

Original Article

The ESL Secondary School Student's Perceptions on the Uses of Computer in Developing Writing Skills

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ABSTRACT

The use of computers to facilitate teaching and learning of language has gained considerable research over the years. Different aspects of computer assisted language learning and computer-mediated communication have dominated research especially in the field of applied linguistics. This paper focuses on the Nigerian ESL secondary students' writing maturity using the computers. To examine the student's perceptions on using the computer while accomplishing writing tasks, the students were initially asked to write essays of their choice on pen and paper. They were told to rewrite same essays using the computer only. The students' perceptions were solicited after they were completed writing tasks. The findings indicated that students recorded significant progress in the aspects of lexical accuracy, grammatical competence and length of writing when they write with computers.

Key words: uses, ESL, secondary school, perceptions, writing skills, computer

INTRODUCTION

Language is a medium of thought and a channel of communication. It is a human attribute that differentiates human beings from animals. It is a social institution, made up of rules and conventions that have been systematically designed to enable us communicate effectively. In recent years, the role of language as potent means of effective communication has received considerable attention from scholars in different disciplines for instance, pragmatics, health sciences, linguistics and communication studies. It is apparent that most second and foreign learners of English acquire it under formal instruction, where classroom is the primary environment in which second language learners have the opportunity to use the target language, this kind of language that students use in classrooms during lessons has a significant influence on their language learning development. More often than not, they use the target language for quite a variety of different purposes in a classroom while interacting with the instructor as well as other students.

It is pertinent to note that students' academic success largely depends on their ability to articulate and express their voice vividly in writing conventions that meet their academic requirements. The prime medium upon which students are assessed is writing, in the sense that they are required to produce and present various kinds of written assignments, tests, examinations and research projects. However, the expectations become higher as they climb up the academic ladder.

Over the past decade, in Nigeria, the availability of computers in secondary schools has considerably increased. This has tremendously led to the increased use of the computers. A considerable amount of literature has been published on the influence of computers in developing language skills to English as second language students (ESL). Computers have become viable instructional materials in ESL classrooms. In recent studies, computer-based activities that provide ESL instructors opportunities which when utilized will increase students' language learning skills especially in the area of proficiency and writing development. In addition during the past three decades, much more research has been conducted on the area of computer mediated communication and computer assisted language exploring different aspects of language learning. Yet what has not yet been researched is how the computer influences ESL secondary school students' writing maturity. Therefore, this paper demonstrates the uses of computer in developing the secondary school ESL students writing maturity in Nigeria. Specifically, the paper focuses on developmental areas of writing that is lexical complexity and grammatical competence which are the most crucial aspects of writing especially in academic setting.

LITERATURE REVIEW

Basically, writing is an act of representing language in a written or technical form through the use of a set of signs forming the writing system which is used as a remarkable means of transmitting information. However, writing in academic setting is usually serious and meant specifically for a critical and informed audience. Previous studies indicate that computer-mediated communication (CMC) facilitates interaction (Cooper & Selfe, 1990), similarly, computers are user-friendly instructional tools that reduce students' anxiety (Kern, 1995; (Sullivan & Pratt, 1996). (Cumming & Li, 2001) investigated a 12 students writing processes as well as quality of writing. They found out that computer assisted writing improves students' higher level revision and promote their quality of writing particularly when students are trained and exposed to computer-assisted writing over a period of time.

In another study, (Shang, 2007) conducted an exploratory study of e-mail application on FL writing performance. The study focused on the overall effect of using e-mail to improve the writing performance especially in aspects of grammatical accuracy and lexical density. His findings indicate that students made more improvements on grammatical accuracy. Furthermore, the findings demonstrate that e-mail approach is a good strategy that promotes language learning. (Goldberg, Russell, & Cook, 2003) examined the effect of computers on students' writing, where they made a meta-analysis of studies from 1992-2002. The study included 26 studies which focused on the comparison between writing with computers and those with paper and pencil. The findings indicate that significant quality of writing existed with the computer writing students. The overall findings show that the writing process is found to be more interactive, collaborative and social in computer classrooms compared with paper and pencil writing environments. Thus students who use computers frequently especially when learning writing are more likely to be involved and motivated in the writing tasks and also produce written texts in much higher quality and quantity.

In another study, Al-Jarf and Sado (2002) investigated effect of online learning on struggling ESL College writers. He found that students who are exposed to computer web-based instructions become more proficient and make significant improvement in their writing. Kaur and Hegelheimer (2005) conducted exploratory study on ESL students' use of concordance in the transfer of academic knowledge. They posit that concordance is a fairly new classroom learning approach which has emerged with the use of corpora in language learning. The approach involves presentation of language in an authentic context giving learners the opportunity to examine a key word from a string of sentences in a context which exemplifies the use of that given word. The results indicate that there was a significant improvement in students' positive transfer of vocabulary knowledge to the writing tasks.

Biesenbach-Lucas, Meloni, and Weasenforth (2000) examined the use of cohesive features in ESL students' e-mail and word-processed texts. He made a discourse analysis of comparable word-processed and e-mail writing assignments to determine the effect of medium on the language that students produce. The findings indicate that the difference between e-mail and word-processed writing lies on the length of the text produced by students. Moreover, Hyland and Hyland (2006) investigated contexts and issues on feedback on L2 writing. He provided an overview of feedback as a central aspect of ESL writing programs across the world. He posits that feedback constitutes a crucial learning instruction on the field of second language writing. It is a key element through which students develop control over composing skills. Lai and Kritsonis (2006) explored the advantages and disadvantages of computer technology in second language acquisition. He expounds merits of computers as having positive effect on the achievement level of English as second language (ESL) students. He also outlined the weakness and limitations of computers to students' learning. He suggests that language instructors must recognize both merits and demerits of using computers in order to harness the maximum effectiveness of technology mainly to facilitate second language learning.

Students writing and Word processing

A word processor is a computer application mainly used for the composition, production, editing, and printing of any kind of printable text. Significantly, over than past two decades, more than 200 studies have explored the influence of word processing on students writing (Goldberg et al., 2003). The studies provided empirical evidence on the effect of word processing on students writing development. For instance, Cochran-Smith (1991) found that students generally had positive

attitudes toward word processing and that students who used to word processors spent a considerable amount of time writing and produced more qualitative and longer texts when compared with paper and pen. Additionally, word processor was found to be more effective on sustaining students' interests in writing thereby developing their writing habit. Generally, the word processor proved to be more effective especially for students with learning disabilities (Haas, Hayes, & Center, 1986).

Descriptive Models of Writing

Descriptive model is used to provide theoretical background to the study where it accounts for the nature of writing production. The theory describes what writing is, how it is used and subsequently developed. The model of writing comprises knowledge telling and knowledge transforming. For this reason, a descriptive theory of writing is suitable for describing the nature of writing because it accounts for how writing is performed and evaluated in different circumstances. It also explains the reason why some people write better than others in similar contexts performing similar topics. Similarly, the theory also offers explanation on how students develop writing abilities in different ways and varying conditions. In addition, the theory helps instructors to teach better and respond responsibly.

In an attempt to provide explanation on writing activity, two recent attempts have been identified by (Haas et al., 1986), Grabe (2001) and Grabe and Kaplan (1996). These studies attempted to combine issues raised to support writing by merging together contextual influences, cognitive knowledge and process of writing creation. Thus Hayes (1986) accounts for motivational factors, context factors and reading processes. The link between these factors provide an increased writing abilities

The Grabe and Kaplan emerged from applied linguistic approach thereby giving linguistic considerations to explain the communicative competence as related to writing skills. It incorporates writing processes which begin in memory where the relevant knowledge generates the necessary information for writing. Subsequently, the writing is then produced and forms a part of the context for future reference.

Despite a considerable amount of literature that has been published on the impact of computers on language learning especially writing, yet no research has focused on the uses of computers in developing ESL students' writing maturity in developing countries like Nigeria where computers are now gaining grounds. Therefore this paper aims at filling this gap in literature by examining the uses of computers in developing students writing maturity in classroom setting. Moreover, the existing studies have failed to adequately provide a theoretical background on the nature of writing, how it is composed and produced. Hence, the paper provides additional theoretical insight on the nature of writing.

METHODOLOGY

The paper uses quantitative paradigm to examine the level of achievement in ESL students' writing especially the basic aspects of writing such as lexical accuracy and grammatical competence. The percentage and frequency of each writing aspect is presented to provide basis for comparing students' improvement in the overall writing activity. In addition, students' writings conducted in different medium were examined to ascertain the supremacy of one medium over the other in writing classroom. The data collected from students' writings is compared with the students' perceptions on the uses of computer to provide basis for the generalizability of the findings of this study.

Subjects

50 non-native speakers of English who were ESL senior secondary school students who were in form five were selected to form the subjects of the study. The students were selected from Ulu-Albab secondary school Katsina state, Nigeria. The range of the students' age was about 17 to 18 years. The study was conducted over a period of three terms that make up a session applicable in the academic calendar of the state Ministry of Education.

In order to gauge in the students' accessibility and familiarity with the computer, a brief survey was conducted to the computer room where lessons with computers are conducted. This survey was conducted prior to the commencement of the study. The result of this brief survey indicated that almost all the students had the experience with the word processing computer application.

The students were comfortable with using computers in classrooms and expressed their enthusiasm towards using the instructional material especially in learning writing.

Instruments

A questionnaire was designed to assess the ESL secondary school students' perception on the use of computers in developing their writing skills. In order to make the students focused on the two aspects of writing, the questionnaire consists two main items of assessing the level of students' perceptions, that is agree and disagree options. These two options were used to assess their perception on each item and the frequency and distribution of each item has been presented in the analysis section of the paper.

Writing Tasks

Students were told to compose essays of their own choice using a traditional pen and paper method. Each student was told to write his own an essay independently. They were given a period of one hour to write and submit the essay within the stipulated period. The essence of giving room to the students to write topics of their choice is to enable them demonstrate their ability in writing task where they could put to writing different aspects of language use such as vocabulary pool, spelling, punctuation, critical thinking and grammatical competence in terms of subject-verb agreement, appropriate use of tense and sentence structure and complexity.

After completing the first writing tasks and the students' scripts were collected, another task was scheduled in the next lesson. They were asked to rewrite same essay they composed using pen and paper in the previous lesson. This time around, they were instructed to use computer Microsoft word to typeset their essays. A total of 100 essays were collected, 45 scripts were composed using pen and paper and the remaining scripts using computers. The essence of repeating the same task using different medium is to see the differences in students' mastery of basic aspect of writings that contribute to their writing maturity so as to make possible suggestions for pedagogical implication of using the most effective medium to facilitate writing development.

Analysis

The analysis focuses on basic features or aspects of writing including text length of the students composed essays. Thus the following are investigated:

- a. Vocabulary
- b. Punctuation
- c. Grammatical competence

Under the first aspect, vocabulary, spelling which is a key variable of accurate use of words, vocabulary pool that is the range of stock of words learnt by an individual student and lexical repetition were used as parameters of assessing student's vocabulary development in writing. In terms of punctuation, capitalization of proper nouns, use of periods and comas as well as the use of question marks were used to assess their punctuation accuracy. Similarly, subject-verb agreement, use of tenses and sentence structure were used to examine the students' grammatical competence. To examine students' performance, both writing tasks were compared side by side between the pen and paper medium and that of computer. Also, the text length was determined by counting the number of words in each essay of individual students. Moreover, students' errors were identified in each medium so as to see the medium in which they perform better; this is indicated in table 4.

RESULTS AND DISCUSSION

Table 1 indicate students' perceptions on using computers in developing their writing maturity in relation to the three measured variables of basic writing aspects upon which their performance was assessed in writing tasks. Also, table contains the frequency of errors recorded in both hand written essays and the computer typed essays.

It can be clearly seen in table 1 that students' perceptions on various aspects of writing with computers out of which 92%,88% and 80% agree that the use of computer improve the students vocabulary, punctuation and grammar skills respectively. The students were asked to fill in the questionnaire after they finished the writing tasks from both media. The results of the questionnaire were triangulated with the marked scripts from the pen and paper medium and that of computer. Similar results were also obtained based on the students' performance on the measured writing aspects.

Table 1

Does the use of Computer improve your Vocabulary in ESL written skills	Frequency	Percent
Valid Disagree	4	8.0
Agree	46	92.0
Total	50	100.0
Does the use of Computer improve your Punctuation in ESL written skills	Frequency	Percent
Valid Disagree	6	12.0
Agree	44	88.0
Total	50	100.0
Does the use of computer improve your grammar in ESL written skills	Frequency	Percent
Valid Disagree	10	20.0
Agree	40	80.0
Total	50	100.0

The results from the questionnaire was also confirmed by comparing the students performances in handwritten and computer manuscripts where the number of errors are recorded as presented in table 2 below with the corresponding percentages of the number of errors in both cases. Interestingly, the results of the marked scripts indicate that over 80% of the total errors are from the handwritten manuscript.

Table 2: Frequency and percentage of the writing tasks

Number of errors in Handwritten Manuscript	%	Number of errors in Computer Manuscript	%
348	80.18	46	19.82

It is interesting to note that in all three variables used to measure ESL secondary school student's writing maturity using computers, the students exhibit higher performance in writing tasks in classrooms. Students become more accurate in their spelling of lexical items. Moreover, using the computer improves students' consistency in punctuation. Similarly they indicate significant improvement in grammatical accuracy, for instance common mistakes found in the hand written scripts include subject-verb agreement especially in number.

Additionally, there has been significant improvement in the text length especially the computer written essays; perhaps this could be related to the students' enthusiasm on using the computer coupled with its facilitating nature which allows room for continual writing without necessarily demanding extra papers as in the case of paper and pen situation. In the case of mistake in the course of writing, the only option is to cancel the mistaken part and rewrite it on the available space. This is frustrating and affects students' neatness of writing and above all kill student writing habits.

CONCLUSIONS

In fact, writing is the most complex skill among the language skills because it involves the articulation of thoughts and ideas into written or printed medium. It requires critical thinking, reflection and practice. The articulation of thoughts to express ideas is seen as the communicative function of writing. The paper has demonstrated the benefits of using the computer in developing students' potentialities in writing. The descriptive model of writing used in the paper to provide theoretical background accounts for the way writing is developed through its major constructs of knowledge telling and knowledge transforming.

Basically, ESL students stand a better chance of becoming productive potential writers if they are given maximum access to write with computers due to the fact that the technology induces students towards scribbling with its key board as part of stimulating exercise that promotes their interest to write. Furthermore, students' linguistic competence in terms of precision and accuracy is improved through the use of computer; this is seen in their writing scripts with computers when compared with that of handwritten scripts. This paper strongly recommends that the curriculum designers and language instructors should give computers a place in language classrooms considering its myriad ways of facilitating teaching and learning. This will significantly enhance

language learning more constructively and inculcate positive writing culture among students especially in Nigeria where this study was conducted.

Given the fact that English is the medium of instruction in Nigeria and that ability to write determines one's power of literacy, students are required to write their assignments and other continuous assessments throughout their period of study as a yardstick for evaluating their success in academic pursuit. Therefore, using computers in language classrooms will promote students' writing quality and subsequently uplift the standard of education.

It is hoped that this study will serve as inspiration for further research in teaching and learning of English especially to those who are non-native speakers of the language. Further research should focus on relationship between the use of computers in language classrooms and students' critical thinking.

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