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The Effectiveness of Problem-Based Learning Program in Developing Critical Thinking Skills among the Secondary Stage EFL Students

A Dissertation Submitted in Partial Fulfilment of the Requirements for the
Ph.D. Degree in Education (Curriculum and Instruction, TEFL)

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فاعلية برنامج فى التعلم القائم على المشكلة لتطوير مهارات التفكير الناقد لدى طلاب المرحلة الثانوية فى اللغة الإنجليزية كلغة أجنبية

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Abstract

Research Title: "The Effectiveness of Problem-Based Learning Program in Developing Critical Thinking Skills among the Secondary Stage EFL Students"

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Abstract: The main purpose of this study was to investigate the effectiveness of problem-based learning (PBL) in developing critical thinking skills for 1st grade secondary school students and to describe students' satisfaction towards PBL. A quasi-experimental pre- post-test control/ experimental group design was conducted. Participants were 60 1st grade secondary school students randomly selected from Abd Al Aziz Al Saud experimental language school, Heliopolis, Cairo in 2016-2017. Tools of the study included: critical thinking skills checklist, a pre-post Watson -Glaser critical thinking appraisal -short form (WGCTA-S) and a questionnaire of students' satisfaction of learning using problem-based learning. A PBL program was designed and taught through using problem-based learning .The participants' pre-post test scores were analyzed using t- test. The results indicated that there were statistically significant differences at (0.05) level between the mean scores of the experimental and the control groups on the post critical thinking test as a whole and in its sub-skills (making inferences, recognition of assumptions, deductions, interpretations, and evaluating arguments)in favour of the experimental group. Also, there were statistically significant differences at (0.05) level between the mean scores of the experimental group on the pre-post administration of the critical thinking test as a whole and in its sub-skills in favour of the the post administration. In addition, most of the students were satisfied with learning through problem based learning.

Key words: Problem-based learning, critical thinking, secondary stage students, students' satisfaction.

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Dedication

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Chapter One

Background and Problem

1.1 Introduction

In a rapidly changing world, every person is challenged to fulfill the global demand especially in developing skills. The impact of the rapid change in society to education is that education must prepare generations to have a certain skills needed by the society. The skills are called 21st century skills. The Partnership for 21st Century Skills has developed 21st century skills that consist of life and career skills, learning and innovation skills, and information media and technology skills.

Thinking is a necessary part of our social and intellectual lives. It is argued that the quality of our lives and of our learning depends on the quality of our thinking. Thinking is part and parcel of being intrinsic to human development and that we gain pleasure from being exposed to intellectual stimulus and challenge (Facione, 2006).

Acquiring thinking skills has been increasingly emphasized in education, especially with forces in globalization demanding its workers to be adaptable over and above being productive. Studies have recommended that students can no longer be passive recipients of given information and called for changes in pedagogical and learning environments that are geared towards developing thinking skills and utilizing creativity.

The teaching and learning process does not only increase student's knowledge but also develop student's creativity, critical thinking skill, characters which are included the character to have responsibility, social skills, tolerance, productivity, and adaptive skills. 21st century skills also emphasize on the ability to think critically, solve problem, communicate, and collaborate each other that are included in higher order thinking skills (Paige, 2009).

One of the main tasks that teachers face is to teach English language learners complex content while they are developing English proficiency. Teachers have to figure out how to make instruction comprehensible to students who are still grappling with their new language and relying on limited linguistic resources to understand instruction. This means that complex academic information must be broken down using simplified, social language and a variety of

scaffolding strategies before cognitively demanding information can be accessible to them. If the language becomes "manageable", students can focus on more difficult abstract concepts and higher levels of reasoning, or critical thinking. Critical thinking is generally recognized as an important skill for students to acquire in the acquisition of academic language (Connolly, 2000)

Critical thinking is a mode of thinking about any subject, content, or problem. It is an ability with which students can improve their thinking quality by skilfully managing their thinking structures and intellectual criteria around them. (Paul & Elder, 2005, updated 2014). Scriven and Paul (2004) defined critical thinking as an intellectually disciplined process in which students actively and skilfully conceptualize, apply, synthesize, and evaluate information generated by observation, experience, reflection, reasoning, and communication. Critical thinking does not expect students to answer the questions put in the class, but instead develops students' sound judgment for problem-solving, decision-making, and higher-order thinking.

Critical thinking is a cognitive process of developing reasonable, logical, and reflective judgment about what to believe or what to do (Faclone, 2000). Halpern, in her text, *Thought and Knowledge: An Introduction to Critical Thinking* (2014) defined critical thinking as the application of cognitive skills or strategies to increase the positive outcome. Through purposeful reasoning, and goal-directed thinking, students can use these cognitive skills and strategies to solve problems, to formulate inferences, to calculate likelihood, and to make decisions.

According to (American Psychological Association (APA)'s Delphi Report (1990), critical thinking has six core elements: interpretation, analysis, evaluation, inference, explanation, and self-regulation. That is, students should know how to comprehend and express meaning or significance. They should know how to identify implicit and explicit relationship and to give logical assessment. Besides, after interpretation, analysis, and evaluation, they should know how to monitor their cognitive process, draw reasonable and logical conclusions, and illustrate the results. Based on APA's definition (1990), ideal critical thinkers should be inquisitive, well-informed, logical, and open-minded. Besides, they should be honest in facing their biases and be careful in making judgments.

To sum up, persons with a disposition to think critically should be these who are inquisitive, truth-seeking, open-minded, analytic,

cognitively mature, systematic, and self-confident (Ferrett, 1997). They always know how to ask appropriate questions, address arguments, and seek evidence to support their thoughts and beliefs. Moreover, they know how to reject information that is incorrect, illogical, or irrelevant.

Critical thinking is recognized as an important skill for students to acquire in academic language (Connolly, 2000), so many studies emphasized teaching it in EFL/ESL Classrooms. Examples of these studies are the following:

Wang's (2009) study intended to investigate whether the incorporation of critical thinking skills into the English conversation class could bring positive effects on the college students' learning outcome in Taiwan. The research results revealed that the students going through the critical thinking English conversation class attained significantly better critical thinking skills in terms of length, focus, content, organization, style, and overall sections. In addition, after applying the critical thinking ability learning system in the class, students in the experimental group attained a greater level of satisfaction.

Cesar's (2010) study investigated the impact of structured reading lessons on the development of critical thinking skills in college students learning English as a foreign language. This study took place during the first level of English in their academic program. Two groups of students were included in the study. One group received traditional reading instruction while the other group had structured reading lessons that intended to create opportunities to operate in higher order thinking levels. Results showed that students who had structured reading lessons did not improve in a significant way compared to the results of the control group in the post-test.

Hashemi & Ghanizadeh (2012) conducted a study to investigate the impact of critical discourse analysis (CDA) on TEFL students' critical thinking (CT) ability in Reading Journalistic Texts classes. In so doing, the study utilized an experimental design with 24 participants in the control group and 29 participants in the experimental group. The participants in the experimental group were instructed to critically analyze teacher-distributed articles and devise follow-up presentations based on CDA. The results of the post-test indicated that CDA has a positive and significant influence on learners' critical thinking ability. CDA was also found to have the highest impact on two components of CT, interpretation and recognizing unstated assumption.