Implementing E-Learning Designed Courses in General Education

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ABSTRACT— ***The aim of this study is to implement e-learning designed course for general education. The study employed 3 phases for developing e-learning course: contextual study, designing, and implementing. Two courses general education, 217 undergraduate students are participated the study. Research tool consisted of interview about e-learning form and learning satisfaction questionnaire. The findings revealed that e-learning courses should not be used alone, but it should be mixed between face to face and e-learning in the appropriate solution. After students had learned through e-learning, they express learning satisfaction at high level and need to be continued e-learning courses in other courses.***

Keywords— e-learning, general education, instructional practice, satisfaction

1. INTRODUCTION

The instructional strategies in the era of Education 3.0 and 4.0 are now challenging higher education. Modern classroom cannot be absolutely rejected online learning, online education, and mass open online learning activities. Students have to success their learning by computer-assisted learning, group online discussion, and experiential learning. As it related to the learning preferences and habit of learning for new generation because world-wide learning is rapidly respond to students' need. It is difficult to kick online education far from classroom activities in here till tomorrow. Students can learn through virtual classroom and multimedia as well, questioning and soft skills will be improved individuals in essential knowledge and aware changing in variety of information[1].

The traditional classroom opens the world of learning in such narrower than those students should know in the 21st century. We, educators need to manage learning activities to meet students' requirements and goals of education that uncertainly solution occurred. Teachers might want to have such skills also to shape classroom that looks difference traditional classroom[2]. The problem in the previous solutions cannot be solved by the traditional methods, the new paradigm of learning and solving the problem should integrate many skills and much more information to consider. The classroom should be changed in cultural, societal, psychological, contextual, technological, and managerial ways. Teachers have to change teaching behavior by act role to be facilitator or co-learner with students.

The 21st century skills required students to do with online learning and inquiring mind to solve the problem by using appropriate reason. The future is stand on the uncertainty, it needs students consume information and critique to success decision making as well. The learning environment becomes a borderless learning due to anywhere, anytime information-accessed classroom[3]. Teachers might want to adapt pedagogical strategies to their classroom[4]. The use of educational technology and media for helping students learn more about knowledge and necessary skills, it realized that how efficient the method was for delivering instruction, able to spend less class time lecturing and more time working on experiments while interacting with students.

General education program is propagated by the educational philosophy which requires students to have intrapersonal and interpersonal understanding. The program prepares students to face the future, empower them learning to live with others, creating experiences, communicating skill, and fostering knowledge important to all. General education requires variety methods of teaching because it allows diversity of students. Pascarella & Terenzini [5] concluded that general education improves students' critical thinking. It helps students understand that they are not people who are separate from society, but rather, members of a community. In addition, general education prepares students for civic engagement, incubate students to understand them. General education enable students respond critically and constructively to social change, and develop students' understanding of the ethical dimensions.

The philosophy of general education needs students to understand and live with others by friendly environment. It is design based on all for education, education for live, and live for one and others. Also, courses for general education are designed with flexible learning, variety of learning activities, emphasize attributes, skills, and understanding of what they should be known. E-learning is a type of pedagogic strategy that help students learn much more than inside and outside classroom practices, they can learn through internet or cyber classroom. It can aid and response students individually. This study aims to implement e-learning designed course for general education. The findings can be used for designing courses to meet philosophy of general education and useful for teachers to develop modern classroom as well as student needs.

2. METHODOLOGY

Classroom setting: Two courses of general education in which first-fourth year of undergraduate students enrolled in the semester 2, academic year 2014 are selected for implementing online education by employing e-learning to general education classroom. The first thing that research team done, give teachers who have responsibilities to manage two courses. Music and life and Ballroom dance were selected, purposes of the research were announced for clarifying online education as it possibility in general education course. The numbers of enrolled students in general education courses: Music and life and ballroom dance was presented in table 1. Music and life showed numerous students in the first and second year of study, but Ballroom dance showed numerous students in the third and second year of study.

Table 1. number of enrolled students in two courses

Year of study	Music and life		Ballroom dance	
	n	%	N	%
1	80	51.3	6	9.8
2	54	34.6	24	39.4
3	13	8.3	31	50.8
4	9	5.8	-	-
Total	156	100	61	100

Procedure: The procedural process of online education that research team have responsibility to support teachers and introduce students to engage general education. The research design employ 4 steps by starting plan, act, observe, and reflect to develop learning activities as it should be relevant to online education.

- Plan: researchers employ qualitative method to generate innovation, by interview general education teachers about situation and need to develop students' learning achievement. Course design and learning management that online education should be incorporated for mass students. The opinion and recommendation of what general education courses need online learning and pedagogy in which relevant to 21st century learners emphasizing on online learning and internet-aided instruction are discussed during general education seminar. Also, instructional practices reports in the previous semester are analyzed and synthesized. Most of report that teachers have to do when finished their class by semester, they have to report about learning outcomes and comments to university. The report listed online education to big class that could do with diversity of learners and meet the requirement of learning for young students. What teachers need to do and what students need to know that classroom should be designed are recorded.
- Act: workshop is employed to prepare teachers about online education, two days is set for e-learning courses and giving some clarification in terms of academic purposes. The technical support is processed by general education staffs. Teachers have to invite their content and pedagogical practices to prepared online supports. Teachers volunteered to this study and ready to do as research purposes. Training by person is followed after workshop, teacher can meet and question of what online learning looks suit for their class. Service center is created for teachers and students about problem and need during the research implement.
- Observe: The teachers created and designed courses for helping students get understanding for course purposes. This phase employ observation and supervision to measure online education and its process in classroom. Researchers randomized time to check instructional activities. Some students are interviewed for classroom activities and e-learning exposure.
- Reflect: The teachers and students will be reflected their feeling about course activities through questionnaires and interviewing. Teachers send their questionnaires to all students who enrolled course and provide opinion about learning activities. The data is gathered and analyzed by showing in terms of average in learning satisfaction. Teachers also reflect their instructional activities through

interviewing. The reflection helps researchers to understand and perceived how promote e-learning in other courses as well.

Participants have to response learning satisfaction and also, express what they had learned through learning activities. The level of learning satisfaction is to be considered with Likert's five-point rating scale. Each respondent is asked to rate each item on some response scale. They could rate each item on a 1-to-5 response scale where; 1=lowest, 2=low, 3=medium, 4=high, and 5=highest. Data were analyzed by mean and standard deviation. The researcher analyzed collected data by using a computer program, checked the completeness of the data, and then obtained data from responses to the questionnaire. Data were recorded; statistic values were calculated and interpreted by using the criteria as below;

Mean	Interpretation
4.51-5.00	Highest
3.51-4.50	High
2.51-3.50	Medium
1.51-2.50	Low
1.00-1.50	Lowest

The data is represented by qualitative explanation showing students' learning satisfaction. Some empirical sentences are listed to discuss about e-learning courses. The meaning for interpretation can be shown in terms of level of learning satisfaction as above.

3. RESULTS

The course can be divided into teacher and technical supports: teacher prepared to design course by one day workshop in e-learning concept and practices. That's not easy to new teacher, but they can design and assign classroom activities through e-learning. Technical supports as a part that e-learning develop by employing Moodle as tool to do with general education students. Teacher found the problem about instructional practices i.e. classroom is not allowed time to do activity, students' interest in the lesson, interaction between teacher and students.

Technical supports help teacher to solve this problem by giving some instruction and methods to manage classroom. Also, students have to know and practice how to access and use e-learning as well. Technical supports response to the e-learning classroom by helping teacher design and develop online course, insert some tools in which necessary for classroom, monitoring tools, assessment and other tools. Classroom management can be done by teacher, set course structure, put content, develop classroom activities, upload/download some content by teacher or students, chatroom, quizzes, and report. The instructional strategies through e-learning activities can be summarized in learning satisfaction at high and highest level which can be shown in Table 2.

Table 2 Learning satisfaction of students in course and content design

Item	Music and life			Ballroom dance		
	$\bar{x}$	SD	Level of satisfaction	$\bar{x}$	SD	Level of satisfaction
1. course meet the learning objectives	3.92	0.67	High	4.54	0.67	Highest
2. content relevant to course description	3.96	0.71	High	4.43	0.67	High
3. content is contemporary	4.08	0.69	High	4.36	0.60	High
4. content can be used for citation	3.92	0.76	High	4.39	0.61	High
5. course engaged students	3.66	0.82	High	4.43	0.64	High
6. course filled appropriated content	3.84	0.80	High	4.36	0.71	High
7. course easy to use and access	3.88	0.81	High	4.28	0.69	High
8. course is attractive	3.77	0.87	High	4.39	0.61	High
9. course is designed continuously	3.78	0.73	High	4.39	0.61	High
10. course can be repeat of learning	4.09	0.75	High	4.36	0.58	High

Students express their learning satisfaction at high level by showed mean score for Music and life ($\bar{x}$ = 3.89), Ballroom dance ($\bar{x}$ = 4.39). That is, learning satisfaction respond to their feeling and criteria about instruction practices through internet. Two of courses are not easy to design because of philosophy of general education claims knowledge and skills should be incorporated, it prepares necessary skills for 21st century citizen. Music and life is a course which can be repeat of learning ($\bar{x}$ = 4.09), contemporary design ($\bar{x}$ = 4.08), and it relevant to course description ($\bar{x}$ = 3.96). Ballroom dance is a course which meet the learning objectives ($\bar{x}$ = 4.54), it relevant to course description and course is attractive ($\bar{x}$ = 4.43)

The tools in which students engaged to e-learning courses can be shown in Table 3. The criteria to measure tools that students use for e-learning are direction, announcement, calendar, e-mail, report, chat room, webboard, link, upload/download, and other tools.

Table 3 Tools in which student access through e-learning courses

Item	Music and life			Ballroom dance		
	$\bar{x}$	S.D.	Level of satisfaction	$\bar{x}$	S.D.	Level of satisfaction
1. Direction	3.72	0.83	High	4.81	0.72	Highest
2. Announcement	3.55	0.92	High	4.30	0.67	High
3. Calendar	3.62	0.88	High	4.33	0.72	High
4. E-mail	3.53	0.89	High	4.48	0.62	High
5. Report	3.67	0.87	High	4.26	0.73	High
6. Chat room	3.40	0.94	High	4.36	0.66	High
7. Webboard	3.59	0.89	High	4.34	0.68	High
8. Link	3.54	0.90	High	4.36	0.71	High
9. Upload/download	3.76	0.91	High	4.36	0.68	High
10. Others	3.49	0.82	High	4.44	0.59	High

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Students listed their route to access learning by courses reflection at high level. The direction to get courses shown in highest score in two courses, Music and life is tend to be lower than Ballroom dance. However, overall of score students rated at high level for tools to access e-learning. Finding can be supported by interviewing, instructors give their expectation to course designed e-learning for helping students reach the goal of general education. The interviewing reflects of what they perceived during the program of study.

"…students should be known and understand everything that describe in the course description, but time for classroom management is limited. They should sit and back to the classroom by internet tools such as dance competition clip video that they can see, practice, and discuss, moreover, they can make a recording then upload clip to free services online..."

(instructor of Ballroom dance. June 2, 2014)

"...it is easy to use and more comfortable to access information..."

(instructor of Music and life. May 30, 2014)

"...students can go to previous information and course activities anytime anywhere, even though they absent..."

(instructor of Music and life. May 30, 2014)

"…students might want to have practical guide by themselves if some content did not meet their requirements, today they can access online information in easily such as youtube, google, and other search engines…."

(instructor of Ballroom dance. June 2, 2014)

The satisfaction of learning activities through e-learning is so easy to access and make students love to learn in concept anytime and anywhere. Students can get understanding and no boundary of practical learning. Instructors ask the requirement for theoretical lesson in the classroom, but it can be deleted the some limitation.

4. DISCUSSION

Technology in education is changing the way students learn and communicate. It will revolutionize education in the 21st century. The rapid growth in e-learning and discusses the demand and supply forces creating that growth. E-learning is not argued to be a substitute for general education, rather it is a highly valuable supporting pedagogy. The power e-learning as an experiential tool needs to be communicated to educators. Teacher and technical supports have to

parallel working for designing and developing e-learning that meet the requirement to learn of all students. That is, let students to have life long learning skills and 21st century skills[6]. Teachers are familiar with the increasing pressure to use online learning. Teachers have to develop e-learning classroom with integration lesson plans[7].

The e-learning and components are based on the constructivist theory of learning[8], it is based on constructivism, constructionism, social constructivism, connected and separate behavior[9, 10]. That why e-learning or online learning can benefits student-teacher interactions, foster student independence, and allow students more flexible time for learning[11]. The designed e-learning courses is some suitable for general education because it respond to the cognitive development, but some skills that practical learning activities meet the goal of nature of subject. Teachers should aware content and time to let students hit the threshold of learning as well as e-learning could do. The concept of e-learning is not new to education, but it evolves paradigm of learning in the 21st century. It can be shown in the results of learning satisfaction and tools to access e-learning, anytime, anywhere learning situation are the best way to solve gap between learning area and nature of learning[12].

Students show high level of learning satisfaction in both two courses. However, designed courses were created that bring philosophy of general education as it to be claimed knowledge and skills. It is attracted interest from disciplines as diverse as educational psychology, computer science, pedagogy, and information communications technology. E-learning course allowed students in the live instruction and online sections[13, 14, 15]. It makes students and teachers to have interactive, online, virtual, and authentic areas. They interest with educational technology by variety of information and rapid changes in contents and methods for 21st century skills.

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