INTEGRATING E-LEARNING AMONG THIRD YEAR BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY STUDENTS TAKING UP COMPUTER SYSTEMS AND ADVANCE COMPUTER NETWORKING COURSES AT ALDERSGATE COLLEGE

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By:

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I.   INTRODUCTION

It has been six years since the researcher taught IT subjects in the College including non-lab IT subjects. It was hard for the students to understand their lessons because of comprehensive lectures with very limited interaction with the students. Therefore, cheering the students up and keeping them motivated had been a great challenge. With the conduct of Teaching Excellence Project participated in by Aldersgate College faculty and the academic unit head the researcher gained idea on how to solve the problem faced by most IT instructor. Since there were many documents for students to read, like broad computer technologies, programming techniques and computer technology awareness, and others, Dr. Romeo M. Bicad, the Dean of the College of Business and Information Technology (CBIT), conceived the idea to put all the resources online. He instructed the researcher to build a Yahoo Group as a platform to put resources and announce news under College of Business and Information Technology. A teaching platform is a familiar way to teach students and to correspond to environmental protection issue. Associate Professor Rodel B. Balallo shared his discussion experience by using Yahoo Messenger (YM) with students. According to him, YM is a common chatting tool for teenagers; which is an easy way to ask questions as long as teacher / instructor is online. These two ways the teaching platform and YM had something to do with computers that motivate the researcher to integrate E-learning to all academic classes. Based on the inspiration mentioned above, the purposes of this study are to *(a) construct student-content interaction by integrating e-learning; (b) foster good student-teacher interaction; (c) encourage student-student interaction; and (d) review student-interface interaction.*

II.   BACKGROUND OF THE STUDY

In 1922 Thomas Edison predicted that "the motion picture is destined to revolutionize our educational system and ... in a few years it will supplant largely, if not entirely, the use of textbooks." Twenty-three years later, in 1945, William, the director of the Cleveland public schools' radio station, claimed that "the time may come when a portable radio receiver will be as common in the classroom as is the blackboard." Forty years after that the noted psychologist B. F. Skinner, referring to the first days of his "teaching machines," in the late 1950s and early 1960s, wrote, "I was soon saying that, with the help of teaching machines and programmed instruction, students could learn twice as much in the same time and with the same effort as in a standard classroom." Ten years after Skinner's recollections were published; President Bill Clinton campaigned for "a bridge to the twenty-first century ... where computers are as much a part of the classroom as blackboards." Clinton was not alone in his enthusiasm for a program estimated to cost somewhere between $40 billion and $100 billion over the next five years. Speaker of the House Newt Gingrich, talking about computers to the Republican National Committee early this year [1997], said, "We could do so much to make education available twenty-four hours a day, seven days a week, that people could literally have a whole different attitude toward learning."

Looking back on the last century and the comment by Oppenheimer, it is interesting to note how there has been a subtle shift in focus from promoting a variety of information and communication technologies in the learning environment to the expectation that education could be available twenty-four hours a day, seven days a week. What was omitted was the additional time period of 365 days a year. It is this leap of understanding that has taken many people in education by surprise and accounts for a healthy dose of both skepticism and optimism. Since 1997 when Oppenheimer wrote his paper The Computer DELUSION, examples of 24/7 education in schools

has not evolved at the anticipated rapid rate to meet the promise and expectations. This is in direct contrast to the enormous growth of the Internet and the level of access in both homes and schools over the past four years. Greater access does not infer greater uptake of e-education.

The e-learning approach on the program is based on an underlying assumption that engagement in study will take place alongside participants' professional work, with academic study enhanced by reference to current practice, and direct relevance of study to challenges and issues within the work context. With this in mind, almost all modules encourage assignments and project work to be contextualized within real educational contexts, and students are encouraged to combine a depth of exploration into issues pertaining to e-learning within their own contexts with mutual and peer learning through comparison and contrast with the contexts of their online colleagues.

All have been involved in the design of active learning activities which include online seminars, mini-action research projects, the development, implementation and evaluation of a period of e-Teaching Practice, the design and development of e-resources, and the development of a collaboratively-owned e-dossier comprising individual papers investigating a negotiated theme and topic related to e-learning management and implementation.

Engagement in this program has provided a valued form of professional development for some other academic colleagues and support staff across the college and has been instrumental in informing the development of online provision of modules and program within their own departments and faculty.

DEFINITION OF TERMS

1) **E-Education** – used in this study refers to involvement of e-teaching and e-learning along with the various administrative and strategic measures needed to support teaching and learning in an Internet environment. It will incorporate a local, regional, national and international view of education.

2) **E-Learning –** is used in this study refers to a type of Technology supported education/learning (TSL) where the medium of instruction is through computer technology, particularly involving digital technologies.

3) **E-Resources** – used in this study refers to electronic reference such as e-journals, e-books, database and others.

4) **IT** – used in this study refers to the branch of engineering that deals with the use of computers and telecommunications to retrieve and store and transmit information

5) **MOODLE** - used in this study refers to a free and open source e-learning software platform, also known as a Course Management System, Learning Management System, or Virtual Learning Environment.

6) **Online** – used in this study refers to the operation of a functional unit when under the direct control of a computer

7) **Peer** – used in this study refers to people of a similar group. In education, a student's peers will be other students

8) **Yahoo Groups** - used in this study refers to an electronic mailing lists and Internet forums.

9) **YM** - used in this study refers to an advertisement-supported instant messaging client and associated protocol provided by Yahoo.

III. OBJECTIVES OF THE STUDY

<u>GENERAL</u>

The main objective of this action research is to determine how to integrate E-learning into teaching and learning process.

> ➤ Construct student - content interaction by integrating e-learning;
>
> ➤ Foster good student - teacher interaction;
>
> ➤ Encourage student - student interaction; and
>
> ➤ Review student - interface interaction**.**

<u>SPECIFIC</u>

This action research desires to:

1. Provide interactive learning within the campus with the opportunity to interact with others in education and training contexts.

2. To encourage students to work independently and collaboratively as they explore core issues involved in the design, development and implementation of e-learning with specific focus.

3. Determine the tasks to be taught, identify subtasks and other elements involved, and identify the knowledge, skills, and attitudes required to complete the tasks efficiently and effectively.

4. Review existing methods and infrastructure for providing training or meeting learning needs.

5. Identify concrete expectations and/or ROI requirements from the desired eLearning solution.

6. E-Learning is considered an effective way to keep up with new technology, to generate new ideas, and to keep workforce fresh and inspired.

7. To reduce the need for classroom training

8. To track employee progress

9. To track training effectiveness (or absorption)

10. To link training with Knowledge Management

11. To reduce time away from the job

12. To improve job performance

13. To support business objectives

14. To make learning available anytime, anywhere.

IV.   FINDINGS

STUDENT - CONTENT INTERACTION

Put learning resources on MOODLE. As a result, the researcher put some good examples on the MOODLE for them to refer. Besides, the researcher put other learning resources, like PowerPoint, Video, Audio and textbook references. Putting some good examples and formats on MOODLE provides models of construction of reports / topics which students consider difficult. Following the direction of the examples; student can get a picture of the topics from the paper handouts given to students, they may not be able to find the information they need. While, documents on MOODLE can be downloaded and kept in the computer, and can be opened when needed.

Handing in homework for a limited time, MOODLE could set up exact deadline of homework, so students would remind themselves to hand in homework on time. It helps them to monitor their time management. A deadline there will motivate and remind the researcher, for example MOODLE would give the reminded a week before the deadline. As had been observed, students always hand in homework at the last minute. But it's more convenient for instructors because they don't need to print out homework. Hand in online remind the instructor the deadline.
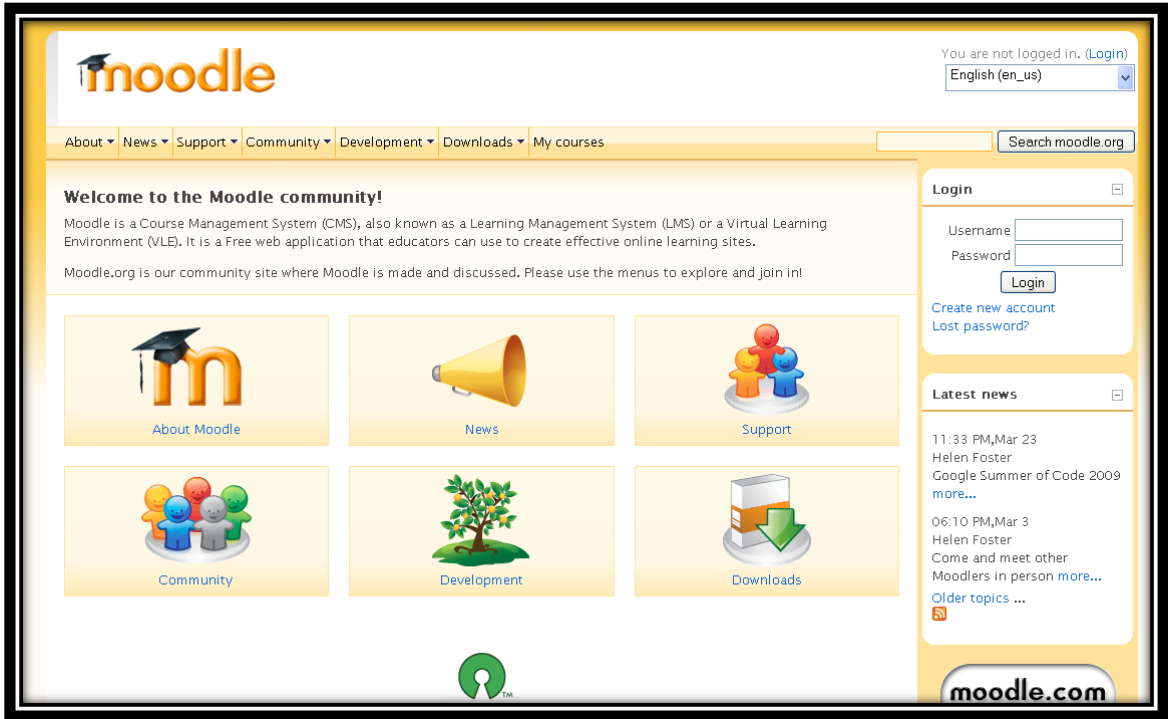
Figure 1. MOODLE

STUDENT- TEACHER INTERACTION

In this study, students could interact with their teacher both in person and online, and the latter is more novel for them and the teacher seems closer to his/her student by using Yahoo Messenger (YM). In a class of forty students, sometimes it's hard for an instructor to know them and especially for those who are too shy to ask questions, but communicating with them through the YM, students feel free to ask whatever they want. The more fantastic part is, after class they would change their nicknames to reflect their mood, and the instructor read his/her students mood and adjust his/her teaching plan. All that makes the instructor feel closer to his/her students. Online discussion dares the student to "talk" to the teacher, and it seems that TEACHER is not so hard to go along with.
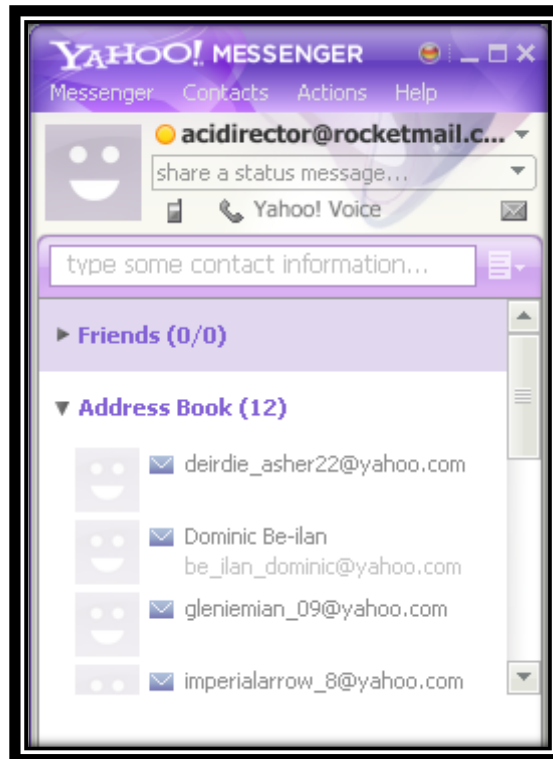
Figure 2. YAHOO MESSENGER

<u>STUDENT - STUDENT INTERACTION</u>

Yahoo online discussion - Though they are classmates, some students would hesitate to express themselves, but through YM, their familiar chat tool, students could join the discussion more confidentially, feel that different ways can satisfy everyone because there are some students who are shy and afraid to participate in face-to-face conversation, but they can to say something online by keying in and sending out.

Electronic whiteboard (Yahoo Groups) - In this study, the researcher tried to use electronic whiteboard to present flash for students to hit the answer by group competition. Everyone focused on the item and discussed with group members. It allowed everyone in the same group discuss together, not only the one who hit the answer but also the others because they belong to the same group and they worry about getting the scores for the group.

Figure 3. YAHOO GROUPS

STUDENT - INTERFACE INTERACTION

Since information technology (IT) is not new to BSIT students, they did not find it difficult to use the tool. After posting the problem on the discussion board, the solution is taken. The teacher could put the discussion documents and outlines on MOODLE three days before class, and let the students read them before attending the class. They could ask their questions or give their comments first by WORD and paste them in Bulletin when online discussion is held.

V.   RECOMMENDATIONS

Online discussion and face-to-face discussion are complementary ways to faster class discussion. Though online discussion has become a popular means to communicate and share ideas, but face-to-face discussion is still the most effective way to achieve success in the teaching-learning process.

Integrating e-learning in other subjects is possible depending to the nature of the subjects and the curriculum design being implemented. This recommendation must be observed to enable other instructors to enhance their teaching methodology by using e-learning in all subjects in our college.