รายงานการไปฝึกอบรม ดูงาน ประชุม / สัมมนา
ตามระเบียบมหาวิทยาลัยสุโขทัยธรรมาธิราช ว่าด้วยการให้ทุนฝึกอบรม ดูงาน
และประชุมทางวิชาการแก่บุคลากรของมหาวิทยาลัย

ไปเข้าร่วมประชุมวิชาการและนำเสนอผลงานวิจัย เรื่อง Designing and Developing Online Learning Course for Documentary Program through Multiple Learning Theory ณ University of Vienna, Austria ตั้งแต่วันที่ 21 เดือน เมษายน พ.ศ. 2567 ถึงวันที่ 27 เดือน เมษายน พ.ศ. 2567 เป็นระยะเวลา 7 วัน (รวมวันเดินทางไป - กลับ)

2 รายงานการประชุม/สัมมนา

2.1 หัวข้อเรื่อง และวัตถุประสงค์ของการประชุม/สัมมนา

งานประชุมทางวิชาการเรื่อง Vienna International Academic Conference on Education, Humanities, and Social Sciences (WEI-EHSS-Vienna 2024 นำเสนอผลงานวิจัย เรื่อง "Designing and Developing Online Learning Course for Documentary Program through Multiple Learning Theory" มีวัตถุประสงค์เพื่อเผยแพร่องค์ความรู้และแลกเลี่ยนการเรียนรู้

2.2 ผู้เข้าร่วมประชุม/สัมมนา (ระบุจำนวนรวมและสังกัด เช่น เจ้าหน้าที่จากกระทรวงมหาดไทย 5 คน อาจารย์/ผู้เชี่ยวชาญจากมหาวิทยาลัยต่าง ๆ 10 คน)

ผู้เชี่ยวชาญจากมหาวิทยาลัยต่างๆและผู้เข้าร่วมประชุม ประมาณ 30 คน

2.3 วิธีการประชุม/สัมมนา (ระบุลักษณะและวิธีการจัดประชุม/สัมมนา โดยสังเขป)

นำเสนอผลงานวิจัยและแลกเปลี่ยนเรียนรู้

2.4 เข้าประชุม/สัมมนาในฐานะวิทยากรบรรยาย (เดี่ยว/กลุ่ม) หรือผู้อภิปรายกลุ่ม หรือเป็นผู้เสนอบทความทางวิชาการในที่ประชุม/สัมมนา (ในกรณีดังกล่าวโปรดจัดทำบทสรุปย่อในส่วนของท่านด้วย)

นำเสนอผลงานวิจัย เรื่อง "Designing and Developing Online Learning Course for Documentary Program through Multiple Learning Theory" โดยมีบทสรุปดังนี้

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ 1) ออกแบบและพัฒนากระบวนการเรียนการสอนออนไลน์การผลิตรายการโทรทัศน์สารคดีภายใต้ทฤษฎีการเรียนรู้แบบผสมผสาน 2) ศึกษาผลสัมฤทธิ์ทางการเรียนและทักษะทางการเรียนรู้ และ 3) ศึกษาความพึงพอใจของผู้เข้ารับการอบรมที่เรียนด้วยกระบวนการเรียนการสอนออนไลน์การผลิตรายการโทรทัศน์สารคดีภายใต้ทฤษฎีการเรียนรู้แบบผสมผสาน การวิจัยในครั้งนี้เป็นการวิจัยเชิงพัฒนา เพื่อหาแนวทางการออกแบบและพัฒนาการเรียนการสอนออนไลน์ชุดวิชาที่มีการฝึกปฏิบัติ ผู้เข้าร่วมการวิจัยในครั้งนี้เป็น นักศึกษาผู้ใหญ่ จำนวน 23 คนด้วยวิธีการเลือกแบบอาสาสมัคร ซึ่งวิธีการวิจัยประกอบด้วย (1) บันทึกข้อสังเกตขณะทำการการทดลอง (2) ผลสัมฤทธิ์ทางการเรียนจากการเรียนด้วยกระบวนการเรียนการสอนออนไลน์ (3) การประเมินรายวิชาของนักศึกษา สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ค่าเฉลี่ย ค่าร้อยละ และ paired samples T-test

ผลการวิจัยพบว่า 1) การออกแบบและพัฒนากระบวนการเรียนการสอนออนไลน์การผลิตรายการโทรทัศน์สารคดีภายใต้ทฤษฎีการเรียนรู้แบบผสมผสานประกอบไปด้วย 3 องค์ประกอบ ได้แก่ องค์ประกอบที่ 1 หลักการทฤษฎีที่ใช้ในการออกแบบ องค์ประกอบที่ 2 กระบวนการเรียนรู้และองค์ประกอบที่ 3 ผลสำเร็จ 2) ผลการเปรียบเทียบผลสัมฤทธิ์ก่อนเรียนและหลังเรียนพบว่ามีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .01 และสัมฤทธิ์ผลทักษะการเรียนรู้ของผู้เข้ารับการอบรมจำนวนทั้งหมดจากการทำกิจกรรม พบว่ามีผลประเมินอยู่ในระดับดีเยี่ยม และ 3) ผู้เข้ารับการอบรมได้ประเมินความพึงพอใจต่อกิจกรรมรายวิชา เรื่อง การผลิตรายการโทรทัศน์สารคดี โดยเฉลี่ยอยู่ระดับ "พอใจมาก" ทุกด้าน

2.5 กรณีเข้าร่วมประชุม/สัมมนา ควรประมวลชื่อบทความทางวิชาการและเอกสารประกอบการประชุม/สัมมนา ที่เห็นว่าน่าจะเผยแพร่ให้ผู้อื่นได้ทราบ

ประมวลบทความนำเสนอผลงานวิจัย Vienna International Academic Conference on Education, Humanities, and Social Sciences (WEI-EHSS-Vienna 2024) เผยแพร่ https://www.westeastinstitute.com/wp-content/uploads/2024/05/EDUHUM-2024-Vienna-Proceedings.pdf

หน้าที่ 10 – 23: "Designing and Developing Online Learning Course for Documentary Program through Multiple Learning Theory"

2.6 ผลการประชุม (สรุปสาระสำคัญที่ได้ทำการประชุมในเชิงเนื้อหา จากบทความหรือเอกสารที่เสนอต่อ ที่ประชุม การบรรยาย และอภิปรายของที่ประชุม)

ผลการแลกเปลี่ยนเรียนรู้จากการนำเสนอผลงานวิจัย มีประเด็นดังต่อไปนี้

1. การวิเคราะห์ทฤษฎีการเรียนรู้หลายแบบ: การศึกษาและวิเคราะห์ทฤษฎีการเรียนรู้ที่เกี่ยวข้อง เช่น ทฤษฎีการเรียนรู้ของพาวเวอร์แบบสี่ส่วน (Four-Part Model of Power Learning) หรือทฤษฎีการเรียนรู้แบบคอนสตรัคทิวิสต์ (Constructivist Learning Theory) และวิธีการประยุกต์ใช้ในการออกแบบหลักสูตรการเรียนออนไลน์

2. การออกแบบหลักสูตรการเรียนออนไลน์: การวิเคราะห์และออกแบบโครงสร้างหลักสูตรการเรียนออนไลน์สำหรับโปรแกรมสารคดี การกำหนดวัตถุประสงค์การเรียนรู้ เนื้อหาการเรียนรู้ และกิจกรรมการเรียนรู้ต่างๆ ในหลักสูตร

3. การพัฒนาหลักสูตรการเรียนออนไลน์: กระบวนการและเทคนิคในการสร้างเนื้อหาการเรียนรู้ออนไลน์ที่มีคุณภาพ การใช้เทคโนโลยีและเครื่องมือการเรียนรู้ในการพัฒนาหลักสูตร

4. การวัดและประเมินผล: วิธีการวัดและประเมินผลสำหรับหลักสูตรการเรียนรู้ออนไลน์ที่ออกแบบด้วยทฤษฎีการเรียนรู้หลายแบบ เพื่อตรวจสอบความสอดคล้องกับวัตถุประสงค์การเรียนรู้และปรับปรุงให้ดียิ่งขึ้น

5. ผลกระทบและความสำเร็จ: การวิเคราะห์ผลกระทบของหลักสูตรการเรียนรู้ออนไลน์ที่ออกแบบด้วยทฤษฎีการเรียนรู้หลายแบบ

2.7 ประโยชน์ที่ได้รับ (ระบุประโยชน์ที่ผู้รับทุนได้รับ และประโยชน์ที่มหาวิทยาลัยได้รับ โดยจำแนก เป็นข้อ ๆ)

<u>ประโยชน์ที่ผู้รับทุนได้รับ</u>

1.ได้รับประสบการณ์การนำเสนอผลงานวิจัยกับต่างประเทศ

2.พัฒนาทักษะการนำเสนอผลงานต่างประเทศ

3.ได้เครือข่ายทางวิชาการ

<u>ประโยชน์ที่มหาวิทยาลัยได้รับ</u>

1. การนำเสนอผลงานวิจัยใหม่ๆ ช่วยเสริมความเชี่ยวชาญและชื่อเสียงของมหาวิทยาลัยในระดับนานาชาติ

2. การสร้างความร่วมมือระหว่างมหาวิทยาลัยและส่งเสริมการพัฒนาวิชาการของมหาวิทยาลัย

3. การสร้างฐานข้อมูลและเครือข่ายวิจัย

4. ช่วยสร้างภาพลักษณ์ที่ดีต่อมหาวิทยาลัยในระดับนานาชาติ

2.8 ข้อเสนอแนะ (โดยเฉพาะอย่างยิ่งข้อเสนอแนะที่จะเป็นประโยชน์ต่อการดำเนินงานของมหาวิทยาลัยถ้าเป็นข้อเสนอของผู้เขียนรายงานให้ระบุไว้ด้วย)

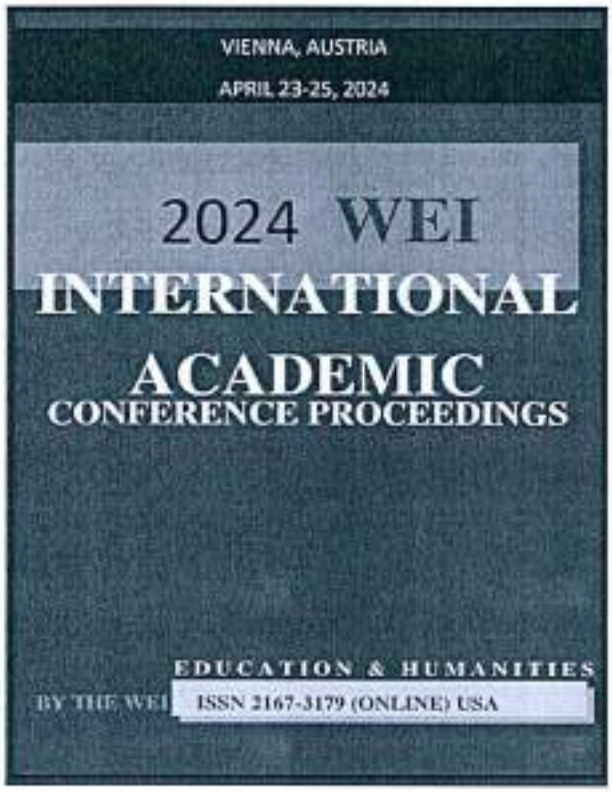
ข้อเสนอของผู้เขียนรายงาน

การรับลงทะเบียนชำระเงินบทความวิจัยกำหนดระยะเวลาชัดเจนหากผู้ส่งบทความชำระไม่ทันตามกำหนดเป็นผลต้องจ่ายค่าธรรมเนียมเพิ่มจากปกติ และราคาตั๋วเครื่องบินหากจองโดยใช้ระยะเวลากระชั้นชิดชิดจะมีผลทำให้ราคาค่าตั๋วสูงขึ้น ดังนั้นหากกระบวนการพิจารณาใช้ระยะเวลาค่อนข้างนานจะเป็นผลให้ต้องใช้งบประมาณมากขึ้น โดยการพิจารณาทุนไปต่างประเทศคณะกรรมการมีการประชุม 2 เดือนครั้ง หากมีการปรับแก้และเป็นประเด็นที่อนุโลมได้ขอให้คณะกรรมการมีมติให้ปรับแก้และขอให้เจ้าหน้าที่สถานพัฒฯเป็นผู้

ตรวจสอบเพื่อลดระยะเวลาการอนุมัติจะทำให้มหาวิทยาลัยประหยัดงบประมาณได้ ไม่จำเป็นต้องเบิกเต็ม
งบประมาณ (70,000 บาท)

ภาคผนวก

ประมวลผลงานนำเสนอ




Designing and Developing Online Learning Course for Documentary Program through Multiple Learning Theory

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การเผยแพร่องความรู้

ชุดวิชา STOU Modular

Module 1

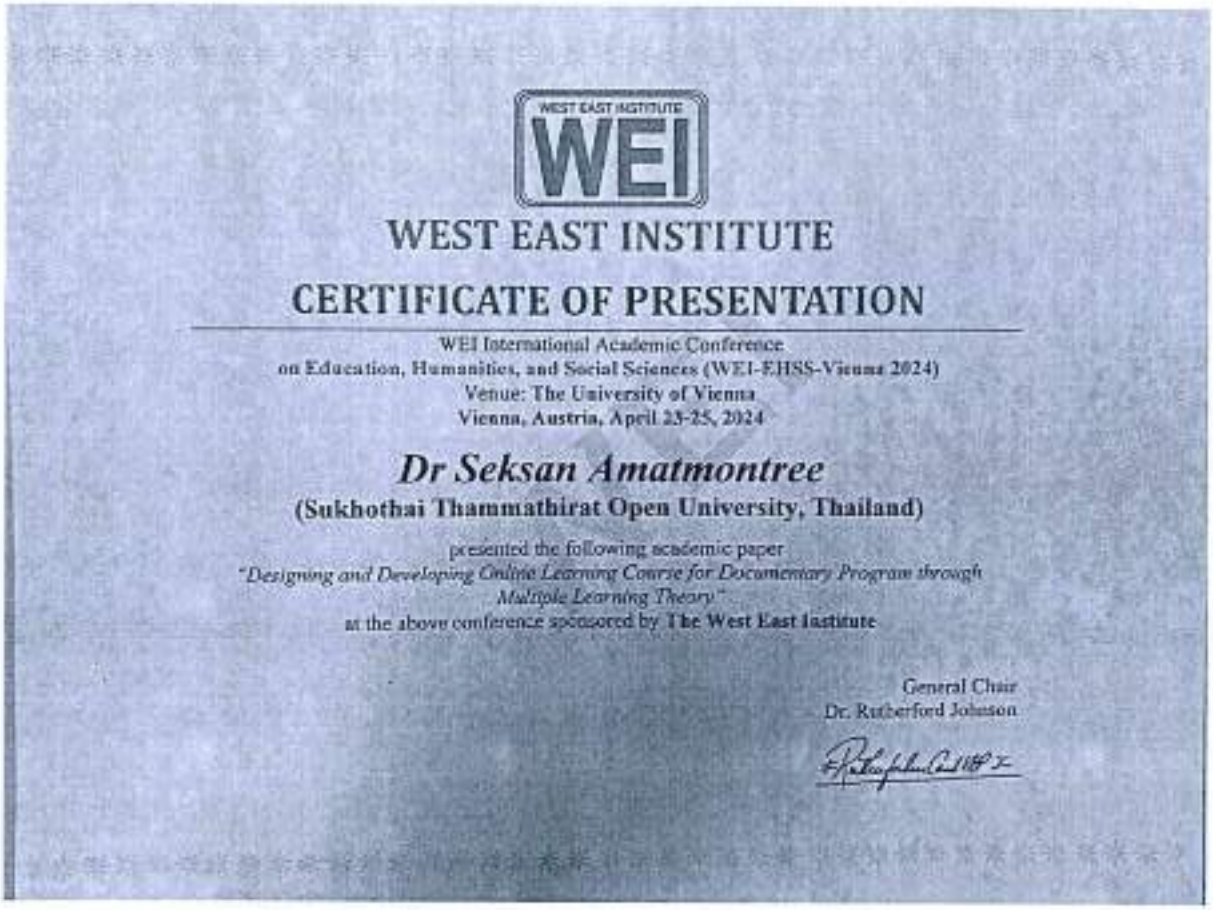
- แนะนำการเรียนรู้ โดย ผู้ช่วยศาสตราจารย์ ดร.เสกสรร อาชาสยัมพลี
- การจะนำเป็นรายการสารคดี ตอน การผลิตรายการอย่างง่ายๆด้วยตนเอง
- การผลิตสารคดีเชิงท่องเที่ยว ตอน แรงบันดาลใจในการผลิตรายการ


การผลิตสารคดีเชิงท่องเที่ยว : ตอนการวางแผนและเตรียมการผลิตรายการ
ดูบน YouTube


กว่าจะเป็นรายการสารคดี : ตอนเทคนิคการเตรียมอุปกรณ์เพื่อการเล่าเรื่องที่ดี
ดูบน YouTube


การผลิตสารคดีเชิงท่องเที่ยว : ตอนการวิเคราะห์ตลาดและกลุ่มเป้าหมาย
ดูบน YouTube

ประกาศนียบัตรการเข้าร่วม



WEST EAST INSTITUTE

CERTIFICATE OF PRESENTATION

WEI International Academic Conference
on Education, Humanities, and Social Sciences (WEI-EHSS-Vienna 2024)
Venue: The University of Vienna
Vienna, Austria, April 23-25, 2024

Dr Seksan Amatmontree

(Sukhothai Thammathirat Open University, Thailand)

presented the following academic paper
"Designing and Developing Online Learning Course for Documentary Program through Multiple Learning Theory"
at the above conference sponsored by **The West East Institute**

General Chair
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VIENNA, AUSTRIA

APRIL 23-25, 2024

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EDUCATION & HUMANITIES

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Designing and Developing Online Learning Course for Documentary Program through Multiple Learning Theory

Seksun Anoatmontree[1*], Walaiwad Chaiyabut[2]

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[1]First Author Affiliation,

*Corresponding Author

Abstract: The objectives of this development research were 1) to design an online practical course to teach television documentary production based on multiple pedagogy principles, 2) to study the learning achievement of sample students taking the course and assess their use of exploring learning skills, and finally 3) to form guidelines for the design and development of other online teaching courses with a practical component. The participants in this study were 23 adult students selected using the volunteer selection method. The research methodology consisted of (1) recording observations while experimenting and (2) assessing learning achievement gained through the online learning and teaching process. The statistics used for data analysis were mean, percentage, and paired samples T-test. The research results revealed as follows: 1) designing and developing the online practical course for television documentary production based on multiple pedagogy principles consisted of 3 elements including Element 1- theoretical principles used in designing, Element 2- learning process, and Element 3- success, respectively. 2) The comparison between pre-test and post-test results showed that the gains were statistically significant differences at the .01 level, and the results of the learning skills of all the participants from the activity showed that achievement was at an excellent level.

Keywords: online learning, online documentary television production, multiple pedagogy learning theory

Introduction

In today's world, a new form of education has become more prominent: online learning. In most cases, this entails self-directed learning through the Internet after the instructor has prepared all the learning resources in advance. Online learning is especially prevalent at the level of higher education, which aims to equip independent learners with the skills they need to start into a career after graduation. The online learning avenue becomes especially important whenever

educational institutions cannot offer normal face-to-face education due to unforeseen circumstances, such as the COVID- 19 pandemic. Thailand was also impacted by the pandemic, and educational institutions had to suspend their ordinary teaching activities in classroom settings. Institutions of higher learning suddenly had to adapt, develop new systems, and find new ways of delivering education. Most of the colleges and universities in Thailand normally use a mixed in-

classroom teaching and learning system relying mainly on conventional learning media, with some additional technology to supplement classroom experiences. When the pandemic arose, they had to discontinue this system.

Sukhothai Thammathirat Open University (STOU) is the only open university in Thailand that has always used a comprehensive distance learning system. The STOU system utilizes distance education technology and innovations to facilitate independent learning in remote locations with no need for classrooms. The learners and the educators

may be far apart but can still participate in educational activities together using mixed media. The main medium always used at

STOU is print media, and the books and workbooks are supplemented by radio and TV programs, DVDs, audio CDs, CD-ROMs, online media and sometimes in-person meetings at educational resource centers in each province as necessary. Nevertheless, students and instructors at STOU were still affected by the COVID-19 pandemic, because some of the

courses also have a practical component where students can practice skills in real life at actual locations where that work is done. This is important to enable students to have full learning experiences to develop skills they will use in their future careers.

STOU has been gradually developing its e- learning capacity and putting more priority on e- learning opportunities. STOU set a strategic plan to strengthen its educational system and make the university more competitive

on a national level while upgrading its benchmarks to match international standards according to its ideal identity, which means becoming a recognized global leader in distance education. STOU's mission and 15-year plan (2013-2027) entail the application of appropriate modern technology to develop electronic teaching and learning as much as possible.

Television program production is a course offered by the School of Communication Arts and the School of Education in the educational communication and technology program. Other universities in Thailand also offer similar courses for this topic. It is a course that is very important for society because it is about producing audio-visual media in

the form of TV programs. Audio-visual media affect viewers' perceptions and awareness because the content can directly convey issues and events that have happened in society in a way that allows viewers to see the stories or actual events clearly. The TV production course emphasizes both theory and practice for the development of work skills. For these

reasons, the authors wanted to use multiple pedagogy principles to design and develop an online learning process to teach students how to produce documentary television programs. The online learning course developed can be a model for other instructors at STOU and elsewhere. The objectives of this development research project were 1) to design and develop a

practical online course for teaching television documentary program production based on multiple pedagogy principles, and 2) to assess the learning achievement of sample students testing out the course as well as their use of exploring learning skills. To begin the research project, the researchers studied, analyzed and synthesized 4 pertinent topics, as

summarized below.

Topic 1: Distance Education Theories and Learning Theories

Pioneering researchers in the fields of education and psychology have developed various concepts and theories about the nature of learning, and these concepts and theories have evolved over time. Newer theories closed gaps and overcame weak spots in the previous theories. For instance, the field has advanced from Behaviorism towards

Cognitivism, Constructivism, Connectivism and Heutagogy (Anderson, 2007).

The concept of Cognitivism that was developed helps explain the development of learning, starting from how perception and understanding in the learning process affect the later stages, i. e. Recognition, Reflection, Encoding, Chunking, and Long-term Memory (LTM). Distance learning practitioners and online educators can apply and make good

use of these concepts when developing and designing distance learning media and materials (Driscoll, 1994).

The concept of Connectivism as a part of learning theory was developed at a time when information technology had begun to play a very important role in society. It was developed by George Siemens, who put great emphasis on technology as an important component in the teaching and learning process. He wrote that we can utilize information

technology as an important tool to link and connect diverse sources in the body of knowledge.

Heutagogy is another senior theoretical framework developed in the Age of Information. It originated in Australia from the work of Hase and Kenyon (2000). The term "heutagogy" comes from the Greek for "self," and heutagogy means managing one's learning oneself with no need to rely on an instructor. The main concept is that a learner must learn to manage the learning experience and develop him or herself in the subjects he or she is learning. Each learner must know how to go about learning in order to reach their self-set goals. Each learner must know the best approach for making

use of the innovations and specific skills needed to improve and transform themselves, along with the structure and environment of their community, and the characteristics of the work duties they are responsible for, in the way they desire.

When you consider the concepts and principles underlying STOU's distance learning system, you could say that STOU implements distance education under the "Theory of Industrialization" (Saba, 2003), which was one of the early

theories of distance education that compared the learning method to an assembly line in a factory that has groups of people who operate like production teams. The instructors producing books are like workers in a factory. Also, under this Theory of Industrialization framework, the standards for measuring educational achievement are set using a database of

exam questions to be used on a large number of students, and in the end, STOU's distance education system results in the

production of a large number of graduates with consistent quality and equivalent standards, similar to products from a factory.

Topic 2: Taking Policy into Practice

STOU's long-term 15-year development plan (2013-2027) clearly states that e-learning is a priority. Nevertheless, there does not seem to be a clearly-stated plan as for exactly how that policy is to be implemented. It is a generally

accepted principle that to take the policy into practice, it is essential that the people who design the teaching and learning system, and the people who produce each individual course, must use distance education theories and methods as the framework. If they proceed under that framework, they can be fairly confident about how learners under the distance

education system will engage in the thinking process, how they will build up knowledge and how they will learn. To reinforce the approach and the practice of distance learning, adhering to distance education theories is a crucial component for seeking out suitable ways to continually develop and improve the distance learning process according to

the institution's mission.

Topic 3: Technology and Distance Learning

E-learning or online learning is entirely and completely suitable for use in the distance education system. If the educational innovation of e-learning can be genuinely used more completely in the distance education process,

instead of just being a supplemental channel for content delivery (Clark, 1983), then it has the potential to do much more, such as

demonstrating examples of complicated subjects or topics, providing a tool for students to make presentations about their work results, and promoting participation, interaction and collaboration while helping build up a learning community.

Certainly, all these diverse e-learning activities need to be evaluated to determine how effective they are in different situations and contexts. There are several alternatives for evaluation methods. In the end, it is up to the educator who designs an online or e-learning course to make assessments and decide which kind of learning activities to utilize. It

could be simply a matter of compiling and arranging written information to present to the learner to memorize, or it could be in the form of facilitating a learning process aimed at discovering the origins of a complex and unorderly problem and trying to solve it (Jonassen, 1993). In conclusion, the use of online learning or e-learning in the distance education process

should not be limited to transmitting course content, and should not be just a supplemental medium, but should be utilized to its full potential.

Topic 4: The Course Design and Production Process

According to the research of Rodchompoo, W. (2012), the process of designing and creating an e-learning course includes the following components (1) work characteristics of people involved with designing and creating the e-learning course, (2) characteristics of the content or topic of the e-learning course, (3) characteristics of activities, (4) design of activities, (5) avenues for topic and content management for instruction through the e-learning format, (6) the need for training about the course design and creation along with additional recommendations, (7) participatory design of learning activities, and (8) building up the work team.

The research questions for this research and development project are 1) What should the components of designing an online teaching and learning process to teach television documentary production based on multiple pedagogy principles be? And 2) What is the design of an online teaching and learning process to teach television

documentary production based on multiple pedagogy principles like?

Methodology

Population and Sample

The sample population came from 137 students of Phranakhon Rajabhat University who were enrolled in the teacher training college's computer studies department. The sample population was 23 of those students, chosen through volunteer sampling. They all had the ability to use computers and Smart Phones.

Research Tools

For the experimental intervention, the researchers, who are university instructors and educational technology experts, designed and created a course to teach TV program production. Following the regulations and standards for designing and creating online courses, they followed all the prescribed steps of planning, preparation, writing/compiling

the course, testing it and evaluating it by assessing the course itself and measuring the educational achievement of the sample students who tried taking it in the experimental intervention. The online course design and creation process for the experimental intervention was evaluated following the Quality Matters (QM) rubric.

A pre-test and a post-test to measure the educational achievement of the sample students who took the course.

Overview of methodology

The creation of the online course and production of each unit or module of the course that constituted the experimental material was done under the framework of multiple theories of learning, the e-learning ecosystem principles and the QM Rubric, with the following steps:

Planning the design and production of an online course: 1) setting the topics; 2) setting the objectives of each module;

3) setting evaluation methods and benchmarks; 4) choosing the technology to be used for brainstorming; 5) choosing the technology to be used for presenting content; 6) choosing the technology to be used for promoting interaction and building a learning community; 7) choosing the technology to be used for conveying video images; 8) arranging the learning materials; and 9) setting the activities and research resources to be used to support interaction and building up a learning community.

Setting participants and their roles in the research: 1) setting the desired study population and inviting participants; 2) setting the instructors and their roles in the experimental intervention; 3) designating qualified experts in the subject matter and inviting them to participate in the management of the teaching and learning; 4) setting the learning materials needed for the course and the other materials and equipment needed for the experimental intervention; 5) selecting the participants and agreeing on their roles, such as researchers and assistant researchers; and 6) deciding on the activities needed to prepare the students for participating in the online course.

Producing the online course with learning materials to be used in the experiment: 1) producing TV programs for teaching; 2) producing the course materials; 3) producing multimedia items to be used in the course; 4) producing print media; 5) producing video clips featuring the qualified experts for each topic; and 6) creating the pre-test and post-test.

Experimental Intervention - Offering the fully online course in TV production that was produced for the first set of sample students: The experimental intervention lasted 10 weeks. The 23 volunteer participants who took the online course already had the basic skills for using computers and smartphones. The research team met with the participants to create understanding and to agree on the learning methods to be used. Then the researcher let the sample participants

proceed to do all the learning activities in the new online course on TV documentary production that was produced following multiple theories. The course had 4 modules and 5 activities that were designed using the theories of Constructivism, Connectivism, Heutagogy, Bloom's Taxonomy, Transformative learning, e-learning ecosystem, and QM

Rubric, as shown in Table 1.

Table 1 Conceptual framework and learning theories applied in the design and development of the learning process for the online course on TV documentary program production

Learning activity	Theories applied
1. Pre-test	Bloom's Taxonomy for setting the objectives and

	choosing online learning activities
2. Greeting, introducing oneself, telling one's learning goals	Bloom's Taxonomy for setting the objectives and choosing online learning activities
Module	**Theories applied**
Module 1 Steps in producing a TV program Module 2 Writing a script Module 3 Types of video presentation Module 4 Video editing principles and patterns	Constructivism for managing the learning environment to promote independent learning Connectivism for making use of technology as a tool to link knowledge from a large and diverse range of sources Heutagogy to support adult learning in the age of information technology to meet learning objectives Bloom's Taxonomy for setting the objectives and choosing online learning activities Transformative learning to choose teaching and learning methods utilizing technology that can allow students in the learning community to become more aware of diverse worldviews by engaging in conversation e-learning ecosystem for managing the learning environment to promote learning skills
Learning activity	**Theories applied**
3. Project (creating an actual program) 4. Post test 5. Course evaluation	Bloom's Taxonomy for setting the objectives and choosing online learning activities Transformative learning to choose teaching and learning methods utilizing technology that can allow students in the learning community to become more aware of diverse worldviews by engaging in conversation QM Rubric as a standard for designing and evaluating online learning modules in terms of 8 benchmarks

Statistics used in data analysis

Paired samples T-test was used to compare the pre-test and post-test scores, and participatory observation was used to obtain and analyze qualitative data throughout the experimental period.

Results

The type of online learning course that the researchers developed for this project was a self-learning system delivered via the Internet using the Moodle learning course management system (LMS). The lessons about TV

documentary production used concepts from multiple learning theories to present content about the theory and practice of documentary style TV program production. In the course, online learners were able to obtain knowledge and use their

creativity, knowledge and skills to design and produce a short TV program after they had learned about the concepts and techniques for all the steps from planning and preparation, to script-writing, production and editing.

With this learning method, the learners can study the modules at any time that is the most convenient for them. They can learn about how to produce a TV documentary program and then can practice producing an actual program efficiently, using their creativity.

The process of designing, developing and testing the new online course on TV documentary production using multiple theories of education is graphically represented in Figure 1.

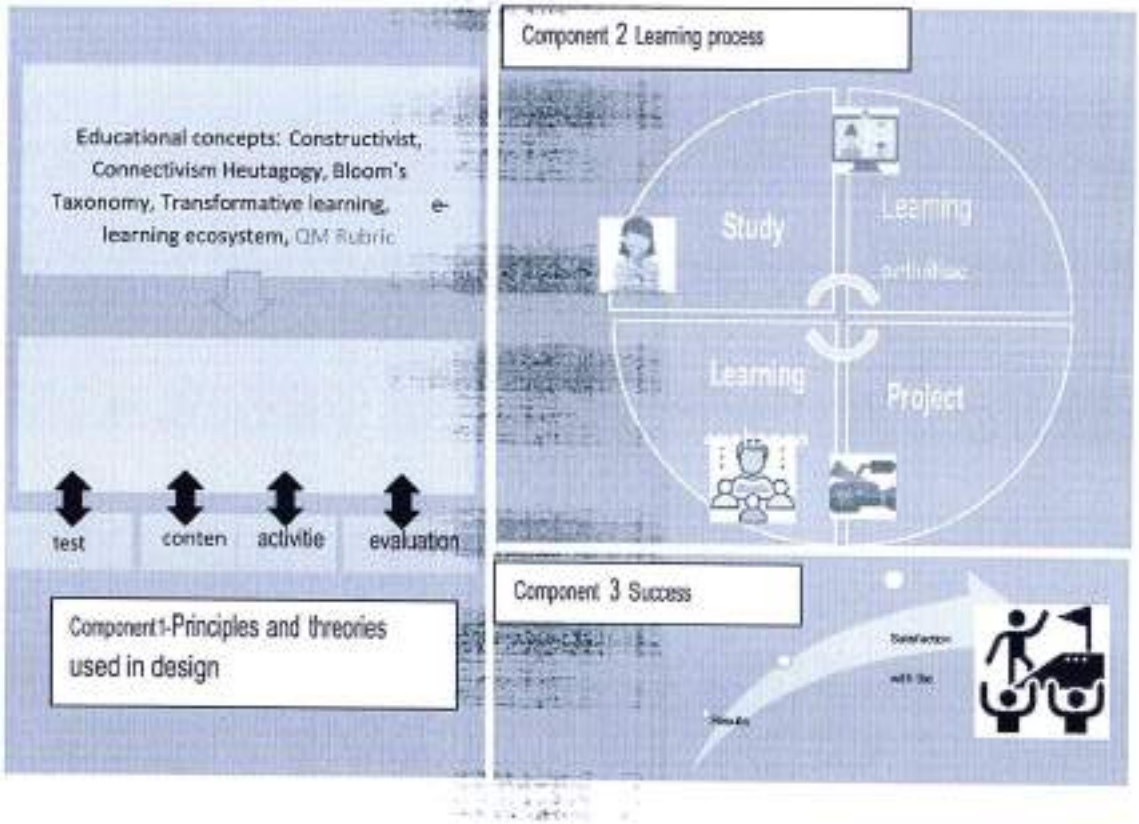

Figure 1 Process of designing, testing and evaluating an online course about TV documentary program production based on multiple learning theories

Table 2 Learning achievement before and after the online course

Test score	n	Mean	S.D.	t	P
Pre-test	23	5.26	1.936	3.529*	0.002
Post-test	23	6.70	1.396		

* p < .01

Analysis of the pre-test and post-test scores of the 23 participants who tried taking the online course for this experiment showed that the average score was significantly higher (at 0. 01) after they took the course, so learning did occur, and the experimental hypothesis should be accepted.

Results of studying the behavior of online learners taking the course

For the 10 weeks of the experimental intervention, the researcher observed the 23 participants who volunteered to take the online course on TV documentary program production that was developed in this research project. The following conclusions were reached from this observation:

In the initial phase (weeks 1-4) the participants were interested in the online learning method, as could be seen because in the first week when the courses started, all of them used the Moodle system to take the pre-test, introduce themselves, submit the first assignment, and ask questions, such as how to upload files to the system. The researcher observed these activities from log in records and also messaging using the Line application.

In the second phase (weeks 4 -5), there started to be problems with some participants not submitting their course assignments on time according to the deadlines set. When the researcher asked the participants why they had missed the deadline, they responded that they had too many other work or study assignments so they could not finish them all on time and also could not find the time to devote to participating regularly in the online course on TV documentary production. Some also commented that they would like the instructors to meet with them in person sometimes and join in learning activities together.

In the third phase (week 6) the research team consulted on the problem and decided to address the difficulties by meeting with the participants taking the course to discuss the with them all the issues that had come up and to try to find a way to help them successfully complete the course. After the discussion, the instructors agree to reduce the load of required activities for the course. The participants cooperated well with this unplanned discussion step in the experimental intervention.

In the final phase (weeks 7-10) the learners divided themselves into 5 teams of 4-5 participants each and divided up the work duties for the final project. The teams were assigned to each produce one mini documentary style TV program of a duration of 3-5 minutes. In the first step of pre-production, the teams did brain-storming to come up with a topic, program concept and program structure as a framework for their subsequent preparation, script writing, filming and other production work. In weeks 7 -8 the teams uploaded their program concept and planned program structure on the LMS system. The subjects chosen by the 5 teams were "The ocean is not a rubbish bin," "Love the forest/save the forest," "Foods that should not be eaten at the same time," "Online media, a very close danger," and "Stop teenage pregnancies." After that, all the teams began the production and post production work steps. During this phase of the course, the researchers observed that some of the participants asked the instructors questions about the editing process. Some of them reported that they had started with the

filming part of the work. In weeks 9 - 10 some of the teams submitted their projects by uploading them to the cloud. However, some of them had not started filming yet. When the researcher asked about it, they responded

that they were extremely busy with assignments for their regular courses as well as other work duties so they were not able to complete the work project and submit it by the deadline. In the final week the researcher asked all the participants to do the post-test to measure their learning achievement and to fill out the course assessment

so the feedback could be used to evaluate and improve the course.

From observation of the participants' behavior it can be concluded that in the initial phase of the course, the sample learners were interested in this form of learning. Their behavior demonstrated that they were studying the course materials and developing an understanding of how to use the online learning system. As the course progressed, a problem came up of some of the learners being unable to submit their assignments on time. When asked why, they said that at that time they were overwhelmed with work for their other courses and other obligations. For this reason, the instructors agreed to the learners' requests to reduce the amount of work required for the course. The researchers observed that the learners were able to work together as a team, as could be seen from the final projects that were submitted. Learning did occur, as could be seen from the improvement in post-test scores.

Discussion

The first finding to answer the research question of "what should the components of designing an online teaching and learning process to teach television documentary production based on multiple pedagogy principles be?" is that there

are 3 basic components, consisting of Component 1- theoretical principles used in designing, Component 2- the learning process, and Component 3- success. The educational format for the online course was independent self-learning through a system that was designed by the instructors, with learning resources provided by the instructors. Learners did tests to

assess how much they had learned and did practical learning assignments in each module to develop skills by themselves based on the framework and conditions specified by the instructors. The sample learners who tried out the course in this experimental intervention did well on the post-test, which indicates that their learning achievement was up to the

benchmark. The learners did most of the assignments and their evaluation of the course was satisfactory. In this online course the learners were able to choose by themselves what time they would spend on the course activities, and they had the opportunity to go back and review any parts of the course at any time. They could exchange ideas and opinions with

other co-learners or with the instructors through the online system at any time. They were free to express their ideas. This is consistent with the concept of Mezirow (1991), who wrote that discussion and expression of opinions among co-learners is extremely important in online learning. It is very convenient when people can express their ideas without being interrupted by other people. When this interaction is done online it can take the form of texting or messaging in the discussion threads, which is interruption-free.

In an online course, learners can usually resolve their learning problems by themselves by exchanging ideas with other learners or asking advice from the instructor. In this form of learning, the learner constructs his or her own learning experience. This is consistent with the views of the American researcher Dewey, who said the value of education

was that individuals must construct their unique learning experiences by themselves. Dewey also placed importance on participatory engagement with other people in the learning experience. This is based on the belief that humans cannot learn from nothingness. Knowledge is built out of our interactions with people, objects and other experiences in life. As

social animals, humans have a need to converse, build relationships and engage in give and take with others about the subjects that interest them. All of this will lead to learning and personal development (Bruner, 1996). In addition, Vygotsky (1981) wrote that social interaction gives people the opportunity to understand other people's perspectives and experience

different opinions and diverse points of view that are more varied than what we've come across in our own lives.

As for the finding that answered the second research question ("What is the design of an online teaching and learning process to teach television documentary production based on multiple pedagogy principles like?"), the researcher

analyzed and synthesized relevant principles and theories to support the online course design process and discovered the following 4 major themes:

Application in Distance Education

that also may be provided "classroom environment". There are several dimensions of cooperative work in the

Normally there is less interaction and less collaborative work among students in the .by the distance education system

person classroom setting, the -In a normal in .distance education system compared to in conventional classroom learning In .instructor is usually the center of the learning system and normally teaches by presenting the content by lecturing the distance education system, where each learner is interacting with the course material or content in their own time,

Learners can access the course content through .there are no lectures, but their may be asynchronous communication

m .the sources of information providedBeing a part of the learning process takes the form of engaging in conversations by using technology rather than speaking to each other face-to-face in real time. Providing opportunities for learners to communicate with each other is an important principle for managing distance education. Exploratory and investigative

learning should be collaborative, and it is an important part of the ideal learning ecosystem in the distance education system. It is a mechanism that helps create a learning community. Through cooperative exploratory learning, students can develop themselves and gain incentive to be more assiduous in their studies. The distance learning environment may be

new to some learners. If there is no interaction between learners, and between the learners and the instructor, it will be very difficult for the instructor to support a learning process that truly builds understanding about the topics that the instructor is trying to teach. If a learner is not really participating with other learners, then they might not have much

expectations about what they will accomplish. In the distance education environment, the learning community is a very important component that helps the learner prioritize what needs to be done for the class. The learning community also

provides energy that drives the learning process and activities forward. It can be similar to in-person classrooms where when one student sees another student get excited and enthusiastic about what they are learning, then that

enthusiasm will spread and the other students will pay more attention to the lesson. Interactive learning makes learners feel like they

have a sense of ownership when they are a part of the learning environment (Abdullah & Hayworth, 1993).

Learning through a distance education system or an online course does not change the exploratory or investigatory atmosphere of the learning environment at all. However, it is still a challenge for the course designers and instructors to make sure that learners really participate and stay engaged. Some things about the online learning process

are different, such as the fact that most of the learners are learning at home or at the office. This makes it more difficult for them to participate in the lessons. But no matter if it is for online learning or classroom learning, the instructional

designers and educational technologists designing a course need to make sure that the topics and issued covered and also the technology used are optimal for stimulating learner participation and are suitable for the learning objectives.

The learning system management approach mentioned above should fall within the designated framework of the type of learning environment in each system. For instance, you should consider where and when learning is supposed to take place and using which methods. There might be some limitations for some learners to engage in certain types of

communication and interaction. In some cases, preparing learning resources for the learners to interact with by themselves on their own time will be more feasible than planning group activities. One thing to keep in mind is that the method you choose for encouraging learner interaction might not be self-contained or finite. The ultimate goal is for learners to interact, but sometimes other factors may confound the process. When people's personal beliefs are involved, it may be more difficult for co-learners to reach a mutually agreed joint conclusion on some topics.

In the distance education system there is no difficulty or obstruction for using ordinary methods of measuring learning achievement. Discussion of the subject matter is one benchmark for evaluating learners' participation and group work, and this can be done relatively easily. In an online course, giving feedback about cooperation in group work and

analysis can usually be set as requirements, and that can be an advantage compared to in-person classroom learning. However, online modules and courses are often designed and taught by many instructors together, so it is helpful to have a rubric that acts as a standard guideline for the evaluation of student performance. Then the evaluation results will better

reflect how well knowledge was transmitted.

Promotion of Collaborative Exploratory Learning

In the development of theories about education and learning, a great deal of research has been done on the nature and value of cooperative work and teamwork by co-learners. Collaborative exploratory learning is one of the mainstays of the constructivist concept (Barab & Duffy, 2000; Von Glasersfeld, 1995). The concept of collaborative inquiry is

composed of teamwork, group discussion, and cooperative assistance among members of a learning community. These are ways to make the learning process livelier and more exciting. The main idea of group projects is so that co-learners can share the work and gain teamwork skills. Nevertheless, to achieve all the ideals of the constructivist approach, the learning system needs to follow a certain pattern including these components:

Requires critical thinking, discretion, fact- finding and investigation - The learners should be able to express their ideas and test their knowledge by explaining their thoughts in public to test them out. When learners have

the opportunity to speak and share their opinions in a discourse with other people, they will gain a deeper understanding of the topic. The co-learners participating in the discussion can help add to and expand their thoughts on the subject. Their

understanding may be transformed past the zone of proximal development, thus leading to the achievement of the learning goals (Vigotsky,1981).

Activities that challenge the learner's opinions and world view – This may seem to be the opposite of thinking using discretion, but even though providing a learning environment that promotes cooperative work can help develop the viewpoints of learners on individual differences, still listening to and acknowledging one's co-learners' views

can sometimes challenge what one used to know and believe. Arguing or debating in a reasonable way can reveal a diversity of viewpoints that may be good alternatives to one's usual perspective. If disagreements can be resolved

appropriately and different opinions can be combined in new ways, then each learner can come away from the discourse with a new view (Von Glaserfeld, 1995).

An ecosystem that supports the learner – When a learner becomes a member of a learning community, they have the opportunity to exchange ideas in a meaningful way because they share common goals and incentives.

Feeling that one is part of a group in itself creates incentive and can inspire learners to keep up the effort to continue learning (Barab & Duffy, 2000).

All the above are approaches for designing and managing a learning ecosystem under the constructivist theory of learning. Managing a learning ecosystem that operates outside a conventional classroom is especially conducive to this approach. There is a great deal of diverse data confirming that collaborative exploratory learning with teamwork (Johnson

& Johnson, 1990) are very beneficial for promoting mutual learning exchanges, leading to greater learning achievement within learning communities (Scardamalia, & Bereiter, 1991).

Assessment of Practical Learning

Nevertheless, there may be .Knowing that they will be evaluated at the end of a course stimulates learners to learn some difference of opinion among educators about how best to evaluate different pathways to learning, such as The best .discretionary thinking, problem solving starting from designated conditions, or experimental learning

conclusion is that evaluation of student results or learning achievement assessment should take the form of skill testing, or should be practice based (Wiggins, 1998). Practical learning assessment involves ways of letting the learners prove their knowledge, understanding, skills and methodology by demonstrating their ideas and creating a work project of some

kind (Rudner & Boston, 1994). It is an application of knowledge, skills and work effort, resulting in a project to show off

that is linked to the learner's learning results.

Evaluation can be done in many ways, but the important point is that it should be measurable or involve benchmarks. A student's grade should come from their finished practical work project more than from test scores. The evaluation should be based on the learner's ability to explain or argue with reason about the concepts and methods they

used in their project. A learner's capabilities can also be tested by letting them apply their ideas and methods in other ways.

Rubrics or checklists are tools that can be used to evaluate learner's work results and work process. A rubric is a system for giving points based on the evaluator's judgement of the efficiency of a learner's creative work after looking at different aspects, each of which has a different weighting in the scoring system. The instructor and the learner can both use the rubric to evaluate different parts of the work or the learner's expression of his or her ideas on certain set topics or questions, or from some other end point or final project in the learning process.

e-learning Ecosystem

The e-learning ecosystem is the entire environment surrounding the e-learning process including educational technology, educational tools the learners need to use, and sources of knowledge in different forms ,that are all intended to help the learners build up their knowledge and develop their skills. All the stake holders involved in the e-learning

ecosystem should help promote interaction and create more opportunities for learners to access learning resources so they can get the most benefit from the e-learning system. To create an optimal and effective e-learning ecosystem, every participant should fulfill their respective roles as best they can. The course designers and educational technologists should

strive to build an effective e-learning ecosystem by implementing suitable technology and sufficient learning resources as well as choosing learning activities that really promote learning, so that learners will gain knowledge and fully participate in the activities in the ecosystem that they choose themselves.

Conclusion

The result of the process of developing an online course to teach TV documentary program production based on multiple pedagogy principles was the modules of the online course that was designed and produced. The next result

was the behavior of sample student volunteers who tested out taking the online course for 10 weeks using the Moodle Learning Course Management System via the Internet. The course presented content about the production of documentary

style TV programs. The course methodology was based on multiple pedagogy principles with the aim of guiding learners to gain knowledge and technical skills before using their creativity to design and produce a mini TV documentary by following all the steps of planning, preparation, script writing, filming, production, and editing.

The results in terms of the learning achievement of the sample population who took the online course was evaluated by comparing their pre-test and post-test scores and by observing their behavior during the 10 weeks of the course. The results can be summarized as follows:

The post-test scores of the sample population who took the online course on TV documentary program production were higher than their pre-test scores to a statistically significant degree at 0.01.

The behavior of the online learners testing out the course, as seen from their use of the online learning course management system, showed that they were interested in the course format and content. However, for managing the online course, the researchers found that the number and difficulty of activities and work project assignments had to be reduced and the instructors had to be flexible due to the time limitations of the students. In terms of the time available in their daily lives, the students reported that they had many other obligations and were unable to do all the course activities required in the 10-week duration of the course. After the course work requirements were reduced, the researchers found that the sample learners were able to work as teams satisfactorily, as can be seen by the assignments that were turned in. Also, they learned from the course, as can be seen from the post-test scores.

References

Anderson, T., (2007). Reducing the loneliness of the distance learners using social software. Keynote paper presented at the 12th Cambridge International Conference on Open and Distance learning, Cambridge, England, 25-28 September. Retrieved 3 December 2008, from http://www2.open.ac.uk/ro6/conference/TerryAndersonKeynoteCambridge2007.pdf

Abdullah, D.A and Hayworth, S.C. (1993). Macroeconometrics of stock price fluctuations.Quarterly Journal of Business and Economics, 49-63.

Bruner, J. (1996). Toward a theory of instruction. Cambridge, MA: Harvard University Press.

Barab, S., Duffy, T. (2000). From practice fields to communities of practice. In D. Jonassen & S. M. Land (Eds), Theoretical foundations of learning environments (pp.25-56). Mahwah, NJ: Lawrence Erlbaum Associates.

Clark, R. E., (1983). Reconsidering research on learning from media. Review of Educational Research, 53, 445-459.
Driscoll, M.P. (1994). Psychology of Learning for Instruction.Massachusetts: Allyn & Bacon.

Hase, S. , and Kenyon, C. , 2000 From andragogy to heutagogy, Ultibase, RMIT, Dec. Available, http://ultibase.rmit.edu.au/Articles/dec00/hase2.htm. Accessed April 30 2007.

Jonassen (Eds.)(1993), Designing environments for constructive learning , 105 (pp331-358). Berlin: Springer-Verlag.
Mezirow, J. (1991)Trasformative Dimensions of Adult Learning. San Francisco, CA : Josseys-Bass.

Rudner, L. M., & Boston, C.(1994). Performance assessment. ERIC Review, 3(1), 2-12.

Saba, F. (2003). Distance education theory, methodology, and epistemology: A pragmatic paradigm. In M. G. Moore & W.

G. Anderson (Eds.), Handbook of distance education (pp. 3-20). Hillsdale, NJ: Erlbaum.

Scardamalia, M., & Bereiter, C. (1991). Higher levels of agency for children in knowledge building: a challenge for the design of new knowledge media. Journal of the Learning Sciences, 1 (1), 37-68.

Vygotsky, L. S. (1981). The genesis of higher mental functions. In J.V. Wertsch (Ed.), the concepts of activity in Soviet psychology. Armonk, NY: Sharpe.

Von Glasersfeld, E. (1995). Radical constructivism: a way of knowing and learning. London: Falmer.

Wiggins, G. P. (1998) Educative assessment: Designing assessments to inform and improve student performance. San Francisco: Jossey-Bass.

Rodchompoo, W. (2012). A critical examination of an international distance education program: a case study. Las Cruces, NM: New Mexico State University, Graduate School of Education