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DEVELOPMENT OF PROSPECTIVE TEACHERS LEARNING MODEL INTEGRATING ICT CYBERWELLNESS IN THE CONCEPT OF CONTINUOUS, CONVERGENT AND CONCENTRIC

Dedi Kuswandi, Eka Pramono Adi, Yerry Soepriyanto
Educational Technology, Faculty of EducationState University of Malang,
dkuswandi08@gmail.com

Abstract

Educating prospective teachers in the use of information and communication technology (ICT) has to improve/enhance teaching-learning process, and it has the commitment and becomes an important goal in all educational programs at State University of Malang. The era of innovative learning and ICT-based have changed the way teachers and students' interact, and now teaches the method of one-way, unable to provide maximum learning outcomes for student learning. Development of prospective teachers' learning model in terms integrates ICT cyberwellness with the concept of continuous, convergent and concentric (as culture integration concept from Ki Hadjar Dewantara) web-based open source platform on student teachers has been made possible to a limited circle. Learning and the design of interconnection systems design has been carried out based on the stage of development.

keywords: *cyberwellness, prospective teacher, continuous, convergent, concentric*

INTRODUCTION

Commitment to teaching the use of ICT in the State University of Malang in line with the policy of the Ministry of Education and Culture of the use of information and communication technology (ICT) in Open, Distance, and e-learning (ODEL). Technology which allows to reach the learners in a variety of conditions, is the use of information and communication technology (ICT) in Open, Distance, and e-learning (ODEL). Ministry of Education and Culture of the Republic of Indonesia (2012), explains that the use of ICTs are crucial to reach all learners in Indonesia which has a geographical diversity. ODEL is very relevant and stragegis the development challenges educators. According to Adi (2007) majoring in Educational Technology researcher explained that the ICT-based learning media can be realized by improving the ability of teachers custodian of school subjects.

The era of innovative learning and ICT-based have changed the way teachers and students interact, and now teaches the method of one-way, unable to provide maximum learning outcomes for student learning. Currently, the use of digital learning resources, the Internet, and virtual media allows the integration of technology and education resources to help shape the learners in the learning environment. Teacher education reform for the State University of Malang was aimed at improving the effectiveness of learning in subjects that will Amnestied by prospective teachers. Chen (2004) explained that the reforms should be supported by combining the use of ICT with the preparation of the characteristics of prospective teachers,

curriculum, and learning environment. Yan, Lo and Wang (2009) explained that teaching blended and e-learning combines face-to-face teaching with curriculum combines virtual and classroom curriculum, and focused guidance and learner autonomy, will gain maximum benefit in learning. According Sigh (2003), in spite of the advantages and effectiveness of the learning, the use of time in online learning provides a natural and flexible means of acquiring knowledge. ICT is the most logical means to develop the ability of prospective teachers if accompanied by the preparation of concept learning model that has a superior education.

Mastery of knowledge and procedures of using ICTs have been recognized as a significant and fundamental factor contributing to the implementation of ICT in learning. Chang (2003), Chang & Tsai (2005) dan Chien & Chang, (2012) explained that in order to effectively improve student learning through ICT, prospective teachers need to understand the interaction between the use of ICT, teaching pedagogy, student characteristics, and features of the source Study abroad. So that any use of ICT can successfully requires a comprehensive understanding of the mutually reinforcing relationship between technological knowledge, pedagogical knowledge, and content knowledge. Application of ICT in learning have a procedure that must be understood by prospective teachers, namely: 1) how the subject matter may be established by the ICT (content knowledge and technology), 2) how teaching and learning can be transformed by ICT (technological pedagogical knowledge and characteristics), and 3) how to represent and communicate specific concepts and topics of the subject matter to the students (pedagogical content knowledge).

Teacher competency standards in the modern digital era dalah must know how to utilize ICT to enhance lesson planning, teaching, assessment, and classroom management. The concept underlying the development of prospective teachers by kuswandi (2009) are the values of education, culture and leadership of the people of Indonesia are integrated with the concept of Continuous, Convergent and Concentric. Utilization of ICT penggunaa basically 1) agree on a cultural exchange should be done continuously with teacher candidates cultural nature, 2) study the convergence of cultures obtained to realize the universal culture, 3) build community synergistic and together realize the cultural which is concentric with diverse cultural realms. Continuous utilization of ICT without concept, Convergent and Concentric will result in loss of future teachers basic foundation values the development of education, culture and leadership of the Indonesian people.

Continuous, Convergent and Concentric Concept

Nature of information and communication technology for teaching and learning has become increasingly easy, accommodating, since the advent of Web 2.0 technology (web site designed to achieve two-way communication) technology and "cloud" of the Internet. According to So & Kim (2009), learning programs and only partial use of ICT-based skills just is not possible to prepare prospective teachers to learn how to handle the complex issues of pedagogy, content management, and technology. This shows the urgent need to revisit the assumptions underlying what we mean by ICT competencies necessary for teachers within the State University of Malang, and subsequent, related to redesign learning model involving ICT in teacher education programs, State University of Malang.

Debate on important and fundamental requirement for prospective teachers in order to reframe the teachers who have the capacity utilization is from the perspective of ICT expertise and acceptance of the technology. According Bransford and Schwartz (1999), expertise can be used to explain the differences between novice learners with learners who have expert. It can measure the progress and importance of developing how to transfer knowledge and skills. Hammerness, Darling-Hammond and Bransford (2005) indicates that development involves a two-dimensional expertise penelrimaan expertise, namely 1) the dimensions of efficiency and 2) dimensions of innovation. Dimensions of efficiency means greater ability to perform certain tasks without having to devote too much attention resources to achieve goals. Dimensions of innovation involves activities that move beyond existing routines and often involves a rethinking of the ideas, practices, and even the values in order to change what they are doing. Two dimensions are complementary, but can be antagonistic when they run the potential to create conflict. To realize the teacher candidates who have the necessary expertise to develop the disposition to understand the candidate's initial experience, not as a failure but as a valuable and productive process of learning that can be said to be a continuous activity.

Step convergence of science that can be done is to help prospective teachers find teaching and learning culture. Hammerness and colleagues (2005) showed that helping teachers to become an expert requires three aspects of preparation. First, educators need to help prospective teachers see the learning process in a way that is fundamentally different from what they may have learned as a student. One important goal of teacher education is to help prospective teachers see teaching as more than just applying a routine practice. In certain cases, meaning that prospective teachers need to reconstruct their perceptions of teaching and learning in order to learn and adopt new ideas. Second, to help prospective teachers to teach more effectively mean not only think like a teacher but also know for both understanding and determined. Prospective teachers often face problems. Effective enforcement beyond the ability to apply routine practices. Instead, prospective teachers need to engage in reflective practice where they have the opportunity to practice and reflect on their own implementation in various contexts (Schön, 1983, Kim & Hannafin, 2008). Problem-based learning, case-based learning or micro-teaching is an example of a pedagogical approach that helps prospective teachers to be better prepared to effectively legalized. The last aspect involves what they call "complexity problem", where teaching is seen as a process of development thinking and practice habits.

Concentric steps to prospective teachers is to try to adopt a more focused dimension of efficiency and innovation expertise dimension. Common learning model is based on the competence of teachers and more emphasis on efficiency rather than creating a space for innovative ideas to grow and mature. As mentioned previously, the typical model of competence integration of ICT use but are rarely used is the development of adaptive skills (receptive to change), while the model can hold certain values to teach efficiently and diagnostic purposes. New direction for the integration of ICT in teacher education lies in developing a set of prospective teachers' knowledge of how to readily accept change and can also easily transferable, so that teachers are better able to adapt. Therefore, epistemic and pedagogical assumptions underlying the design of the learning model by integrating ICT for teacher candidates must be reviewed a) to focus on understanding where prospective teachers

better understand the complexities of teaching and learning with technology, and b) to develop systematic thinking skills and creative ideas for growing innovative.

As Cyberwellness Development Master Plan Learning Environment Teacher Candidate State University of Malang.

Cyberwellnes a condition in a particular community to use the on-line well and gain optimal benefits. According Grosseck (2009), Web 2.0 is characterized by cyberwellnes is emerging as an important technology. The existence of this technology allows the web as a medium for social interaction, collaboration, knowledge sharing and creation, web 2.0 examples include Facebook, wikis and blogs. Research has shown that adopting Web 2.0 tools in the learning can improve interaction and communication between teachers and students it is based on research Cheon, Song, Jones & Nam (2010) dan Hartshorne & Ajjan (2009). Therefore, to integrate Web 2.0 tools in teaching prospective teachers need to be emphasized. In addition, Web 2.0 tools need to be applied to strengthening the profession prospective teachers in the areas of learning in order to improve the effectiveness of learning in the State University of Malang.

Continuous education concept, convergent and concentric used to reduce the adverse effects that accompany technological culture. Kuswandi (2005:173) in his dissertation refers to the view expressed that the Ki Hajar Dewantara Continuous, means continuously developing nations and sustainable indigenous cultures. Convergent, means selectively and adaptively combine our culture with foreign cultures is necessary for the progress of the nation. Concentric, meaning toward cultural unity with the world still continue to have the personality traits of each nation in the world.

Several studies have reported that in the education of prospective teachers are using Web 2.0 and its application in the classroom teaching and learning on-line, are still visible frustration and anxiety on the context of Web 2.0 as a learning tool. This is a problem cyberwellness. For example, Sharples, Graber, Harrison and Logan (2009) surveyed 206 teachers during the teaching profession through education that teaches children aged 11-16. The teachers analyzed their reactions about internet safety issues that kids use with Web 2.0. Researchers found that about half of the teachers have been engaging students in the use of Web 2.0 activities. However, 42% of teachers did not teach students about online safety and only 11% do security on-line teaching. In addition, 46% of the teachers reported that they had negative experiences caused by students using Web 2.0. So, some teachers and school administrators are still not aware of the problem cyberwellness as an on-line kebudaayaan wisely and safely. Most prospective teachers do not receive enough support or conditions in acquiring knowledge through concepts cyberwellness education at State University of Malang far.

Educational concept that conditioned culture cyberwellness need grafted on teacher education candidates. According to Wang & Woo (2009) web 2.0 has been recognized as an efficient technology to support and enhance collaborative learning strategies in learning. But actually, the integration of Web 2.0 into the classroom and on-line learning can be enhanced if prospective teachers are guided to address cultural concerns cyberwellness in the Web 2.0 environment. Conditions of the learning environment at the State University of Malang that generate prospective teachers need to overhaul the collaborative web-based learning has been

done and corrected with proper design according to the characteristics of prospective teachers in scope cyberwellness.

Cyberwellness issues actually bring moral culture expedient and safe. This is seen in the study, Chou and Peng (2011) reported that teachers at the age of 16 years receive education training e-learning models feel more comfortable about choosing and utilize Web resources for their learning, and have a positive attitude in guiding their students by using security information in their learning activities and learning materials in web-based environments. These results imply that the issue of concern in the context of Web 2.0 cyberwellness dependent actual practices may influence the effectiveness of teachers and curriculum design that uses Web 2.0 technology. In summary, research has explained that the development of on-line technology to prospective teachers is very important and must be effectively integrated the use of ICT-based media Web 2.0. This condition is needed to assist prospective teachers in their teaching practice. Various studies have also shown that the use and integration of Web 2.0 in the ICT knowledge cyberwellness influenced by an understanding teacher. Cultural use of the on-line by integrating ICT resources is an important variable that must be considered by the State University of Malang in order to produce a superior teacher candidates.

Analysis

Students have basic knowledge using a computer. Technical capabilities such as the use of software applications and computer hardware is quite varied. Students generally have been able to utilize the computer as a medium that can be used in certain off-line learning. Students have good literacy to information technology and communications to social media applications. Literacy to the development in the field of Information Technology is quite adequate and the ability to communicate well enough, but literacy to learning resources such as journals, research papers etc is still very minimal. Indicator is the use of computer ownership and internet laboratories dijurusan showed a very rapid increase in the use of social media to access. But the files that exist in a student computer lab and computer education is less support them.

Student teachers need to obtain information utilizing additional knowledge and skills of the web-site on the Internet in order to promote fluency in the completion of their tasks. However, many discovered the phenomenon, namely the tendency to open social media overload, have behavioral dependence on lecturers teaching materials, as well as the behavior uncomfortable and tend to excessive fear of evaluation activities if performed under the supervision of lecturers. Addiction and Fear qualitatively student still difficult to describe his background.

The pattern of dependence on the teacher candidates quite worrying. This can be seen in the behavior of students as follows 1) The dependence on the presence of the figure of a lecturer. 2) Dependence on Teaching Material lecturer. 3) The dependence on the way of thinking and expression lecturer. 4) Dependence on deadline scheduling.

Context of the development was to build a system that can assist in the implementation of learning for prospective teachers at the University of Malang. Learning activities and learning for prospective teachers at the University of Malang has received the characteristic off-line learning environments (classroom meetings, consultations, discussions on specific issues, etc.) and the characteristics of on-line learning environment (general learning forums, group forums, general discussion , discussion groups, a learning material documents, presentations broadcast

delay, etc.). So it is necessary to develop a model system for the management cyberwellnes internet access for prospective teachers.

RESULTS

Model from the initial meetings lectures or systems to the new material. At the beginning of college professors usually do not know the substance of student mastery of subjects. This model is efficient in terms of execution time, but time interaction between students and students or by faculty became slightly.

The model consists of five steps, namely the presentation of material by the lecturer, discussion groups, giving tests / quizzes, the implementation of the cross question to improve the ability, and stabilization by the lecturer.

Early stage Matrix Class Models

TEACHING ACTIVITIES	SUDENT TACTIVITIES
Prepare and provide learning resources Cast before the meeting takes place on the web Presenting lectures the subject off-line	Utilize resources online learning resources through system interconnects Listening dish prepared faculty
Hold a discussion / group work off-line •	Provide ideas, thoughts and ideas that come from the knowledge and culture of the individual • Meeting Concludes
Conduct tests (assessments) and the interaction cross-question form to students	Doing test (assessment) and cross question
Giving group reflection	Follow up

Model of core lectures make every student actively involved. Each actualization through interaction, engagement, and characterization together arranged between faculty and students.

TEACHING ACTIVITIES	SUDENT TACTIVITIES
Group activities (Model 1) Prepare material on-line (teaching materials) Establish a working group Guiding group	Sharing of tasks within the group, each member of the group focus on reading and reviewing different things according to their roles and duties of each. Conduct activities in a group share a working although each individual
Group activities (Model 2) Monitor the activities of on-line discussion, real-time, or blog activities Guiding the student group discussion Guiding student in the group discussion	Selecting members of the group based on student Sharing tasks in groups, each member of the group focus on reading and reviewing different things according to their roles and duties Conduct activities to share in the working group, although each individual
Giving assignments to students in the form of individual tasks and duty following evaluation.	Evaluation and tasks
Giving class reflection	Follow up

Model lecture final stage emphasizes the responsibility of learning on the student. This model further highlight the ability of the individual or the ability to work in groups. Model strength

lies in the high interaction, both between faculty and students and students and students. To be able to do something like that, a student should study confirmed previous sections through the things that have been performed and recorded in the on-line learning systems. This model may be applied if the student does not have readiness.

Independent On-Line models performed when the tutorial has been going a few times so that students have mastered many important concepts about the course and the range of questions that might arise. The student teachers should be aware that the consequences of unreadiness, respectively delays the learning process. So unpreparedness one individual should be resolved by sharing systems and policies to encourage faculty sharing attitude.

TEACHING ACTIVITIES	SUDENT TACTIVITIES
Provide identification and summary of the material as resources learning that has been existing in the web	Identification of resource learning material and social activities,
Assign tasks in groups and provide guidance.	Discussion / working groups to review the problem, find the answer / solution, and prepare a report for presentation.
Receive a presentation of the results of student groups and reports. Events leading to the discussion online.	Presenting the results of the group discussions
Provide reflection the discussion.	Provide follow-up activities

The design of control system interconnection interconnection is intended as a form of action to realize the convergence of science or as an effort to discover how to help prospective teachers learn the culture and learning. This control system can help:

- Student teacher candidates need to reconstruct their perceptions of teaching and learning in order to learn and adopt new ideas from the world of the internet.
- Student teacher candidates need to engage in reflective practice where they have the opportunity to reflect on and share the things that are accessed on the internet in a variety of contexts

The design of control systems using the interconnect is also a step towards realizing concentric with the student teachers are trying to make prospective teachers to adopt a more focused dimension of efficiency and innovation expertise dimension. This system can create an environment to share the innovative ideas to grow and mature. So that student teachers have adaptive attitude (easily accept changes) as an element cyberwellnes. Using the system, the student teachers placed in the system how prospective teachers receptive to change and can also easily share, so that teachers are better able to adapt. The control system is a software that will be embedded in the hardware device.

CONCLUSSION

Development of prospective teachers' learning model in terms integrates ICT cyberwellness with the concept of continuous, convergent and concentric web-based open source platform on student teachers, State University of Malang has been made possible to a limited circle. Learning and the design of interconnection systems design has been carried out based on the stage of development. So that development can be done for the next phase of the next stage.

Assessment needs to be done on all the elements and aspects, so that it can be obtained as a guideline for decision making in developing on-line learning system is full.

DISCUSSION

Recommended for the next phase of development into consideration and assessment is needed of some things that are not less important, among other things:

1. Advantage in the form of descriptions of the extent to which the system will benefit the institution, faculty, administrators, and especially the benefits to be derived intranet to improve their quality when compared with the implementation
2. The cost of infrastructure development and procurement of equipment and software. Cost required to develop the infrastructure, equipment and software held done carefully taking into account the selection of facilities owned. For that to consider such things, whether to build a network of fully or gradually, whether to hold an entirely new equipment or upgrade existing ones. Also note that the software is genuine (not pirated) are expensive or her election to the Biya opensource system development. The ability to provide the funds necessary to be considered in making decisions.
3. Operational and maintenance costs. A system will work if properly managed. Similarly, the web-based learning systems required operational and maintenance costs are certainly not small. While the cost of maintenance including replacement of parts that were damaged either due to age and use of procedural errors, as well as the calculated result of natural disasters.
4. Human resources. To develop and manage networks and learning systems, the required amount of human resources with competence and integrity. This includes lecturers who have to understand the principles taught through web-based intranet and blended. So the first step is to identify the human resources and then prepared the personnel. To equip these workers need to be trained, it needs to be taken into account for a long period of training, where the training and how that training can produce qualified manpower.
5. Students. A component or entity that is not less important to note. Need for analysis to determine the extent of readiness of students in participating in learning activities with an intranet that will be held. If development is something new for most students, of course, need to be a series of attempts to condition so that they are ready to participate actively in the new teaching system. It is not easy to change the habits of those who have been accustomed to learning in the conventional face-to-face over the years, which certainly has been a learning style or habit.

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