madkour et al., 2016; Nassar, 2017; Abd Elrauf, 2019).

The problem of the current study was that secondary students in general and first year secondary students in particular had poor critical and writing skills. They also lacked the sufficient and convenient opportunities to practise them. The available English Language courses hardly provide sufficient activities that consider students' needs as Connectivism theory aims at. In large mixed classes in Egypt, first year secondary students are taught traditionally regardless of their individual differences. Yet, EFL teachers and schools do not make use of modern technological learning and teaching strategies and theories.

Questions of the Study

To overcome this problem, the study sought to answer the following main question:

“What is the Effectiveness of the Suggested Program in Enhancing EFL Critical Reading and Writing Skills for the Secondary Students in light of Connectivism Theory?”

The following sub-questions emerged from the above major one:

1. What are the EFL critical reading and writing skills required to be developed for 1st year secondary students?
2. To what extent do the secondary students master EFL critical reading and writing skills?
3. What is the form of suggested program in light of Connectivism theory?
4. How far can the suggested program be effective in developing the EFL critical reading and writing skills for 1st year secondary students in light of Connectivism theory?

Hypotheses of the Study

The current study endeavoured to verify the following hypotheses:

1. There is a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the experimental group on the pre-test and post-test in the critical reading skills in favour of the post-test.
2. There is a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the control group and the experimental group on the post-test in the critical reading skills in favour of the experimental group.
3. There is a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the experimental group on the pre-test and post-test in the critical writing skills in favour of the post-test.
4. There is a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the control group and the experimental group on the post-test in the critical writing skills in favour of the experimental group.

Delimitations of the Study

The current study was delimited to the following:

1. 1st year secondary students in Giza Governorate.
2. Enhancing English critical reading and writing skills.

3. The program lasted for (10 weeks) for the first semester in the academic year 2018 \ 2019 within 35 hours.
4. The study was conducted at Abu Bakr Al-Seddeek Secondary School, Sheikh Zayed city, Giza governorate where the researcher works.
5. The critical reading skills were identifying the main and supporting ideas, identifying cause and effect relationships, distinguishing between facts and opinions, making comparisons and contrasts, making inferences, giving reasons, making judgments and giving opinions.
6. The critical writing skills were organization and paragraph structure, using language well, delivering the main and supporting ideas, making cause and effect relationships, making comparisons and contrasts, making inferences, making judgments and giving opinions.

Method of the Study

To achieve the aims of this study, the current study utilized the quasi-experimental design. Two intact classes were selected randomly from Abu Bakr Al Sedeek Official Language School, Sheikh Zayed City, Giza Governorate. A class was served as an experimental group and the other was served as a control group. Students of the experimental group were taught using the Connectivism-based program, whereas students of the control group

were taught using the regular method. A pre-post-test was administered to both groups before and after administering the program to the experimental group.

Participants of the Study

The participants of the study consisted of 80 first year secondary students (two intact classes), males and females, randomly selected from Abu Bakr Al Sedeek Official Language School, Sheikh Zayed City, Giza Governorate in the academic year 2018 / 2019. There were 40 students for the control group and 40 students for the experimental group.

Instruments of the Study

1. A Connectivism-based program of enhancing critical reading and writing skills.
2. A pre-post critical reading and writing skills test.
3. A critical reading skills inventory to determine the critical reading skills for first year secondary students.
4. A critical writing skills inventory to determine the critical writing skills for first year secondary students.
5. A scoring rubric for scoring the pre- post critical writing skills test part.
6. Reflection logs.

Main Results of the Study

After administering the Connectivism-based program and pre-post critical reading and writing skills test, a t-test and Eta-square of the Effect Size were used in analyzing data. Scores of the study groups in the pre-post critical reading and writing skills test were analyzed and compared. The findings indicated the following:

1. There was a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the experimental group on the pre-test and post-test in the critical reading skills in favour of the post-test.
2. There was a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the control group and the experimental group on the post-test in the critical reading skills in favour of the experimental group.
3. There was a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the experimental group on the pre-test and post-test in the critical writing skills in favour of the post-test.
4. There was a statistically significant difference at ($\alpha \leq 0.01$) between the mean scores of the control group and the experimental group on the post-test in the critical writing skills in favour of the experimental group.

Table 1 *t-Test Results of Difference between the Control Group and the Experimental Group on the Post Critical Reading Skills Test in the Critical Reading Skills*

Critical Reading Skills	Groups	N	Mean	Std. Deviation	t. value	Sig. Level																																																																											
Identifying the main and supporting ideas	Experimental	40	5.0000	.62877	6.480	.01																																																																											
	Control	40	4.0003	1.52488			Identifying cause and effect relationships	Experimental	40	5.1591	.98697	3.546	.01	Control	40	4.2956	1.40726	Distinguishing between facts and opinions	Experimental	40	4.4773	.66433	6.400	.01	Control	40	2.9543	1.36322	Making comparisons and contrasts	Experimental	40	4.3773	.67433	6.405	.01	Control	40	2.9540	1.36319	Making inferences	Experimental	40	5.0022	.62900	6.490	.01	Control	40	4.0000	1.52499	Giving reasons	Experimental	40	4.3770	.66430	6.405	.01	Control	40	2.9535	1.36305	Making judgments and giving opinions	Experimental	40	2.6818	.51817	3.548	.01	Control	40	2.2955	.63170	Total Scores of Critical Writing Skills	Experimental	40	31.0747	4.76587	39.274	.01		Control
Identifying cause and effect relationships	Experimental	40	5.1591	.98697	3.546	.01																																																																											
	Control	40	4.2956	1.40726			Distinguishing between facts and opinions	Experimental	40	4.4773	.66433	6.400	.01	Control	40	2.9543	1.36322	Making comparisons and contrasts	Experimental	40	4.3773	.67433	6.405	.01	Control	40	2.9540	1.36319	Making inferences	Experimental	40	5.0022	.62900	6.490	.01	Control	40	4.0000	1.52499	Giving reasons	Experimental	40	4.3770	.66430	6.405	.01	Control	40	2.9535	1.36305	Making judgments and giving opinions	Experimental	40	2.6818	.51817	3.548	.01	Control	40	2.2955	.63170	Total Scores of Critical Writing Skills	Experimental	40	31.0747	4.76587	39.274	.01		Control	40	23.4532	8.54659								
Distinguishing between facts and opinions	Experimental	40	4.4773	.66433	6.400	.01																																																																											
	Control	40	2.9543	1.36322			Making comparisons and contrasts	Experimental	40	4.3773	.67433	6.405	.01	Control	40	2.9540	1.36319	Making inferences	Experimental	40	5.0022	.62900	6.490	.01	Control	40	4.0000	1.52499	Giving reasons	Experimental	40	4.3770	.66430	6.405	.01	Control	40	2.9535	1.36305	Making judgments and giving opinions	Experimental	40	2.6818	.51817	3.548	.01	Control	40	2.2955	.63170	Total Scores of Critical Writing Skills	Experimental	40	31.0747	4.76587	39.274	.01		Control	40	23.4532	8.54659																			
Making comparisons and contrasts	Experimental	40	4.3773	.67433	6.405	.01																																																																											
	Control	40	2.9540	1.36319			Making inferences	Experimental	40	5.0022	.62900	6.490	.01	Control	40	4.0000	1.52499	Giving reasons	Experimental	40	4.3770	.66430	6.405	.01	Control	40	2.9535	1.36305	Making judgments and giving opinions	Experimental	40	2.6818	.51817	3.548	.01	Control	40	2.2955	.63170	Total Scores of Critical Writing Skills	Experimental	40	31.0747	4.76587	39.274	.01		Control	40	23.4532	8.54659																														
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	Control	40	23.4532	8.54659																																																																													

Table 2 *t-Test Results of Difference between the Pre-test and Post-test in the Critical Writing Skills of the Experimental Group*

Critical Writing Skills	Application	N	Mean	Std. Deviation	t. value	Sig. Level
Organization & paragraph structure	Pre-test	40	4.0002	1.52497	6.490	.01
	Post-test	40	5.0004	.62876		
Use of language	Pre-test	40	2.2954	.63169	3.547	.01
	Post-test	40	2.6817	.51816		
Delivering the main and supporting ideas	Pre-test	40	4.0003	1.52500	6.500	.01
	Post-test	40	5.0003	.62878		
Making cause and effect relationships.	Pre-test	40	4.2960	1.40730	3.552	.01
	Post-test	40	5.1597	.98698		
Making comparisons and contrasts.	Pre-test	40	4.3770	1.36310	6.403	.01
	Post-test	40	2.9540	.67431		
Making inferences.	Pre-test	40	4.0004	1.52504	6.497	.01
	post-test	40	5.0025	.62903		
Making judgements and giving opinions.	Pre-test	40	2.6819	.63177	3.553	.01
	Post-test	40	2.2957	.51815		
Total scores of critical writing skills	Pre-test	40	23.842	8.60677	36.542	.01
	Post-test	40	29.9036	4.58417		

Discussion of the Results

In light of the results of the study, it is evident that using the Connectivism-based program enhanced first year secondary students' critical reading and writing skills in addition to the meaningful and authentic situations set up through collaboration and participation among students online and in the classrooms. This design made a good and positive atmosphere helping students to learn critical reading and writing skills effectively.

Furthermore, quantitative and qualitative data supported the positive results of the study and indicated that remarkable enhancements observed in all areas of the critical reading skills (identifying the main and supporting ideas, identifying cause and effect relationships, distinguishing between facts and opinions, making comparisons and contrasts, making inferences, giving reasons, making judgements and giving opinions.) and critical writing skills (organization and paragraph structure, use of language, delivering the main and supporting ideas, making cause and effect relationships, making comparisons and contrasts, making inferences, making judgements and giving opinions.) as well.

Findings of the Study

The findings of the current study can be summarized in the following points:

1. Using the Connectivism-based program enhanced first year secondary students' critical reading skills.
2. Using the Connectivism-based program enhanced first year secondary students' critical writing skills.
3. Using the Connectivism-based program increased first secondary students' self-confidence that helped them to acquire critical reading and writing skills efficiently and easily.
4. Using the Connectivism-based program increased first secondary students' active participation and collaboration.
5. Using the Connectivism-based program increased first secondary students' motivation, fun, self learning and independence.
6. Using the Connectivism-based program helped first year secondary students to integrate critical reading and writing skills and saved their time.

Recommendations of the Study

In light of findings of the study, it is important to make some recommendations to enhance students' critical reading and writing skills for Secondary students, EFL teachers, curriculum designers and decision makers.

Recommendations to Secondary Students

- a. Students should read and write critically as critical reading and writing are important nowadays.
- b. Students should utilize Connectivism theory-based modern technology and social networking sites for learning English in general and critical reading and writing skills in particular.

Recommendations to EFL Teachers

- a. EFL teachers should create modern technology-based environment for learning critical reading and writing skills effectively.
- b. EFL teachers should use Connectivism theory strategies, teaching methods and techniques in teaching critical reading and writing skills.
- c. EFL teachers should encourage students to think critically to read and write critically well.

Recommendations to Curriculum Designers and Decision Makers

- a. The syllabus of English curriculum for the secondary stage should emphasize critical reading and writing skills.
- b. EFL teachers should be trained to develop their competencies to have the abilities to enhance students' critical reading and writing skills.
- c. Decision makers should hold conferences workshops for developing critical reading and writing skills in light of Connectivism theory.
- d. Curriculum designers should consider integration of critical reading and writing skills in designing learning EFL materials.

Suggestions for Further Research

To have a comprehensive understanding for the current topic, further research should be considered including the following points:

1. Conducting the current study on other grades in the secondary stage.
2. Conducting the current study on university students.
3. Conducting the current study on the first year secondary students but in other skills of language.
4. Conducting the current study on all grades in all stages but in other skills of language.

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