Developing E-Learning for education of children in the Family Subject through Students Online Quizzes

Luluk Asmawati
Lecture Early Child Education-Faculty of Teacher Training And Education
Sultan Ageng Tirtayasa University
nialuluk@yahoo.com

ABSTRACT

The main purpose of this paper was to describe the current state of e-learning subject family in education through students early childhood education online quizzes feedbacks: (1) lecture and students have a forum space in an e-learning via email, (2) lecture and students taking the online quiz was considered a challenging experience, (3) lecture can use online quizzes as tool to monitoring the keep track their progress in the subject, (4) students have visibly reported the online quizzes had improve their motivation in e-learning of this subject. Method of the research was research and development. The data was analyzed with descriptive qualitative. Finding research included: (1) technical problems e-learning subject family in education were the no quota, slow internet, no signal in specific location in Banten Province, (2) effective ways of conducting online quiz in this subject: lecture design-develop, manage and utilization guidance softbook and the first time to exercise quiz online for students face to face, lecture and students must active user e-learning focus online quizzes`feedbacks in this subject, students team building quiz activity to remind each other, students focus the curriculum and syllabus documents and learning materials, students active browse and search materials related this quiz problem, students encourage achievement literacy e-learning and critical thinking. It was concluded that developed learning material family in education with quiz online was feasible to be used in the e-learning process in student's preschool education.
Key words: *e-learning, family in education, online quiz.*

G. INTRODUCTION

E-learning has come to define any dissemination of educational knowledge over the internet. This makes e-learning a subset of technology based training. E-learning can be real time or self-paced, also known as synchronous or asynchronous learning. E-learning is considered to be connected to something and reported to this challenge and started investing heavily in the reconstruction of its education system and initiating national program to introduce information and communication technology (ICT) into education. E-learning is an ideal learning environment using modern means of information technology. It through the reflective integration of information technology the curriculum to achieve, a new learning style which can fully reflect the main role of the students to thoroughly reform the traditional teaching structure and the essence of education, to train large numbers of high quality personnel (Ma,Wang and Liang 2008, p.4). Higher education institutions through the world area in a period of rapid change, as ‘’changes occurring in the primary process of higher

education courses and degree grating are closely related to the contextual trends of virtualization, internalization, lifelong learning and customer orientation that are part of society in general (Collins and Moonen, 2001, p. 30). In this context, traditional universities have no choice but to significantly after their instructional methods to keep pace with developments spurred by the internet (Ali, 2003; Collins and Moonen, 2005).

The aims of this study was to develop e-learning education of children in the family subject at faculty of teacher training and Education Sultan Ageng Tirtayasa University; to know the challenges for e-learning manage; to implement the full cooperation and interaction between lecture and student's were still predominant in e-learning environments; to know the students' performance and accessibility.

E-Learning Theory

The 21st century theories of learning are being developed very rapidly and connections between this knowledge and the individuals that interact with it are virtually instantaneous known by its nickname of the digital age. Digital age, which does a good job of describing what daily life, is like in modern day society. Using technology, information is being developed very rapidly and connections between this knowledge and the individuals that interact with it are virtually instantaneous. Theories of learning need to address this new pace of education today. Online learning environments have changed the dynamics of the traditional classroom, E-learning provides an opportunity to bring together individuals into one community that surpasses physical space and time to unite and engage them in purposeful learning.

Koetting and Januszewski (1991: 401-402) use the definition of theory established by the association for Educational Communities and Technology (AECT) to help establish a definitional foundation. The AECT defines theory as, '' a general principle, supported by considerable data, proposed as an explanation of a phenomena; a statement of relations believed to prevail in a comprehensible body of fact. When the learning environment takes place on the World Wide Web, it knows as an online learning environment. E-learning has been used to define different concepts. One of these is to address online learning that is how it will be defined for exploring the above-mentioned learning theories and how they apply to online education.

The constructivist learning theory is well suited to tutorial classroom. E-learning model with an online medium content creation, are often condidered a ''socially constructivist experience (Gulati, 2008: 184). The social aspect of online education is important to consider in designing online content. Helland (2004: 619) expands on the idea of

social constructivism by stating ‘’individuals make meaning in dialogues and activies about shared problems or tasks. Students are able to dialogue with their peers, other experts in the academic community or experts outside of education to solve problems. Students are active in their learning as they work together to solve common problems. Therefore, through online quizzes and interactions lecture students can construct meaning with others in the course. Technology as a tool in learning has been embraced by some and disgraced many, yet today’s digital natives traverse virtual worlds without hesitancy or misgivings. ‘’students are far more technologically perceptive than the institution that support them (Desai, Hart, and Richards, 2008: 329). This poses a problem as lecture try to reconcile personal constructivist pedagogies with a tool they are unaccustomed to or intimidated. Yet, it’s this very tool that it opens the door to new asked innovative applications of constructivist teaching and learning methods. Technology offers flexibility and adaptability reflective of pedagogies across various learning models based in constructivism. The early roots of constructivism are from the educational theories of John Dewey and Jean Piaget (Brown and Green, 2006). Dewey set the foundation for constructivism by finding inquiry to be a key part of learning. Piaget’s theories also helped to shape constructivism with the key concepts of assimilation, accommodation, and schema. Combined these theories constitute the beginning of the constructivist learning process by focusing on how learning is processed and structured (Neo, 2007:34). Constructivism was further developed through the works of Brunner, Vygotsky and Papert (Neo: 47). Vygotksy’s fundamental contribution to constructivism was the formal introduction of a social aspect to learning. Theories who have the development of constructivism have a common theme which is knowledge is considered dynamic and constantly changing. Learning is an active process, which involves the learners personal interpretations created through experience. Lecture takes an interactive role providing scaffolding and collaboration for learners. Constructivist pedagogies are built from these foundations.

In an educational context, pedagogy often refers to the teaching strategies techniques or approaches that lecture use to deliver instruction or facilitate learning (Wang, 2008: 412). Constructivism stated simply contemplates how the learner constructs knowledge meaningful way. One way this is a focus on the types of tasks given to learners. Two guidelines used to determine the task talk with in constructivist pedagogy include if the task is meaningful and authentic. To be considered a meaningful task, the learner should derive applicable, understandable knowledge from it. An authentic task is directly related to the course of study and is applicable to the real world. Constructivism emphasizes the responsibility of learning

lies within the student while the teacher acts as a facilitator of learning. Desai, Hart, and Richards (2008:327) stated, ‘’technology is often assumed to be the catalyst of new pedagogical change. Pedagogical change influenced by technology within three constructivist based learning theories, activity theory, social constructivism and situated learning.

Murphy and Manzanares (2008: 1067) describes that the instructional design in a virtual classroom requires extensive planning and preparation which is not the case in the physical classroom. E-learning need the lead time to get power point notes developed, and exercises. Virtual classroom present some difficulty because few lectures have the knowledge and expertise needed to fully utilize educational multimedia virtual learning environments and the types of educational transaction they support (Dillon, 2004: 34). While the components of activity theory may be scaffolding by technology, in order to be fully. Technology’s greatest pedagogical impact within this theory may be in area of social interaction. Benson, Lawler and Whitworth, 2008: 23) explain the exchange of personal, social and cultural norms determines the work environment which in turn creates the rules of performance in an activity system. In physical classroom the personal, social, and cultural clues are learned from direct social interaction in the form of body language, visual cues and physical contact and the environment of the system must be determined through email, texting, and discussion forums. This impacts the object of activity theory by shifting it from teaching students to helping them learn.

Sociocultural constructivism uses this relationship and continues it with stating that through this social interaction a new level of knowledge is acquired. Staupe (2000: 830) explain who Vygotsky is well known for his Zone Proximal Development (ZPD) theory, The ZPD is often defined as the relation as the relation between what a learner knows and the knowledge that exixts within the social context. Bonk (1998: 26) defines is sociocultural constructivism defines learning as a dialogic activity for participation in a community of learners that learn through authentic tasks.

Nehme (2000: 247) describes how a sociocultural learning environment would work in a synchronous online community of learners. The synchronous online tool is the mediator and the social area is achieved through the different styles of communication, collaboration, cooperation, and interaction that happen among the moderator and the learners online. The use of online learning environments brings with them the availability of an extremely complex network of information and personnel that enrich the learning community. Bonk (1998: 28) explained socio cultural constructivist theory that can be enhanced through e-learning are the need for a mediation tool and distributed intelligence. There is a need for a

learning environment to facilitate the development of a culture in which participants learn and grow. This community of learners must be diverse and utilize an array of knowledge. Online learning environments provide the framework for creating such mediations as well as the ability to bring together a limitless perspective on any subject imaginable.

Transactional distance theory was developed by Moore (1997: 22) also Grosky and Caspi (2005: 56) is viewed as a framework for understanding distance education and cited that reduction of understanding how distance learning affects individuals who participate in such learning environments. When learners and lecture are separated by time and physical space (as in distance education), the potential for misunderstanding between these individual is increased. The principles learning environment are the amount of dialogue, structure, and learner autonomy present. Moore (1997:23) online education by its very nature has the potential for a less predetermined structure or open structure allowing for the flow of dialogue between learners and instructors to increase and in turn lessen the amount of transaction distance present. Online education by its very nature has the potential for a less pre-determined structure or open structure thus allowing for the flow of dialogue between learners and instructors to increase and in turn less the amount of transaction distance present. So transactional distance in online learning and the need to address it as a factor of student learning when instruction for e-learning is being designed (Chen, p.468).

Meyer designed cognitive theory of multimedia learning. Mayer in Veronika (2005: 180) is well known in the field of educational psychology and has made it his goal to develop a theory based on the assumptions that people process audio and visual input differently, that people only process limited elements at one time, ant that learning occurs when learners are presented with the right kind of cognitive processing. Online learning environments can be designed with these principles in mind to promote learning that is more effective. It is easy to present large amounts of material in an online learning environment since so much knowledge is accessible in a digital format and easily uploaded to present learners. Digital media can also become extremely complex and information jumbled in a format that loses the focus of the related goal. Concluded cognitive theory of multimedia learning can be applied to improve the level of online education available.

Siemens (2005: 5) explain that connectivism is a learning theory explores new ideas in learning and data transfer. The theory states that because information has now become digital. The learner thus finds a need to create an external network of valid sources such as people or content of information called nodes. These nodes create for the individual learner to organize up to date knowledge that can be accessed when needed. Online learning

environments have a structure consisting of networks where information is gathered. This is retrieved the individual participant, studied and sorted. Connectivism provides the needed shift skills and activity to provide a successful and up to date learning environment by online tools and resources.

H. METHOD

Research design was research and development focused on lecture and student preschool education by online quizzes. Structured interviews with lecture and student preschool education contribute to the findings. Population 97 student's early childhood education in fourth semester 2015/2016 academic year . Sample 33 student's early childhood education. Data collection techniques and instruments development classroom by observations, field notes, student's feedbacks quizzes, questionnaire. Data analysis technique was qualitative.

RESULTS AND DISCUSSION

Table.1.1 Indicators E-Learning Education of children in the Family Subject

No	Dimensions	Indicator	Scala		
			3	2	1
1	Communication tools used for lecturing subject family in education	Online distance learning courses	35		
		Traditional courses supplement with technology using power point, web based activities, multimedia simulations		5	
		Hybrid courses lecture combines elements of online distance and virtual sessions			2
2	Challenge for e-learning manage priority	Infrastructure technology	24		
		Lecturing digital skills		2	
		Students digital skills		16	
3	E-learning environment	Lecture will control the degree of learning, attitude forwards technology, teaching style and control of technology	17		
		Students centered learning acquire skills to identify difference courses of information in application such as electronis media or video to communicate through newgroups, online discussion forums, web blogs or chat rooms.	30		
		Supporting interactive an individual learning environment used access to computers and internet		5	
4	Students performance and accessibility	Students are given more time to prepare questions and responses even online		4	
		Students participate in e-learning initiatives that allow them to control their own work in a virtual working enviroment	28		
		E-learning techniques and delivery are that they potentially give students greater flexible access to education			10

Table 1.2. Results Subjects Online Quizzes Family In Education Courses

Subject	Quizzes										Percentage (%)
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	
N1	√	√	√	√	√	√	√	√	√	√	100
N2	√	√	√	-	√	√	-	√	√	√	90
N3	-	-	-	√	√	√	√	√	√	√	80
N4	√	√	√	√	√	√	√	√	√	√	70
N5	√	-	√	√	√	√	√	√	√	√	100
N6	√	√	√	√	√	√	√	√	√	√	90
N7	√	√	√	√	√	√	√	√	√	√	100
N8	-	-	-	√	√	√	√	√	√	√	70
N9	√	√	√	√	√	√	√	√	√	√	100
N10	√	√	√	√	√	√	√	√	√	√	100
N11	√	-	√	√	√	√	√	√	√	√	90
N12	√	√	√	√	√	√	√	√	√	√	100
N13	√	√	√	√	√	√	√	√	√	√	100
N14	-	-	-	√	√	√	√	√	√	√	70
N15	√	√	√	√	√	√	√	√	√	√	100
N16	√	√	√	√	√	√	√	√	√	√	100
N17	-	√	√	√	√	√	√	√	√	√	90
N18	√	-	√	√	√	√	-	√	√	√	90
N19	-	-	√	√	√	√	√	√	-	√	70
N20	√	-	√	√	√	-	√	√	√	√	80
N21	-	-	√	√	√	√	√	√	√	√	80
N22	-	-	√	√	√	√	√	√	√	√	80
N23	-	-	√	√	√	√	√	√	√	√	80
N24	√	√	√	√	√	√	√	√	√	√	100
N25	√	√	√	√	√	√	√	√	√	√	100
N26	-	-	√	√	√	√	√	√	√	√	80
N27	√	√	√	√	√	√	√	√	√	√	100
N28	-	√	√	√	√	√	√	√	√	√	90
N29	-	-	√	√	√	√	√	√	√	√	80
N30	-	-	√	√	√	√	√	√	√	√	80
N31	-	√	√	√	√	√	√	√	√	√	90
N32	-	-	√	√	√	√	√	√	√	√	80
N33	√	-	√	√	√	√	√	√	√	√	90
	19	**17**	**30**	**31**	**33**	**33**	**32**	**33**	**32**	**33**	

Enhancing communication lecturing tools through e-learning technology providing lectures with re-engineering that will revolutionize classroom practices and education fortification that will improve the learning courseware through technology. Teare (2000:43) explain that initially the process of e-learning may demonstrate features of educational enrichment and prove highly problematic. Teare's (2000) studies suggested that some students who participated in online learning courses found the delivery of course content impractical and frustrating due to technological failures. Volery (2000) research identify that

university students who participated in virtual lectures found experience rewarding and rated then as a valuable learning tool. E-learning may have the potential to equip lectures in higher education with flexible channels and a model for the delivery of courses. Web based learning allows lectures to disseminate up to date course content in relatively no time at all and students can complete courses just-in-time, giving them the opportunity to apply knowledge in contemporary situations. E-learning courses can be structured and aligned with requirements of today's workforce, learning methods with virtual lectures, sustain group interaction whilst broadening the flexibility of communication between students. So, e-learning offer lecturers enhanced teaching tools that are capable of moving higher education into the information age.

The manage infrastructure technology is need for continual development of skills so that the University can fully realize the benefits that proper and confident use of technology can bring. The developments are being done in a particular order because of dependencies of one area on another. Collectively they are crucial activities that underpin IT service delivery and enhancements, e.g. the introduction of portals, virtual learning environments, and content management all of which the University recognizes as important developments. Students's e-learning needed skills are ability collect and retrieve information, organize and manage information, evaluate the quality, relevance, and usefulness of information, and generate accurate information through the use existing resources. Then, lecture need skills are ability civic literacy, digital literacy, global awareness, financial literacy, health literacy, and environmental digital. Lecture must be arranging quizzes through project-based learning and problem based learning. Project based learning model are trying project outcome to curriculum and goals, employing questions or posing questions to introduce students to central concepts and principles, students responsibility for designing and managing much of their learning, basing projects an authentic real world and questions that students care about this. Problem based learning must be lecture to develop and students to focus on complex, real world problems using a case study approach, student can explore multiple solutions and best practices for tackling projects, students have found that for factual learning use critical thinking skills, communication, collaboration, and applying knowledge to real world situations are measured. E-learning manage also lecture who recognizes the preventive nature of class management will foresee likely problems and structure the class in a manner that addresses problems before they occur.

Lecture understanding different ways of creating online learning environments is necessary to support students in higher education in the quest for knowledge. Online learning

has grown rapidly in the past few years, requiring instructors to learn effective ways building online communities of learners. While technology software will change, it needs to support learners in online courses to be important. Lecture becomes more facilitative when aligning instruction with social construvist, connectivism, and transformative learning theories. Their job is to create learning environments that help learners make connections between their past and currently acquired knowledge, while remembering that learners come to their course with different objectives, skills, and comfort levels. Students will be successful in online courses when instructors utilize the tools available to create effective online learning communities that promote dialogue, discussion, and reflection, all of which allow learners to develop deeper understanding and to gain knowledge. Developing material subject family in education need are: (1) creating online learning environments for students, (2) learning theories revised, (3) constructivist online learning, (4) teaching and design of online learning, (5) student role in building communities, (6) training of instructurs, (7) delivery of course materials. These all are described following. Creating online learning environments for students online co understand that learning courses that lecture must be understand the best methods for creating learning environments with available technology. Technology can be enhance or defeat the building of community learning environments. Social constructivist understands that learning takes place in a community setting, where lecture and students interact to construct meaning. Connectivist realizes knowledge is increasing at such fast speeds that it is important for learners to know how to find pertinent information. Transformative learning theory is also grounded in communication, with reflection as a key component. Lecture must incorporate these key components when creating their online courses. Learning theories revised used blended learning to provide the best online learning environments. Online learning communities should help students feel more connected to their peer and lecture. Transformative learning theory acquisition of knowledge is changing from what is known to how to find the information and browse any exercises in their homework's. This leads to continual learning for an individual based on one's ability to find the correct information, to connect it with past and current information, thus increase their knowledge. Constructivist online learning builds on seventh steps: (1) lecture and students try to provide a constructivist learning environment to distance learners, (2) lecture must understand their learner situation and condition, (3) lecture accommodating these differences can be difficult when all interaction takes place online, (4) lecture to construct their student's their own learning, (5) lecture have extensive time required to evaluate online learning activities, (6) lecture create students centre learning, (7) lecture design to effectively create and evaluate

collaborative learning opportunities for students. Teaching and design of online learning according to Heineeka , Dawson and Willis (2001: 14) these six principles can be constructivist focused: (1) interactive learning, (2) collaborative learning, (3) facilitating learning, (4) authentic learning, (5) student learning centre, (6) high quality learning. Lecture to build knowledge of content. Students may enter into either synchronous or asynchronous discussions throughout the course via chats, blogs, wikis, threaded discussions or email. Lecture is to facilitate learning, support learner, monitor their learning, and to provide directions and guidelines for students. Students need authenticity in activities that directly relate to their work experiences and real life. Lecture can support students by providing assignments early in the course that are short and directed to help the reluctant learner see the value of an online course. Student role in building communities provide opportunities for learners to make connections with their prior knowledge using available technology tools. Lecture may need to help students understand how to learn and how to become comfortable within the online community. Many students come from traditional classroom settings where assessments are based on the reading of the chapter in the textbook, completing a couple assignments, and then taking a quiz. Students will need support and extended opportunities to practice different assessment methods that are new to them before they are comfortable and before lecture see changes in students assessment behavior. Delivery of course materials in higher education and the tools within the systems are growing and becoming more robust each year, with open source system such as moodle, course management systems are more flexibility for lecture when designing their online curriculum. The perfect system is evolving each semester better meeting the needs of lecture and students. Consistency in menus on the course management system will help students navigate easily within the course material, so virtual worlds are becoming more common in educational settings.

Students performance enrolled on e-learning courses perform better than those on more traditional schemes. It is important to clarify that in the context of this paper students performance considers the level and quality of learning outcomes as`well as the student's grades in assessments. E-learning in higher education techniques improved student exam by online quizzes result have acted as educational bridges between subjects, problem based cases, students analyze topics and send answered by email. The inference is that higher education institutions, which utilize effective e-learning methods, enhance the performance of students in assessments to produce graduates who are theoretically and practically prepared for working in an information age.

C. CONCLUSIONS

1. E-learning is the potential to equip lecture's in higher education with flexible channels and a model for dilevery courses.
2. Challenge technical problems e-learning subject family in education was the no quota, slow internet, no signal in specific location in Banten Province. Then lecture implemented e-learning through online email quizzes based on understanding educational technology, constructivist, pedagogy, socio cultural constructivism, transactional distance, and cognitive theory of multimedia learning.
3. Lecture and students tolerant each other with effective ways building online community quizzes by email for learners.
4. Student's performance measure by result analyze topics family in education courses, the student's send answered quiz by email. Then student's acceptability must active browse and search material related quizzes problems and student's encourage achievement digital literacy skills and critical thinking.

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