IMPLEMENTATION OF ELECTRONIC TECHNOLOGY IN THE CURRICULUM: A CASE IN ACCOUNTING ETHICS COURSE AT STIE PERBANAS SURABAYA

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ABSTRACT

The screen-based technological revolution, which is only a decade old, has a profound effect on the way humans learn. Due to such a condition, STIE Perbanas Surabaya implements the new electronic technology in the learning process to improve the quality of the alumni of the higher education. Accounting ethics is one of the courses that use e-learning process to improve the quality of students. This course is attended by 128 students (two classes) from March to June 2010. The paper illustrates the planning and the process of electronic technology implementation in the student-centered learning process as a tool by students to understand accounting ethics course, the difficulties and obstacles of the program, and student involvement. The 69 students involved in this course were required to give opinions about the implementation of this program and suggestions to improve the implementation of the next e-learning process. Based on the students' opinions and suggestions, it is advisable that STIE Perbanas Surabaya should place the electronic technology to organize the curriculum, especially before students finish their study.

Keywords: Electronic technology, accounting ethics, student participation

INTRODUCTION

The era of globalization has forced nations to adopt information technology. This information technology is an important tool to improve international relationship. Besides, it can also advance nation economy as well as accelerate the education improvement. The modern electronic technology and the internet have revolutionized the traditional learning system, and offered learning opportunities to all the people interested in their professional evolution (Andronie, 2006). Responding adequately to this challenge amidst today's cultural shifts, to which young people are especially sensitive, necessarily involves using new communications technologies (Pope Benedict XVI, 2010). The development of the modern learning technologies not only helps the evolution of the high education but also accelerates the achievement of the higher education objectives. Thus, electronic technology is not only a tool to easily explain the material course in high education, but also facilitate the understanding of the material course.

Accounting ethics course is a part of Accountancy, especially in Economics. Becker and Watts (1996) said that current teaching practices that heavily depend on traditional lectures cannot be judged to increase the effectiveness of educating students in Economics. After Enron's debacle in 2002, Accounting Ethics course started to be studied in higher education. This is expected to improve understanding the importance of ethics, especially Accounting Ethics. After finishing their study, the students are expected to have an understanding about moral ethics and the way how to solve the ethics dilemma. This is good when they

work as an accountant; such knowledge can be used for a guidance in making decision. Therefore, the learning process of Accounting Ethics is necessary.

The learning process of Accounting Ethics can be attractive when performed by electronic technology. Besides getting the course materials from the lecturer, the students can also obtain them from the online-internet, dealing with Accounting Ethics cases and solutions. The students can submit their homeworks to the lecturer by email. They can also explain and discuss the course materials in a class by means of electronic technology. By doing so, there exists enrichment in the learning process.

The article illustrates the planning and process of electronic technology implementation to enhance student-centered learning process and to be used by the students as a tool to understand Accounting Ethics, the difficulties and obstacles of the program, and students' involvement. The students involved in this course are required to give an opinion on the implementation of this program to improve the implementation of the next e-learning process. Based on the students' opinions, it is advisable that STIE Perbanas Surabaya should implement the electronic technology curriculum, especially before students finish their studies.

LITERATURE REVIEW

The literature review describes the new paradigm in the learning process, student-centered learning, and four pillars of education. It also explains electronic technology as a learning source and tool.

New Paradigm in the Learning Process

In a conventional educational system, the students get knowledge through a process called instruction or teaching. In this condition, the success of educational system solely depends on the lecturer. Thus, it is teaching but not a learning process, yet, it is teacher-centered. Therefore, it is time to shift from a conventional paradigm into a new one. A college is an institution that exists to produce learning (Barr & Tagg, 1995). Consequently, teaching process should be changed into learning process, or student-centered learning (SCL).

In the era of globalization, students can not rely on the lecturer's activities only. They have to learn a lot from other sources like internet that is easily accessed. Students should use any learning instrument in their environment as a learning source. Teaching is about providing the students with opportunities to learn (Jones, 2000). Therefore, learning orientation is moved from teacher oriented learning to student-centered learning.

Student Centered Learning

One of the education problems in Indonesia is a wide gap between student knowledge and its behavior (Afiatin, 2010). Many students understand or memorize the course materials but they cannot apply it for life-quality improvement. Due to this condition, they need the process of learning which is SCL. This SCL commensurates with external situation when the student will make a decision to solve the problem. By SCL, the students are asked to have critical ability and are forced to solve the problem by themselves.

Some methods in SCL are: (a) Information sharing method (ISM) which consists of brainstorming, group discussion, panel discussion, symposium, and seminar; (b) Experience-based method (EBM) which consists of simulation, role playing, game, and meeting group; and (c) Problem solving based methods (PSM) which consists of case study, workshop, and tutorial learning. In SCL process, the students individually or in group must be active to get and digest the course materials. In such instances, the

lecturer just becomes a facilitator rather than being more active compared to the students. In SCL, the learning focuses on problem solving, team skills, learning how to learn, continuous improvement, interdisciplinary knowledge, interacting and processing information, and technology integral learning.

Four pillars for education

In 1996, United Nation Educational, Scientific and Cultural Organization (UNESCO) established the international commission on education for the 21st century led by Jacques Delors. In its report, the commission recommended the four pillars of education. These pillars are learning to know, learning to do, learning to live together, and learning to be.

The emphasis of the first pillar is combining a sufficiently broad general education with the possibility of in-depth work on selected number of subjects. In the 2nd pillar, the students receive a lot of competence and can work in team. In 3rd pillar, the students have to develop an understanding of others and their history, traditions and spiritual values and create a new spirit to manage the inevitable conflicts in an intelligent and peaceful way. The last pillar recommends that in 21st century, everyone needs to exercise a greater independence and judgment combined with a stronger sense of personal responsibility for the attainment of common goals.

In this period, the role of electronic technology is very important. All people in the world strive to understand and use electronic technology in all activities. Without electronic technology, a person or a nation cannot survive and they must be excluded. Because of that, the electronic technology should be utilized and maximized for the effort of making higher education implement the SCL.

Electronic Technology as a Learning Source and Tool

Implicitly, UNESCO also recommended that a learning process for a person throughout life be the key to the access to the 21st century. The formal or non-formal educational institution is only "a temporary stop over" in a long-life learning process of a person. In temporary long-life, a teacher, a lecturer, a tutor, or an instructor is not only the main learning resource for a learner. He or she is only one of the learning resources.

Electronic technology is a combination of computers, internet, and hypertext (Lasso, 2002). For instance, computers and the Internet provide a new vehicle for learning. Hypertext helps to become aware of the intimate relation between learning and technology. It has been the fact that the electronic technology communication revolution has a great effect on two fundamental aspects of human learning: the centre of learning and the learning process. Learning is controlled by whoever or whatever controls information. This control is referred to as the centre of learning.

Lasso (2002) said that the electronic technology communication revolution is also changing the way human beings learn anything. Essentially, the human brain learns by processing information received through sensory channels from a vast array of sources. Electronic technology permits a person to read many books and combine their ideas to produce creative interactions.

Other sources are laboratory, library, and place for workshop, seminar and conference, learning facility basing on multimedia as video, and audio-broadcasting, video, and audio-conference, and so on. Internet, as an application of electronic technology in this moment, is a learning source which has been continually developed in this decade. In virtual communication, the students can look for and develop their knowledge by themselves using e-learning with a learning network.

Ghosh and Renna (2006) quoting Chickering and Gamson (1987) explained that interactive technology will help to enhance the principles of good practice in undergraduate education. It is an electronic technology. The seven principles of good practice are as follows.

1. Encouraging student - faculty contact;
2. Encouraging cooperation among students;
3. Encouraging active learning;
4. Giving prompt feedback;
5. Emphasizing time on task;
6. Communicating high expectations; and
7. Respecting diverse talents and ways of learning.

THE IMPLEMENTATION OF ELECTRONIC TECHNOLOGY IN ACCOUNTING ETHICS COURSE

STIE Perbanas Surabaya has a website named www.perbanas.ac.id. There are some facilities in this website (e.g. news, web mail, student information system, e-learning, digital library, and galleries). In such website, it is expected that every lecturer can use the e-learning in their implementation of learning process.

The Learning Process Plan
The learning planning process of Accounting Ethics course starts preparing course materials by the lecturer. The course materials are taken from books, journals, and other sources with reference to accounting ethics. The lecturer also prepares electronic technology program of accounting ethics course. In the first course meeting, the lecturer presents a contract of learning process. In STIE Perbanas Surabaya, the website address of learning management system is named http://kuliah.perbanas.ac.id/. This system uses "moodle software". In the website, there are some facilities, (e.g. add a resource and add an activity). In this program, the students and the lecturers can communicate with each other. The students can send homework and the lecturers can evaluate, comment, and score the performance of homework of the students.

The Learning Implementation by Electronic Technology in Accounting Ethics Course
The steps of implementation of Accounting Ethics learning by electronic technology are performed as follows:
1. The lecturer uploads the learning contract of Accounting Ethics course in its file by using the facility of "add a resource", at subfacility of "link to a file or web site".
2. The course materials and the student homeworks are uploaded to each "topic outline". The 10 topic outlines of accounting ethics course are as follows:
   a) The overview of Business and Environment Ethics
   b) Governance, Accounting, and Auditing Reform, Post-Enron
   c) Corporate Ethical Governance and Accountability
   d) Ethical Behaviour in Accounting: Ethical Theory
   e) Code of Ethical Conduct of Indonesia Accountant
   f) Ethics in Auditing
   g) The Ethics of Managerial and Financial Accounting
   h) Professional Accounting in the Public Interest,
   i) Approaches to Ethical Decision Making
   j) The Accounting Profession in Crisis

3. Before the course starts, the students can download the materials of the course through the topic outline. After learning the materials, the students upload his/her homework in accordance with the lecturer instruction.

4. In the class, the student or the group of students presents the course topic. The following activity is a discussion between the students about the course topic. The student presentation must use electronic technology software (e.g., power point).

5. Finally, the lecturer evaluates, comments the result of presentation and discussion, and scores in column "status grade". Every student will know the score.

Difficulties and Obstacles of Electronic Technology Implementation

The difficulties and obstacles are not only for learning process in Accounting Ethics course, but also for all courses in STIE Perbanas Surabaya. These obstacles are as follows:

1. Although a learning facility for electronic technology is already prepared, not all lecturers use this facility. A total course in the institution is 114. The courses, using electronic technology are 97. The reminders are not used yet. It is caused by a lack of understanding to use electronic technology in learning process.

2. There is no regulation in the institution that compels the lecturer to use electronic technology for the learning process.

3. Not all students have the toll of electronic technology by themselves. So they use the facility in campus. It slows down the homework delivery.

4. There are 22 facilities in learning management system, but the lecturers only use two facilities. There are links to a file or web site and upload a single file.

Students Opinion and Suggestion to Improve Learning Process by Electronic Technology

Respondents. There were 128 students attending Accounting Ethics course used as the respondents. But only 59 respondents could be analyzed. The response rate is 54 percent from the total students attending the course. The response rate is low because there were some questionnaires answered incompletely. Thus, there were only 69 complete and valid samples.

Validity and reliability tests. The validity and reliability of questionnaires were tested. The result indicates that the questionnaires are valid which as indicated by the correlation score. Likewise the reliability of questionnaires was proven by the Cronbach's Alpha.

THE STUDENTS' OPINION AND SUGGESTIONS

Opinions

The students stated that e-learning is useful in learning process, and the use of electronic technology helps the accuracy of their presence in the class. The respondent's emphasized that assignments downloaded in e-learning are in accordance with a learning contract of Accounting Ethics course. Moreover, uploading the assignments in Accounting Ethics course was easier, cheaper, and simpler than by hard copy. They also described that in e-learning of Accounting Ethics course, there is enough space to upload an assignment and the limit time to deliver an assignment by e-learning is suitable for expectation. Finally, the respondents agree that presentation of Accounting Ethics course by power point is good and clear to understand.

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Suggestions

The respondents gave the following suggestions:
1. The exterior of e-learning should be nicer and more interesting;
2. Upload space should be larger and more than one attachment;
3. Course material discussed is uploaded in e-learning;
4. There are other alternatives to submit assignments when there is nuisance in uploading; and
5. If any class is cancelled, uploading should be extended.

DISCUSSION

The article describes the implementation of electronic technology in learning process in STIE Perbanas Surabaya. In STIE Perbanas Surabaya, the website address of learning management system is named http://kuliah.perbanas.ac.id/. The system uses "moodle software". The course used as an example of e-learning implementation is Accounting Ethics. The steps of learning implementation of accounting ethics by electronic technology are: (a) The lecturer uploads the learning contract of Accounting Ethics course in its file by using the facility of "add a resource", at sub facility of "link to a file or web site"; (b) The course material and the student homework are uploaded to each "topic outline"; (c) Before the course starts, the students can download the material course through the topic outline. After learning its material, the students upload their homework in accordance with the lecturer instruction; (d) In the class, the student or the group of students presents the course topic; and (e) The lecturer evaluates, comments the result of presentation and discussion, and scores in column "status grade".

Although the electronic technology is important in the learning process, there are some difficulties and obstacles in implementing this program. These obstacles can be listed such as: (a) not all lecturers are using the facility because of lack of understanding about electronic technology; (b) no regulation in the institution that compels the lecturer to use electronic technology in their learning process; (c) not all students have the tolls of electronic technology by themselves; and (d) there are 22 facilities in learning management system, but only two are used by the lecturers.

Some of the students attending the Accounting Ethics course were asked to provide opinions and suggestions to improve the next learning process. They stated that through e-learning, downloaded assignments, can truly be cheaper and it is simpler to upload. Finally, they also comment that by using power point, it is good and clear to understand the course materials.

However, the students also suggested that: (a) the view of e-learning should be nicer and more interesting; (b) upload larger space and more than one attachment; (c) the course materials discussed should be uploaded in e-learning; (d) there should be other alternatives to submit assignments when there is problem in uploading; and (e) if any class is cancelled, uploading should be extended. Finally, the paper concludes that the implementation of e-learning is important. It means that the e-learning is useful to improve the learning process, especially in accounting ethics course.

CONCLUSION

There are some conclusions can be asserted in this research. The implementation of electronic technology is the important aspect in the improvement of learning process in higher educational institution. Electronic technology can help the students to understand the materials of the course, especially in Accounting Ethics course. The use of electronic technology is cheaper, faster and more accurate in learning

process, especially in finishing the assignment of the lecturer. Finally e-learning is useful for accelerating the understanding of accounting ethics course. It is hoped that STIE Perbanas Surabaya should include the electronic technology in the curriculum.

REFERENCES

Andronie, M. (2006). E-Learning course guide. Paper presented to the *International Scientific Symposium - Quality Management in Higher Education*, Spriru Haret University

Afiatin, T. (2010). *Learning based on student-centered learning.* Retrieved on May 20, 2010, from http://www.inparamatric.com

Barr, R. B. & Tagg, J.(1955). *From teaching to learning, a new paradigm in undergraduate education.* Retrieved May 12, 2010, from http://critical.tamucc.edu/~blalock/readings /tch2learn.htm

Becker, W. E. & Watts, M. (1996). Chalk and talk: A national survey on teaching undergraduate economics. *American Economic Review, 86.*

Ghosh, S. & Renna, F. (2006). Technology in support of good pedagogy: Electronic response systems and peer instruction in an economics classroom. *Social Science Research Network.*

Jones, M. J. (2000). *Curriculum development.* Jakarta: EEDP DGHE.

Lasso, R. (2002). *From the paper chase to the digital chase: Technology and the challenge of teaching 21st century law students.* HeiOnline —43 Santa Clara L.Rev.

Pope Benedict XVI. (2010). The priest and pastoral ministry in a digital world: New media at the service of the word. Message for the *44th World Communications Day.*

UNESCO. (1996). *Treasure within report to UNESCO of the international commission on education for the twenty first century.* UNESCO publishing.