

## **THE IMPACT OF USING COMPUTERS ON ENHANCING EFL WRITING QUALITY: A CASE STUDY OF MUHEYDEEN WAHBE SECONDARY SCHOOL FOR GIRLS – SUDAN**

**Salaheldin Eldouma**

Albaha University - Faculty of Sciences and Arts - Qilwah 65335-4164

Kadama Square - Unit No. 09404

Qilwah, Albaha 65335

Saudi Arabia

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**ABSTRACT:** *This study investigated the impact of using computers on enhancing EFL writing and learners' attitudes towards using computers to compose in EFL classrooms. A set of writing tests (two pen-paper based compositions and two computer-based ones) were administered to thirty pupils from Muheydeen Wahbe Secondary School for Girls to investigate the impact of using computers on enhancing EFL writing quality. The participants also responded to a questionnaire that investigated the use of computers in EFL writing classrooms. The data of the study were analyzed using SPSS. The findings have shown that the participants made use of the facilities provided by the computer; their computer-based writings were significantly better compared to their pen-paper ones in all the aspects of writing such as organization, language use, mechanics and length, except the content. The results have also revealed that the students were highly motivated when computers were used. Given the positive results of the study, it has been recommended that the use of computers in EFL writing classes should be encouraged and that English language teachers should be trained on using computers and technology in EFL classrooms, particularly, in writing classes.*

**KEYWORDS:** EFL Writing, Communication, Word Processor, Writing Quality, Learners' Attitudes.

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## **INTRODUCTION**

From their first existence in this world, people needed to communicate with each other; and to do so, they used many tools such as miming, speaking and writing. Writing was well thought-out by different scholars as ideas within the mind of the writer that he/she wanted to communicate them to his/her reader in an easy way, or an art of forming letters and characters on paper, wood, stone, or other materials, for the purpose of recording the ideas which characters and words express.

Writing as a human activity, has undergone many stages, each stage represented a nation or generation. To communicate, people firstly, used pictures which used pictograms to represent objects directly; then, the Sumerians developed a pictographic writing system which was later being cuneiform writing. After that, the Egyptians developed hieroglyphics which borrowed and improved by Phoenicians who discovered the first alphabets on which English language is based (Fromkin, and Rodman, 1983).

Writing enables us to communicate with people of the past by reading their records; and communicate with people of the future by recording our events. Also, we can communicate with distant people by chatting or emailing. Thus, writing is an inevitable power for

everyone, whatever his professional. Writing is also a developing skill, it upgrades according to the progressing of people who use it. Aradeb (2010; 24) defines writing "as a primarily mental activity and a resource from pens and papers to word processes that relies on physical tools".

Inspired by the rapid development of technology from decades, computer has now become an influential component of foreign language learning pedagogy. Educators recognize that utilizing computer technology and its attached language learning programs can be convenient to create both independent and collaborative learning environments and provide pupils with language experiences as they move through the various stages of foreign language acquisition (Kung, 2002).

### **Rationale**

Learning to write, in either a first or second language, is one of the most important things students do in college. Good writing skills are essential to their success, whether they are writing reports, preparing research papers, or taking essay tests. According to Scarcella and Oxford (1992), students in ESL programmes quickly discover that their survival in academic settings depends on their ability to write well.

However, writing is one of the most difficult tasks a learner encounters and that few people can be said to have actually mastered it. Many native speakers leave school with a poor command of writing (Richards, 1990). The ability to express one's ideas in written form in a second language and to do so with reasonable accuracy and coherence, according to Murcia and Macintosh (1991: 187), "is no mean achievement, since many native speakers of English never truly master this skill". The difficulty of writing grows from the coordination of hands, brain and eyes. When one writes, one is expected to discover and organise ideas, because writing draws on the writer's mental, physical, and emotional resources (Gebhardt and Rodrigues, 1989). This means the efforts to write can be hindered by different mental, physical, and emotional problems.

According to Abu Rass (2001), writing is a difficult skill for both native and non-native learners, because writers must balance multiple issues such as content, organization, purpose, audience, vocabulary, punctuation, spelling and mechanics. Writing is much more difficult for second language learners because they are expected to create written products that demonstrate mastery of all the above-mentioned elements in a new language.

In recent years, the computer has established itself as a significant feature of the present life. It is no longer an expensive machine used exclusively by professionals in major industrial corporations, government and military. Many of us use computers daily, sometimes without even being aware of the fact. Banking, traffic control, word processing, social security applications, accounting and record-keeping, design, office management, computer games and various hobbies are merely a few of the applications where computers are part of our life (Eswaran, 2008).

The flexible information processing capability of computers makes them potentially useful in a wide variety of educational applications. They can facilitate teaching and learning at all levels, from pre-school, children mastering the alphabets to doctors learning new diagnostic techniques (Eswaran, 2008). They can be used in all subject-language, mathematics, history, science, vocational trainings, business education, music, art as well as reading and writing.

Through word processor, writers are able to rearrange and replace phrases, clauses, sentences and paragraphs. Also, it enables writers to jump back to the pre-writing stage by adding new ideas which suddenly arise to his/her mind during revising stage. The importance of the word processor clearly appears at the proofreading stage, when the writer wants to correct the grammatical, spelling and punctuation mistakes. All to do is to go through his composition, checking the mistakes and correcting them without scrapping or rubbing any word. So the use of the computer in writing simplifies the process, making revision much less painful and less boring.

Word processing remains the basis for using the computer as a writing tool. There have been considerable researches regarding the impact of word processing on the development of writing skills. A main evidence is that pupils are enthusiastic to rewrite, edit and polish their work when using word processing. They are less resistant to making changes because it does not necessitate rewriting, or recopying the entire passage. Both the amount and value of writing are affected. Improvements in quantity are initially more recognizable; however sentence structure and vocabulary will get better as well (Abo Rizk, 2010).

According to Padma (2008), in traditional writing approaches, pupils often write alone without peer interaction with the tool of writing. Writing is thus a lonely pursuit. One of its obvious shortcomings is its lack of interaction, a vital element for effective language learning. This has led foreign language educators to seek ways to promote better performance among language learners when they write. One way to increase pupil performance is to expose them to the computer where meaningful interaction and interactive moments can occur.

The use of computer in an EFL writing classroom is urgent and must in a world filled with technological machines, so as to pave the way to our pupils to be in contact with new trends of learning. Moreover, it is a way to supply the fields of employment with qualified employees, who are ready to cope with the modern world and modern technology.

To investigate the efficacy of using computers in EFL writing, this research addresses the following questions:

1. To what extent can computers help to enhance the quality of EFL writing in terms of:
  - a- Content.
  - b- Grammar.
  - c- Punctuation.
  - d- Vocabulary.
  - e- Length.
2. What are EFL learners' attitudes towards using computers in writing?

## **METHODS AND MATERIALS**

The subjects of this study were second year pupils of Muheydeen Wahbe Secondary school for girls. A total number of thirty pupils participated in this study; their age ranged between fourteen and sixteen years. They were in the second class; i.e. they have been studying

English as a foreign language for five years. Moreover, they come from a relatively high class, in addition to that, roughly, all these pupils have personal computers at home.

Two tools of data collection were used; writing tests and a questionnaire. The pupils were required to write two compositions using pen and paper. Then they were taught the advantages of using computer in writing. They were trained on the facilities provided by the computer such as spelling checker, grammar checker and how to use computer to organize writing. Then they were asked to write about the same topics using computer, this time. The pupils' written products (both pen-paper based and computer- based writings) were collected and marked by two scorers based on ESL Composition Profile (Jacob et al, 1981), which consists of six aspects: content, vocabulary, organization, language use, mechanics and length. The scores were later summed and analysed using SPSS program.

A questionnaire which consisted of two parts: the first part was about “attitudes towards using computer in language”. This section consisted of twelve statements, most of which were set to investigate the pupils' attitudes towards using computer (see table 1). The second part of the questionnaire investigated “computer and the writing process” which consisted of nine statements, set to probe the willingness of the pupils as they used computers in their writing (see table 2). The pupils’ responses were then analyzed using SPSS programme.

## RESULTS AND DISCUSSION

### Pen-paper Writing Versus Computer-based Writing

The two sets of the pen-paper based and computer-based writings of the pupils were scored and analysed using SPSS programme. The results were then compared and discussed below.

**Table 1: Pen-paper Writing Versus Computer-based Writing**

Items	No.	Pen-paper writing Mean	Computer – based writing mean	Difference between means	T	Sig.(2-tailed)
Content	30	24.9333	25.4333	.05	.784	.439
Organization	30	16.1333	17.0667	.9334	2.755	.010*
Vocabulary	30	15.6000	16.7667	1.1667	2.623	.014*
Language use	30	17.2667	19.6667	2.4	3.409	.002**
Mechanics	30	2.6667	3.7333	1.0666	5.757	.000***
Length	30	14.3000	16.0667	1.7667	3.471	.002**

\* P-value < .05

The above table shows that the students performed better when they used the computer to write. There were significant differences between the sets of writing in all the aspects of writing except the content, (p-value > .05). In all the other aspects of writing (organization, vocabulary, language use, mechanics and length), the pupils were able to score significantly better when they used the computer to write compared to writing traditionally (using pen and paper), (P-value < .05). These results are further discussed below.

## Organization

The general form of the students' computer-based writing, i.e. the division of composition, the paragraphing, (introduction, body and conclusion), appeared more organized. The students' mean score of computer-based writing was 17.06 compared to 16.13 in their pen-paper writing, with a P-value of (.010\*). This shows that using computer, particularly word processor, in writing enables pupils to write more neatly and clearly than when pen and paper are used.

## Vocabulary

It is also assumed that computer can help pupils to enhance writing aspects, including vocabulary. The results of the study have shown that when the computer is used, learners were able to produce more sophisticated vocabulary compared to that of pen-paper ones. Table 1 shows that there is a significant difference between the mean scores of computer-based writing vocabulary and pen-paper based one (p-value = .014\*).

## Language Use

The computer has great effects on certain closed linguistic items, and grammar is one of them. This effect is obvious as the participants of this study were able to surpass themselves when they used the computer to write. The mean score of the pupils' computer-based writing was 19.66 compared to 17.26 of their pen-paper based writing, with a significant difference of .002\*\*.

## Mechanics

As far as the pupils' writing mechanics is concerned, the analysis showed that the pupils benefited a lot when they used the computer to write. Making use of the facilities provided by the computer, the pupils were able to know the correct spelling, grammar and form of the word they intend to use. There was a significant difference between the mean scores of the pupils' computer-based essays and pen-paper ones (p-value = .000\*\*\*).

## Length

When the computer was used, the pupils' were able to write longer topics compared to those they wrote using pen and paper. There was a significant difference between the pupils' computer-based writing scores and their pen-paper writing ones (p-value = .002\*\*). This gain could be due to the confidence the pupils had during their writing with computer, they were writing freely and confidently without thinking or hesitation.

Based on the discussion above, it can be concluded that the computer, in general, and particularly the word processor, is a very useful aid for students' writing. For instance, the findings of this study have revealed that there were significant differences between the vocabulary, organization, language use, mechanics and length of the students' word-processed writing and those done with pen-paper. These encouraging results motivate the use of computer in language classroom and further research in this area with relatively larger number of learners at different language levels.

In this study, the participants have also reported positive attitudes towards the use of this tool which is expected to make drastic changes in the field of language learning, particularly, to practice writing. These attitudes are discussed below.

### Pupils' Responses to the Questionnaire

In addition to writing tasks performed by the subjects of this study, the pupils have also responded to a structured questionnaire that investigated their attitudes towards using computer. The pupils' responses were analyzed using SPSS, tabulated and discussed.

**Table 2: Pupils' Attitudes towards the Use of the Computer**

No	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Happiness of using computer in writing	7.5 25 %	15 50%	0 0%	0 0%	7.5 25%
2	I do not get nervous in the computer-writing class.	0 0%	22.5 75%	0 0%	0 0%	7.5 25%
3	Using computer in writing class is interesting.	22.5 75%	7.5 25%	0 0%	0 0%	0 0%
4	The easiness of how to use the computer.	7.5 25%	7.5 25%	7.5 25%	7.5 25%	0 0%
5	I prefer computer to pen and paper to write	7.5 25%	15 50%	0 0%	0 0%	7.5 25%
6	Pupils recommendations to their mate to use computer	7.5 25%	22.5 75%	0 0%	0 0%	0 0%.
7	The computer-aided helps raise confidence	7.5 25%	22.5 75%	0 0%	0 0%	0 0%
8	Pupils have learnt more when they used the computer	0 0%	0 0%	7.5 25%	15 50%	7.5 25%
9	Pupils use word processing more than pen-paper.	10 33.3%	10 33.3%	0 0%	10 33.3%	0 0%
10	Computers encourage pupils to spend more time working on their papers.	12 40%	8 26.7%	6 20%	0 0%	4 13.3%
11	The computer provides me with more feedback about my errors and mistakes.	6 20%	18 60%	6 20%	0 0%	0 0%

The results of the pupils' responses to the questionnaire, as presented in the table above, showed that the pupils, generally, had positive attitudes towards the use of the computer. Four fifths (80%) of the pupils reported that they were felt happy when they write using computer. Also, all the pupils (100%) who participated in the questionnaire recommended that pupils have to learn to use the word processor for writing their papers. Whole of the



pupils (100%) said the computer-aided writing helped them in developing self-reliance skills, problem-solving strategies and critical thinking abilities. And that due to the facilities the computer offers.

### Computer and the Writing Process

The pupils' responses to the questions related to the computer and writing process was also positive as will be shown below in terms of mechanics, content and choice of words, organization, confidence, revision and length.

**Table 3. Computer and the Writing Process**

No	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	I write longer papers using the computer.	0 0%	7.5 25%	7.5 25%	15 50%	0 0%
2	Computer helps pupils to change their paper	7.5 25%	15 50%	7.5 25%	0 0%	0 0%
3	Using computer makes pupils pay more attention to choosing right word.	15 50%	7.5 25%	0 0%	7.5 25%	0 0%
4	Using computer makes pupils pay more attention to punctuation	0 0%	15 50%	15 50%	0 0%	0 0%
5	When I use word processing, I pay more attention to what I am writing.	0 0%	22.5 75%	0 0%	0 0%	7.5 25%
6	I pay more attention to spelling when I use the computer.	0 0%	22.5 75%	7.5 25%	0 0%	0 0%
7	I pay more attention to organization when I use the computer.	7.5 25%	0 0%	22.5 75%	0 0%	0 0%
8	I can think of more ideas for my writing when I use the computer.	0 0%	7.5 25%	0 0%	22.5 75%	0 0%
9	When I use word processing on the computer, I am more careful about grammar.	7.5 25%	7.5 25%	7.5 25%	0 0%	7.5 25%

### Mechanics

The pupils' responses to the questionnaire showed that half of them (50%) claimed they had paid more attention to punctuation when they write using the computer. Moreover, the same of the participants (75%) reported that they had paid more attention to the spelling when they

used the word processor. Three quarters (75%) of the participants had also said that they paid more attention to the punctuation when they used the computer. These results very much support their scores in computer-based writing; there was a significant difference ( $P > 0.002$ ) between their computer-based writings and pen-paper based ones in respects to these aspects of writing (see table 1).

### **Content and Choice of Words**

The results of the questionnaire showed that three quarters (75%) of the participants reported that when they used the computer, they had paid more attention to the choosing of the right words, that is, the words used should be relevant to the topic. This claim did not back up the scores of their computer-based essays, however. The table revealed that no significant difference in their computer-based writing compared to pen-paper ones. ( $P > .439$ ).

### **Organization**

As far as writing organization is concerned, only one quarter (25%) of the participants claimed that they had paid more attention to the organization when they used the computer to write. Three quarters of them remained neutral. This result showed a big discrepancy with the findings of their computer-based essay which score ( $P > .010$ ). Appoint that should further be investigated.

### **Confidence**

The pupils' responses to the questionnaire showed that computer-aided writing helped them to develop self-reliance skills, problem-solving strategies, and critical thinking abilities. That is, increasing their abilities to write in English. Almost all of them responded positively to this point.

### **Revision**

The most important benefit of the computer in the field of writing is the easiness of revising texts, that is to say, add, delete, or change words at any before submitting the final draft. The results of the questionnaire showed that three quarters of the participants (75%) believed that they were able to make changes to their papers more easily and more often when they used word processor than when they used pen and paper. The majority of the pupils (80%) reported that the computer provided them with more feedback about their grammatical and spelling errors.

### **Length**

The results of the pupils' responses to the questionnaire revealed that only a quarter of the participants (25%) thought they wrote longer papers when they used computer. The same number of the students claimed that they can think of more ideas for their writing when they used the computer. Compared to their scores in computer-based writing tests, however, there is a discrepancy between their performance and what they have claimed. This discrepancy could be due to a psychological reason, that is, the novelty of using computer in real writing may cause this shrink.



## DISCUSSION

The results of this study have generally revealed that some of the pupils' writing features were enhanced when the computer was used. The use of this device has also increased the pupils' positive attitudes towards using computer in writing.

In their computer-based writing, the participants have scored significantly better compared to their pen-paper writing in terms of organization, vocabulary, language use, mechanics and length. However, the findings showed that there was no significant difference in term of the pupils' writing content.

Some other previous researches on computer-based writing yielded similar results. In his study, which was conducted in Malaysia, Eldouma (1999) found that his students scored significantly higher in most of the aspects of writing when the computer was used.

The two studies, have also, yielded similar result with regard to the content of writing. Both of them have found that the computer did not have any effect on the students' writing content. Furthermore, Eldouma (1999) revealed that his students, generally, held positive attitudes towards the use of the computer for composing and during the writing process. As well, most of the students reported that using computer helped them develop confidence in their ability to compose and make to their writing.

Warshawer (1996) also claimed that his students whether they were male or female, skilled or unskilled at typing and using computers, showed a positive attitude towards using computer for writing and communication in the language classroom. Similar attitudes towards using computer in writing were documented in this study.

AbuSeileek (2006) pointed out that the results of his study indicated that the students who used the computer as a writing tool, achieved better scores in writing than their counterparts who used pen –paper in writing essays, that is similar to the result of this study. In general, pupils scoring when they used computer-based writing are higher than their scoring when they used pen-paper writing. Moreover, AbuSeileek stated that the majority of his students had a positive attitude towards computer-aided writing, and this is in harmony with this study.

Concerning spelling, the findings of this study have also revealed that the participants benefited a lot from using the spelling checker, which is a computer-built-in device, to get rid of their spelling errors. A similar result was also arrived at by Mudawi (2008) who pointed out that the use of the word processor enabled his students to have immediate and positive feedback concerning spelling errors, adding that, in terms of the punctuation marks, his experimental group showed a more sophisticated portion of using correct punctuations. The findings of the current study have also shown that the pupils made relatively high scores in dealing with punctuation marks, making the utmost use of thesaurus and dictionary facilities to diversify their vocabulary.

## CONCLUSION AND RECOMMENDATIONS

The above mentioned examples of studies as well as the current study, clearly, show that the computer was used, the students were able to develop and enrich their writing in more

interesting and efficient manner. This is simply because using instructional technological devices such as spelling and grammar checkers, thesaurus enabled them a quicker and more convenient access to meaning as well as other visual and interactive advantage. In addition to that, when their opinions were surveyed, the students have also showed positive attitudes to the use of the computer in language classroom, particularly in writing.

The positive results achieved by the use of the computer motivate the introduction of the computer in language classroom in a larger scale. Further research to include a large number of learners at different levels deemed necessary.

Based on the findings of this study, it is recommended that:

- Schools, throughout the country, should be provided with computers for EFL learners to use them in their writing classes.
- Awareness of computer integration in pedagogical activities in general and teaching English as a foreign language, in particular, should be raised.
- Language teachers should, first, be trained on the use of the computer and technology in language classroom and should be competent in computer basic knowledge and keyboarding skills.
- Pupils should be trained and have practice in keyboard skills before starting using computer-based writing.

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