THE DEVELOPMENT OF HYBRID LEARNING SYSTEM MODEL IN ACADEMIC TRAINING PROGRAM ON INSTRUCTIONAL MATERIALS RESEARCH

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Abstract

The aim of this study is to develop a model of hybrid learning system applied in a training of research on instructional materials in Universitas Terbuka (UT). A research and development (R and D) method was used to develop the hybrid learning model. The R and D method consists of several systematic and holistic steps such as: (1) conducting needs analysis; (2) establishing instructional goal; (3) implementing instructional analysis; (4) analyzing trainees and setting; (5) establishing instructional objectives; (6) developing assessment instruments: (7) developing a syllabus and instructional strategy; (8) developing learning materials; (9) conducting a formative evaluation.

This study was motivated by the expectation of the UT's lectures ability in researching instructional materials. UT has Lecturers who are in 37 UT's Regional Offices. UT have facilities adequate support for the implementation of distance learning. One of the facilities and infrastructure that can support distance learning in UT is its network, space, tools, and resources that enable humans to communicate using video conferencing. Video conference facilities were used to deliver the Academic Training Program of Instructional Materials Research to the lecturers who stay in UT Regional Offices. Research and Development to optimize the use of video conferencing for learning programs, and to find a model of learning systems. This model of learning system called Hybrid Learning, because learning is designed to implement the distance and face to face system. The materials presentation conducted in distance learning via video conferencing. Consultation, completion of tasks, and training outcomes assessment carried out face to face is guided by facilitators in the regional offices.

At the step of the research and development, we conducted data collection, recording, documentation, record keeping, and surveys. Formative evaluation will be done through learning activities at 8 Regional Officies video conference participants, and the number of participants is 40 lectures.

The result of the study reveals that the use of a hybrid model learning system was recommended conducting a training program for the participants who live in UT's Regional Offices.

Key words: R&D, hybrid learning model, instructional materials research.

Introduction

Universitas Terbuka or UT, through its research institute, provides opportunities to its lecturers to conduct research. The lecturers have to follow a certain procedure to apply their research interest. They have to write a research proposal to be reviewed. Based on the review process, it is judged that some of the proposals are inadequate as a research project.

It is necessary for UT to conduct a training program to increase the competencies of its lecturers in writing proposals and conducting a research project. Around 50% of the UT's lecturers live in regional offices of UT. There are 37 regional offices of UT located in all provinces. Based on this condition it is necessary for UT to use communication media to deliver the training material to trainees. In this sense, UT has to use video conference facilities as a medium to convey training substances. UT equipped its regional offices with video conference facilities.

The aim of this research is to develop model of a hybrid learning system that can be used in an academic training program for instructional materials research. The result of the study is to produce the model of the learning system recommended to conduct a training program on writing learning material research proposal for UT's lecturers through video conferences.

The hybrid Learning

The term hybrid learning, blended learning and mixed mode learning are often used interchangeably. Purnima (2002) noted that: "…blended learning is used to describe a solution that combines several different delivery methods, such as collaboration software, web based courses, EPSS (Electronic Performance Support System), and knowledge management practices." In addition, Rooney (2003) explained the terms of blended learning as a hybrid learning concept integrating traditional in class sessions an e-learning elements.

Blended learning means many things to many people, even within our relatively small online learning community. It is referred to as both blended and hybrid learning, with little or no difference in the meaning of the terms among most educators. In general terms, blended learning combines online delivery of educational content with the best feature of classroom interaction and live instruction to personalize learning,

allow thoughtful reflection, and differentiate instruction student across a diversity of learners. (Inacol in http://sites.google.com/a/idahopd.org/blended learning, 13 February 20130

Based on the above description, blended learning can be defined as a method of instruction which combines an e learning system with a face-to-face method. In other words blended learning can be defined as an approach which combines a face-to-face learning activity with a type of learning uses integrated computer medium. Blended learning can be described in the following figure.

Figure 1.

Blended learning methodology

In general, blended learning has three basic meanings: (1) Integration of face-to-face learning with online based learning; (2) The use of online media in class; (3) Combination of some learning approach individually, group and demanded leaning.

The aim of using a blended learning approach is to gain instructional impact from combinations of face-to-face learning and online based instruction. Through face-to-face learning the student will get a real learning experience. The students will get involved in intensive learning interaction with lecturers. Online learning will enable the students to learn without the limitation of time and place.

There are six models of learning approach delivered through blended learning. Those are:

1. The "face-to-face driver" model, in which a teacher in a traditional classroom instructional setting employs online learning for remediation or supplemental instruction;

2. The "rotation model", in which students move back and forth between online and classroom instruction;

3. The "Flex", a model in which the curriculum is delivered primarily through an online platform, with teachers providing on-site support;

4. The "online lab" approach, wherein an online course is delivered in a physical classroom or computer lab;

5. The "Self-blend", a model in which students choose on their own, which courses they take online to supplement their schools' offerings; and

6. The "online driver" model, where the courses are primarily online and physical facilities are used only for extracurricular activities, required check-ins, or similar functions.

Research on Learning Materials in Distance Learning

UT uses open and distance learning system in conducting their educational program. The system uses various types of media to deliver instructional content to students. UT applies both printed and digital media as learning materials. Printed media, in this context is used as the main medium to deliver learning substances. It is designed with a modular system, so it can be be learned systematically by the students. The UTs printed learning materials are called modules. The modules consist of several learning activities for the students. In addition, the modules describe the content and learning strategies that can facilitate students to attain predetermined competencies.

The UT's printed medium, is called modules. Printed medium is designed a an instructional system which consists of instructional objectives, course content, instructional strategy methods and learning resources applied to make the students learn. UT's digital media-web and internet –mostly used as a supplementary learning materials. The web of UT enables the students to use various learning materials to be learned.

UT has to assure the quality of its learning materials. One of the methods to be applied is conducting research on learning materials. One of the approaches used to conduct research on learning materials is formative evaluation. This type of approach is aimed to improve the quality of learning materials while they are developed. Formative evaluation can be defined as an approach used to try out and revised the program during its developmental stages to make it useful when it is applied in real settings. Formative

evaluation is considered as a part of research and development method used to create a learning material.

Research and development method consists of systematic and holistic stages to prepare and to create a learning material that can be used effectively in a real instructional setting. In order to assure and to increase the quality of its learning materials it is necessary for UT to train its lectures to be able to conduct effective research on the learning material. UT has to use hybrid learning approach to conduct the training on learning materials research.

Instructional design on hybrid learning

In order to develop a hybrid learning model applied to learning material research training, it is necessary to implement a model of instructional design. Instructional design refers to a systematic activity to create an effective learning program.

This research on developing a hybrid system of learning material for UT's academic staffs implement an instructional design model which is called MPI – Model Pengembangan Instruksional – developed by Suparman (2005). This model, modified from an instructional system design model of Walter Dick and Lou Carey (2009), consists of nine stages which are used to design an Instructional Program. Those stages are: (1) Conduct a need analysis; (2) Stage an instructional goal; (3) Conduct instructional analysis; (4) Analyze the students and learning facilities; (5) State instructional objectives; (6) Develop task, assessment criteria, syllabus and instructional strategy; (7) Develop learning and presentation materials; (9) Conduct a formative evaluation of program prototype. This can be seen in the following figure.
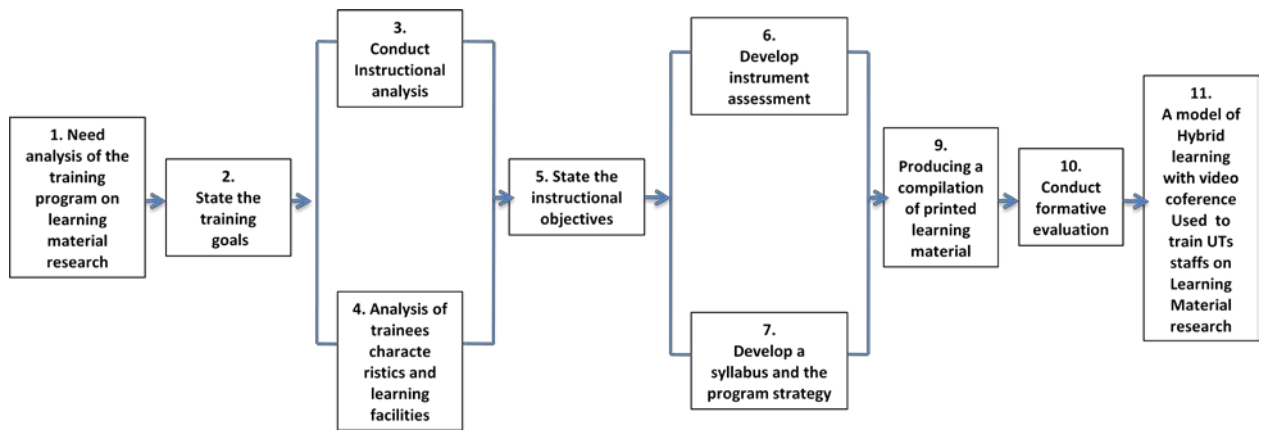
Figure 2.

MPI model of Instructional System Design

Specifically, there are several research activities done to develop a model of hybrid learning of training on learning material research. The research activities included:

- Need analysis, which is followed by stating the instructional goal of the training program.
- Develop a program design to produce a syllabus consists instructional objectives, training strategies, tasks, and training substances.
- Develop a guidance to conduct a training program of learning material research based on a hybrid learning model.
- Develop assessment instruments to determine the student learning achievement and the quality of the program.
- Develop an interview guide to gather information from:
    - Head of UTs regional offices
    - Facilitators
    - Trainees – through focus group discussion
    - Video Conference Management
- Record the process of learning with hybrid learning model in video digital media.
- Qualitative data analysis.

The results of the study

The study of the development of hybrid learning system model in an academic training program of instructional materials research produces a conceptual model with the following description.

- The model consists of the two main areas – the system and the supra system. The system has three main components such as: input, process and output.

- The trainee characteristics and their entry behavior are considered as the input.

- The input - the trainee characteristics and their entry behavior – will be processed in the interactive activities of hybrid learning model used video conference facilities.

- There are several important components that influence the process of learning with the hybrid learning model. The components are: (1) training instructor; (2) compilation of printed learning materials; (3) digital learning materials for video conferences; (4) equipment and technician of the video conference; (5) management in regional offices; (6) management at UT; (7) the process of monitoring and evaluation.

- Conducting the hybrid learning model as an instructional system is influenced by external factors such as: (1) National education policy related to the research; (2) research policy in Universitas Terbuka; (3) knowledge and technological development in media and learning materials.

- The output of the system – the trainees who are able in writing research proposals and conducting research on distance education learning material will will enter the supra system.

The Conceptual Model of Hybrid Learning using the video conference facilities for training UTs lecturers on learning material research can be seen in the following diagram.
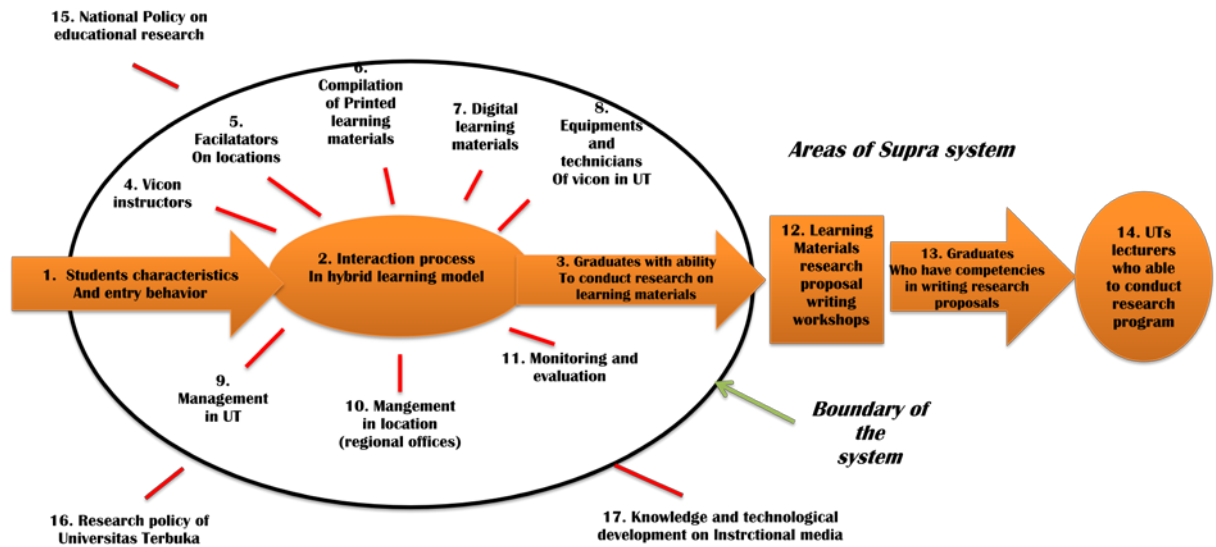
Figure 3.

Model of Hybrid Learning implementing Video Conference as delivery system.

This model will produce the trainees who have ability in writing proposal and conducting research projects in developing media and learning materials that can facilitate students' learning process.

Conclusions

- Learning materials – both in printed and digital form – can be considered as an important component part of distance learning system. They are used to deliver learning substances to students. UT has to assure the quality of its learning materials.

- Workshop and training programs regarding learning materials development and training should be held continuously. Since the lecturers have the main responsibility in assuring the quality of UTs learning materials, it is necessary for them to participate in learning material workshops and trainings.

- To conduct the workshop and the training program on learning materials research, UT has to involve the lecturers who work both in central and regional offices. In this case UT has to consider to use the video conference facilities in delivering its learning substances.

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