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**A Smart-board Based Program to Develop
EFL Primary School Pupils Writing Skills and
their Self-efficacy**

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A Smart-board Based Program to Develop EFL Primary School Pupils Writing Skills and their Self-efficacy

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Abstract

The aim of the current study is to measure the effect of using smart board on improving paragraph writing skills and developing self-efficacy among fourth grade students. The participants in the current study were (43) pupils of 4th grade primary school that are randomly selected in Hafez Enan Official Language School in Salamoon El Komash of Dakahleya governorate. The study found that There is a statistically significant difference in favor of the Post – Test with the highest mean score = (108.42), where the value of $t = (15.976)$, a statistically significant value at 0.01 in the Writing Skill Test . And For the (All sub- skills) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (60.72), where the value of $t = (15.960)$, a statistically significant value at 0.01. There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.77), where the value of $t = (16.746)$, a statistically significant value at 0.01, and for all self-efficacy scale, there is a statistically significant difference in favor of the Post – Test with the highest mean score = (27.07), where the value of $t = (10.741)$ a statistically significant value at 0.01. Eta Square values ranged from (0.41 – 0.88), indicating that the effect of using the smartboard have a large Effect in Enhancing English writing skills of 4th grade primary school students.

المخلص

هدفت الدراسة الحالية إلى قياس أثر استخدام السبورة الذكية في تحسين مهارات كتابة الفقرة وتنمية الكفاءة الذاتية لدى طلاب الصف الرابع الابتدائي، وقد تكونت عينة الدراسة من (٤٣) طالب وطالبة من الصف الرابع الابتدائي تم اختيارهم عشوائياً من مدرسة حافظ عنان الرسمية للغات بمركز سلامون القماش بمحافظة الدقهلية، وقد توصلت الدراسة إلى وجود فرق دال إحصائياً لصالح الاختبار البعدي بأعلى متوسط حسابي = (١٠٨,٤٢)، حيث بلغت قيمة $t = (15.976)$ ، وهي قيمة دال إحصائياً عند مستوى ٠,٠١ في اختبار مهارة الكتابة. وبالنسبة لـ (جميع المهارات الفرعية) يوجد فرق دال إحصائياً لصالح الاختبار البعدي بأعلى متوسط (60.72) =، حيث بلغت قيمة $t = (15.960)$ ، وهي قيمة دالة إحصائياً عند مستوى دلالة ٠,٠١. ويوجد فرق دال إحصائياً لصالح الاختبار البعدي بأعلى متوسط (5.77) =، حيث بلغت قيمة $t = (16.746)$ ، وهي قيمة دالة إحصائياً عند مستوى دلالة ٠,٠١، وبالنسبة لجميع مقياس الكفاءة الذاتية يوجد فرق دال إحصائياً لصالح الاختبار البعدي بأعلى متوسط (27.07) =، حيث بلغت قيمة $t = (10.741)$ ، وهي قيمة دالة إحصائياً عند مستوى دلالة ٠,٠١. وترواحت قيم مربع إيتا بين (٠,٤١ – ٠,٨٨)، مما يشير إلى أن استخدام السبورة الذكية له تأثير كبير في تحسين مهارات الكتابة باللغة الإنجليزية لدى طلاب الصف الرابع الابتدائي.

Introduction:

Writing is one of the most difficult and complex English language skills. It requires time and training to master it efficiently. This view is reinforced by many specialists including (Nunan ,1995, Brown ,2001, Harmer 2007) asserting that writing is a multiple activity with complex elements such as the development of syntax, ideas, organization, grammar, vocabulary, content, use of punctuation and communication skills. Writing is often seen as a complex process. Academic Writing has its own conventions, not just in terms of style and language, but also structure, and the use of paragraphs is one of those conventions. Paragraphs don't just make a text easier to read by breaking it up on the page. They are a key tool in creating and signposting structure in academic writing, as they are the building blocks of an argument, separating each point and showing how they link together to form the structure. They also have a characteristic structure of their own (Newcastle University, 2024).

Paragraph is a series of sentences that are organized and coherent, and are all related to a single topic. Almost every piece of writing you do that is longer than a few sentences should be organized into paragraphs (Writing Tutorial services,2016). A paragraph is a distinct section of writing covering one topic. A paragraph will usually contain more than one sentence. A typical paragraph will be 5-7 sentences, but this is by no means a rule. The length is determined by the topic and the content(Grammar Monster, 2020).

(Stealy,2023) stated that smart boards — also called interactive whiteboards or e-boards — improve the learning experience while making teachers' lives better. They allow teachers and students to learn collaboratively, share files, access online resources and use educational software. teachers can create more dynamic lessons by writing or typing on screen, calling attention to certain topics with highlights, circles, arrows or zooming in, and sharing multimedia content such as videos, webpages, presentations and images. Boost student engagement. Help students succeed A study in the Universal Journal of Educational Research proved that students who learned via an interactive whiteboard did significantly better on standardized tests than those who did not use the technology. The same study points out that permanence in learning is increased through visual materials, paintings, symbols and screen designs.

1. Review of Literature and Related Studies**1.1 Writing skill**

writing is a vital skill that concerns with generating ideas and one of the major skills that pupils need to master. It is concerned with converting ideas into words to create a suitable meaning as the pupils produce a

sequence of sentences in a specific order and connected together in certain ways to form a coherent whole.

Matsuda(2003) states that to be deprived of the opportunity to learn how to write is to be excluded from a wide range of social roles, included those which the majority of people in industrialized societies associate with power and prestige. Writing is considered as a tool for creation and using ideas for communicative objectives in an interactive way. Accordingly, the successful transmission of ideas from an addresser to another via a text and this exchange of information through writing becomes a powerful mean to promote and develop the language skills. Qishta(2017) mentioned that writing is a motor mechanical skill. It is similar to the skill of learning to hold a pencil but requires a conscious effort. Writing is a mean of communication and mental activity for describing ideas and thoughts. In other words, writing is a matter of construction where man needs to combine his mental activity with physical one, following specific writing conventions to produce a message to be communicated.

1.1.1 What is a paragraph?

A paragraph is a group of closely related sentences that develop a central idea. It can also be said as a group of sentences that fleshes out a single idea. In order for a paragraph to be effective, it must begin with topic sentence, have sentences that support the main idea of that paragraph and maintain a consistent flow. (Bambang Sutrisno,Siti Jamilah(2018).

1.1.2 Problems students face in writing

Research suggests that writing something worthy of reading is a tough task for native and non-native learners alike because one has to be careful about a number of things ranging from spelling to organization of text (Rass, 2015). But these problems are severe for the non-native speakers of the English language. A study conducted in Bangladesh found that students have problems in writing in terms of spelling, punctuation, vocabulary, grammar, sentence structure, and organization of ideas (Afrin, 2016). A similar study conducted in Israel revealed that sentence structure and paragraph organization were the major problems of Arab students in writing (Rass, 2015). In addition, one study published in Sudan showed that students have various problems in organization such as not differentiating between topic and closing sentences, not developing a paragraph properly, or not focusing on one idea in their paragraph. Similarly, Pakistani students also face great trouble in writing in English. In research conducted in Khyber Pakhtukhuwa (a province of Pakistan), it was found that even postgraduate students made mistakes in subject-verb agreement, verb tense,

inappropriate vocabulary, and spelling (Jamil, Majoka, & Kamran, 2016). A study conducted in Lahore on college-level students stated that learners of a second language face difficulties in writing a “well-organized” presentation of information (Farooq et al., 2012). The same study highlighted spelling, punctuation, capitalization, the task of thinking in Urdu (the national language of Pakistan) and then translating the thought, and technicalities of grammar as major challenges faced by students in Pakistan. A similar research study done in Karachi showed that undergraduate learners of English face issues of vocabulary, syntax, content selection, topic sentence, and organization (Fareed, Ashraf, & Bilal, 2016).

1.2 Self-efficacy

Self-efficacy has played important role in developing student’s EFL writing skills. (Samah Mohamed 2020) defined self- efficacy as the pupil’s beliefs and trust in his/ her abilities to do a task and achieve a goal. This self-efficacy can reflect teacher’s expectations of pupil’s behavior in a specific situation. (Nancy 2016) defined self-efficacy as the pupil’s beliefs and trust in his or her abilities to do a task and achieve a goal. This self-efficacy can reflect teacher’s expectations of pupil’s behavior in a specific situation. Many researchers (Rymer,2014, ,Afaf Miteb Ahmed 2018, and Al-Sayed 2021) stated that self –efficacy refers to a person’s belief in his or her ability to perform a specific skill , or task entrusted to him or her ,or reach an objective and is focused on future goals.

1.2.1 Writing self-efficacy

It is believed that because the beliefs of self-efficacy cannot be generalized to all areas and vary according to the task, when self-efficacy is assessed in relation to writing , it is called writing self-efficacy (Eggleston,2017). As there is a relationship between low self-efficacy and poor writing. Some researchers such as Shang(2010), Williams(2012), Shumow (2014), Elnagar(2016), and Diab(2019) assured that there is a positive relationship between writing and self-efficacy. The results of their studies proved that developing pupils’ self-efficacy leads to developing their writing skills.

Many researchers defined witing self-efficacy as (Shell,Murphy and Brunning, as cited in Kirmizi ,2015, and Samah Mohamed 2020) defined writing self-efficacy as ones beliefs in their ability to successfully perform writing tasks at a given level. Writing self-efficacy could reflect teacher’s expectations of developing the pupil’s EFL writing sub-skills namely; use of appropriate vocabulary, use of grammar properly, have correct spelling, use

of punctuation marks correctly, coherence(unity and organization), in a specific situation to achieve his/her goal (Samah 2020).

Also Sarkhoush(2013) conducted a study in order to investigate whether pupil's writing performance was related to self-efficacy in writing . Three instruments were used to collect data (writing apprehension test, self-efficacy writing scale, and a questionnaire on attitudes towards writing. The results indicated that self-efficacy is related to writing and pupil's with high self-efficacy perform better in writing than those with lower self-efficacy.

1.2.3 Academic self-efficacy

According to (Ming Cheng 2023) self-efficacy varies according to the domain of demands made on the individual. The suggestion is that in academic settings, it is academic self-efficacy that needs to be considered, rather than generalized self-efficacy. The first differs from the latter in that academic self-efficacy beliefs are those which are directed specifically towards academic domains. This contrasts with general self-efficacy beliefs which are those that are directed towards non-academic, general domains. More specifically, academic self-efficacy refers to the individuals' convictions that they can successfully perform given academic tasks at designated levels. Many studies have reported a positive correlation between academic self-efficacy and academic performance, whereas generalized self-efficacy measures appear to be less closely correlated. More specifically, academic self-efficacy is positively correlated with the number of hours spent studying. A possible explanation for these correlations is that students with a strong sense of academic self-efficacy not only manage and plan their time more effectively but are also better at monitoring their efforts and able to use their knowledge and skills more efficiently. In addition, these individuals are more likely to view difficult tasks as challenges to be mastered rather than threats to be avoided. They also tend to recover their confidence quicker after setbacks or failures. In contrast, low academic self-efficacy beliefs impede academic achievement and, in the long run, they can create self-fulfilling prophecies of failure and learned helplessness that can have a negative impact on one's psychological well-being. Students with low academic self-efficacy may perceive tasks to be more difficult than they actually are. Such a belief can lead to stress, depression, anxiety and inefficient problem-solving strategies. Moreover, compared to students with high levels of academic self-efficacy - who attribute their failures to insufficient preparation that can be improved in the future - students with low academic self-efficacy attribute their failures to low ability, which is something that they perceive to be innate and permanent.

1.3 Smart board

One of the modern technologies is the smart board or the interactive smart board. The smart board is one of the high-quality technologies that allow the teacher to be creative easily and for students to interact and the only one in the current global market that uses touch and not only the pen, and thus serves students with diverse skills and different methods of comprehension. It also enhances students' understanding of body concepts across different school subjects such as: Science, technology, English learning, and Mathematics (smartboard in Egypt 2023). Hence, in 2016, the Egyptian Ministry of Education declared that 5179 interactive boards were distributed to several secondary schools. It declared that interactive boards were distributed in 13 Egyptian cities (Mohammed, 2016).

That indicates that the Egyptian Ministry of Education is keen on improving the quality of school education. It indicates that the latter ministry is keen on providing students with convenient learning environment.

Today, many Egyptian schools employ tablets and interactive boards in order to improve the quality of the provided education and keep up with latest developments. Through using tablets and interactive boards, students and teachers can access electronic curricula at any time. All students and teachers have username and password to access the systems of the tablet and interactive boards (Hussein 2019).

The use of interactive boards enables teacher to use creative instructional approaches to teach students. To use the smart board efficiently, teachers at Egyptian schools were enrolled in training courses that improve their ability in using interactive boards (Hussein 2019).

Also (SCHOOLNET 2022) smart boards are beneficial in the classroom. By providing an interactive and collaborative learning environment, smartboards have aided in the transformation of classrooms into active learning environments. An interactive whiteboard in many schools has replaced the overhead projector. Smart Board technology in the classroom can improve the understanding of your curriculum by making a dull lesson into an exciting, interactive experience. Smart boards are an excellent addition to. Students learn from a combination of a computer, a projector, and other features such as an audio system, video conferencing, etc. into a single interactive device in a enabled class.

1.3.1 What is a smart board?

According to (Adept 2021) Imagine being able to navigate on a board like you would on a computer. This time, instead of writing, the board

can search and save things for you. We know evolution has been a topic of debate regarding humans, but evolution for boards in schools has been prominent over the years. And speaking of boards, let us introduce you to a modern way of teaching: interactive whiteboards, or SMART Boards. Interactive boards originated in 1991, but they're becoming resourceful in today's society. SMART Board is an interactive whiteboard that is receptive to touch, which allows you to write and move things around.

SMART Boards work by connecting to a PC via an HDMI cable. The SMART Board displays what's on the computer and allows you to see what's on the board.

SMART Boards grant you the ability to tap things with a finger, and they also come with special-coloured pens to write with. This can save teachers time from buying EXPO markers when it comes to writing on a whiteboard.

Advanced versions of smart boards now allow students to work on a problem on the board at the same time. Before, only one person could touch the board since smart boards wouldn't respond to multiple touches.

Also (Pitzer College 2023) described the smart board as an interactive whiteboard that uses touch detection for user input. You use it the same way as you use a computer, with your fingers instead of a mouse, to edit a document, browse websites and collaborate on projects. Everything displayed on the whiteboard can be marked up, captured and saved for later use and references.

(Wikipedia 2022) defined it An interactive whiteboard (IWB), also known as interactive board or smart board, is a large interactive display board in the form factor of a whiteboard. It can either be a standalone touchscreen computer used independently to perform tasks and operations, or a connectable apparatus used as a touchpad to control computers from a projector. They are used in a variety of settings, including classrooms at all levels of education.

2. Statement of the problem:

The problem of the study can be stated in that most primary school pupils need their writing skills to be developed since they lack some essential writing sub skills. Such as spelling mistakes, lack of cohesion and cohesiveness, and grammatical mistakes. Thus, the current study attempts to use multimedia based program to develop the primary skills of primary pupils and their self-efficacy.

3. Questions of the study:

- 1) What are the paragraph writing skills necessary for primary school pupils?
- 2) What is the effectiveness of using Smart -board in enhancing paragraph writing skills of primary school pupils?
- 3) What is the effectiveness of using smart -board in improving self-efficacy of primary school pupils?

4. Aim of the study:

The current study aims at:

- 1- Assessing the students' performance in paragraph writing in English before and after the program.
- 2- Studying the effect of using smart board on improving paragraph writing skills and developing self-efficacy among fourth grade students.

5. Importance of studying:

The importance of the current study lies in the following:

- 1- Helping students to improve their paragraph writing skills.
- 2- Developing the self-efficacy of the fourth grade students.

6. Definition of terms:

6.1 Paragraph :

paragraph is a series of sentences that are organized and coherent, and are all related to a single topic. Almost every piece of writing you do that is longer than a few sentences should be organized into paragraphs (Writing Tutorial services,2016). A paragraph is a distinct section of writing covering one topic. A paragraph will usually contain more than one sentence. A typical paragraph will be 5-7 sentences, but this is by no means a rule. The length is determined by the topic and the content(Grammar Monster, 2020)

6.2 Self- efficacy:

It defined as learners' confidence in one's ability to complete academic tasks(Bandura, 1997;Pajares, 1996, Zimmerman,2000).

Self-efficacy is related to individuals' beliefs about their abilities and their self-confidence when performing certain tasks. Therefore, individuals must be encouraged, and create an incentive that affects their ability to perform the tasks, until they have the conviction that they will succeed in performing the appropriate tasks to achieve the desired results.

6.3 Smartboard

(Abdul Majid,2019) Stated that it is clear that the smart board is one of the innovations of the technological development that the world is experiencing now, and we must invest this technology in our educational in

institutions to advance the educational process and exchange knowledge to build a generation capable of facing challenges with its stock of scientific knowledge.

The smart board allows students to use many educational programs, which increases their motivation to learn the subjects they are studying, and thus increase their interaction with it. The educational curricula, as they work to support students' aspirations towards keeping pace with the technological developments that surround this, increase their motivation, increase their achievement in the educational process, and develop them in order to achieve the goals of the educational process(Samaha,2011).

7. Research Methods and Procedures

7.1 Participants

The participants in the current study were two classes of 4th grade primary school students that are randomly selected in Hafez Enan Official Language School in Salamoon El Komash of Dakahleya governorate. The first class is the experimental group as this group used smart board based program to develop EFL primary school pupils writing skills and their self-efficacy, while the other group will use a traditional program for enhancing writing skills.

7.2 Research instruments:

The following instruments were designed and used by the researcher :

- Pre\ Post writing skills test to measure primary stage students' writing skills before and after applying the proposed smart board based activities.
- An self-efficacy Scale to measure students' self-efficacy writing skills.

7.2.1 The Writing test:

Aims

The writing test aimed to measure the development of writing skills of 4th year primary school students before and after applying the proposed treatment.

Description

After submitting the sub-skills of the 4th year primary school students, the researcher developed a final writing test in the light of the jury's suggestions. The developed writing test in its final form consisted of (9) questions.

Validity and Reliability of Writing Skill Test

To measure the validity , reliability and the timing of the test , it was piloted to a group of students (n = 24) other than the participants in the main study

Difficulty, ease and discrimination coefficients for test questions:

difficulty is defined as the percentage of examinees answering correctly. The formula for determining the optimum difficulty for a test is as follows:

$$\text{optimum difficulty} = P + \frac{T-P}{2}$$

where,

P = the number of items a student could be expected to get correct by chance

T = the total number of items on the test

The discrimination index (D) is computed by subtracting the number of students who got an item right in the lower group (RL) from the number who got it right in the upper group (RL) and dividing the difference by the number in one group.

The following table illustrates Difficulty, ease and discrimination coefficients for test questions:

Table (1) Difficulty, ease and discrimination coefficients for test questions

<i>Question N.</i>	<i>Difficulty</i>	<i>ease</i>	<i>discrimination</i>
1	0.57	0.43	0.49
2	0.68	0.32	0.46
3	0.70	0.30	0.45
4	0.66	0.25	0.25
5	0.55	0.45	0.34
6	0.60	0.40	0.31
7	0.58	0.32	0.35
8	0.62	0.38	0.42
9	0.54	0.40	0.33

It is clear from the table that the difficulty coefficients values for the Writing Skill Test ranged from (0.54 to 0.70) and that the values of the coefficient of discrimination ranged from (0.25 to 0.49), which were acceptable.

Reliability and validity coefficients of Writing Skill Test:

The Cronbach's alpha method was used to determine the reliability of the Writing Skill Test. the coefficient of Cronbach's alpha (Chiu et al., 2009) used to examine the relativity of the results of the field study in

generalizing the results. If the coefficient of alpha is more than 0.070, and it is good for research purposes. If the coefficient of alpha is more than 0.070, and it is good for research purposes. Table (2) shows the reliability and validity's coefficients results of the list addressed to the (2) using the Cronbach's alpha coefficient and the validity coefficient using this equation, validity coefficient = $\sqrt{\text{Cronbach's alpha coefficient}}$: The following table illustrates Reliability and validity coefficients for test questions:

Table (2) Reliability and validity coefficients for test questions

<i>Question N.</i>	Cronbach's Alpha coefficient values	Validity's coefficient
<i>1</i>	.855	0.924
<i>2</i>	.879	0.937
<i>3</i>	.879	0.937
<i>4</i>	.833	0.857
<i>5</i>	.827	0.922
<i>6</i>	.818	0.901
<i>7</i>	.857	0.909
<i>8</i>	.869	0.921
<i>9</i>	.888	0.903
<i>Writing Skill Test as all</i>	.872	0.933

Table (2) shows that the values of the Cronbach's alpha coefficient and the Validity's coefficient are acceptable for all Questions. The closer the value of the Cronbach's alpha coefficient than the correct one, So, it can be noticed that there is a high statistically significant positive correlation between the subjects of the study's scores on both the pre-post Writing Skill Test. So, the Writing Skill Test is reliable.

7.2.2 Self-efficacy Scale:

Aim

The self-efficacy scale was designed in order to measure students' self-efficacy before and after using the Smart board -based activities. It was used at the beginning and at the end of the treatment.

The internal consistency of self –efficacy scale:

The scale was applied on 24 students who were randomly chosen from Hafez Enan Official Language School in Salamoon El Komash of Dakahleya governorate, during the second term in the academic year 2023/2024.

The reliability analysis of self-efficacy scale

The reliability of self –efficacy scale was calculated from the application on a random sample consisted of 24 students from 4th Hafez Enan Official Language School in Salamoon El Komash of Dakahleya

governorate, during the second term in the academic year 2023/ 2024 and the calculation of Alpha Cronbach which was. It is a significant value at .01 level and this indicates to the consistency of the current scale and the validity coefficient using this equation, validity coefficient = $\sqrt{\text{Cronbach's alpha coefficient}}$: The following table illustrates Reliability and validity coefficients for self-efficacy scale :

Table (3) Reliability and validity coefficients for self-efficacy scale

<i>Items N.</i>		Cronbach's Alpha coefficient values	Validity's coefficient
1	I can brainstorm ideas related to the topic	.778	0.963
2	I can use ideas to compose sentences related to the topic efficiently	.852	0.905
3	I am confident in my ability to arrange paragraph sentences efficiently	.752	0.910
4	I use punctuation in paragraph sentences Efficiently	.852	0.847
5	I trust my ability to choose the appropriate vocabulary efficiently	.734	0.928
6	I can use grammar rules efficiently	.810	0.913
7	I can use vocabulary efficiently without spelling mistakes	.832	0.922
8	I can organize paragraphs efficiently	.888	0.910
9	I can deal with the difficulties of paragraph writing efficiently	.814	0.808
10	I can use the correct tense in writing paragraphs	.830	0.910
<i>self-efficacy scale</i>		.780	0.950

8. Results and Discussion

In this chapter, the researcher presents the analyzing of the obtained data to get to the conclusion and recommendation of the study. Data obtained were organized, analyzed and tabulated using Statistical Package for Social Sciences, SPSS, version 25 for PCs running using Microsoft Windows. T-test was used for analyzing the obtained data. Moreover, the results of the study are presented by relating them to the study hypotheses.

8.1 Results Related to the Hypotheses of the Study

i. Hypothesis One:

The first hypothesis predicted that There is a statistically significant difference between the mean scores of the experimental and control groups on the post test of the writing test in favor of the experimental group.

To verify this hypothesis, Paired t -Test was used to test the hypothesis, i.e., to investigate the difference between the post-test of the experimental group in the Writing Skill Test. The following table illustrates the results:

Table (4)
Comparing the performances of the study sample in the Writing Skill Test at Pre and Post-Test

Writing Skill Test	Group	N	Mean	Std. Deviation	t	df	Sig.
	Pre - Test	43	65.63	13.67	15.976	84	0.000
Post – Test	43	108.42	11.02	Non sig.			

The previous table illustrates:

There is a statistically significant difference in favor of the Post – Test with the highest mean score = (108.42), where the value of t = (15.976), a statistically significant value at 0.01.

The following figure illustrates the difference between the mean score in the Pre - test of Writing Skill Test as compared to the Post – Test:

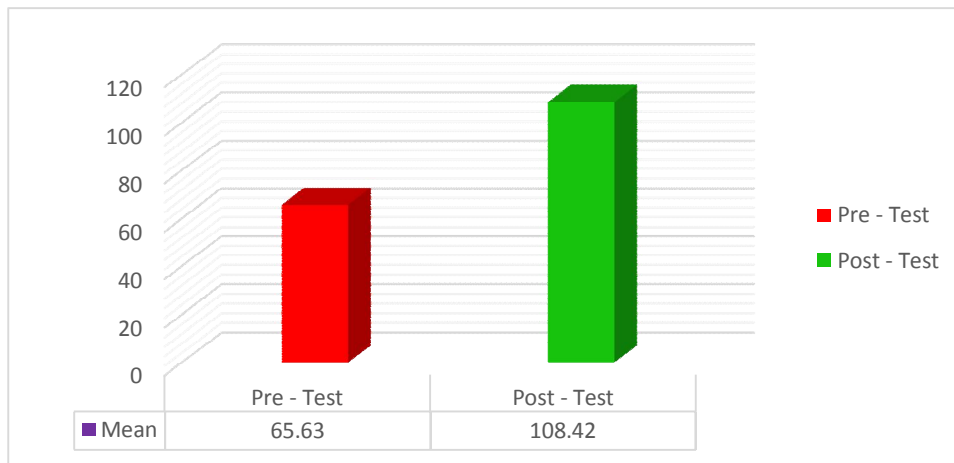


Figure (1) difference between the mean score in the Pre - test of Writing Skill Test as compared with the Post - Test

It was obvious from table (4) and figure (2) that the score of the study sample in post-test is remarkable and higher than the score of the pupils pre-test , which means that there was a statistically significant difference at 0.01 level between the attained mean score of the experimental and that of the control one in favor of the experimental group in the post-test of the writing test. The estimated t-value is (15.973). It is significant at (0.01) level in favor of the post-test of the experimental group. The mean of the experimental group in the post-test was (108.42) and that of the control group was (65.63). So the mean of the experimental group was higher than that of the control one. Moreover, the deviation of the experimental group is higher than that of the control group. The deviation of the experimental group was (13.67) and that of the control group was (11.02).

These results can be explained like following:

In schools, smart classrooms with smart boards help teachers deliver the best quality education to their students. Also, With the help of a digital board for classrooms, audio, video, graphics, charts, and graphs are all intelligently integrated on a single platform. Additionally, the smart board operates smoothly thanks to multiple controls. An interactive smart board is a simple and easy-to-use tool for teaching a variety of subjects such as math, science, and English. And the large screen of the smart board can display an infinite number of visual elements, which will benefit visual learners. Students are better able to absorb the concepts being taught because the classes are audio-visual. This is one of the biggest benefits of the smart board for classrooms With a smart board, you can teach a large group of children without worrying about their attention span. Students enjoy visual learning, which will eventually draw them to the lessons. A smart board can enhance teaching and learning in the classroom. It provides teachers with the ability to create a personalized learning environment that promotes mental and physical growth by allowing students to engage more interestingly and interactively. Furthermore, smart boards are equipped with cutting-edge virtual and smart teaching techniques that give teachers the freedom to choose the best possible approach to complement what is learnt in the classroom. All of this reasons makes using smart-broads in classroom so important that enhancing writing skills for pupils in primary stage.

This result is consistent with the results of Al-Saleem (2012), a smart board supports the language learning process. There are three reasons for that. Firstly, it supports interaction and communication in class. Secondly, it helps in the presentation of new cultural and linguistic items. Thirdly, it improves speaking abilities. Also Povjakaloas (2012) conducted a study to

investigate teaching grammar to young learners using interactive whiteboard. The main aim of his thesis is to design teaching objects for interactive whiteboard to teach English grammar in the 5th grade of primary school. He has confirmed that teaching using the interactive objects met the expectations in the field of pupils' motivation and effectivity of the educational process". Sen & AGir (2014) examined in their study the effects of using an interactive white board in teaching English on the achievement of primary school students. Findings showed that the use of IWB increases the students' English academic success when compared to the use of blackboard and using IWB in teaching English affects primary school students positively. The following table (5) indicated the difference between the Pre and Post-Test in sub-skills (Organization, Development, Word choice , Mechanics, Grammar, Cohesive, Cohesion):

Table (5)

T-Test Result of the Mean Scores of the Experimental Group Students in the sub-skills at Pre and Post-Test

Sub skills of the writing skills	Group	N	Mean	Std. Deviation	t	df	Sig.
Organization	Pre - Test	43	2.49	0.960	15.940	84	0.01
	Post – Test	43	5.60	0.849			Non sig.
Development	Pre - Test	43	3.14	1.226	9.606	84	0.01
	Post – Test	43	5.47	1.00			Non sig.
Word choice	Pre - Test	43	2.26	0.978	15.356	84	0.01
	Post – Test	43	5.47	0.960			Non sig.
Mechanics	Pre - Test	43	2.51	1.94	8.369	84	0.01
	Post – Test	43	5.33	1.04			Non sig.
Grammar	Pre - Test	43	3.95	.147	6.390	84	0.01
	Post – Test	43	5.53	0.667			Non sig.
Cohesive	Pre - Test	43	3.60	1.53	8.005	84	0.01
	Post – Test	43	5.65	0.686			Non sig.
Cohesion	Pre - Test	43	2.84	0.998	13.073	84	0.01
	Post – Test	43	5.37	0.787			Non sig.
All sub- skills	Pre - Test	43	32.21	10.28	15.960	84	0.01
	Post – Test	43	60.72	5.61			Non sig.

The previous table illustrates:

- 1) For the skill (Organization) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.60), where the value of t = (15.940), a statistically significant value at 0.01.
- 2) For the skill (Development) There is a statistically significant difference in favor of the Post – Test with the highest mean score =

- (5.47), where the value of $t = (9.606)$, a statistically significant value at 0.01.
- 3) For the skill (Word choice) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.47), where the value of $t = (15.356)$, a statistically significant value at 0.01.
 - 4) For the skill (Mechanics) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.33), where the value of $t = (8.369)$, a statistically significant value at 0.01.
 - 5) For the skill (Grammar) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.53), where the value of $t = (8.369)$, a statistically significant value at 0.01.
 - 6) For the skill (Cohesive) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.65), where the value of $t = (8.005)$, a statistically significant value at 0.01.
 - 7) For the skill (Cohesion) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.37), where the value of $t = (13.073)$, a statistically significant value at 0.01.
 - 8) For the (All sub- skills) There is a statistically significant difference in favor of the Post – Test with the highest mean score = (60.72), where the value of $t = (15.960)$, a statistically significant value at 0.01.

The following figure showed the difference between the mean score of the Pre and the Post-Test in sub-skills:

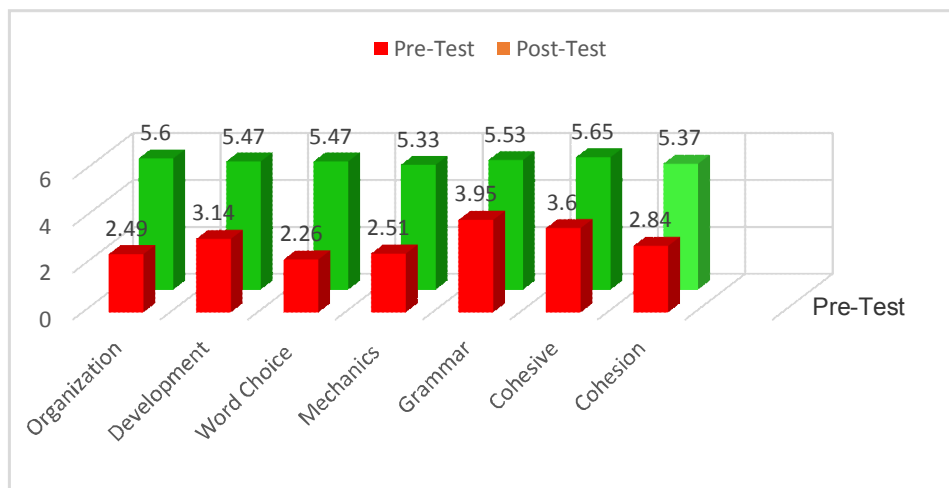


Figure (2) the difference between the mean score of the Pre and the Post-Test in sub-skills

It was clear from table (5) and figure (2) that there is a difference between the mean score of the Pre and the Post-Test in sub-skills in favor of the Post – Test with the highest mean score = (60.72), where the value of $t = (15.960)$, a statistically significant value at 0.01. All of that was because using the smart board in the classroom is one of the most important technology tools you can use. Not only does the usage of the smart board benefit the students but it also has benefits for the teacher as well (Springer, 2011).

This result was consistent with the findings of many studies such as Hasan & Ibraheem (2018) which supported the use of Interactive Whiteboard as it has a positive influence on the grammatical competence of the learners. Davidovitch & Yavich, (2017) in their study indicated that the use of smart boards contributes to the student’s success and to improving the student’s learning process. It is a significant criterion of good teaching. One more study for Jelyani, Janfaza & Soori (2014) that revealed the positive effect smart boards have on student engagement, motivation, learning styles, and the capability of enhancing the students’ understanding.

ii. Hypothesis Two:

The second hypothesis predicted that There is a statistically significant difference between the mean scores of the experimental and control groups on the post test of self-efficacy scale in favor of the experimental group.

To verify this hypothesis, Paired-samples t -Test was used to test the hypothesis, i.e., to investigate the difference between the post-test of the experimental group in the self-efficacy scale. The following table illustrates the results:

Table (6) Comparing the performances of the Experimental Group Students in the self-efficacy scale at Pre and Post-Test

	Items	Test	N	Mean	Std. Deviation	t	df	Sig.
self-efficacy scale	I can brainstorm ideas related to the topic	Pre	43	3.05	1.55	6.898	84	Non. Sig. 0.01
		Post	43	5.05	1.09			
	I can use ideas to compose sentences related to the topic efficiently	Pre	43	3.44	1.46	8.996		
		Post	43	5.63	0.618			
	I am confident in my ability to arrange paragraph sentences efficiently	Pre	43	4.72	0.701	8.076		
		Post	43	5.77	0.480			
	Use punctuation in paragraph sentences Efficiently	Pre	43	3.65	0.842	9.433		
		Post	43	5.49	0.960			

	Items	Test	N	Mean	Std. Deviation	t	df	Sig.
	I trust my ability to choose the appropriate vocabulary efficiently	Pre	43	4.58	1.11	3.494		
		Post	43	5.33	0.837			
	I can use grammar rules efficiently	Pre	43	4.14	0.710	6.475		
		Post	43	5.33	0.969			
	I can use vocabulary efficiently without spelling mistakes	Pre	43	4.09	1.288	7.627		
		Post	43	5.07	0.549			
	I can organize paragraphs efficiently	Pre	43	3.98	0.408	16.746		
		Post	43	5.77	0.571			
	I can deal with the difficulties of paragraph writing efficiently	Pre	43	1.77	0.684	19.115		
		Post	43	5.23	0.972			
	I can use the correct tense in writing paragraphs	Pre	43	2.49	0.960	15.940		
		Post	43	5.60	0.849			
	All Self-efficacy scale items	Pre	43	19.44	3.86	10.749		
		Post	43	27.07	2.59			

The previous table illustrates:

There is a statistically significant difference in favor of the Post – Test with the highest mean score = (5.77), where the value of $t = (16.746)$, a statistically significant value at 0.01, and for all self-efficacy scale, there is a statistically significant difference in favor of the Post – Test with the highest mean score = (27.07), where the value of $t = (10.741)$ a statistically significant value at 0.01.

The following figure illustrates the difference between the mean score in the Pre - test of self-efficacy scale as compared to the Post – Test:

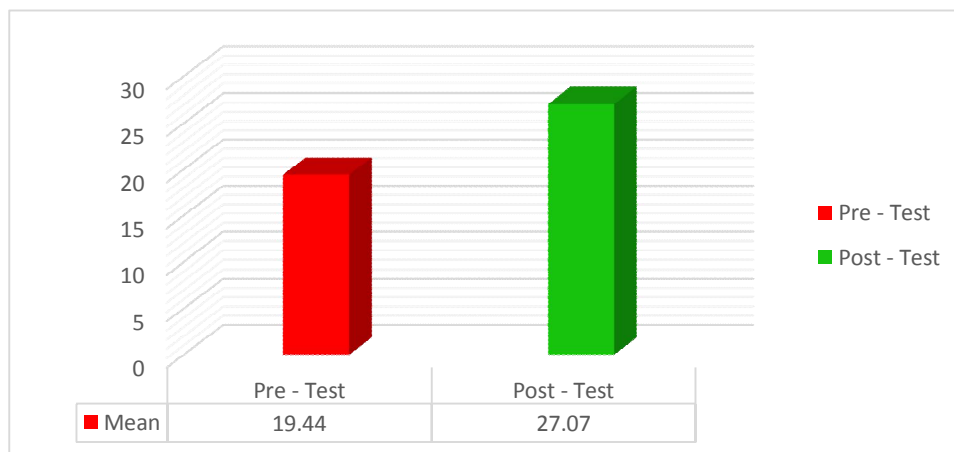


Figure (3) The difference between the mean score in the Pre - test of self-efficacy scale as compared with the Post - Test

It was obvious from table (6) and figure (3) that there is a difference between the mean score in the Pre - test of self-efficacy scale as compared with the Post – Test in favor of post-test. This result is consistent with many researchers such as (Donnelly,2009; Ramet, 2007 & Dornyei,2005) asserted that there are many benefits of using smart-broads to enhancing writing skills. It creates a enjoyable and supportive tone in the classroom. It offers rewards in a motivational manner through the development of group cohesiveness, and makes learning more stimulating and enjoyable as it breaks the monotony of classroom events and increase the attractiveness of tasks through enlisting them as active task participants. Consequently, it builds learners' self-efficacy and confidence through providing encouragement and promoting cooperation among learners. The significance of emotional dimensions in language learning and their positive or negative contribution to success have been studied by scholars in quest of reaching firm conclusions on factors influencing learning despite the elusive nature of psychological aspect (Doğan,2016). EFL learners' self-efficacy played an important role in English language learning and is usually considered as critical factor affecting their English language proficiency.

iii. Effect size:

To calculate the Effect size, the researcher used eta squared (η^2). Eta squared can range from 0 to 1 and represents the proportion of variance in the dependent variable that is explained by the independent (group) variable.

It can, however, be calculated using the information provided in the output. The procedure for calculating Eta squared is provided below:

The formula for eta squared is as follows:

$$\eta^2 = \frac{t^2}{t^2 + df}$$

Effect Size is large when > 0.50 η^2 ($0.80 \leq$

Effect Size is Medium when > 0.20 η^2 ($0.50 \geq$

Effect Size is small when) η^2 ($0.20 \geq$ (*El-Kenany, 2012, P. 571-578*)

The following table illustrates the values of Eta Square:

Table (7) Eta Square Values

Skills	Eta squared	Effect size
Organization	0.44	Medium
Development	0.41	Medium
Word choice	0.59	Large
Mechanics	0.60	Large
Grammar	0.88	Large
Cohesive	0.80	Large
Cohesion	0.67	Large
All Skills	0.86	Large

The previous table illustrates that Eta Square values ranged from (0.41 – 0.88), indicating that the effect of using the smartboard have a large Effect in Enhancing English writing skills of 4th grade primary school students.

The smartboard has a satisfied level of effectiveness (1.2 as in Blake’s, 1972) in Enhancing self-efficacy of 4th grade primary school students, the researcher calculated Blake Modified Gain Ration and it is:

$$\text{Black Modified Gain Ratio} = \frac{\overline{Y} - \overline{X}}{T - \overline{X}} + \frac{\overline{Y} - \overline{X}}{T}$$

Y = Mean of scores for the post test for the experimental group students;

X = Mean of scores for the pre-test for the experimental group students;

T = Total score in the test.

The registered Blake value is found to range between 0-2 and this allows claiming that the smart board can be described as effective since the obtained ration is 1.2 and above which shows its effectiveness for the participants in the experimental group. The following Table (8) presents the differences in the mean scores between the pre- and post-tests:

Table (8) Blake Modified Gain Ratio for Pre – Test and Post Test

Total score	Mean in the pre test	Mean in the post test	Modified gain ration	Significance
60	225.72	355.18	1.30	Accepted as it is above 1.2

The previous table shows that the smart board can be described as effective in achieving its aims since the gain ration (1.30) is higher than 1.2 This all indicates that the smart board was effective enough to help students Enhancing their self-efficacy.

9. Conclusion

The main purpose of the study was to using a smart board based program to develop EFL primary school pupils writing skills and their self-efficacy. Based on the results of this study, the following points were concluded:

1. The current study provided evidence to the effectiveness of using smart board for Enhancing EFL primary school pupils writing skills and their self-efficacy.
2. Using smart board can substantially have better effects on Writing Skills of Primary Stage Students if they are done in a unique, better, technological and animation methods.
3. The current study provided evidence to the importance of Enhancing Writing Skills of Primary Stage Students.
4. The current study provided evidence that the smart board can be described as effective in achieving its aims and it was effective enough to help students Enhancing Writing Skills .
5. It was noticed that there is no caring about merging the smart board to be used by senior teachers and supervisors in all schools. So, the present study presented a model of Using smart board activities can substantially have better effects on Writing Skills and self-efficiency to be applied in all Primary schools.
6. It is important to take into consideration the effectiveness of using smart board while preparing EFL student teachers in faculties of Education.

10 Recommendations

Based on the previous results, the researcher recommends the following:

10.1. Suggestion for the Teacher

- It has been founded that smart board can be used to develop and motivate the students' writing ability. Due to the finding, English teacher can help the students to increase their writing ability by using smart board.
- The English teachers should provide interesting activities and materials, in order to prevent the students from being bored and encourage the students' attention in learning English, especially in writing text.
- Teachers should prepare themselves for the use of technology such as smart board.
- Teachers should have a clear idea of how a traditional classroom is different from classroom equipped with a Smart Board.
- Not only English language teachers but all subject teachers also should share ideas, resources and experiences to help develop professionally.

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- Provide specific training courses to prepare teachers to easily use smart boards in classrooms.

10.2. Suggestion for the Students

The students should study hard and practice more in writing English to improve their writing ability. They also need to increase their vocabulary in order to use appropriate word for every kinds text, then should be active and creative in learning activity.

10.3 Suggestion for school directors:

- Technology such as Smart board should be used at schools in order to facilitate teaching and provide fun opportunities for pupils to learn all skills of English language.
- (2) Smart board should be used at schools in order to facilitate teaching and provide fun opportunities for pupils to learn all different subjects.

11. Suggestion to the Further Research

This research is focused on the influence of Using smart board for Enhancing EFL Writing Skills of Primary Stage Students. Therefore, it is suggested for the next researchers to investigate the use of smart board in other English skills such as listening skill, reading skill or speaking skill and conducting further action research and studies on educational integration of smartboard

In addition, it is suggested for the next researchers to investigate the use of smart board for preparatory, secondary or university stage in Enhancing EFL listening, reading or speaking skills.

Also, Using the internet to provide on-line smart board for the students in the light of e-learning theories. Or Making use of the social media websites to develop EFL Writing Skills of university Students.

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