ICT FOR ENGLISH TEACHERS:
THE CHANGING OF EDUCATION WORLD

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The demanding and competitive world becomes the key of e-learning. With the existing of resources and information over the internet, some teachers in big cities encourage their students to be able to take initiative in learning by giving the students tasks, assignments, homework and ask them to use the internet as one of the sources.

INTRODUCTION

Teaching English has continued using multimedia to evolve from its inception. In the beginning, tape recorders, videos, computers, and CDs, have been used to teach English in the classroom. The most recent entry into the delivery category of teaching English is web-based teaching and learning activities along with their rapid developments. Universities around the world have been implementing and upgrading course delivery systems for years. The World Wide Web, however, is just beginning to appear in our nation’s public and private high schools. As schools in big cities in Indonesia increasingly turn to technology as a valuable tool, research and development at the junior and senior high school level must be increased and be continuous to determine how new technologies help facilitate students’ learning and motivation to learn.

The demanding and competitive world becomes the key of e-learning. With the existing of resources and information over the internet, some teachers in big cities encourage their students to be able to take initiative in learning by giving the students tasks, assignments, homework and ask them to use the internet as one of the sources. Some schools even apply the blended learning, physical classroom and e-learning. The human invention, in this case technology has created an environment with ‘screen’; motion pictures, televisions, computers and mobile phones. When TV was invented, people worried about the negative impact of this technology. Similarly, some are concerned about the bad effect of computers and the internet. In reality, children in this era watch computer screen more than to TV and possibly watch the mobile phone’s screen the most. In the next 10 years children will probably get exposure to internet even at younger age.
E-LEARNING AND STUDENT’S MOTIVATION

Barolli, Akio.K, Arjan.D and Giuseppe. M. (2006) confirm that web-based e-learning system increases study efficiency when there is enough stimulating motivation given to the learners. They claim that materials in form of texts, pictures, sounds give only small stimulating motivations. They found that communication among students and interactions between teacher and students stimulate students’ motivation. In other words, virtual interaction stimulates motivation more than the presentation of the materials. Eijl, Albert.P, and Peter.V (2005) confirm that students work collaboratively using discussion forum in the e-learning system gain higher marks than students work individually. The observation was carried out at the university level where the students have the freedom to participate in the forum or work individually throughout the semester. However, they suspected that some students who did not join the forum might have face to face discussions.

Learning using computers as a media, in the early time, Schramm (1977) suggested that the learning is influenced more by the content and instructional strategy in the learning materials than by the type of technology used. Clark (2001) has claimed that technologies are merely vehicles that deliver instruction, but do not influence students’ achievement. In regard to the new trend of using the internet as a medium to support teaching and learning, there are on-going debates about whether it is the use of a particular delivery technology or the design of the instruction that improves learning (Clark, 2001). Kozma (2001) argues that the particular attributes of the computer are needed to bring real-life models and simulations to the learner; thus, the medium does influence learning. However, it is not the computer per se that makes students learn, but the design of the real-life models and simulations, and the students’ interaction with those models and simulations.

E-LEARNING AND BEHAVIORIST

Early Computer Assisted Language Learning programs were designed based on behaviorist to learning. There are various behavioral theories that extend from Ivan Palov’s classical conditioning to the operant conditioning of B.F. Skinner. Ivan Palov’s work on “the digestive system of dogs” (Gilliani, 2003. p. 26) came upon interesting idea that changed the history of psychological research. His work, classical conditioning, influenced the work of E.L. Thorndike in the area of applying a behavioral approach to education. He applied his “connectionism theory” into educational planning and developed “law of effect” and “law of exercise” (Gilliani, 2003. p. 27).
Connectionism is a process of forming a connection between stimulus and respond, and Thorndike defined learning as habit formation. Law of effect takes place when a connection is created between stimulus and response and is followed by reward. The next important principle posited by Thorndike for educational purposes was the law of exercise. This principle states that repetitions strengthen connection between stimulus and response. In other words the more practice the stronger the connection is.

Like other behaviorist theories, operant conditioning developed by B.F. Skinner was based on stimuli-responses. This behavioral theory, however, differed from other behavioral theories in respect to stimuli-responses and treatment of reward. In stimuli-responses, Skinner posited two types of response called “respondent” and “operant” to explain human behavior (Gilliani, 2003. p. 28). Respondent is response that occurs to a specific stimulus, and operant response occurs for no apparent reason and it is uniquely human. Gilliani (2003) points out that there are operant responses that a child has the innate tendency to acquire and these operant responses become rooted in human behavior when they are properly reinforced. “This is why Skinner refers to his theory as operant conditioning” and becomes the goal of learning and education (Gilliani, 2003. p. 29).

It is worth noted that tutorial, practice and drill of behaviorism as adapted to e-learning environment, have received a lot of criticism. Jonassen (1991) has criticized practice and drill programs for not using the full potential of computers. He claims that practice and drill programs can easily be done with pencil and paper. On the other hand, Salisbury (1990) believes that practice and drill are more efficient and less costly done with computer. Furthermore, Yunandami (2007) indicates that a large number of junior high school students enjoy learning English using computer.

Gilliani (2003) points out that there is a place for the use of a behavioral approach to e-learning, and states that there are important factors to be considered such as gathering adequate information about the target learners, designing the content and making an appropriate decision about what teaching and learning model should be implemented in the e-learning program. In other words, in the e-learning environment, the behaviorists believe that learners should be told the explicit outcomes of the learning so that they can set expectations and can judge for themselves whether or not they have achieved the outcome of the lesson. Tests or assessments must be conducted to
determine whether or not they have achieved the learning outcome. These should be integrated into the learning sequence to check the learner’s achievement level and to provide appropriate feedback. More importantly the learning materials must be sequenced appropriately to promote learning, such as from simple to complex, known to unknown or knowledge to application. Appropriate feedback should be provided so that students can monitor how they are doing and are able to take corrective action if required.

In most cases, these types of e-learning are used to support the classroom activities. For instance, after explaining certain rules of grammar and asking the students to do exercises in class, the teacher might recommend the students to visit online quizzes or do exercises in a computer as reinforcement. By doing these types of exercises, where feedback and explanations are provided, the students are expected to get more exposure of the materials. This kind of combination, conventional classroom teaching and e-learning, is now known as blended learning’.

**E-LEARNING, COGNITIVE, AND CONSTRUCTIVISM**

Cognitive developmental research has also influenced the development of teaching and learning English in the area of learning capacity. Cognitive developmental research has had an impact on the constructivism movement in education and educational technology (Gilliani, 2003). Constructivism originated in the ideas of Piaget (1952) to account for the way in which children acquire cognitive abilities in an apparently regular order and children are engaged actively in constructing theories about how the world around them works.

Jerome Bruner (1966) proposed a learning theory whose educational implications resemble the concrete to abstract concept of Piaget. Such process is called scaffolding where the learner is initially dealing with concrete subjects, and the mentor provides a great amount of support. However, the support fades away as the learner begins to think abstractly (Gilliani, 2003). This shift can lead to very rapid learning, but it is also a risky process because it means abandoning the old ways of viewing concept. This notion of scaffolding is useful, because it describes how new models of concept can be introduced to learners gradually and in a way lessen the risk.

Furthermore Flavell (1985) has provided a more detailed discussion of three operations as the continuation of Piaget’s work in the area of cognitive development. The three operations are called;
combination reasoning, propositional reasoning, and hypothetical-deductive reasoning. Combination reasoning refers to the ability to consider different factors to solve problems. This reasoning provides the learner the ability to look at problems from an integrated approach. Propositional reasoning refers to the characteristic that learners acquire to reason on the basis of assumption to solve problems. Hypothetical-deductive reasoning allows the learner to consider different hypotheses in dealing with problems. This also enables the learner to gather data and test different hypotheses to come up with a possible solution. In brief, cognitive theories are useful to explain how, why, and when learners develop and learn new concepts.

These theories provide a frame of reference with which educators and educational technologies can analyze the behavior of the learners and design educational environments where they can construct their own knowledge. The design of e-learning environment, such as SimCity, science exploration (http://www.exploratorium.edu/IFI/index.html) and many other similar programs, mostly designed by using software called Macromedia Author-ware, are examples of the influence of cognitive approach. These e-learning environments attempt to guide the learners to construct knowledge in the learning process. In other words, the learners should be given opportunity in doing meaningful activities which facilitates the creation of personalized meaning. Good interactive online instructions facilitate knowledge construction because the learners have to take initiative to learn and to interact with other students and instructor (Murphy & Cifuentes, 2001). Furthermore, learners experience the information first-hand, which gives them the opportunity to contextualize and personalize the information themselves. According to Heinich et al. (2002), learning is the development of new knowledge, skills, and attitudes as the learner interacts with information and the environment. Interaction is also critical to creating a sense of presence and a sense of community for online learners, and to promoting transformational learning (Murphy & Cifuentes, 2001). Learners receive the learning materials through the technology, process the information, and then personalize and contextualize the information.

In the transformation process, learners interact with the content, with other learners, and with the instructors to test and confirm ideas and to apply what they learn. Garrison (2003) claimed that it is the design of the educational experience that includes the transactional nature of the relationship between instructor, learners, and content that is of significance to the learning experience. In the e-learning environment, learners have the freedom to explore the learning materials and to experience
the learning process. The learners have the freedom to take the path of their own. For example, the learner can login to the site and go directly to class forum to see what the teacher and peers have posted and discussed, then go to learning materials or even directly to the quiz. The learner also has the freedom to logout the program at anytime.

Today’s constructivist theories evolve from a conceptual point of cognitive constructivist theory where the learners ‘construct’ their knowledge, skills or understanding from their own observational and reasoning capabilities (Holmes and John Gardner, 2006). In essence, the socio-constructivist model requires a third dimension to the interaction between learners and other people (Warschauer, 2003). Constructivism underpins the understanding of how individuals learn in a social context and extends to the learning organization, which by nature its members learning together, improving its activities through group reflection and sharing of experiences. In this case e-learning has the potential to overcome some of the limitations of traditional learning, including the fixed times and locations for learning. E-learning allows for a synergy between advances in information and communication technologies. However, it is still considered by many to be simply an add-on to key developments in the technology itself (Holmes, 2006).

The significant development of the technology is the rapid development of very different forms of e-learning such as weblogs, and the multi editor wiki systems. Weblogs or blogs are electronic journals that allow the user to keep records of their writing or recordings on a website. A good example of the use of blog for teaching is the Bay Area Writing Project which has organized the Educational Blogger Network (edBlogNet) with the purpose of helping kindergarten through university teachers “use weblog technology for the teaching of writing and reading across the disciplines” (eBn, 2003). Campbell (2003) states that blogs teachers and students can use blogs to communicate in an EFL environment. He suggests using class blogs as a forum for students to express opinions, ideas, and interesting information. Jati (2006) claims that teaching writing using blog gives advantages for teachers and students. All of the teacher's notes will be viewable together in chronological order.

This is very convenient when preparing lessons that build upon previous material taught in the class. It is simple to edit class material if the text can be improved or if something new needs to be added. All student writing samples are kept in one place and can be read from any computer connected to
the Internet at anytime. Teachers can give collective feedback to the class when a recurring mistake is found by adding entries to a “Writing Feedback” class blog. Additionally, individual feedback can be given to individual student blogs. Students have access to teacher’s complete notes on the Internet. Students have the option of previewing the class material before class and reviewing the material after class. The class material is organized into sections, so that students can easily find information. Students can read comments for the class as a whole and comments directed at them individually. This maximizes feedback and contact with the teacher. Students can observe how their writing has changed over time.

**ICT IN THE CONTEXT OF INDONESIA**

The Indonesian government has taken some strategic plans to improve the human resource in ICT sector. Rusadi (2008) reported that the year of 2015 as the year of ICT for Indonesia, where ICT becomes the effective tool in the implementation of government, business sector, and public and also the social stratum communication of ICT for all. The Indonesian government has positioned ICT as the tool to achieve ‘long life learning paradigm’, and in line with the results of WSIS (World Summit on Information Society) meeting as reported by Rusadi (2008), Indonesian government will at least: (1) connect 50% of primary and secondary schools, academies and universities with ICT; (2) connect 50% of educational institutions and research centers that are spread in all regions with ICT; and (3) compile and adapt educational curriculum that refers to the formation of knowledge-based society development. The biggest challenge for Indonesian is to make English teachers at all level become ICT literate and then make them use the rich teaching and learning materials available online.
REFERENCES


Appendix

There are many websites available ranging from elementary level to advanced. These websites based on one or more of the learning theories discussed previously. They are;

http://www.english-to-go.com/index.cfm
http://a4esl.org/q/h/www.nhm.ac.uk
www.rgs.org
www.eatwell.gov.uk
www.science museum.org.uk
www.britishmuseum.org
www.tate.org.uk/ modern
www.museumoflondon.org.uk
www.greenpeace.org.uk
www.bbc.co.uk/learning
http://www.enchantedlearning.com/Home.html
http://vanda51.blogspot.com/
http://www.mes-english.com/
http://www.fun-and-easy-english.org
http://www.bbc.co.uk/cbeebies/
http://www.britishcouncil.org/kids
http://www.voa news.com/learningenglish/home/
http://www.youtube.com/user/VOALearningEnglish/ featured