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Impacts of Computer Technology on EFL Teachers' Profession in Schools in Indonesia

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Abstract

Computer technology has influenced the way teachers of English as a foreign language (EFL) carry out instructional activities in the classroom. Computer technology has impacts on the way many EFL teachers design and carry out their instructional activities. In consequence, many EFL teachers try to change their traditional instructional strategies by incorporating the facilities provided by computer technology. Computers can be potential tools to help teachers to improve the quality of teaching. However, the effectiveness of the technology depends upon the creativity of the innovation of teachers in their daily activities in the classroom. The use of computers in teaching is a kind of changes in social values that require cultural shift in teaching students. Changes in social values reprioritize the importance and dignity given to certain activities. In other words, shifts in cultural values greatly influence society's perception of, and demand for, professional work of teachers.

Keywords: *computer technology, instructional activities, changes, learner-centered instruction.*

A. INTRODUCTION

Information technology has drawn the interest of teachers of English as a second or foreign language in non-English speaking countries. There are some factors motivating the use of information technology in teaching English as a foreign language. There is a belief that technology offers a revolutionary and important instructional medium for improving the quality of academic learning for all students (Cuban, 1986; Labbo, 1996; Liu, 2000; Papert, 1993). Therefore, the use of technology in teaching is expected to contribute to the effectiveness of classroom teaching. The use of technology in teaching is also consistent with the movement toward *learner-centered instruction,* in which learners proactively carry out learning activities using many kinds of potential information sources to comprehend a problem and find the solution. The role of the teacher shifts from the only person to give the information to the facilitator who helps learners to attain the learning goals. Computer technology has the various capabilities that students can use to improve their personal skills and knowledge.

B. TECHNOLOGY IN TEACHING PROFESSION

This paper will focus on how computer technology has influenced the way teachers of English as a foreign language (EFL) carry out instructional activities in the classroom. This is based on the condition that the rapid development of information technology has contributed to the change of the world and how people learn to live (Levin & Wadmany, 2008; Liu, 2009). The main argument of this paper is that computer technology has impacts on the way many EFL teachers design and carry out their instructional activities. Impacts in this context refer to the changes of teaching

and learning influenced by the development of computer technology. According to Price and Oliver (2007), impact can be understood as "a change in the structure organization" (p. 19). Therefore, when this term is applied in teaching activities, impacts refer to teachers' decisions and procedures in carrying out the instructional processes. Another explanation about impact as a change is that because the utilization of computer technology in instructional processes requires changes in the models of teaching from traditional to more computer-based learning (Jewels, Heredero& Campbell, 2004; Cuban, 2003). In fact, computer technology can be utilized as a source of knowledge, a medium for transmitting content, and an interactive resource furthering dialogue and creative exploration (Levin &Wadmani, 2008). In consequence, many EFL teachers try to change their traditional instructional strategies by incorporating the facilities provided by computer technology. This argument is based on the fact that computers can be potential tools to help teachers to improve the quality of teaching. However, the effectiveness of the technology depends upon the creativity of the innovation of teachers in their daily activities in the classroom. Therefore, the impacts of computer technology will vary based on many factors including contextual conditions and personal beliefs of the teachers.

Theories in the sociology of teaching have contributed the theory of profession and role theory that become the supporting argument for this paper. Abbot (1988) argues that cultural change transforms professions. In this perspective, culture legitimizes the function and results of professional work. In consequence, changes in social values reprioritize the importance and dignity given to certain activities. In other words, shifts in cultural values greatly influence society's perception of, and demand for, professional work. In the context of schooling, "teaching and the organization of the teacher's work become central features that are often influenced by culture" (LeTendre et.al.,

2001). According to Hargreaves (2000) teaching profession is "in the edge of an age of postmodern professionalism" (p. 175). In this age, teaching strategies has been dramatically influenced by various kinds of teaching paradigm including cooperative learning and computer-based inquiry (Hargreaves, 2000). In addition, the development in technology has contribution in shaping some courses of development that influence the competence of all occupations (Dreeben, 2005). Therefore, the competence of using technology in the teaching profession becomes very important in current situation. The effective use of technology must also consider the shift of roles of the teacher. The meaning of roles in this paper follows the ideas that role is regarded as resource (Callero, 1994). Roles as resource enable the actor to access social capital in the structure of relations among actors and this form of capital is accessible only through roles. Therefore, technology integration initiatives will only be effective if teachers shift from the role as the only information givers to the learning facilitators who creatively manage variety sources of information for the purpose of student learning.

The cultural changes require changes of perceptions about teaching profession based on three reasons. First, teaching profession of the 21st century demands consideration and actions that are different from those of previous centuries (Thorne & Reinhardt, 2008; Garrison & Anderson, 2003). The development of technology has influenced all occupations (Dreeben, 2005) including how teachers teach. Siegel (2007) argues that the reality of 21st century learners includes the demand of digital technology literacy that requires teachers' attention. This condition is the same as other professions such as doctors or police officers who are influenced at least in part by the radically different tools they use to perform their jobs (Ertmer &Ottenbreit-Leftwich, 2010; Bennet, 2002).Therefore, the proper integration of computer technology in classroom activities

will benefit both for the teachers in providing effective learning activities and for the students in getting the orientation of their future life which will be surrounded by the use of technology in carrying out their jobs. Second, computer technology in education is only an instructional tool. The effectiveness of it depends upon the teaching skills of the teachers. To use technology to support meaningful student learning, teachers need additional knowledge of the content they are required to teach, the pedagogical methods that facilitate student learning, and the specific ways in which technology can support those methods(Moore-Hart, 2008; Levin & Wadmani, 2008). Third, the trend of using computer technology in instructional activities is becoming a global movement including Indonesia. The attack of globalization and the demand for transparency which come together with the advance of information and communication technology become the challenges for educational system in Indonesia. Consequently, schools are struggling to find the most effective models of integrating technology into their curriculum.

C. THE PROMISE OF COMPUTER TECHNOLOGY TO IMPROVE LEARNING EFFECTIVENESS

Computer technology has changed the practice of teaching in general. Research studies report shifts in classroom use of technology. Since the 1990s, one third of elementary and middle school teachers in United States are occasional users of technology; one out of ten are daily users; and one half are nonusers (Means & Olson, 1995; Schofield, 1995). This condition is different from the teaching practice in the 1980s in which the majority of teachers were nonusers of computers in their classrooms (Cuban, 1986). In addition, many teachers are motivated to integrate computer technology into their teaching because of many benefits of computer technology. The use of computer technology has offered some possibilities

to create more meaningful and rewarding learning (Levin & Wadmany, 2008; Bauer & Kenton, 2005). As a matter of fact, computer technology has been used because of its ability to store, manipulate, and retrieve information. The use of computers in classroom activities not only engages students in instructional activities to increase their learning, but also helps them solve complex problems to enhance their cognitive skills (Jonassen & Reeves, 1996; Newby, Stepich, Lehman, & Russell, 2000). Moreover, when computer technology is used for conducting active learning experiences it has impact on students' learning motivation (Barak, Lipson, & Lerman, 2006).

Similar situation also happens in Indonesia. Many schools provide computer facilities for the teachers and students. Some schools include information and computer technology subject into the local content of the curriculum. This condition requires specific approach to managing school curriculum. Many schools establish computer laboratories for students to learn how to operate computers and to access information through Internet. Computers are also provided in the library for the students to access learning materials through World Wide Web.

The influence of technology becomes stronger with the existence of computer network technology. In fact, the Internet has influenced the way that teachers, parents, and children perceive education. Many school children today have access to the Internet in the classroom or at home. Consequently teachers and parents have the responsibility of selecting appropriate websites, and previewing any site that they want their children to use. In many cases school children should not be using the Internet without supervision (Dodge, Colker, &Heroman, 2003). Warschauer (1997) argues that the features of online computer technology provides potentially useful tool for collaborative language learning. The use of online communication is consistent

with sociocultural learning theory, which emphasizes the educational value of creating cross-cultural communities of practice and critical inquiry. Consequently, many foreign language teachers try to move from their traditional ways of giving instruction to the use of more interactive methods of instruction.

Another important aspect of the integration of computer technology in EFL lesson is the need to provide more individualized learning which. The most widely used idea underlying technology integration into curriculum is the movement toward *learner-centered instruction*(Becker & Ravitz 1999; Dexter, Anderson, & Becker, 1999; Matzen & Edmunds, 2007), in which learners proactively carry out learning activities using many kinds of potential information sources to comprehend a problem and find the solution (McCombs &Vakili, 2005). The idea of learner-centered instruction becomes popular because it "incorporates teaching strategies that focus on the needs, preferences, and interests of the learner" (Kengwee, Onchwari & Onchwari, 2009, p. 12). Briefly, integrating computer technology in the teaching and learning processes is relevant to principles of learner-centered instruction.

The idea of learner-centered has received considerable attention in education scholarship and practitioner preparation (Kengwee, Onchwari & Onchwari, 2009). McCombs & Whisler (1997) define learner-centered as the perspective that couples a focus on individual learners – their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs – with a focus on leaning – the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners. (p. 9). This definition suggests that learner centered principles apply to all learners including young and adult learners which emphasize on the capacities of the individual learners. Gibbs (1995) describes learner–centered courses as those that emphasize: learner activity rather than passivity. Learner-centered instruction demands active learning environments, guiding learners to learn how to learn, recognizing differences in each learner, and creating different learning styles to meet the needs of each learner (Brooks & Brooks, 2001). The learners become actively engaged in the learning process, take responsibility for their learning, and enhance their skills to learn how to learn (Kengwee, Onchwari & Onchwari, 2009). Gibbs (1995) further argues that students' experience on the course outside the institution and prior to the course are crucial in the process of instruction. In addition, the instructional strategies emphasize on the process and competence, rather than content where the key decisions about learning are made by the student through negotiation with the teacher.

The idea of student-centered instruction is nothing new. F. H. Hayward has been credited with coining student-centered philosophies as early as 1905. Dewey in 1953 introduced student-centered curriculum that emphasized that the learner and the curriculum are essentially the same (Ellis, 2004). Learner-centered instruction is also linked with Piaget's work in which teaching is expected to be the establishment of environment which facilitates students to learn on their own with little direct adult intervention (Ellis, 2004). In 1990, American Psychological Association (APA) developed *Learner-Centered Psychological Principles.* The principles originally consisted of 12 fundamental principles about learners and learning which was modified in 1997 into 14 principles, with attention focused on those principles dealing with diversity and standards (McCombs &Vakili, 2005). The principles can be categorized into four factors: (1) cognitive and metacognitive factors, (2) motivational and affective factors, (3) developmental and social factors, and (4)

individual difference factors that influence learners and learning. Those learner-centered instruction principles provide educators with a valuable framework for the Information-Age paradigm of education (Bransford, Brown, & Cocking, 1999; Hannum & McCombs, 2008; McCombs & Whisler, 1997; Watson & Reigeluth, 2008).

In learner-centered instruction, the roles of the teacher shifts from the only person to give the information to the facilitator who helps learners to attain the learning goals. The shift from teacher-centered instruction and student-centered instruction is a challenge. O'Neill & McMahon (2008) identify the differences between teacher-centered and learner-centered instructions. First, in teacher-centered instruction there is a low level of student choice, while in learner centered instruction the level of student choice is high. Second, students become passive learners in teacher-centered instruction, while in learner-centered instruction students become active learners. Third, when teacher-centered instruction is implemented the power is primarily with the teacher. In contrast, when learner-centered instruction is implemented, the power is primarily with the students. A more useful way of understanding the idea of student-centered learning is to see these terms as either end of a continuum. The practical kind of learner-centered instruction can fall at a particular point on the continuum which is affected by the contextual barriers in a particular teaching situation.

D. CURRENT TREND IN LANGUAGE TEACHING METHODS

In 1980s and 1990s there has been a significant shift to communicative language teaching, with an emphasis on student engagement with authentic, meaningful, contextualized discourse and achievement in the second language. William and Burden (1997) point out that "individuals acquire a foreign language through the process of interacting, negotiating and conveying meanings in the language in purposeful situations" (p. 168). Therefore, students' learning engagement in language learning activities will have positive impact on the increase of second and foreign language competencies. A language learner's engagement in meaningful, motivated communication activity using the target language is considered the best route to becoming both literate and fluent in that language (Stevik, 1980; Brown, 1994). In addition, learning a foreign language is often influenced by one's personal values so that individual intention in carrying out activities is greatly needed (William & Burden, 1997). Learning a foreign language involves learning skills so that the learners need to take personal actions in carrying out learning processes. The learning of foreign language also involves learning the system of rules, or grammar which requires the learners to actively use their cognitive abilities. The most important thing is that learners need to critically adopt new social and cultural behaviors which are often uncommon for their native culture and behavior. Therefore, in communicative language teaching the focus of instruction has developed from the teaching of discrete grammatical structures to the fostering of communicative ability. In communicative language teaching, expressing personal opinion has become more important than recitation of memorized dialogues. Negotiation of meaning has received more attention than structural drill practice.

Since 1980s cognitively-oriented perspectives on language acquisition has gained popularity. Dell Hymes, an American sociolinguist, and Michael Halliday, a British linguist, argued that language is not just a private, "in the head" affair, but rather a socially constructed phenomenon. Hymes used the term *communicative competence* in response to Chomsky's mentalistic characterization of linguistic competence. In this perspective, language use is a matter of social *appropriateness*. "There are rules

of use without which the rules of grammar would be useless" (Hymes, 1971, p. 10). In Hymes' opinion, syntax and language forms were best understood not as autonomous, acontextual structures. They should be used as meaning resources in particular conventional ways in particular speech communities. Grammaticality was not separable from social acceptability, nor was cognition separable from communication.

In the practice of communicative language teaching, meaningful interaction has been a central element in second language pedagogy. In teaching a second language, it is insufficient for the teacher to teach only linguistic competence. The teaching and learning process should also include sociolinguistic competence, discourse competence, and strategic competence (Canale, 1983; Canale & Swain, 1980). Communicative processes become as important as linguistic product, and instruction become more learner-centered and less structurally driven. Therefore, interaction in the process of language learning is central in ESL/EFL learning context.

From the communicative perspective, language instruction was viewed not just in terms of providing *comprehensible input*, a concept provided by Krashen (1982), but rather as helping students enter into variety of authentic social discourse situations and discourse communities. These are the situations and communities that the second or foreign language learners would later encounter outside the classroom. In helping those language learners entering into authentic discourse situations and communities, second and foreign language instructors are interested in the use of task-based learning, in which students engage in authentic tasks and projects (see for example Breen, 1987; Candlin, 1987; Long & Crookes, 1992; Prabhu, 1987). In this context, a task is "any activity that learners engage in to further the process of learning a language" (William & Burden, 1997, p. 168). In carrying out the tasks, the learners exchange and negotiate meanings so that their knowledge of the language systems develops. Learner's engagement in authentic tasks and projects within such meaningful interaction between two or more participants helps them to improve communicative skills in the target language.

Sociology has also contributed significantly in the application of communicative approach to foreign language teaching. Gumperz and Cook-Gumperz (1982) claim that personal and social control is significant in developing communicative ability. They continue to argue that "the ability to manage or adapt to diverse communicative situations has become essential and the ability to interact with people with whom one has no personal acquaintance is crucial to acquiring even a small measure of personal and social control" (p. 4). This notion is consistent with the basic ideas of communicative approach to language teaching that has been elaborated above.

Furthermore, effective communication requires individuals to have certain abilities including "communicative strategies", "communicative flexibility", and "cooperation in communication". Gumperz & Cook-Gumperz (1982) claim that "New communicative strategies are created based on the juxtaposition of the two sets of forms which symbolize not only group membership but adherence to a set of values" (p. 6). According to them, communication with people who are relative strangers to each other needs communicative flexibility skills. This skill refers to "an ability to adapt strategies to the audience and to the signs, both direct and indirect, so that the participants are able to monitor and understand at least some of each other's meaning" (Gumperz & Cook-Gumperz, 1982, p. 14). In addition, cooperation in communication requires people to use both ability in using words and ability in identifying cultural values which become the convention in a society. "Construction across time of negotiated and situationally

specific conventions for the interpretation of discourse tasks" is important in developing effective communication. Briefly, socio cultural approach to learning gives significant ideas in developing better foreign language teaching.

E. IMPLICATION AND CONCLUSION

Computer skills become an important requirement for future teachers. EFL teachers are not only required to be able to use it for personal need but also obliged to integrate the technology into their teaching. There are many ways to prepare teachers to be skillful in using computer technology both for personal need and instructional activities. Teacher education can include the materials that help learners to improve their computer skills for instructional purposes. The idea that the use of computers in classroom activities engages students in instructional activities to increase their learning (Jonassen & Reeves, 1996; Newby, Stepich, Lehman, & Russell, 2000) should provide inspiration how to use computer technology to improve students' achievement. Improving teachers' computer skills can also be done by schools in the professional development program. Cosidering that the utilization of computer technology in instructional processes requires changes in the models of teaching from traditional to more computer-based learning (Jewels, Heredero& Campbell, 2004; Cuban, 2003) the teachers who have been working for a while require continuous update of the use of technology for teaching purposes. In addition, learner-centered instruction is mostly relevant for developing classroom instruction. However, the ideas of learner-centered instruction are also applicable for considering models of professional development. An idea suggested by learner-centered instruction theory is that learners proactively carry out learning activities using many kinds of potential information sources to comprehend a problem and find the solution (McCombs &Vakili, 2005). An individual teacher who wants to improve their knowledge and skills of using computer technology for instructional purposes can proactively carry out learning activities to improve skills of using computer for instructional purposes.

In conclusion, the use of technology into EFL teaching requires changes in the English teaching practice. Computer technology has impacts on the way many EFL teachers design and carry out their instructional activities. Impacts in this context refer to the changes of teaching and learning influenced by the development of computer technology. The existence of network computer has inspired the use of the technology to strengthen the communication using English. This opens the opportunities to find many teaching methods that draw the interests of the students and help them to cope up with the developments that happen around the world. Teacher education and schools must do many efforts to devise teachers with the knowledge and skills of using computer technology for their instructional purposes.

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