# The Efficacy of the Internet-Based Blackboard Platform in Developmental Writing Classes

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## Abstract

The application of computer-assisted platforms in writing classes is a relatively new paradigm in education. The adoption of computers-assisted writing classes is gaining ground in many western and nonwestern universities. Numerous issues can be addressed when conducting computer-assisted classes (CAC). However, a few studies conducted to assess students' reactions, attitudes and development in such courses. A qualitative quantitative study is designed at a US Midwestern university to highlight details about students' development in a computer-assisted introductory writing course. Both qualitative and quantitative data are collected over a time span of an academic semester. Data sources include interviews, e-mail messages, student interactions, discussions and acts of writing during the semester. Content analysis is applied to find out the type of electronic interactions that took place between the students and the instructor and the students themselves. As for quantitative data, a Repeated Measure Multivariate Analysis with ANOVA is applied to find out the statistical differences between the group levels of this study.

Eleven students were enrolled in this study. To attain a deeper understanding of the students' learning experience, the study looks at how students interact with and respond to the instructional material delivered through the 'Blackboard' platform, the learning materials or feedback provided online, the nature of interactions, and the students' cognitive development throughout the course.

The findings indicate that computer-assisted learning helps students become more self-confident and independent learners. Moreover, students' individual differences and learning styles affected their performance in the course. Some of the findings aligned with other research studies. These include but not limited to: (a) students' transition to the web-based learning (b) course and time flexibility are very positive aspects.

*Key words:* Blackboard; Computer Mediated Communication/Education (CMC/E); Computer or Blackboard-aided writing class (CAW); Discussion Board; External Links.

# The Efficacy of the Internet-Based Blackboard Platform in Developmental Writing Classes

Research in the area of computer-mediated communication (CMC) and instruction has shown that using technology can provide students with a sense of empowerment and development of communicative abilities. It develops confidence in the students' learning abilities. Thanks to increasing opportunities for interaction on the Internet, it is becoming possible not only to transmit instruction, but also to facilitate communicative and collaborative learning for 'writing students'.

A snapshot at traditional college classrooms gives an image of an instructor and a group of students who interact during the scope of a class period. Such traditional classroom is no longer the only 'optimal' setting for teaching and learning. With the advent of educational technology, an 'optimal' classroom requires adequate teaching aids, computers in particular to facilitate the learning process. In fact, the 'optimal' classroom is one, which instructors and students create, specifically to suit their own purposes and needs, and can change as the needs require. Communication between instructors and their students in such classrooms can take place either synchronously (at the same time), asynchronously (at different times), or both. As educators, we should ask ourselves: how we can impact students' learning by applying technology (teaching efficacy), and how we can bring the world into the classroom.

Some of the aspects of this case study are: the application of technology (teaching efficacy), learning environment, access to technology, teaching style and self-efficacy. A major goal of this qualitative quantitative study is to explore how each of these factors impacts the subjects' progress throughout a developmental writing course offered by a

Midwestern University in the USA. This study intends to explore the benefits and limitations of teaching university-level developmental writing courses through the Internet-based Blackboard platform. It predicts that dramatic solutions will be explored to solve some of the difficulties that students encounter in basic/developmental writing courses. For example, spelling, grammar, fluency, style, and lexical problems can be significantly solved by the application of some of the Blackboard platform features.

**Research Question:**

The primary question of this research study is:

How and to what extent does the application of computers in writing classes affect the progress and fluency of developmental writing students? More specifically, what is the efficacy of using the Internet-based Blackboard platform?

**Justification and Rationale:**

What this study hopes to do is pointing out the areas of difficulty for developmental writers, and how computers can help in overcoming all or some of these difficulties. What is meant here by the general term "computer" is the combination of 'Word Processing', the prepackaged educational website called 'Blackboard', the 'Discussion Board' and the 'External Links and Internet'. These platforms will be used interchangeably throughout this research paper. The same applies to computer-aided and blackboard-aided classes.

**Review of Literature:**

This review presents a brief explanation of the idea of switching from a traditional writing classroom to a Computer-aided Writing (CAW) classroom. With the introduction of Computer Aided/Mediated Communication/Education (CMC/CME) into the field of education in the late 1960s, there is a steady and continuous paradigm shift in education at all levels. Starting the 1990s of last century, computers have become an accepted tool in writing centers. Research has recurrently showed that, overall, students have a positive reaction towards the use of computers in language classrooms. They help students track their own linguistic capabilities and language proficiency. They empower students and grant them flexibility in the learning process in general.

Bloch, and Brutt-Griffler (2001) conducted a study that focused on how teachers implemented software for composition classroom purposes and how their students responded to the implementation. The focus was on human-computer interaction (HCI). The study took a yearlong implementation of CommonSpace in L2 writing environment for undergraduate and graduate writers in an ESL writing composition program at a large Midwestern University.

The researchers concluded that the CommonSpace as a tool for students' negotiation and construction of meaning could be successfully incorporated into L2 composition methodology. The general conclusions that were reached by this study were: **(1)** that in comparison to similar classes that did not have this component, some of the class time was devoted to learning how to use computers, the Internet, and e-mail. That is

because many students came from countries where these technologies were not pervasive. **(2)** the software provided a means by which teachers could write clear and concise comments that could be read and understood by students. **(3)** the software facilitated peer review by enabling students to send files to each other regardless of what platform they were using; or, students could respond to each other simply by exchanging seats in a computer lab. **(4)** the software provided an environment for students in which they could easily access external links, such as writing handbooks, or online dictionaries. **(5)** the software allowed for the electronic exchange of papers, which broke down some of the constraints of time and space for both teachers and students.

Fang, Y. (2010) investigated the perceptions of a computer-assisted writing program among EFL learners in a college composition class. A mixed method research design was employed combining both qualitative and quantitative techniques. Forty-five junior students in a Taiwanese college writing class were introduced to a computer-assisted writing program called 'MyAccess'. After using the program in class, students completed a survey questionnaire; nine of them were selected for follow-up interviews based on their writing proficiency. Survey results showed that the majority of students held favorable attitudes towards using 'MyAccess' as a writing tool, but were less positive concerning its use as an essay grading tool (Fang, 2010, p. 246). Evidence obtained from a multiple choice questionnaire showed that a majority of the students benefited by using the computer-mediated feedback to revise their essays. Moreover, data obtained from interviews revealed that the computer-mediated feedback had a positive effect on writing skill development, particularly in suggesting changes of form rather

than of content. Finally, eight of the nine interview participants suggested that MyAccess could be utilized in future writing classes. The benefits of adopting computer-assisted writing software such as MyAccess increased learner motivation and learner autonomy also indicate that this kind of software can be a useful support tool in the EFL classroom.

Smith, M. (2012) described and discussed an online assignment system utilizing peer commentaries that addressed many of the shortcomings of the traditional essay requirement. The system was modeled after peer commentary academic journals such as Behavioral and Brain Sciences and Current Anthropology. This system has successfully been used as a substitute for the traditional essay requirement in a number of third year psychology course sections platformed on both Moodle and Blackboard. The advantages, challenges and practicalities of instituting, managing and grading such peer-reviewed assignments are outlined, and the benefits of the system in terms of student engagement, intellectual modeling, and learning community enhancement are discussed. The peer reviewed assignment system indicated some advantages of blended learning approaches compared to traditional approaches. The researcher hoped that this study will be particularly useful to instructors who are in the process of moving from traditional face-to-face course context to the blended/online education environment (Smith, 2012, p. 147).

He suggested that when instructors make the transition from traditional to blended/online instruction, they should consider abandoning the traditional essay requirement and replace it with some form of “assignment essay/peer review” system described in the study.

Contemporary Learning Management Systems facilitate peer review and peer assessment approaches in ways that were not available in traditional offline education. Researchers encourage replacing or augmenting them with assignments and assessment methods that take advantage of the online environment's strengths and possibilities.

Tolosa, East, and Villers (2013) investigated online peer feedback in beginners' writing tasks to understand the relationship between online communication and foreign language (FL) learning in New Zeland. They aimed to examine the processes by which students tutored each other in the online environment as they responded to each other's texts. They focused on **(1)** the aspects of language corrected by the tutors **(2)** the frequency with which tutors accurately identified and provided input on errors **(3)** the types of feedback provided by the tutors and **(4)** what the learners did with the corrections and feedback (Tolosa et al. 2013, p. 1).

The findings indicate that the students were willing to contribute to peer correction. They used different strategies and correction techniques to foster attention to linguistic forms, although they were not always capable of providing accurate feedback or metalinguistic explanations.

Mondahl, M. and Razmerita, L. (2014) conducted a case study that probes the role of social media, collaboration and social learning in foreign language learning. This case study focuses on the use of social media to facilitate learning in an educational context using empirical data and socio-constructivism theory. The central idea of constructivism in this study is that knowledge construction is a social process that occurs through

connectivity and collaboration with others. They argue that foreign language learning is an individual as well as collaborative process. Cognitive processes underlying learning in general and foreign language learning in particular are facilitated by means of social media. The findings of this study indicate that collaborative learning processes that are embedded in a social media-enhanced learning platforms are supportive and conducive to successful problem-solving. This eventually and most probably leads to successful adult foreign language learning.

**Methodology:**

This is a qualitative quantitative case study, which focused on the learning experience of eleven undergraduate students registered in a computer-aided developmental writing class. It was designed to trace the progress these students go through over the span of an academic semester. All students were required to write (3) papers, their multiple drafts (at least three for each paper), before the final clean copy. The three required papers and their multiple drafts were reviewed and graded initially by the instructor. The students' errors in all papers and drafts were identified, categorized, quantified, tabulated, and analyzed. Analysis of, and comparison between their earlier and later writing efforts were made. The *SPSS* statistical package was used to scrutinize the students' writing progress. The study is conducted based on interpretive/constructivist paradigm to trace the progress of the participants in this class. It looks at the interactions that took place among the participants, basically the students, and their access to the Blackboard's discussion board.

**Strategies for Analysis - Content Analysis:**

As an integral part of content analysis, the researcher looked at the content of the students' email messages and Discussion Board postings to determine the nature of interactions that took place during the course. The basic content analysis in this study was that of students' papers and their multiple drafts. **First**, each language-related error and/or problem in a paper or a draft was identified, coded, classified, and categorized. **Second**, the frequencies of the errors/problems in each of the student's papers and drafts were measured. **Third**, a statistical analysis was made. Repeated Measure Multivariate with ANOVA was used to trace the students' writing progress overtime. It was applied to determine whether there were significant differences between the first and the following drafts of each paper. Moreover, the 'course statistics' provided by the blackboard platform display the total number of accesses by users. **Fourth,** inter and intra-correlations between these statistical findings and the students' performances were made.

**Instructional Strategies and Student Opinion about the Course:**

Two instructional systems were applied in this course: synchronous and asynchronous. The web-based Blackboard's utilities, particularly its 'Discussion Board' and the email were the main asynchronous delivery systems that connected the instructor to the students. 'External Links' was an invaluable source that connects students with outside sources, particularly other communities of writers through <www.powa.org>. Student number (3), however, commented that:

*" ... It would be much easier to ask someone in the Writing Lab or the tutor about something rather than reading what is on the External Links. However, we sometimes have no other choice"*

Other students, on the other hand, believe that the material on External Links is very significant and helpful. Actually, External Links do not only enrich a subject through additional supporting or related information, but also provide the means for fast and easy navigation between different sources and types of information. External Links are the windows of the course through which students can view the rest of the world. Thus, in order to further their writing abilities, students were required to develop sound reading habits. Extensive readings would enrich their writing skills; their ideas would intermingle with other peoples' ideas. This enrichment could broaden the horizons of students, acute, and finely tune their writing skills and capabilities.

Students indicated that the application of computers gave them a lot of flexibility. They found that writing with the computer was more convenient than the traditional way of pencil/pen and paper. Some students emphasized that the indispensable 'equipment' for writing such as dictionaries and grammar helpers were available on the web. Whenever such 'equipment' are needed, students were able to access them simultaneously and limitlessly. Student # (5) once wrote *"I know that dictionaries and grammar helpers are there; all I need is to use them more and more."*

The syllabus, the prerequisites, parameters and goals of the course were posted on the course web page. Almost all students indicated that the application of the internet-based Blackboard platform gave them very convenient flexibility to do their writings and review them whenever they please. Students emphasized that all the necessary course materials were accessible through the course web page; so, they had a chance to access them limitlessly. They indicated that this is more or less a 24-hour accessible course no matter when or where the student might be.

Another valuable component of the asynchronous learning system of this course was the email. It actually made the horizontal (students among themselves) and vertical (students and instructor) communication very easy all through the course including weekends. The instructor's role was basically (1) director (2) facilitator (3) brainstormer, and (4) manager of the course. Anything related to the course was posted on the course web page on one of the following sites on Blackboard platform: **'announcements', 'course information', 'course documents', or 'discussion board'**. This means that anything students may need was a few clicks away.

Students were required to consult: (1) *The American Heritage Dictionary*, or a "good" college dictionary. (2) *A Writer's Reference* by Hacker, Diana. They were also required to read a required novel called *Parable of the Sower*, by Octavia E. Butler. Students were required to connect the chapters they read out of the novel with their own real life experiences in their writings. Thus, not a single draft in any of the papers is void of at least one or two reflections on the novel. So, in this course reading and writing were going hand in hand. This strategy is in line with the common belief that a good reader is most probably a good writer. Students' readings were by no means restricted to this novel. They were encouraged to be inspired by what they read, and to apply the knowledge they get from their own readings.

Students were encouraged to participate on the individual and group-level discussions. In fact, participation in this class was unavoidable, simply because every student had to review, edit, discuss, write and/or post, respond to, or comment on something. The class was more like a workshop, where everybody had no choice but to do his/her share.

Students in this course were not graded on their early drafts simply because doing so would be grading them based on the knowledge they brought to class rather than on what they learned during the class. At the end of the course, students submitted an accumulation of what they had written during the course for grading purposes.

**Blackboard Platform as a Means of Cooperative Learning:**

Blackboard platform provides a good opportunity for collaborative and/or cooperative learning. Cooperative learning was virtually applied in this course. Students exchange screens to edit each other's writing. Peer reviews remarkably help in building on, commenting on, suggesting and adding threads of thought to each other's pieces of writing. The 'Discussion Board' was a spirited forum where students share and exchange ideas and thoughts about their papers and writing strategies. According to (Johnson & Johnson, 2001), cooperative leaning is arguably the most researched instructional method in education. Cooperative leaning can be defined as students working together in small groups. A group of students could be doing their own work while talking to each other. When implemented correctly, students benefit from cooperative learning by achieving high academic success, as well as, developing positive and supportive relationships that boost self-esteem (Ibid, 2001). Much research has shown that students who receive help from a peer learn more than students work alone, and that those who tutor learn more than either group.

A variety of cooperative learning activities such as brainstorming, revision and editing were applied in this course. Students naturally communicated with each other without any sense of anxiety; they actually shared their composing potentials with the

rest of the class. This will ultimately help students to achieve and sharpen their own higher-level thinking. They begin to see that writing is a learning process - a notion that coincides neatly with the tenets of the constructivist theory of education, where learners construct their own understanding.

It is the researcher's belief that cognitively, cooperative learning triggers creativity and gives learners a chance to build on each other's ideas, concepts and ways of thinking. Once these ideas and concepts are understood and internalized, they become integral parts of the students' permanent construct of knowledge, which is at the heart of the constructivist theory of learning.

The majority of students in this study mentioned that the multiple drafts they write for each paper, the feedback they get from the instructor and their peers, the 'External Links' and the 'Discussion board' have contributed to their learning. They greatly appreciated the flexible dimension of this learning system.

**The Nature of Interaction in this Class:**

- ***Student-Content Interaction:***

In computer assisted courses, instructional interactions include "interactions that take place between learners and the content they are trying to master" (Ozen, 2000, p. 86). Students, then, are expected to construct their own knowledge from the materials provided on the course web page. Except for the optional readings accessed through External Links, the material provided for this writing course was their actual acts of writing. The time they spent on thoughtful, focused and genuine writing was a real

engagement in learning. That is because the best learning mood takes place when students participate actively and engage themselves with the actual study material. So, in this course, the student-content interaction was basically the journals, peer reviews, summaries, drafts and papers students wrote in and out of the computer lab. The following chart shows that there was a constant student-content interaction all through the course. It shows how many times each student did an act of writing:

| ***Student number*** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Acts of writing*** | 29 | 21 | 42 | 20 | 22 | 21 | 34 | 35 | 13 | 23 | 18 |

- ***Student – Instructor Interaction:***

Apart from electronic communications, the instructor provided help both face-to-face during class and office hours, and online through the 'discussion board' and email. That guarantees prompt responses to their queries. The instructor's messages on the 'discussion board' usually include guidance and comments on written drafts. The students' sense of security, self-confidence, and sense of being motivated have encouraged constant interaction with their instructor.

**Interaction through the 'Discussion Board':**

During this course, constant interaction took place through the 'discussion board' between the students and the content material, students and the instructor, and among the students themselves. The 'discussion board' activities occurred as a result of in-class and

out-of-class writing assignments. It holds the total of (179) messages; all of which are inherently related to the course. Each and every message was nothing but a short act of writing and an addition of a new thread to the content material. If we divide them evenly amongst the students, the average will be (17.2) messages per student. However, during this course the total number of students have accessed the course web site (4577) times to read the latest, contribute to the discussions, or get updated about the course.

**Accessing the Course Website:**

Table (1) below illustrates that there was neither significant correlation between the number of visits/accesses to the course web page and the number of actual acts of writing (journals, or initial drafts) nor the students' grades in this course.

**Table (1)**

***Students' total number of accesses, total number of acts of writing and final grades as illustrated in the following table***:

| ***Student Number*** | ***Grade*** | ***Total Accesses*** | ***Acts of writing**** |
|---|---|---|---|
| **1**. | **C+** | 273 | 29 |
| **2.** | **C-** | 280 | 21 |
| **3.** | **B-** | 504 | 42 |
| **4.** | **C** | 100 | 20 |
| **5.** ESL | **IP** (Fail) | 669 | 22 |
| **6.** ESL | **C** | 290 | 21 |
| **7.** | **C+** | 556 | 34 |
| **8.** | **B** | 212 | 35 |
| **9.** | **A** | 432 | 13 |
| **10.** | B- | 307 | 23 |
| **11.** | B | 90 | 18 |
| | | **Grand Total** (3713) | **Grand Total** (278) |

* Each time a student writes a material related to the papers 1, 2, 3.

- ***Student – Student Interaction:***

Students constantly interact among themselves in class and via a forum. Their interactions are manifested in the form of idea instigators, brainstormers, editors, reviewers or proofreaders. Students who participated in such interactions indicated that they received tremendous benefits from such informal and cooperative type of learning. Although this interaction might seem voluntary, however, not a single student could evade active participation. If a student did so, s/he would feel abandoned, isolated, or left behind. Each student was expected to add a new thread, which would in turn encourage a cycle of threads that collectively would provide constant and constructive feedback. Students' comments on the discussion board reflected their belief that they learned a great deal from interacting with other students. As a result, they collaboratively learned invaluable skills of writing that ultimately showed a positive difference in their writing capabilities.

It is true that learning is an individual enterprise, but the quality support that a learners get informally in a cooperative learning environment can be improving, diverse, fruitful and productive. Cooperative learning environment familiarizes the learner with other learners' writing styles. They learn how to develop a model of their own skills and knowledge. Many educators consider collaborative learning a goal that is worth pursuit. They consider it important in itself, and in increasing the learners' efficiency in acquiring new learning and problem solving skills. It can help students monitor their own writing style and capabilities; it can also reduce anxiety, possible frustration and lack of confidence.

**Students' Motivation and Attitude Towards Computer-aided Learning:**

Students took this course because it is convenient, i.e. the 'equipment' needed by traditional writers such as dictionaries and other resources are at their fingertips. Statistics showed that 61.74% of the participating students 'Strongly Agree' that the pedagogical aspects of this computer-aided writing course were practical, effective, helpful, comfortable and efficient. Student # 7 once remarked that:

*"... if you miss the class discussions you will not miss whatever posted on the discussion board, class announcements or course documents on Blackboard".*

The same as the majority, it is noticeable that this student has accepted the society's message about computer technology and saw it as having positively and permanently marked her life as an independent leaner. Students' tendency towards abiding by the commonly held belief that the need for computer-aided learning is inseparable from quality education. They are responsive to the educators' indicative messages about this helpful technology in our modern world of literacy.

**Strengths and Weaknesses of the Course:**

Except for few cases, the students' personal experiences with this developmental writing course indicated that the areas of strength and weakness are as follows:

***Strengths:***

- Convenient/Flexible communication – can be done on student's own time.
- Resources are available 24/7.
- Constantly revise hard copies available to review away from the computer.
- External links connect you to related and helpful resources.

- The instructor is accessible anytime even weekends.
- Helps students' personal growth, independence and sense of responsibility.
- Gives chance for individual talents to outreach knowledge.
- Immediate feedback from the instructor or classmates.
- A good platform for students who benefit from cooperative learning.
- Easier to record, modify, re-modify, and build on earlier drafts.
- Handy and supportive Microsoft Word features (spell and grammar check, etc.).
- Easier to manipulate the texts.
- Internet has put immense amounts of knowledge under students' disposal. Online communities of writers are just a few clicks away.
- Students have a dual benefit of face-to-face and CAW.
- Students feel themselves on task and at the far end of the pool (of learning) from day one of the course.
- The course can take the student as far as s/he can go.
- Students have had a good extracurricular experience technology-wise.
- Easier to write more in number and bigger in size texts.

***Weaknesses:*** the reported areas of weakness were few due to the fact that the course applies both synchronous and asynchronous teaching methods. They could be summarized as follows:

1. Language barrier on the part of one of the ESL students (2 students).
2. The adjustment to the system took few students little extra time.

**Writing Strategies Applied in this Course:**

In this course, the 'discussion board' was a good platform for brainstorming. Students posted and exchanged ideas using the 'discussion board'. These exchanged ideas were a good resource for generating and elaborating on new ideas. This blackboard platform-aided course enabled students to review their 'old documents', i.e. their earlier drafts. These 'old documents' were good sources for generating new ideas; they also helped as organizational and format templates for new documents. The researcher noticed that students' papers were frequently built on previous papers. Students developed a habit of keeping old documents on their computers to consult them whenever they start working on a related topic. Browsing the web helped learners see how other writers had treated a certain topic. It also alerted learners to recent developments on that topic. Sometimes, exchanging electronic mail helped bring students' ideas together. They asked questions like "What do you think?" to gain a different perspective on a topic and to elicit new ideas about it. Reading the messages posted on the 'Discussion Board" served purposes similar to browsing old documents or browsing the Web. Students in this class wrote the minimum of one journal per week. These journals were basically reflections on conversations, and explorations of new ideas for their new papers. Some students used to jot down and save ideas or a running list of notes about their new papers as they come to their minds. Besides the affordances of 'External Links', students encouraged each other to create lists of useful web sites such as 'Online Writing Center Links'.

Writing usually starts with **'planning'**. Computers were helpful in planning when students used multiple windows to jot down notes from different resources. The second step was mostly **'drafting'**, where students tried to put full-fledged thoughts and ideas

into full-fledged sentences and paragraphs. Compared to pencil/pen and paper, computers are proven to be faster, easier, more practical and more accessible. Students in this course found it easy for them to write, erase, cut, paste, modify, add, cut again, rewrite, manipulate and save as many files and as may drafts as they want. All the word processing facilities were at their disposal. They were able to reuse or 'recycle' old documents or texts. Computers made it a lot easier for students in this course to use different strategies such as different colors, outlines, divided screens, several windows, or fonts to distinguish things. In drafting, computers were excellent arenas for collaborative activities. Students used to collaborate in a 'round-robin' fashion, where every student is given a chance to review and revise chunks of writing drafted by other students. Students used to write a page or so on the screen, then, they were asked to exchange seats and edit each other's writing. Later on, students were asked to publish their pieces of writing on the 'discussion board' for editing and revision by other students. In the process, students were able to pass their drafts back and forth until they were satisfied with them. Word processing programs support comparing, tracking, and annotating documents.

The researcher concluded that the peer review activity let the students recognize that other students could have similar difficulties in composing their ideas. Peer review also helped them to discover whether they themselves were making their points effectively. The third step was **'organizing'** where students organize their initial writing efforts. Computers allowed students in this course to organize and reorganize documents. It was easy for them to move texts from one part of a document to another, and to manipulate documents in different ways. Computers were good tools for students to edit

their papers. The software tools were mainly useful for checking spelling, grammar, and style; editing for consistency, variety, and avoiding errors as illustrated below:

***Editing for Spelling, Grammar and Style***:

Computer-aided writing spares students recurrent spelling problems and gives them leeway to focus on their ideas, their audience, and their purpose rather than spelling. Word processing software provides a quick way to review a draft for basic grammar, mechanical, spelling and style problems. The same as spelling checkers, they have both strengths and weaknesses. More often than not, computers skip some grammar and style problems. That is basically because of the following: **(1)** there are so many exceptions to the grammatical rules, **(2)** grammar and style checkers cannot identify all permutations of language structures that might arise in any one context, **(3)** acceptable usage varies widely among the vast areas of specialties, **(4)** different specialists and people of interest interpret the rules differently, and **(5)** English develops over time (see Palmoquist & Zimmerman 1999). Students in this course used to review and did the proper grammatical and style changes when their texts were flagged. Whenever the writers are unsure, recent software gives them a chance to click on the checker's 'help', 'explain', or 'rules' button, and it displays the rule, and explanation, or the required help.

The application of computers also gave the students in this course a chance to: overcome lexical problems, speed up their writing, sort out their lists and references, and correct themselves. Students made an excellent use of thesaurus to improve their diction. They frequently used synonyms to add consistency, coherence, variety and flavor to their

style. They were able to correct themselves within seconds throughout the application of various commands like ‘Find’ and ‘Replace’.

***Format, Layout and Web Browsing:***

Students in this course made good use of the facilities that the computer provided in this respect. All their assignments followed the well-known academic guidelines recommended in the course (font style and size, space, margin, page number, name, course title, etc.) Other features such as viewing, inserting, cut and paste, bulleting, line spacing, indentation, aligning, tables and figures to name a few were also accessible from the screen. The application of all or some of these features on the part of our subjects increased the effectiveness and readability of their documents. The writing and computer skills that the students mastered in this class were really an excellent scaffold for higher and more advanced courses.

The researcher expected students in more advanced courses to be able to do so many more things such as gathering information online, locating online information sources, locating online library catalogs, locating databases such as ERIC (a database on educational issues published since 1966), and MLA online. A lot of valuable materials including online books, online writing centers, dictionaries and style guides, glossaries, thesaurus, encyclopedias, grammar guides online, style and citation guides, online texts about writing processes and genres, and online writing centers, to name just a few, are readily available on the World Wide Web. Students of writing could also join online writing communities, contact newsgroups, web sites, weblogs and chat channels. These

allow learners to discuss and share ideas, collaborate on projects, and request information about certain topics.

***The Most Recurrent Categories of Mistakes in the Students' Papers:***

Table (2) below shows a list of the most recurrent categories of mistakes in the students' papers and their drafts, as well as their frequency; categories are arranged in their order of frequency:

**Table (2)**
**The frequency of the recurring mistakes in the students' papers and their drafts**

| **Type of Mistake** | Frequency Paper **(1)** | Frequency Paper **(2)** | Frequency Paper **(3)** | **Total** |
|---|---|---|---|---|
| 1. Grammar & Syntax | 325 | 174 | 243 | 742 |
| 2. Punctuation mistakes | 280 | 104 | 138 | 522 |
| 3. Missing word or wrong choice of word/phrase | 189 | 114 | 128 | 431 |
| 4. Alternative word/expression; rephrasing or addition by the instructor | 173 | 92 | 119 | 384 |
| 5. Awkward, vague or incomplete structure | 148 | 106 | 98 | 352 |
| 6. Redundant word/sentence | 121 | 67 | 78 | 266 |
| 7. Drawing attention due to lack of specifics and details | 119 | 74 | 68 | 261 |
| 8. Spelling mistake | 92 | 52 | 54 | 198 |
| 9. Transitions/connections between ideas | 78 | 48 | 48 | 174 |
| 10. Clarifying question (input that requires more clarity) | 66 | 25 | 39 | 130 |
| 11. Proofreading (Students should proofread their writing) | 48 | 34 | 46 | 128 |
| 12. Fragment | 49 | 29 | 38 | 116 |
| 13. Lack of clarifying/supporting example | 46 | 29 | 26 | 101 |
| 14. Paragraphing (students should consider a new paragraph) | 33 | 48 | 20 | 101 |
| 15. Lack of topic sentence | 23 | 5 | 7 | 35 |

It is true that the computer was a good helper in certain areas. However, a closer look at Table (2) above showed that there were categories of mistakes where the computer was of no help as numbers 7, 9, 10, 11, 13, 14 and 15 above. This means that the application of computer was neutral with some of the categories.

As mentioned earlier, each student in this study was given a chance to write each paper (3) times. This allows for measuring the students' progress throughout a total of 'Nine' drafts during the course. The statistical results revealed by the Repeated Measure Analysis (RMA) with ANOVA (one-way analysis of variance that is used to determine whether there are any significant differences between the means of three or more independent groups) reflect an overall improvement in the students' writing abilities in all the papers and their multiple drafts. Examining students' writing over time indicates clearly a significant decrease in the number of errors. Figures (1, 2 & 3) below are pictorial images of the estimated marginal means; they trace the students' writing over time. They show a steady and constant drop of the number of errors as shown in the three drafts of the three papers, where:

***D = draft****, and the figures on the Vertical Axis represent the number of mistakes committed by students.*

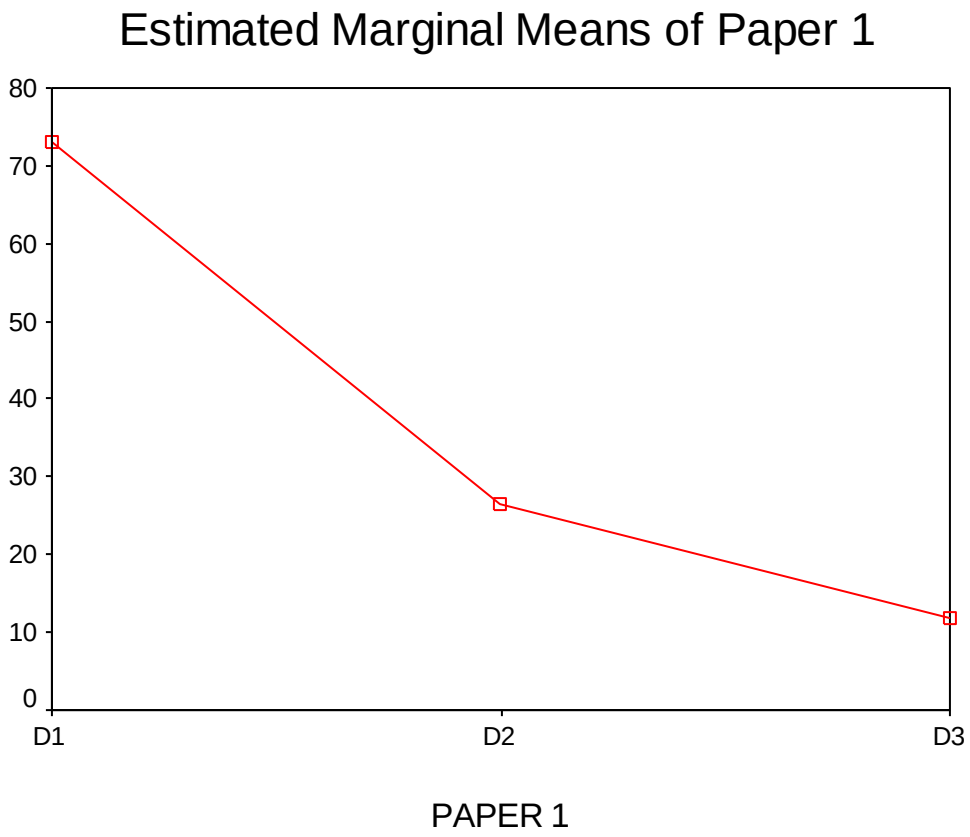

Estimated Marginal Means of Paper 1
80
70
60
50
40
30
20
10
0
D1
D2
D3
PAPER 1

Figure (1)

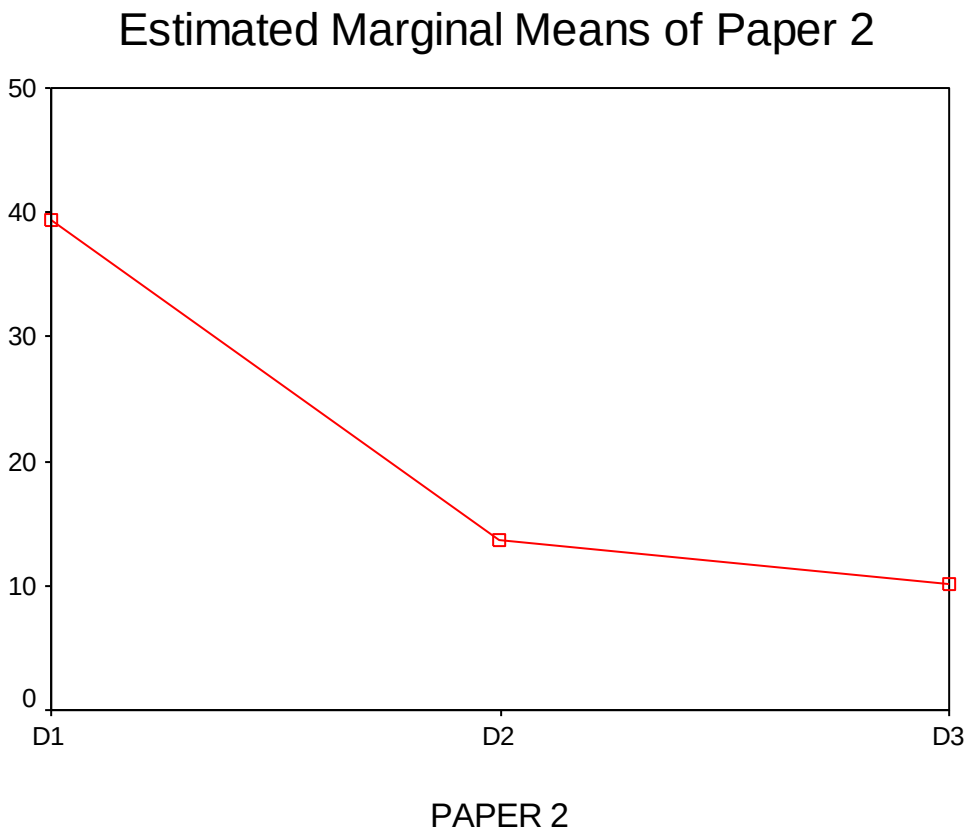

Estimated Marginal Means of Paper 2
50
40
30
20
10
0
D1
D2
D3
PAPER 2

Figure (2)

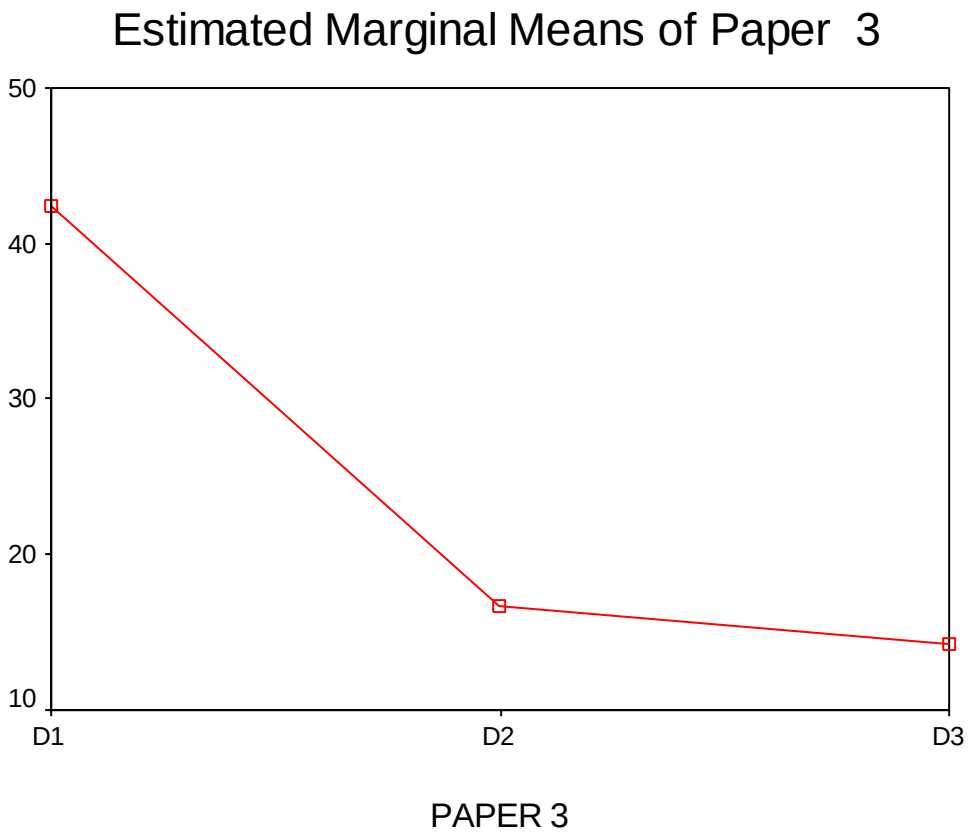



Figure (3)

As shown above in the 'pictorial trace of students' writing over time', the slopes of the repeated measure in the three papers show that there was a constant improvement in the students' drafts and papers alike.

A good question could be: was that improvement due to the application of the computer or not? As I said earlier, there were areas where the computer was no more than a neutral device; it barely lent any help. There were areas, however, where it could draw the attention of the writer to potential errors. Moreover, computers could connect and provide writers with very rich and vast sources of help and guidance. They were facilitators to the extent that they changed the process of writing from a burden to a joy

and fun on the part of the students. Practically, their usage was in the heart of constructivism, where learners could constantly build on, and add to their previous technical and pedagogical knowledge.

Thus, the computer as a device had never been a magical instrument that could switch people from poor writers to good writers overnight. Computers are no more than tools that put the necessary and crucial equipment that instigate writers ready at their disposal. Moreover, the software that is available so far is an excellent tool that plays the role of the editor. Actually, the swift turn of people all over the world to the application of blackboard or similar platforms is an indicator that nobody gives a second thought about the efficacy of such software at almost all levels.

**Summary, Discussions, Conclusions, Implications and Recommendations:**

Blackboard platforms enable writers to easily create, revise, modify, keep, edit and publish texts to name a few. Almost every job requires strong writing and computing skills. Actually such skills are no longer optional, they are a requirement; they are a necessity for almost every application.

A blackboard platform-aided writing class (BAWC) will be losing its point if it is meant to merely duplicate the characteristics of the traditional face-to-face classroom. Thus, it should use the powers of the computer to enhance what can normally be done in such face-to-face classroom. As we have seen earlier, the internet-based blackboard platform, particularly the ‘discussion board’ provided features for asynchronous discussions and communication, sophisticated question and response facility, thoughts,

afterthoughts and other group learning tools that a traditional classroom by no means can provide.

Of course, we all know that the computer as a device does not help its users to be better writers in the sense that 'if you use it, you will be a good writer, and if you do not, you will be a terrible writer'. Just as a well-equipped playground makes it comfortable, easy and handy for players to play, exercise and move around easily, the application of computers in writing facilitates and capacitates the process of writing. Among the many benefits is the fact that it provides quick and handy revisions of papers. Students never have to rewrite the whole thing. They can just omit, add, insert, mutate, move around, and cut and paste the bits and pieces of the written papers. In case of a need, they can access external links, which empower them to consult and make use of outside resources. The application of computers caters for students' writing needs; it makes weeding out mistakes easier and faster. Thus, it helps learners to write more effectively and efficiently. It helps them to easily locate and evaluate information, and to better organize data for later use.

Besides the enormous facilities of the typing process, editing commands that are available to, or ready for writing on a computer, make writing faster, easier, more comfortable and more amusing. Commands such as 'select', 'move', 'delete', 'cut', 'copy', 'paste', 'undo', 'redo', 'find' and 'repeat' are the basic commands that help facilitate the writing process. Thus, the application of computers in writing has the advantage of giving the writers a handy editor at their disposal to polish their documents and improve their writing. These features of computers significantly eased the burden of the learners. The application of blackboard platform in writing has the advantage of

concentrating more on contents and ideas. Multiple drafts are almost inevitable for students of writing; thus computers are efficient tools for saving time through using and reusing (recycling) previous drafts. The application of blackboard platform in writing has fringe benefits as well; it enhances our subjects' typing abilities and computer literacy.

Computers are helpful time savers, or at least are intended to be so. They allow students to save as many copies as they need. Should a student lose a file, retrieving a backup file, stored in a different place, takes far less time than redoing it from scratch. Writing on a computer renders the advantage of having valuable helping resources at the students' heels, ready for their disposal. Nowadays, asynchronous education becomes very applicable in the computer age. Thus, computer-assisted education is by itself a paradigm shift in modern education. This paper, of course, does not encompass all the functions and merits of computer-aided courses, and it never intended to do so.

The researcher believes that the Internet-based blackboard platform can add to and improve upon what writing instructors have been doing for years, i.e. teaching writing in a student-centered, communicative and collaborative classroom environment. The blackboard platform lent itself in helping students extend their learning beyond what the traditional classroom offers by improving their ability and confidence to write more efficiently. This particular Internet-based course provided students with opportunities for:

- Excellent environment like that of a well-equipped playground to players. In the same token this environment helps increase their writing efficacy.
- Collaboration with other students.
- Student responsibility, motivation and enjoyment of the learning process.
- Time management.
- Development of the writing process through dynamic interaction between instructors, computers and students.

What this course might be held accountable for was whether or not the subjects showed improvement in quality, and a decrease in the number of mistakes throughout the three papers. As shown earlier, the slope of mistakes indicated that papers number two and three had fewer mistakes and were of better quality than paper number one. The same applied to drafts two and three of every paper. This assumes that the course has made a relatively positive difference in the students' writing.

***Implications:***

**A. For Teaching:**

The application of blackboard platform can create a community of writers within the class. It also creates studentship skills such as exchanging ideas and peer reviewing; moreover, it fosters critical thinking literacy. After the advent of computers, there is no excuse for anybody not to get sufficient information about any topic in whatsoever field of knowledge within minutes. In the same token, students should do the learning themselves to better cater for their own academic needs. What is special about a blackboard platform-assisted approach to learning is that it can start with learners from the basics and take them as far as they can go. The researcher believes that such approach is among the best methods to date that can help developing writers rather than pieces of writing. The instructor should be no more than a facilitator who is coaching from the peripheries. This by no means indicates that the researcher believes in the common misconception or myth that the "computer will replace instructors".

**B. Further Implications for Classroom:**

The researcher has found out that interaction among students was a key element for a successful CAW class. Students can work collaboratively to publish their writings, or create and publish class web pages. This means that the very nature of the Internet-based learning is advantageous to student-centered learning. The computer-assisted classroom is unlike the traditional one in which teachers are all-knowing and students are subjugates, who recurrently turn to them as experts. While current pedagogical theory encourages the student-centered classroom, the computer-aided learning experience necessitates it. Students realize that they communicate with knowledgeable audience, and that every addition of a new thread is for the purpose of sharing ideas with this audience. The researcher believes that the most innovative and empowering use of the Web-based blackboard in the writing classroom would be opening the door for students to publish

their own work. This provides them with the opportunity for a communicative, collaborative, student-centered and task-based classroom.

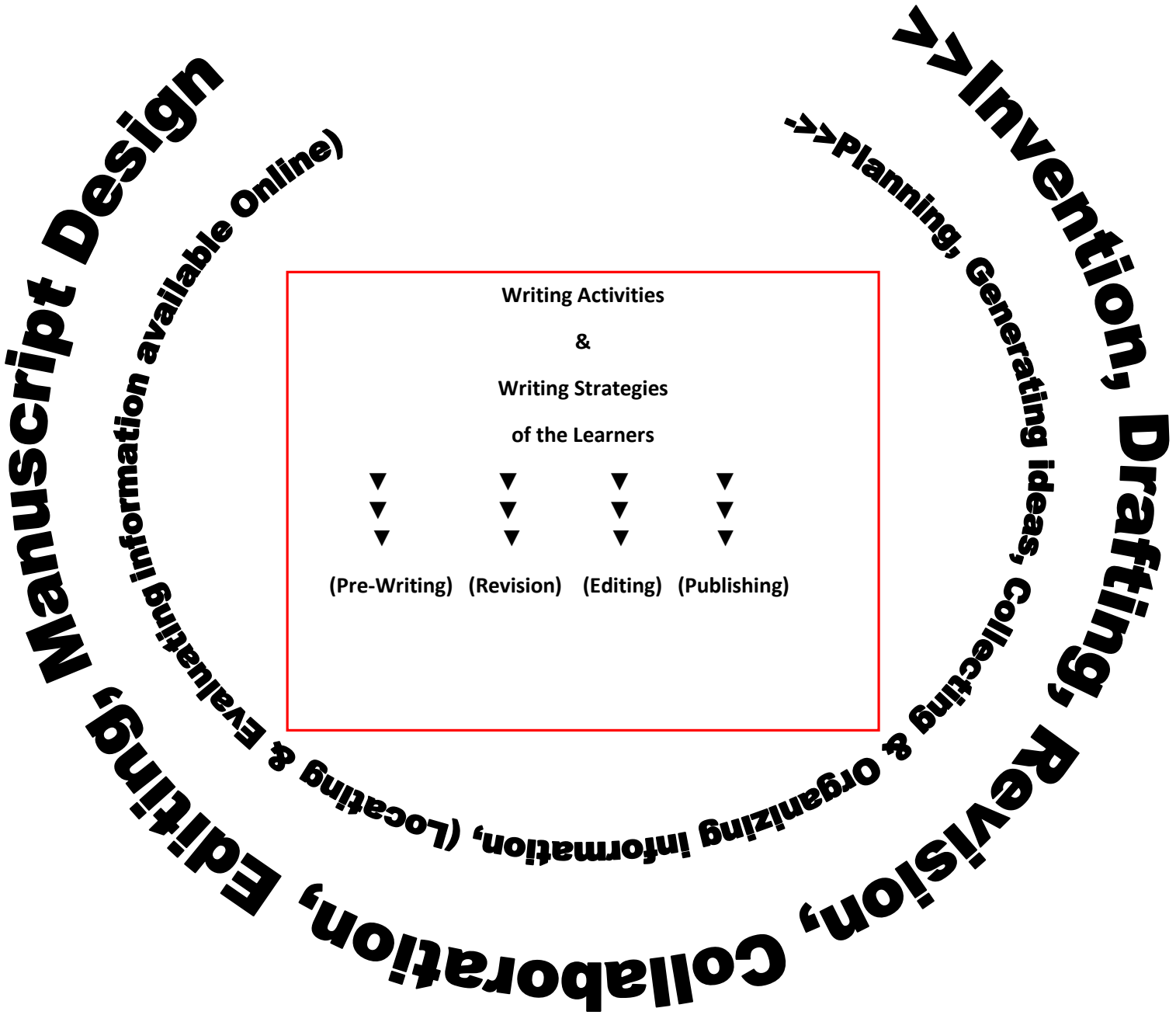
**C. Implications for Instructors of Similar Courses:**

The researcher has noticed that although there was a significant decrease in the number of mistakes in the multiple drafts of the students' papers, still, there was no big difference in the content of these multiple drafts. The content was usually elaborated when the instructor or one of the peers suggested new ideas or asked a clarifying questions that trigger thinking of new elaborative ideas. This indicated that some students were basically contented with just clearing the papers up from the 'current' errors. Some students did not show genuine enthusiasm to elaborate on, or come up with new ideas that might add new dimensions to the content. So, the computer's ability to keep old copies was a mixed blessing.

Instructors need to know that just as there is no single method for successful teaching in the traditional classroom, there are also diverse techniques and methods that can be successful in a blackboard platform -aided environment. Instructors should keep on modifying their methods and strategies that they initially chose on the basis of their observations about the level of, ability and motivation of their students.

**An Illustration of the Act of Writing in this Course:**

The following diagram illustrates most of the writing activities and the writing strategies that were applied by students in this course:



Most educators agree that writing is a product of talent and constant practice, and is nearly as individual as our physical features. Writing is never a linear process; writers kept shifting from one process to another. Sometimes they generate ideas, at other times they revise, draft, organize or trash the whole texts. The major writing processes are normally: generating ideas (brainstorming) or 'invention', collecting information, planning, drafting, reviewing and editing. These processes can be done individually or collaboratively.

***Recommendations:***

Bearing in mind that this research was limited in scope to one blackboard platform-aided class, thus, the recommendations should be limited to similar courses. Based on the quantitative and qualitative data collected for this study, and the personal judgment of the researcher, the following recommendations might be useful for future studies:

- Solid computer literacy in a computer-aided class guarantees positive attitude, motivation and effective performance on the part of students.
- Writing should be viewed as a recursive process. Thus, instructors should not treat writing as a product rather than a part of a process. By doing so, they teach students the benefits of drafting and revising.
- When evaluating papers, instructors should also evaluate writing as part of a process, be aware of student reactions to their comments, provide clear and helpful comments. On the first draft, it may be best to provide positive feedback and focus on two or three main areas needing improvement. Limiting comments increases the likelihood

that students will attempt to improve their papers. If we agree that writing is a process; in the same token, we should agree that the act of improving writing is a process too (see Zeiser, P. 1999).

- Blackboard platform-aided writing excludes the possibility of single-draft assignments, last-minute term papers, and one-draft efforts. The application such platforms in writing requires students to write to learn.

## References

Albirini, A. (2006).Teachers' attitudes towards information and communication technologies: the case of Syrian EFL teachers. Computers & Education, 47, 373-398.

Anderson, D., et al. (1998). Connections: A guide to online writing. Boston: Allyn and Bacon.

Anderson, D. & Reed, W. (1998). The effect of Internet instruction, prior computer experience, and learning style on teachers' internet attitudes and knowledge. Journal of Educational Computing Research, 19, 227-246.

Applefield, J. M. (2001). Constructivism in theory and practice: Toward a better understanding. The high school journal, 84 (2). The H. W. Wilson Company.

Belcher, D. & Hirvela, A. (2001). Linking literacies: Perspectives on L2 reading writing connections. The University of Michigan Press.

Bhalla, J. (2013). Computer Use by School Teachers in Teaching-learning Process. Journal of Education and Training Studies Vol. 1, No. 2; pp. 174-185.

Bodomo, A. (2009) Computer-Mediated Communication for Linguistics and Literacy: Technology and Natural Language Education. Hershey, PA: Information Science Reference.

Dawson, V. (2008) Use of information communication technology by early career science teachers in Western Australia. International Journal of Science Education, 30, 203-219.

Duffelmeyer, B. (2000). Critical Computer Literacy: Computers in First-Year Composition as Topic and Environment. Computers and Composition. 17.3 (Dec. 2000).

Dunn, P. (2001). Talking, sketching, moving: Multiple literacies in the teaching of writing. Boynton/Cook Heineman. Portsmouth, NH.

Education and Literacy – India (2009). http://www.education.nic.in/secedu/ict.pdf

Ermter, P. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. Educational Technology Research and Development, 47 (4), 47-61.

Fageeh, A. (2011). EFL learners' use of blogging for developing writing skills and enhancing attitudes towards English learning: an exploratory study. Journal of Language and Literature, 2(1), 31-48.

Fang, Y. (2010). Perceptions of the Computer-Assisted Writing Program among EFL College Learners. Educational Technology & Society, 13 (3), 246–256.

Ferris, D., & Hedgcock, J. (1998). Teaching ESL composition: Purpose, process, and practice. Mahwah, NJ: Lawrence Erlbaum.

Fuller, H. (2000). First teach their teachers: Technology support and computer use in academic subjects. Journal of Research on Computing in Education, 32, 497-510.

Greiffenstern, S. (2010) "The Influence of Computer, the Internet and Computer Mediated Communication on Everyday English" Berlin: Logos Verlang Gmb.

Hawisher, G. & Selfe, C. (1999). Passions Pedagogies and the 21st Century Technologies. Logan, UT: Utah UP.

Johnson and Johnson (2001). Cooperation and the Use of Technology. University of Minnesota, Minneapolis, Minnesota. USA.

Mahmoud, A. & Auter, P. (2009). The Interactive Nature of Computer Mediated Communication, American Communication Journal.

Mondahl, M. and Razmerita, L. (2014) Social Media, Collaboration and Social Learning: A Case Study of Foreign Language Learning. Electronic Journal of E-Learning, Vol. 12, No. 4, p. 339-352.

Ozen, K. (2000). A case study of students' experiences in an on-line college physics course. ED.D. Dissertation. University of Cincinnati – Ohio.

Palmquist, M., et al. (1998). Transitions: Teaching writing in computer-supported and traditional classrooms. Greenwich, CT: Ablex.

Palmquist, M. & Zimmerman, D. (1999). Writing with a computer. A Viacom Company, Needham Heights, MA.

Robin, B. & Harris, J. (1998). Correlates among computer-using teacher educators' beliefs, teaching and learning preferences, and demographics. Journal of Educational Computing Research, 18, 15-35.

Roybler, J. (2000). Integrating technology into teaching- 2nd Ed., Prentice Hall, Upper saddle river, NJ.

Sankaran, S., & Bui, T. (1999). The effectiveness of Web-based Instruction for ESL students in business: an empirical study with focus on ethnicity, gender and instructional media. ISECON Proceedings, Chicago, 14-17.

Silc, K. (1999). Using the World Wide Web with adult ESL learners. Washington DC. ERIC Document # ED 427555.

Smith Martin (2012) Can Online Peer Review Assignments Replace Essays in Third Year University Courses? And if so, What are the Challenges? University of Victoria, Canada, Volume 10 Issue 1.

Straumsheim, C. (2014). "Moodle for the Masses" Inside Higher Ed, 13 February 2014.

Teeler, D. and Gray (2001) How to Use the Internet in ELT, Person Education Limited, England.

Thompson, J., et al. (1997). Enhancing classroom interaction in distance education utilizing the World Wide Web. ERIC Document # ED 413817.

Tolosa, C. et al. (2013). Online Peer Feedback in Beginners' Writing Tasks: Lessons Learned. Volume: 43 (1).

Vitanza, V. (1998). Writing for the World Wide Web. Boston: Allyn and Bacon.

Yildirim, S. (2000). Effects of educational computing course on preservice and inservice teachers: A discussion and analysis of attitudes and use. Journal of Research on Computing in Education, 479-495.

Zeiser, P. (2002). Teaching process and product: Crafting and responding to student writing assignments. PS online- APSA's journal.