EVALUATION OF COURSEWARE PRODUCTION AT THE COLLEGE OF INTERNET DISTANCE EDUCATION

Firouz Anaraki[1] and Chitapa Ketavan[2]

Abstract

Establishment of College of Internet Distance Education (CIDE) was officially approved in April 2002 by University Council of Assumption University (AU). It started admitting students in 2004. AU could be considered the first university in Thailand to offer full eLearning program in Thailand. Master of Science in Management was the first program offered by CIDE, followed by Master of Science in Information and Communication Technology. By 2008, CIDE started a new program offering Master of Science in eLearning Methodology and by 2009 offering Graduate Diploma in Teaching Profession. In order to evaluate the courseware production for these four programs at CIDE, a questionnaire was conducted online. Students of these 4 programs were requested to answer the questionnaire. This paper analyzes the data collected for the purpose of improving the courseware production. In July 2012 CIDE was renamed as Graduate School of eLearning (GSeL).

Keywords: Evaluation, Courseware, eLearning, courseware production, online learning

บทคัดย่อ

สภามหาวิทยาลัยอัสสัมชัญได้มีมติเห็นชอบการจัดตั้งวิทยาลัยการศึกษาทางไกลอินเทอร์เน็ตอย่างเป็นทางการเมื่อเดือนเมษายน 2545 วิทยาลัยฯได้เริ่มรับนักศึกษาในปีการศึกษา 2547 มหาวิทยาลัยอัสสัมชัญเป็นมหาวิทยาลัยแห่งแรกในประเทศไทยที่เปิดหลักสูตรการเรียนการสอนทางอิเล็กทรอนิกส์อย่างเต็มรูปแบบ หลักสูตรที่เริ่มเปิดสอนคือ วิทยาศาสตรมหาบัณฑิต สาขาวิชาการจัดการ และวิทยาศาสตรมหาบัณฑิต สาขาวิชาเทคโนโลยีสารสนเทศและการสื่อสาร ต่อมาในปี 2551 วิทยาลัยฯได้เปิดหลักสูตรใหม่เพิ่มอีกคือ วิทยาศาสตรมหาบัณฑิต สาขาวิชาวิธีวิทยาการเรียนทางอิเล็กทรอนิกส์และหลักสูตรประกาศนียบัตรบัณฑิต วิชาชีพครู ในปี 2552 งานวิจัยนี้เป็นผลการวิเคราะห์ข้อมูล

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การประเมินสื่อการสอนหลักสูตรต่าง ๆ โดยการตอบแบบสอบถามทางออนไลน์ของนักศึกษาทั้ง 4 หลักสูตร ผลการวิเคราะห์ที่ได้จะนำไปใช้ในการปรับปรุงการผลิตสื่อการเรียนการสอนของวิทยาลัยการศึกษาทางไกลอินเทอร์เน็ต

I. INTRODUCTION

The College of Internet Distance Education (CIDE) was established in 2002 as a semi-autonomous organization within Assumption University whose purpose is to provide Internet based eLearning programs to Thai students and those in other countries.

During early 2003, the executives of the College looked around searching for some commercial Learning Management Systems (LMS), the backbone software that enables the management and delivery of learning content and resources to student. Furthermore an LMS could keep track of students and activities performed by them. Most LMS systems are web-based to facilitate "anytime, anywhere" access to learning content and administration. Moodle[1] was adopted by the executive board of the College as the main platform for learning management. There are many good reasons to use the open source software, i.e. it's free with no pop-up advertisement, full control of options and settings, access to source code, the right to edit the code, online support forum, and modification and derivation of other software from it. Moodle was opted since it was the most promising open source LMS due to its functionality, online forum, and the number of university and colleges around the world using it.

Master of Science in Management (MS-Mgt) was the first online program offered in 2004, followed by Master of Science in Information and Communication Technology (MS-ICT) in 2005. Assumption University is the first university in Thailand that started offering accredited degree programs in full eLearning mode. By 2006, the College started a Ph.D. program in eLearning Methodology (PhDeLM). By 2008 a Master of Science program started in eLearning Methodology (MS-eLM). Later in 2009, another program with the name of "Graduate Diploma in Teaching Profession" was offered to prepare graduates in teaching profession.

II. METHODOLOGY

The College decided to start courseware production for the ICT program first in-house. A courseware production team of 5 members was formed consisting of a an instructional designer (ID), a programmer, a video editor, and a web/graphics designer. The team was responsible to develop courseware for ICT program and modifying and enhancing the features of the Moodle. The product of this enhancement to the Moodle as the main Learning Management System (LMS) was named "SCIT Plus" in honor of the CEO of the College, Prof. Dr. Srisakdi Charmonman in whose honor the IT Center at AU was named. Later in 2 years time, 2 more courseware production teams were formed to produce courseware for Management, MSeLM, and Graduate Diploma programs as well.

In order to evaluate the efficiency and usability of the Learning Management System (LMS) and the courseware produced for the 3 online master degree programs, namely MSeLM, ICT, Management, and 1 Graduate Diploma in Teaching Profession the authors prepared an online survey questionnaire in late 2010 to seek students' views and feelings towards the courseware produced and the SCIT Plus system. The questionnaire was put online at the LMS website and students were requested to spend few minutes of their time to answer to the questionnaire. The questionnaire was conducted anonymously in which no name or student ID was asked so that students can reply frankly. By year end of 2010, 39 students from 4 programs replied to this questionnaire. The rest of this paper discusses the questionnaire and the replies received and the analysis of the data.

III. RESULTS & DATA ANALYSIS

Thirty nine (39) students replied to the questionnaire, 16 male, and 23 female. Figure 1 shows the age group of students. Almost half of the students were in the age range of 25-35 though due to the online nature of the program there were students from all age groups studying towards their graduate studies.

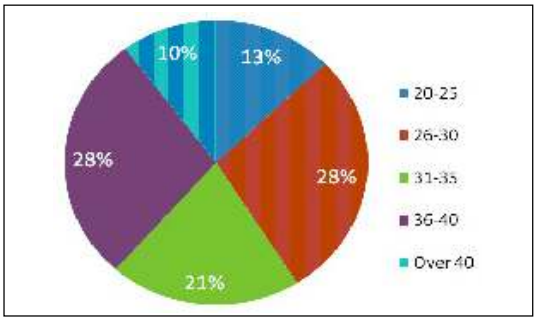

Fig 1: Age groups of students

Students were asked to identify their semester of study at CIDE. As shown in figure 2, majority (64%) of the respondents were either in their first or second semester of their studies at CIDE. Some have been studying for 3, 4, 5, or even more semesters at CIDE.

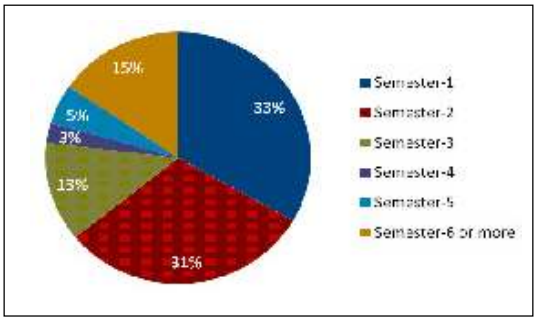

Fig 2: Current semester of respondents

In order to find out students' experience with CIDE's LMS (SCIT Plus), they were asked the number of courses they had taken with the SCIT Plus system. Figure 3 shows that majority of students (72%) had taken between 2 to 4 online courses using the SCIT Plus system. It could be said from Figure 3 that majority of students had enough experience using the system.

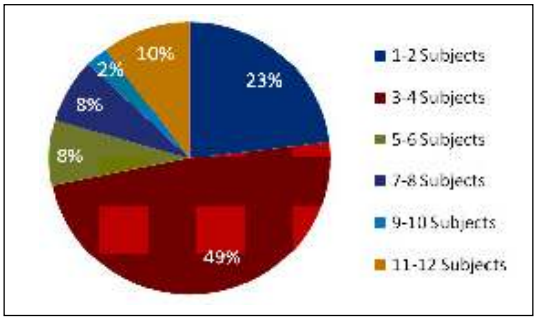

Fig 3: Number of online subjects taken by students

CIDE produces video based lectures for ICT, Management, and Graduate Diploma programs where lecturers (content experts) are invited to the College Studio to take and record their video while giving a lecture. Lec-

turers provide their PowerPoint slides to their assigned IDs for graphic enhancement. On the day of the online lecture, the video of the lecture is recorded while the content expert views the PowerPoint slides on TV and gives the lecture on his/her subject matter. Later the courseware production team edits the video lecture and synchronizes it with the PowerPoint slides to produce a video lecture. Video lectures produced up to middle of 2011 have been in Adobe Flash format. In addition to the video lecture, the audio of the lecture was produced in MP3 format so that students could download the audio lecture and listen to at any place and any time. In 2011, the author responsible for Technology Division decided to prepare to prepare courseware for both eLearning and mLearning mode.[2]

For MSeLM program most lectures were produced in audio format. Using Apple QuickTime, audio lecturers were synchronized with PowerPoint slides to produce the courseware. Students just needed to download Apple QuickTime to view the lectures with associated PowerPoint slides.

The video and audio lectures were the main mode of learning at CIDE eLearning programs. These audio and video lectures plus other subject materials such as PDF files, PowerPoint slides of the lectures, links to related topics, forums for discussion and questions and answers form the main building block of a unit of an online lecture. All these materials were on CIDE SCIT Plus and hosted on CIDE servers so that students can access and study at anytime and anywhere with any pace.

Students were asked how they preferred to study online. Figure 4 displays their choice of tools in their study.

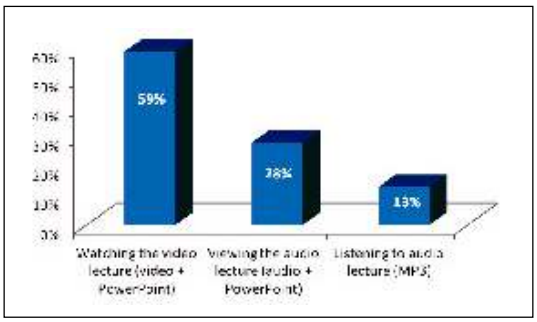

Fig 4: Mode of learning online

As shown in Figure 4, 59% of students would use video lectures and the PowerPoint slides for learning, 28% of students would use audio lecture with PowerPoint slides, and 13% of students just listen to the audio lectures.

To find out if the students watch the video lectures or listen to audio MP3 lectures, the following 2 questions were asked. First they were asked "how often (on average) have you watched the video lecture of each unit of every course. As shown in Figure 5, 5% of students never watched the video lecture, 31% have watch part of the video lecture and 41% have viewed the video lectures at least once, 18% have watched the video lecture at least twice and 5% have watched it 3 times or more. Listening to the audio lectures has become popular because it allows the user to be multitasking. Students usually download the MP3 audio of the lecture and save them

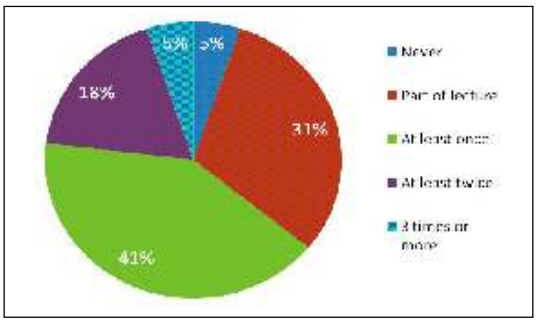

Fig 5: Viewing of video lectures

on their mobile device and listen to the lecture on demand whenever and wherever possible for them.

Then it was asked the frequency of listening to the audio lectures (MP3). As Shown in Figure 6, 10% replied never, 28% listened to part of the audio lectures, 36% listened at least once to each lecture, 10% listened at least twice to the audio lectures, and 16% listened the audio lectures 3 times or more.

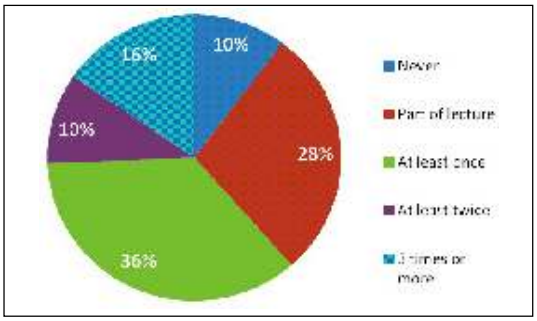

Fig 6: Listening to audio lectures

From the 2 figures 5 and 6 it is evident that majority of students both watch the video lectures and listen to audio lectures for better understanding of the subject.

Later it was asked "How many hours per week (on average) did you spend online studying each subject? As shown in figure 7, 20% spent on average between 1 to 2 hours online per week on each subject, 36% spent 3 to 4 hours, and 26% spent 5 to 6 hours online, and 18% spent more than 6 hours per week. It should be noted that each week, there is at least one hour of video lecture plus some reading, and usually doing some assignment related to that particular week. For an average student it may take between 4 to 6 hours doing all these activities.

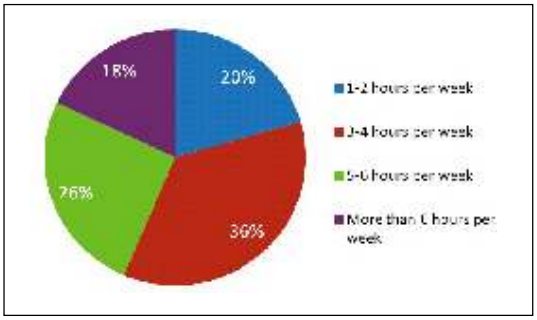

Fig 7: Average time spent/week/subject

In eLearning programs students ask their questions in the Forum and lecturers are supposed to answer the students within 24 hours, or if the questions are more difficult and need more time to explain, the lecturer could acknowledge the question and reply to the question within 3 days.

The next question in the questionnaire asks after how long they (students) receive their answers to the questions they ask in the course forum. Figure 8 shows that 15 (38%) of students have received the answer to their questions within 24 hours, 11 (28%) within 48 hours, 10 (26%) of students within 3 days, 2 (5%) within a week, and 1 student claimed that he seldom received an answer to his questions.

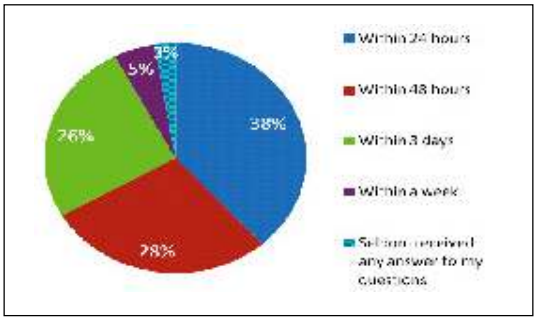

Fig 8: Answers to students' questions

It should be noted that through log reports from the SCIT Plus Learning Management System, it was verified that a certain lecturer did not logged into the system regularly and left many questions unanswered. This particular lecturer was dismissed in the following semester.

SCIT Plus has many features that students could use for their study purpose. The author wanted to know which of the features students consider as most useful in their studies. It was asked to the usefulness of each feature (tool) from 0 to 10 depending on its usefulness. Figure 9 shows students' replies.

TABLE 1: USEFULNESS OF SCIT PLUS FEATURES

SCIT Plus Feature	Score
Video of the lecture	7.5
MP3 Audio of the lecture	7.9
PowerPoint Slides	8.9
Forums	6.7
ELIS	5.7
HelpDesk	5.9
Extra online material for reading	7.1
Assignments	8.4
Quizzes	8.4
Talking by phone with lecturer	6.3
Chatting online with lecturer	6.3
Meeting the lecturer face-to-face	6.4

One question that is usually asked is whom students should contact when faced with some questions. In order to find the answer to this question, the researcher put the same question to students already studying in eLearning environment at CIDE. As shown in Figure 9, majority of students 18 (46%) posted their questions to the Forum of the course. In SCIT Plus, each course has a Forum that the facilitating instructor and the students participate in the asynchronous mode of discussions, very similar to a private web board. Students are advised to post their questions to the course forum so that all students could see the questions and their related answers. 14 (36%) replied they emailed to facilitating instructor, and 7 (18%) contacted their fellow classmates.

As all students were graduate students and they had done their undergraduate studies in traditional classroom mode, the researcher wished to find out how they compared traditional mode of learning with eLearning. As shown in Figure 10, 41% students believed eLearning is much better than traditional mode of learning. 26% replied eLearning is slightly better than traditional mode of learning. 10% thought that eLearning and traditional mode of learning is almost the same, 20% replied that eLearning is slightly worse than traditional mode of learning, and another 3% thought that eLearning is much worse than traditional way of learning. From this figure it could be said that majority (77%) believed that eLearning is as good as or bet-

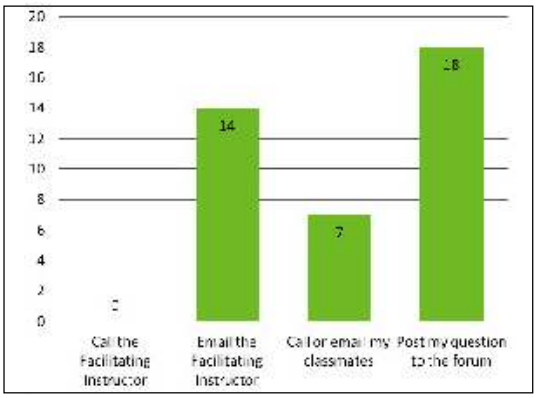

Fig 9: Whom students contact with their questions

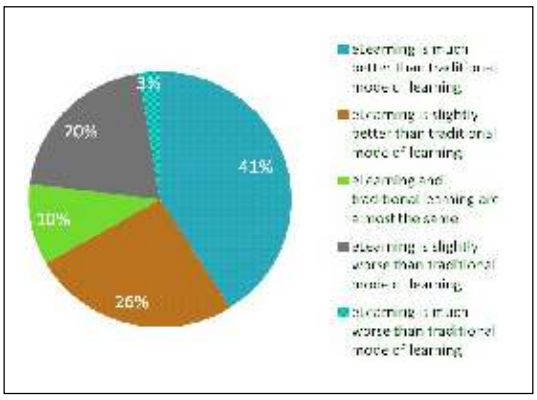

Fig 10: eLearing vs. Traditional way of learning

ter than traditional mode of learning. This is a very good percentage from students who have experienced both classroom and eLearning mode of studying. This also conforms to the Sloan Consortium findings.[3]

To explore the overall satisfaction with course contents and presentation, and also the SCIT Plus features for learning, it was asked "Your overall satisfaction with the contents and presentation of each course and its usefulness. Figure 11 displays students' feedback. Then it was asked "Your overall satisfaction with SCIT Plus for learning online as a Learning Management System". Figure 12 shows how students evaluated the SCIT Plus system.

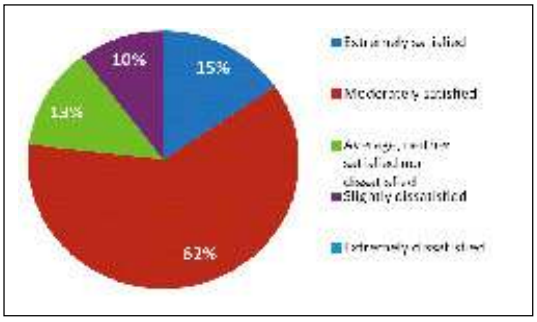

Fig. 11: Satifaction with course content

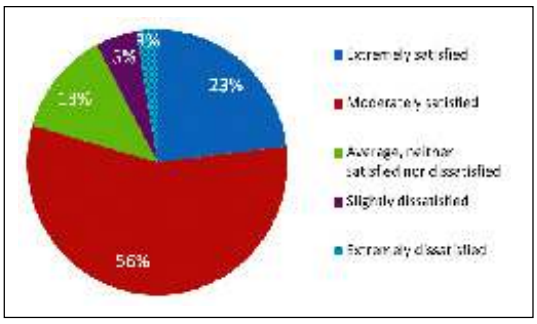

Fig 12: Satisfaction with SCIT Plus

As shown in Figure 10, 15% have been extremely satisfied with the contents and presentation of the online courses, 62% have been moderately satisfied, and 13% neither satisfied nor dissatisfied.

Figure 11 shows that 23% were extremely satisfied with the SCIT Plus system, 56% moderately satisfied, and 13% neither satisfied nor dissatisfied.

Considering figures 10 and 11, it becomes evident that a large majority of students were quite satisfied with both the methodology of courseware production and also the SCIT Plus features and course presentation which is a great success for the College of Internet Distance Education

IV. CONCLUSIONS

SCIT Plus and courseware production has come a long way since early 2004. We have gained much experience in features of Learning Management System, production of online courses, and students' needs. So our SCIT Plus has gone through many revisions, updates, and upgrades since its introduction in 2004; and with each release new features have been introduced. Our Content Experts also have gone through some revisions of their online courses and have improved the quality and presentation of online materials of their respective courses.

A thorough experience with courseware production and the technology to produce and deliver online course has caused a very good evaluation of the courseware by our students at CIDE, a total satisfaction with both the courseware and our SCIT Plus.

This evaluation was conducted in December 2010, and since then we have emphasized and produced courseware that can be run not only on traditional desktop computers such as Windows based machines or Mac based PCs, but also on latest mobile phones

such as iPhone, Android based phones, and Blackberries. With the advent of smart mobile phones and WiFi and 3G networks, this is a new step for courseware production and still gives more satisfaction to students who will be able to access course material and online courses almost anywhere and at anytime as they wish.

Endnotes

[1]Moodle http://moodle.org.

[2]Anaraki, F.B. (2011). "eLearning and mLearning at Assumption University", *IEEE Proceedings, International Conference on e-Education Entertainment and e-Management*, Jakarta, Indonesia.

[3]McDonald, Jeannette (2002). "Is 'As Good as Face-to-Face' as Good as It Gets?", *JALN* Volume 6, Issue 2, Sloan Consortium, sloanconsortium.org/system/files/v6n2_macdonald.pdf.