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# **The Effectiveness of Using the Big Six Model in Developing EFL Critical Reading Skills for Secondary Stage Students.**

**A Research in Curriculum & EFL  
Instruction.**

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## **Abstract**

The current study aimed to investigate **The Effectiveness of the Big Six Model in Developing EFL Critical Reading Skills for Secondary Stage Students**. The participants of the study were 60 first year secondary school students at a public secondary school in Giza governorate. They were randomly selected and divided into an experimental group (n=30) and a control group (n=30). The quasi- experimental pre-test and posttest design was used. The Study employed a pre-post critical reading test and analytic rubric. The experiment lasted for two months during which students of the experimental group received training through the proposed treatment based on the Big6 Model while those of the control group received regular instruction. The study results showed evidence that there was a statistically significant difference at 0.05 level between the mean scores of the control and the experimental groups on the post administration of the test, in favor of the experimental group in overall critical reading skills as well as in each critical reading skill separately. It was concluded that using the Big6 Model was effective in developing the required

critical reading skills among the experimental group students. Consequently, it was recommended that the Big6 model should employed in teaching critical reading skills the primary school students and investigating its effect on developing EFL speaking skills and critical thinking skills.

**Key words:** Critical Reading Skills, Big Six Model

### الملخص باللغة العربية

استهدفت الدراسة الحالية دراسة فاعلية استخدام نموذج المهارات الست الكبرى التدريبي في تنمية مهارات القراءة النقدية في اللغة الإنجليزية كلغة أجنبية، شاك في الدراسة ٦٠ طالباً من الصف الأول الثانوي من مدرسة حكومة في محافظة الجيزة، تم اختيارهم عشوائياً وتقسيمهم إلى مجموعتين، مجموعة تجريبية (٣٠ طالبا) والأخرى ضابطة (٣٠ طالباً) اعتمد البحث على التصميم القبلي - البعدي. تم تقديم اختبار مهارات القراءة النقدية في اللغة الإنجليزية، من إعداد الباحثة للمجموعتين التجريبية والضابطة، تلاميذ المجموعة التجريبية تم تدريبهم من خلال استخدام نموذج المهارات الست الكبرى، بينما تم استخدام الطريقة التقليدية مع المجموعة الضابطة، تم إعداد قائمة لمهارات القراءة النقدية ونموذج لتقييم التجربة يهدف إلى انكشاف فاعلية استخدام العلاج المقترح لتنمية مهارات القراءة النقدية للمجموعة التجريبية، وأوضحت نتائج تحليل البيانات إلى تفوق المجموعة التجريبية على أقرانهم في المجموعة الضابطة في التطبيق البعدي لمهارات القراءة النقدية عند مستوى دلالة ٠,٥، وقد تم الإستنتاج في هذه الدراسة إلى أثر استخدام نموذج المهارات الست الكبرى بين طلاب المجموعة التجريبية وفي ضوء هذه النتائج الإيجابية يوصى الباحثون بإستخدام نموذج المهارات الست الكبرى لتنمية مهارات القراءة النقدية في اللغة الإنجليزية لتلاميذ المرحلة الابتدائية بالإضافة إلى تطبيق نموذج المهارات الست الكبرى في تنمية مهارات التحدث والتفكير النقدي.

## 1.1 Introduction

Being aware of a foreign language is extremely essential because it helps in finding various opportunities and this is considered completely true about English language especially as it is a global language(Crystal,2012).Furthermore, foreign Language is the main means of communication that enables students exchange and generate ideas, feelings and opinions. In addition, it plays a very important role for making the human being the top of all creatures. English is considered the language of international communication, media, education, culture and advancement (Abdelwahed,2021). Moreover, all over the world people consider learning English a fundamental necessity nowadays, so learners should attempt new approaches of learning English language(Boser,2020)

El-Azab(2019), Mugableh & Khreisat(2018), Ferdousi(2017) and the Egyptian Ministry of Education (2012, p.5) indicate that English language consists of four main skills: listening, speaking, reading, and writing. Naturally, teaching reading, listening and speaking skills are provided before the students have learned how to write. Reading is considered a source of obtaining knowledge, information and acquiring other language skills.(Robert, 2003). Students don't just need to read , they need to know how to criticize during reading.

## 1.2 Critical Reading Skills

Foreign language skills consist of four major skills classified into two main categories; Productive skills(writing, speaking) and receptive skills; reading and listening. Reading is considered one of the four major skills because of its role in expressing thoughts and responding to what someone read. It is also well-known that the information received through listening and reading channels is reproduced through writing(Robert,2003). Thorndike (1917) explored and studied readers' errors. He stated that readers should connect with everyday tasks that necessitate their constructing judgements about their responses. He also stated that people should think critically about “the reading of the text-book or reference as a mechanical, passive, undiscriminating task”.

A critical reading approach in pedagogy helps students understanding what they read logically to be an active in one's reading is to pose questions of and thinking about the text. Readers should adopt a critical attitude towards texts through an active process of asking question (Benoit, 2007).Everyone can read but not everyone can be critical in reading so learning to be critical in reading is very important for students. Critical reading is high level of comprehension skills, because a critical reader is able to go beyond the literal interpretation of what they read. Students must be able to evaluate critically what they read effectively and efficiently to do their homework. (Diman et al, 2020).

Rosdiana (2015) mentions that critical reading is important to be integrated to help students in understanding the text and develop decoding and vocabulary skills in order to read better for that reason, critical reading can develop the affective aspect which many class lack of it. (zhang, 2007). Critical reading helps to deepen a student's comprehension of a text, resulting in a positive reading experience. During critical reading, students can determine the main idea and the overall structure of a text (Diman et al, 2020).

Hudson (2007) points that critical reading skills are skills that help students to analyze, synthesize and evaluate what is read. During critical reading skills, teacher makes students see the cause, effect or compare relationships the text, or adopting critical stance word the text. Critical reading skills enables students to understand a text and evaluate the arguments in the text. It makes them read between lines to understand effectively and efficiently. (Tasnimi, 2017). Nowadays, readers are not only observers but also participators and interpreters as they are involved in complex discussion of the meaning of social texts.

(Grabe&stoller,2013), (Valley,2011) and Walker (2007) propose the main steps or strategies of critical reading as follows:

- 1) The first step: previewing;** means gathering much information about the text before reading it. This stage contains skimming and predicting. Skimming is to understand the main idea of a reading text by reading just specific parts of the text.
- 2) The second stage: Annotating and analyzing:** By making notes as a critical reader can read with a pen on his hand to write



down notes in the reading text. Also, by analyzing the main idea and supporting ideas in the reading text. The critical reader during analyzing stage should analyze evidence, sources, author bias, assumptions and source evaluation.

**3) The third stage: Reviewing:** re-reading the text at least three times to make as much as you can the reader can account the notes and unfamiliar words.

**4) The fourth stage: Responding:** by summarizing or discussion with others. These activities presents the main ideas of the text briefly by retelling or writing it by readers own words.

(Fadhillah, 2017).

Critical readers do not simply look at the words with the intention of filling their memories. They should analyze, interpret, synthesize and digest what they read. they question not only what they read but also what was implied and suggested. Critical readers accept what makes most sense rejecting what is distorted, and false. (Tasnimi, 2017).

The purpose of critical reading is to create judgments about how a text work. During critical reading, students are not only absorbing or understanding, but also interpreting, analyzing and evaluating any text. It should face on the pattern, assumptions, and meaning between words. (Diman et al, 2020). Critical reading skills are wanted to be developed by enhancing information literacy skills that makes students find, organize, use and communicate information in all its various format. So the most important model to develop information literacy and critical reading skills is the Big Six model.

### 1.3 Big Six Model

Big Six Electronic Model is formulated by Eisenberg and Berkowitz in 1988 as it is considered one solution to the information problem especially the one adopted not only in schools but also in business and society in general. Michael created the Big6 model to information problem-solving and worked with thousands of students at that time, besides in public schools, business, government and communities to improve their information and technology skills. Through its application, a development of information awareness skills and information search skills are made for students of all ages and all subjects , as it can build real experience and lively situations for students; to implant skills of information awareness within the school curriculum. It is better to access information skills to relate to classroom activities which must be provided with ways to think and use the information and the variety of activities that help to develop literacy skills, through work a research on one of the topics, write articles for magazines and school press. (Mendouza et al,2020; Khamees,2017; mall,2011) and Usman(2021).

Eisenberg and Berkowitz (2010)define it as one of the models that information awareness is used, and it is used in the problem solving process to obtain information on the path of an organized structure and integrated with the curriculum by many researchers. Mendouza et al(2020) and Baji (2018) define it as an effective tool for helping students learn the research process which allows researchers to effectively find, use, apply, and evaluate information. It is an effective tool for helping students learn the research process as an inquiry process.

Willer and Eisenberg(2014) recommended the necessity of using Big6 in the curriculum and classroom practices. It helps to grow personality of each students and the development of their individual skills, as well as making the students able to solve problems in an effective way. According to Baji(2018), Biradar (2017), Khameese(2017)and Eisenberge (2010), there are six stages of Big Six Model as follows;

### **First, Task Definition:**

This stage includes defining the task and determining information needs and the specific information related to the problem. It is therefore important to determine the types and amount of information that research needs. Teachers should guide students to take this step by giving them vague information about the assignment to get them to ask questions, the questions must be in higher-order-thinking. then in small groups, students should discuss the nature of the specific task.

### **Second, Information Seeking Strategies**

The second step of the Big Six skills model involves making use of various strategies to get to the information sources appropriate to the defined task. It refers to identifying information sources available and suitable for informational needs; as it is a stage that makes students think comprehensively and creatively by using a brain storming strategy that let them expect all possible sources that may include prints, electronic and human sources, technology sources such as database, news, and internet to collect information.

### **Third, Location and Access**

This stage depends on locating the useful, reliable and relevant sources. The students have to specify the locations of the information they need to find the required information by recognizing multiple systems sources of information in their different traditional and electronic forms and knowing how to manipulate the various traditional-automated indexes to find the locations of information.

### **Fourth, Use of Information:**

The fourth step of the Big six skills model is the use of information as students engage in reading, hearing, or viewing information in a source. Reading should be deep and deep and students should use skimming and scanning technique to help students gather effectively relevant information. Here, The focus should be on specific skills as; objectivity, avoiding bias, searching for contradictory information, taking notes, copy, paste, and related information.

### **Fifth, Synthesis:**

In this stage, students combine information from multiples sources, start preparing the final project and conclusions are drawn. He uses the graphical method, the oral method or one of the computer programs. The product of the synthesis simply depends on the information problem solving situations like writing notes about any reading text, making a decision, communicating in person, telephone conversation, email, chat or video conferencing.

## **Sixth, Evaluation:**

This stage is the culmination of the Big6 information problem-solving process. The evaluation stage is concerned with identifying the extent and effectiveness of the final product in meeting new tasks, on the efficiency of the processes and procedures. Besides, students can evaluate their work, their own operations, or their colleagues or mentor their actions, by comparing the final product with the requirements set by the teacher.

### **1.4 The relationship between the Big6 Electronic Model and EFL critical reading skills;**

Alexandre and Jetton (2003) mention that improving reading is a critical issue because academic achievement and learning are dependent on the s' ability to read and comprehend at high levels of using technological skills. Coiro(2002) adds that reading community have seen the Internet and other technological media as an important thing to learn and the Big6 Model has the ability to improve the Internet skills for the reading community by following Big6' stages.

Henry(2006) approves that preparing students to read critically for information in the 21<sup>st</sup> century means developing new skills and strategies. Teacher should teach students how to integrate search skills with curriculum to develop literacy skills that reading requires.

Students must become proficient in the new literacies of ICT because new technologies are brought into the classroom (Berkowitz, 2002). Leu et al.(2004) define these literacies in the following fashion: The new literacies of the Internet and other Information Communication Technologies (ICTs) include the skills, strategies, and dispositions necessary to

successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other ICTs to identify important questions, locate information, critically evaluate the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others and these skills are the same skills of the Big6 Model. International Reading Association,2001) and Henry(2006) mention that critical reading specially on the Internet requires locating information, evaluating information critically, communicating answers and identifying the most important questions. These are the most important functions of critical reading.

From the above, there is a great connection between critical reading skills and the Big6 Model. This is indicated in the study of Birader(2017), Mall(2011), and Eisenberg(2010) who show that location and access is an important stage of the Big6 Model that students can recognize multiple sources and know how to manipulate the various traditional-automated indexes to find the locations of information. Also, students can evaluate their assignments by judging the effectiveness and the efficiency of the information.

If anyone does not have the ability to locate information in an effective and strategic manner, then all other reading activities are impeded, as the user cannot get beyond this point. Therefore, the ability to search and locate information can be described as a gatekeeper skill in online reading. Students who can quickly read and locate information are then able to use that information for learning and move on to other elements of reading on the Internet; students who cannot are unable to move beyond the search process. Because searching for and locating information are such critical parts of information use on the Internet, they demand our attention (Henry, 2006)

To develop critical reading skills, students should enhance their search skills on the Internet. Teachers can start the school year by helping their students learn about Internet searching, the skills and strategies they need to become efficient searchers. One way to start is to develop a common searching metalanguage, knowledge of the searching process, and a basic understanding of the many search engines available to access information (Cummins, 2001). The researcher of the present research suggests using the Big6 Model to develop critical reading skills.

The researcher suggests using every stage of The Big Six model to develop critical reading skills separately. The Big6 Model stages reflects EFL critical reading steps. The first step of critical reading skills is previewing which

can be developed through the first stage of Big6 model. Grabe and stoller, (2013) mention that previewing stage means gathering much information about the reading text before reading it and asking oneself some questions to answer it later in the other stages by using skimming and scanning strategies. That is the same role of the first stage of the Big6 “Task Definition” which means defining the task and identifying the information needed. It means identifying the task, posing the needed questions, and determining the information to be gathered and Mendouza(2020) and Eisenberg(2010).

The second step of critical reading is annotating and analyzing which depend on information seeking strategies and location and access stages. In the second step, students can seek the main ideas of the reading text, unfamiliar words, key words; determine the sources of the text and analyze evidence, assumptions, sources and author’s bias.

The third step of the critical reading skills is reviewing or re-reading the text which depends on the synthesis and use of information stages. Students read the text several times to the final meaning of the text and write down the meaning of unfamiliar words, purpose of the text and author’s bias. And finally the fourth step of critical reading is responding that depends on the evaluation stage of the Big Six model by summarizing the reading text, judging the effectiveness and efficiency of the reading text information and discussing the text with others. At the fourth step students can present the main idea of the text briefly by retelling or writing it by readers’ own words.



## 1.5 Research Problem

The problem of this study was concerned with the first year secondary school students' weakness in the required critical reading skills. The existence of the problem of the present study was emphasized through a number of steps as follows ;

### **First: The experience of the researcher;**

In the light of the researcher's experience as a teacher of English, it is observed that first year secondary school students have difficulties in their critical reading skills which were obvious through their performance in class and in situations which require them to interact in English. The majority of students lacked the required EFL critical reading skills which enable them to successfully communicate in English. Despite the importance of EFL critical reading skills in the secondary school, they are not given due attention. Therefore, students are unable to acquire these skills or use them properly.

### **Second: The Pilot Study**

The researcher conducted a pilot study by administering a critical reading skills test to a group of 1<sup>st</sup> year secondary school students (30 students) in the second term of the school year 2021- 2022 (see Appendix1).The researcher chose 1<sup>st</sup> year because they should have gained some critical reading skills such as using suitable vocabulary ,following the

writing mechanics . The test aimed at measuring and examining students' critical reading skills. Results revealed that 60% of the students got less than the average score and there was a remarkable weakness in critical reading skills skills .

### **Third: Previous Studies:**

The existence of the problem of this study was further supported by reviewing previous related studies. Previous studies on writing in private schools such as (Fareed, 2015) who mentions that students have a critical reading problem as they don't know how to define their critical reading task ,seek information ,locate and evaluate it. Besides they can't find the exact information they want it, and in a form they want in order to use the information effectively. (Foster,2015) points that students need information during reading process and the government education depends on regular instructions that make their writing very shallow. Previous studies on critical reading in Egyptian schools such as the studies of Abdel-Gawad(2021) and Abdel Fattah (2017) who indicated that students have low levels of learning critical reading skills. Furthermore, the research problem may also be supported by the results of Soliman (2017) and Ali (2016) revealed the persistence of the problem of teaching and learning EFL critical reading skills for both teachers and students. In addition Rohmah(2018) and Tasnimi(2014), and Nazir(2007) showed that students don't have enough skills to seek information online, locate it, synthesis and evaluate their works alone or with

their classmates. This made the researcher feel that it is important to conduct the current research to support developing secondary school students critical reading skills.

## **1.6 Statement of the Problem**

The problem of this study was concerned with 1<sup>st</sup> year secondary school students' weakness in the required EFL critical reading skills. Thus, the present study attempted to develop the required EFL critical reading skills for the first year secondary school students throughout the use of the Big Six Electronic Model.

## **1.7 Questions of the study:**

For tackling the problem of the study, the present study attempted to answer the following main question:

“What is the Effectiveness of The Big Six Electronic Model in Developing the Required EFL critical reading Skills For the First year Secondary School Students?”

From this main question, the following sub-questions were derived:

- 1-What are the required EFL critical reading skills in English that should be developed for the first year secondary school students?
- 2- What is the proposed framework for using the Big Six Electronic Model to develop the required EFL critical reading skills for the first year secondary school students ?

3- What is the effect size of using Big Six Electronic Model on developing each main critical reading skills for the first year secondary school students?

### **1.8 Hypotheses of the study:**

1-There is a statistically significant difference between the mean scores of the experimental and control groups on the post administration of the overall critical reading skills test ,in favor of the experimental group ".

2-There is a statistically significant difference between the mean scores of the experimental group in the pre administration and post administration of the overall critical reading skills test in favor of the post administration.

### **1.9 Research Aim**

The purpose of this research was to examine the effectiveness of teaching using Big6 Electronic Model in developing EFL critical reading skills for first year secondary school students

### **1.10 Significance of the Study**

Significance of the present study was in the following:

1-Shedding the light on the importance of using Big6 model in teaching and learning processes in general, and in developing EFL critical reading skills in particular.

2- Developing EFL critical reading skills among secondary school students.

3-Developing EFL teachers' skills of integrating the Big6 skills in EFL classes.

4-responding to recent international trends in integrating the Big6 model inside schools.

### **1.11 Delimitations of the Study**

The study was delimited to the following:

- 1) The required critical reading skills for the first year secondary school students. (see appendix 2)
- 2) A group of 1<sup>st</sup> year secondary school students was randomly chosen from one of the governmental secondary schools in Giza. The sample was divided into two classes (30 students each) assigned as the experimental and the control group. The researcher chose 1<sup>st</sup> year secondary school students as they needed to develop some important critical reading skills.
- 3) The first semester of the academic year 2022/2023 for the 1<sup>st</sup> secondary school students.

## 1.12 Definitions of Terms

### 1.12.1 Big6 Model:

Baji (2018,1) defines it as a systematic approach to information problem-solving that relies on critical thinking skills as it is the most model for information literacy instruction in schools worldwide. In addition to Baji, Sonia Santana (2014, 5) defined it as a model within six non-linear steps the research process that makes the process of obtaining information more efficient and effective, and it has been implemented in libraries and the school environment as an approach to informational awareness and solving the informational problem. Kamba,M and Buba,A.(2022) points that The Big6 information literacy skills Model is a process model for information problem-solving. It integrates information search and use skills along with technology tools in a systematic process to find, use, apply, and evaluate the information for specific needs and tasks.

Big Six Electronic Model in the present study were defined operationally as a general academic plan that aims at developing writing skills for the 1<sup>st</sup> year secondary school students. This model is considered an effective model consists of six skills or stages, used in the research scientific process to help students, teach them research Skill, enjoy the levels of higher order thinking, developing linguistic skills, and in obtaining information to solve problems that face them.

### **1.12.2 Critical Reading Skills**

Tasnimi(2017) defines critical reading as an approach which persuades readers not simply to pass their eyes over the words, but to evaluate what they read in order to find the strengths and weaknesses of the argument. Such a perspective toward reading helps readers accept only what makes sense and reject what is distorted.

Abdel Kader et al(2014) indicates that Critical reading skills as skills that help students to analyze, synthesize, and evaluate what is read. However, in order for students to acquire these skills, they need to be exposed and taught how to be critical readers.

Critical reading in the present research was operationally defined as a highest level of reading behavior that learn students to analyze, evaluate, interpret and judge.

## **1.13 Method and variables of the study**

### **1.13.1 Design of the Study**

The research design that used in this research was the two-group (experimental and control) pre-posttest quasi-experimental design. The two groups were a sample of 60 (30 as control and 30 as experimental) 1<sup>st</sup> secondary school students which were randomly selected.

### **1.13.2 Variables of the Study**

- The Independent Variable: using the Big Six Electronic Mode.
- The Dependent Variable: Developing EFL critical reading skills for the first year secondary school students

### **1.13.3 Participants of the Study**

The participants of the study were randomly selected from one of Albadrasheen governmental secondary schools in Giza Governorate, namely, Elomda Abdel- Rahman Aboel- Magd secondary school. The participants used in this study were (60) students divided into two groups, (30) as experimental and (30) as control. Students' age ranged from 15 to 16 years . It is worth mentioning that first year secondary school students usually have four periods of English per week. Each period continues for 40 minutes. The independent sample 't' test revealed that there was not a statistically significant difference between the mean scores of the experimental and control groups on the pre- administration of the skills test.

## **1.14 Instrumentation**

### **1.14.1 The EFL critical reading skills checklist**



Before designing the instruments of the study, the required critical reading skills should have been determined. So, the researchers of the study had set the English Critical reading skills checklist for the required skills for the 1<sup>st</sup> secondary school students. The items of the checklist were suggested by some related studies and literature previously mentioned, such as Rohmah(2018) and Tasnimi(2014), and Nazir(2007)

#### **1.14.1.1 Aim of the EFL Critical Reading Checklist:**

The EFL Critical reading skills checklist, prepared by the researcher of the present study, aimed at identifying English Critical reading skills required for 1<sup>st</sup> secondary school students.

#### **1.14.1.2 Construction of the checklist:**

The checklist consists of the following skills:

- 1-Distinguishing between facts and opinions.
- 2-Identifying author's purpose.
- 3-Making inferences about characters.
- 4-Making evaluation and judgement.

## 5-Analysing the reading text.

### **1.13.1.3 Validity of the checklist**

The first version of the checklist was submitted to seven Jury members specialized in the field of curriculum and EFL instruction to determine to what extent these skills are appropriate and inquired for first year secondary schools students. the jury members approved the checklist and maintained that it is appropriate for first year secondary schools students after doing the following modifications:

- 1) Reducing the handled number of the skills to go well with the determined time of the experiment.
- 2) Integrating some skills.
- 3) Replacing some of the sub skills with others.

And the modifications of the checklist were taken into consideration.

### **1.13.2 EFL Critical Reading Skills Test**

#### **1.13.2.1 Test Purpose**

The test aimed at measure secondary school students' Critical reading skills.

#### **1.13.2.2 Test Description**

The critical reading test included two reading text to answer critical questions about them.

#### **1.13.2.3 Piloting the test:**

Thirty students were selected for the pilot administration. These students were randomly selected from first year secondary stage in Mazgona secondary school,

Badrashin governorate, students of the piloting test didn't belong to the group of the study. They were excluded from the present experiment.

#### **1.13.2.4 Test Timing**

Timing of the EFL critical reading test was estimated by calculating the time taken by all the students (30) used for piloting the test, divided by the number of the same students. This formal shows the time allotted for the test that was counted as following:

Test time = summation of the time taken by all students

The number of the students

= 40.minutes = 1200

30

So, it was estimated that (40) minutes would be suitable to complete the Critical reading tasks of the test.

#### **1.13.2.5 Test Instruction**

Teacher asked students to write their names. The test was administrated for the experimental and control groups simultaneously.

#### **1.13.2.6 Test Reliability**

The reliability of the test was calculated throughout the Cronbach's Alpha as The researcher used this method to calculate the reliability of the test by applying it to a sample of (30) student. The Cronbach's Alpha coefficients for the value of the Cronbach's Alpha for the overall test was (0.817) .This value indicates that the test has an appropriate degree of stability, and this means that the

values are appropriate to be reliable and indicate the validity of the test for application.

#### **1.13.2.7 Test Validity**

In this research, the researcher relied on the validity of the jury members to emphasize the validity of the content, also the internal consistency.

The jury member were asked to read the test and validate it according to these criteria;

- 1-The appropriateness of the test to the measured critical reading skills and students' level.
- 2.The suitability of its content to the students 'level.
- 3-The appropriateness of test items as a whole and as specified for each critical reading skill to the students' level.

By following the jury members recommendations, the test was modified into its final form.

#### **1.13.2.8 Pre-Testing**

The experimental and control groups were assessed by the same test before the administration of the suggested program based on the Big6 Model to determine students' level at EFL critical reading skills.

### 1.13.2.9 Post-Testing

The same test was administered to examine the effectiveness of the suggested program based on the Big6 Model in developing the students' EFL critical reading skills.

### 1.13.3 Sessions based on the Big6 model

#### Sessions aims and description

- The aim of the suggested frame work is to develop the required Critical reading skills for the first year secondary school students by using Big six Electronic Model .
- The suggested units were applied on the students of the experimental group in the first term of the scholastic year (2022/2023).
- The suggested framework includes: the students handouts: the booklet and the teacher's guide. The teacher's guide represents a resource for the researcher (as a teacher) and for other teachers about how to use Big6 Model to improve EFL critical reading skills. It contained detailed step – by – step notes on applying Big6 effectively while proceeding the tasks.
  - The handouts contain the content material of the introductory and the instructional sessions. The handouts are distributed to the students to work on to develop their

critical reading skills through Big Six Electronic Model (Big6). The students' handouts are divided into two parts: The Introductory session and the Instructional sessions.

#### **1.14 Procedures of the experiment**

1-Choosing a random sample of 60 1<sup>st</sup> secondary school students and dividing it into two groups: a control group and an experimental group

(30 students each).

2- Pre-administering the writing skills test to both experimental and control groups to ensure their equivalence before the experiment so as any progress in the experimental groups' performance would be due to using the Big6 model.

3. Using the Big6 model with the experimental group and the regular instruction with the control group in teaching EFL critical reading skills.

4-Post-administering the critical reading skills test to both experimental and control groups.

5.Collecting and analyzing the obtained data.

6-Presenting and discussing the results of the study.

7. Introducing recommendations and suggestions for further research

## 1.15 Data analysis

Data analysis was conducted using the statistical package for social science (SPSS). Both descriptive statistics (means and standard deviations) and t-test were used in data analysis. The t-test was used to calculate the differences between the mean scores of the control group and the experimental group in the two main skills with their sub skills.

## 1.16 Results

The results are presented in terms of the research hypotheses as following

## 1.17 Verifying the Hypothesis of the research

### 1.17.1 The First Hypothesis

The first hypothesis Stated that “ **There is a statistically significant difference between the mean scores of the experimental and control groups on the post administration of the overall critical reading skills test ,in favor of the experimental group**”.

Table ( 1.1)

the value of “t” test and the level of its significance for the difference between experimental group and control group in post-test of the overall Critical Reading skills test

Variables	Groups	N	Mean	Std. Deviation	df	t	Sig
Total Test	Experimental Group	30	27.43	2.112	58	26.340	0.000

Variables	Groups	N	Mean	Std. Deviation	df	t	Sig
	Control Group	30	14.47	1.676			

In order to verify the first hypothesis the researcher statistically compared between the mean scores of the experimental group and the control group on the post administration of the of the overall critical reading skills test. The "t" value was (26.340) which was statistically significant at 0.05 level. Thus, there was a statistically significant difference between the mean scores of the experimental group and the control group on the post-administration of the of the overall critical reading skills test, in favor of the experimental group., in favor of the experimental group. So, the first hypothesis was verified.

### 1.17.2 The Second Hypothesis

The second hypothesis Stated that " **There is a statistically significant difference between the mean scores of the experimental group in the pre administration and post administration of the overall critical reading skills test in favor of the post administration** " .

-To test the validity of this hypothesis, the (t) test was employed to two paired groups in pre and post-test of the overall critical reading skills test for the experimental students group. The results are shown in the following table (1.3):

**Table (1.3)**

**the value of "t" test and the level of its significance for the difference between the experimental group in the pre and posttest of the overall critical reading skills test**



Variable	Test	N	Mean	Mean paired differences	Std. Deviation	Std. Deviation paired differences	df	T	Sig
Total test	Pre-test	3	13.90	13.53	1.826	1.655	2	44.779	0.000
	Post-test	3	27.43		2.112				

**In order to verify the second hypothesis, the researcher compared statistically between the mean scores of the experimental group on the pre and post administrations of the overall critical reading skills test. The "t" value was (44.779) which was statistically significant at 0.05 level. Thus, there was a statistically significant difference between the mean scores of the experimental group on the pre and post administrations of the overall critical reading skills test, in favor of the post-administration**

### **1.18 Discussion of the Results:**

In displaying the results of the study, the researchers presented effect of the development of experimental group students' critical reading skills due to the use of Big6 model. This is shown in the difference between the pre and post administrations mean scores of the experimental group pupils. The difference between the

students' mean scores in the pre and post administrations of the test was statistically significant. This is because the students were aware of the importance of using Big6 model in developing critical reading skills. The research has shown positive results as the Big6 model brought about significant improvement in enhancing the critical reading skills of the experimental group students. The researchers ensured that the use of the Big6 model had highly contributed to enabling students to define their tasks or needed assignments, learn ways of searching for the internet then do a citation for the sources they find, after that how they use the information they find, synthesis and evaluate it to make sure that positively affected their performance on the critical reading test post administration. In addition, Big6 develop students' problem solving skills, complex thinking, and information management skills., helps students to use technology comfortably and to understand that technology tools are available tools to help them do their jobs. Thus, it facilitates the integration of technology across the various grades and subjects and assists teachers in changing their roles from providing information to teaching trainers presenting tools and tips.

## 1.19 Recommendations

In light of the results of the present study, the following recommendations

could be suggested:

- 1- Investigating the effect of the Big6 model on developing EFL speaking skills.
- 2- Suggesting using Big6 Electronic Model to develop the information literacy skills.
- 3- More emphasis should be placed on developing students' EFL thinking skills by using Big6 model.
- 4- Assessing the impact of using Big6 model on developing critical thinking skills.
- 5-Teaching through using Big6 model should be conducted at schools and teachers should be trained on using it in the EFL teaching learning process.
- 5- Suggesting using Big6 model for developing writing skills of the primary schools pupils

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