

THE DEVELOPMENT OF TUTORIAL PROGRAM DESIGN OF “BLENDED LEARNING” BASED ON CONSTRUCTIVISM IN OPEN DISTANCE LEARNING

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Abstract

The purpose of these research and development is to produce a design model of learning program for “Blended Learning”, the learning process is given through online tutorials, combined with face-to-face tutorials of the student of Post Graduate Program of Open Distance Learning (ODL).

The problem in this research, is how the course implementation of the “Design and Innovative and Interactive Learning Model for Primary Education”, which is currently implemented? Is this learning program design criteria qualified as good presentation, good learning criteria, and the eligible criteria for effectiveness in the Open Distance Learning. The approach used is Research and Development (Borg & Gall, 2007), and Dick, W., and Carey (2005), it was conducted through several steps, each steps developed refer to on the results of previous steps. According to the model of development, there are six phases of the development should be done to develop a learning program design. The phases are: 1. Library Studies Program; 2. Design Program; Development Program; 4. Formative Evaluation and Revised Program; 5. Implementation Program; and 6. Summative Evaluation and Diffusion of Innovation. The population of study is the whole students of the first semester in 2016 who took the course of “Design and Innovative and Interactive Learning Model for Primary Education”. The sample of study consisted of 30 students, facilitated by three facilitators of online tutor and face-to-face tutor. The evaluation for program conducted in this study used a modified Formative Evaluation Instrument of The Council of Minister of Education of Canada. The finding of this research showed that, design model of learning program for “Blended Learning”, has already developed the qualify criteria of good presentation, good learning criteria, and the eligible criteria of the effectiveness for student of the Postgraduate Program at Open Distance Learning system.

Keywords : Online Tutorials, Face-to-Face Tutorial, Blended Learning, Constructivism, Postgraduate Program, Open Distance Learning System.

1. INTRODUCTION

Universitas Terbuka (UT) is a Open Distance Learning Institution in Indonesia, which was established and started enrollment in 1984. UT attempts to improve the quality of learning in the system of Open Distance Learning (ODL) is providing a learning support by applying online tutorial (Tuton) which is a part of the e-learning. Learning model developed nowadays include online tutorials. Therefore, it is necessary to develop a model of this online tutorial any time, for improving the quality of student learning outcomes, especially on ODL Systems, which focuses on independent learning process.

Since 1996 up to now, Open University has been using e-learning consistently, in accordance with the development of network technology era that is very fast growing and highly innovative. Advancement of e-learning has made it easier to design a learning aid in a simple, fast and with quality. The program has a high capability in interactive learning process. Therefore, the researcher as lecturer needs to make efforts to improve the quality of student learning outcomes through the development of learning programs. The researcher is continually seeking various patterns of thinking and finding the best alternative to improve design quality learning programs that are used in the ODL system.

As for problems that occur today is, "how to develop an online tutorial program design in the learning process so that this program can improve the quality of learning for the course "Design and Innovative and Interactive Learning Model of Primary Education". Based on the formulation of the problem, the question can be described as follows: 1. Is the online tutorial program design courses in Design and Innovative and Interactive Learning Model Primary Education criteria to qualify a good presentation in the ODL system 2. Can the design of this online tutorial program qualify the criteria of good learning in the ODL system and 3. Does this learning program design meet the criteria for the effectiveness of learning programs that meet the standards? The purpose of this study is: 1. To get tuton program design for the Design and Model courses of Innovative and Interactive Learning that meet a criteria of good presentation in the ODL system; 2. To obtain an online tutorial program design that may qualify the criteria of good learning in the ODL system; and 3. To get the instructional program effectiveness criteria as required.

Therefore, in the learning process is very important to use the design of learning programs that are designed well, because a good learning program serves as a source of information that has a high potential to deliver learning materials to students. No doubt in the learning process, the online tutorial should be supported by the use of learning program design in accordance with the criteria of a good presentation, good learning criteria and meet the criteria of effectiveness of the program. By using the eligible program that meets criteria of a good presentation and a good learning and effectiveness of the program, it is expected that the learning process can be implemented to improve the quality of student learning that can ultimately improve student results.

2. LITERATURE REVIEW

2.1. ONLINE TUTORIAL IN THE OPEN DISTANCE LEARNING SYSTEM (ODL)

One of the learning process at the Open University (UT) which uses technology-based media that cater to the need of students are online tutorials, or better known as e-learning. According Hasbullah and Haritman, (2006), the use of e-learning is simply defined as more than one media or in other words some media merger, it could be a combination of text, graphics, animation, sound and video. The combination and the combination of two or more types of media are generally concerned with the overall control of the computer as a driver of the media combined. E-learning can be a tool of communication and information providers are quickly among fellow colleagues, lecturers, tutors, and students. E-learning can be used to find the source of information very broad scope. E-learning is a very useful learning resource for faculty and students to follow the latest developments from the field of science.

On the other hand Kemp, (1994), said e-learning is a prime choice in terms of interactive learning process. Characteristics of the main in the process of interactive learning is student response to the instructional material and the provision of feedback by tutors against such a response. A computer program designed well by learning experts can create interactive communication between students and the material presented. In the learning process interactive, two-way communication (two-way communication) is very important. According Schwier, (1993), the most important in the process of interactive learning is the students are given the opportunity to interact. Interaction can be done between students and students, between students and tutors, between students and teaching materials. Meanwhile, according to Alessi & Trolip, (1991), in order to lay the groundwork for a better understanding and develop good online tutorials, so that students are motivated to learn, presentation of information and knowledge is done in a small unit. Presentation of the contents contain questions or problems that require student response, response analysis, feedback, practice until preparation of students showed levels of competence have been determined in advance. Furthermore, according to Budiningsih (2007) in the learning

process, in general, e-learning has the potential to empower students, which is to encourage the growth of students' learning skills (learning to learn), student reasoning skills (higher order thinking skills), communication skills in writing or orally, and also the ability of the student to find a variety of learning resources. The use of e-learning carefully designed can enhance the activity of students in learning, as well as the independence of the student to initiate contact, discussion, and reflection to improve learning results.

In the process of learning organized by UT interaction between students and tutors in a computer program, students are given the opportunity to learn the material and get feedback from tutors through a program used. Learning process such as this is called, online tutorials (tuton). Tuton is service learning assistance to students who are academic. According Afriani (2007), online tutorial service is internet based or Web-Based Tutorials (WBT), offered by UT and attended by students through the internet. In particular the implementation of tuton aims to optimize the use of the Internet to provide services to students learning aid. In open distance learning system implemented in UT, activities tuton has a very important role because it can serve as a guide in the activities of the learning process of students. In tuton student learning activities carried out under the guidance of tutors as facilitators, resource persons and managers of the learning activities. Heinich, (1996), said that the online tutorial begins with activities designed to lead the student on the screen, so that the student is ready to learn. In the interaction between the tutor and students are given the information and knowledge to students tutor very communicative, as if standing beside tutor students were briefed directly to the students. One of the most common ways to provide information so that no interaction is by giving those questions or discussions that must be done by the students. Questions and discussion should occur repeatedly, to keep students paying attention, doing exercises, and spirit and still keep students constantly have a high motivation to learn. Until tutor to know how well a student can remember and understand the information that has been given.

2.2 .SELF-STUDY PROCESS IN THE OPEN DISTANCE LEARNING SYSTEM

Self-learning is an essential factor that determines the success of student learning. Students are required to proactively plan and learning strategies appropriate to the circumstances and needs of each. With these efforts, students are expected to prepare and follow the learning of subjects who participated well (Graduate Program Tutorial Manual, 2012). Self-learning is a process of learning interactions between students with learning materials without the physical presence of faculty members either individually or in groups. Learning materials are designed in accordance with the principle of self-learning (self instructional). Self-learning can be done using a computer and connect to the Internet network. The concept of self-learning based on the educational philosophy that says that learning can occur without having their teaching process. According to Munir (2008), based on a self-learning system of self-discipline and tailored to the individual circumstances of learners that includes the ability, speed of learning, a willingness, interest, time owned and socio-economic circumstances. More learners learn on their own or in groups with minimal assistance from the teacher or other people. They learn, among others through teaching materials that have been designed systematically by the designer learners. Therefore, if the system is to be applied ODL need high creativity and innovative learning materials that can develop used independently (self instructional). Students can print and non-print media to be studied independently, before meeting face to face tutorials or online tutorials. Students can learn anytime and anywhere, while learning tailored to the needs and interests of the individual. Self-learning is an essential factor that determines the success of student learning.

2.3. MODEL "BLENDED LEARNING" TUTORIAL PROGRAM

According to the Guidelines Tutorial Graduate Program UT (2012), tutorial activities designed an integrated manner through the Online Tutorials (Tuton) and Tutorial Face to Face (TFF) or another term that is often used is " Blended of Learning " online tutorial is a learning aid provided to students via the Internet, Online tutorial services provided during the eight weeks into the semester. Online tutorial will provide initiation material eight times, and students can provide feedback and / or questions at any time and tutor will give a response at least twice in one week. Active participation of students in the online tutorial contribute to the final value of the course. Each student must work on three (3) academic task. Academic assignment is, review the reading / research, annotated bibliography, case studies, scientific papers, and presentations / seminars. These tasks are given through online tutorials and the results discussed / presented by the students, and are given feedback by the tutor face to face at the time of TFF takes place. Meanwhile, TFF is a study aid for students who performed in a specific time and place face-to-face. All the activities of this TFF, to be followed by the students. Activities carried out 4 (four) times in one semester. The learning process is focused on the consolidation of the material, discussions, seminars, presentations (individual or group), as well as the provision of assessment and providing feedback on the tasks that have been worked on the student. Value assignment, the value of participation and value of participation Tuton and TFF has contributed 60% to the final value of the course. UT until now, provide two (2) types of tutorial services, namely, Tutorial Face to Face and Online Tutorials, Conducting a tutorial program for students (S2) Program Graduate UT, implementing blend a combination of the two systems, namely,

systems Online Tutorials and systems tutorial face to face, blend these two systems are known by the name "Blended Of Learning" so the tutorial program Characteristics of these has its own to serve as a model. The combination of both models tutorial (Blended of Learning) is implemented, contribute significantly to the acquisition of students' final grades.

2.4. LEARNING GROUNDED CONSTRUCTIVISM

According to Kuhn, Jonanssen (1996), while this is going a new paradigm or a revolution in teaching and learning (The Scientific Revolution) where experts are discussing learning about what it means to "know something "and " how to know something ". The paradigm was trying to find a new one is called konstruktivesme. The learning approach is more emphasis on the process and freedom in exploring knowledge and effort in constructing an experience that will give liveliness to the students to learn to find their own competence, knowledge or technology, and everything else needed to develop himself. Provide opportunities for students to express thoughts or ideas with their own language. According Jonanssen (1996), how students construct knowledge depends on what they already know, which then depends on the kind of experiences that they had found. How do they arrange these experiences into the structures of knowledge and confidence they employ to interpret the various objects and events they have encountered, so that students become more creative and imaginative and can create a conducive learning environment. Online tutorial program that is used for UT students designed in accordance with the design of the learning system that uses Constructivism Approach. According to Gagnon and Collay (2001), said that, some important components in Constructivism approach are: 1. the situation, these components describe comprehensively about the aims and objectives implemented in learning activities. In addition, explain the tasks that need to be completed by students, so that they have the meaning of a learning experience. The students involved in the determination of learning objectives, intentional 2. Grouping, giving students the opportunity to interact with peers, by arranging the group 3. Attribution, how students construct knowledge depends on what they already know, which is then depending on the kind of experiences that they had found. 4. Questions, in the learning process through Tuton, students are actively involved in the interpretation of the subject matter so as to reflect the result of this interpretation, the students are given the opportunity to express the idea of explicitly using the student's own language. 5. The exhibition, to allow students demonstrate learning outcomes after following a learning experience. Within this learning program, there is always feedback from tutors by giving them know the value of learning outcomes college student. 6. Reflection, provides the opportunity for students and tutors to think critically about the learning activities they have done together. In the process of learning through Tuton, students are actively involved in the interpretation of the subject matter so as to reflect the results of the interpretation.

As to what the learning models konstruktivesme who seek to create such environments where students are actively building their knowledge, not just making a summary of the interpretation of what is taught Lecturer. In the process of learning through Tuton, students are actively involved in the interpretation of the subject matter so as to reflect the results of the interpretation. The learning process like this should display the characteristics of learning konstruktivesme. According to Simon, learn konstruktivesme must display the following characteristics: 1) The students process information in a meaningful, 2) Cumulative, student's elaborate new knowledge and integrate with the knowledge that they have mastered. 3) Reflective, students consciously reflect on what they already know and what they need to learn more lanjut.4) Directed by destination, and done intentionally. The students involved in the determination of learning objectives, which is done intentionally. In addition, learning programs designed for this study, according to, Personal (2009) should pay attention to several important components as follows: (1) students active learning (2) students engaged in learning activities that are authentic and situational (3) learning activities should be interesting and challenging (4) the student must be able to associate new information with the information that has been previously owned (5) the student should be able to reflect on the knowledge that is follows a learning experience. In this learning program used in this study grounded in the concept of learning konstruktivesme described above.

3. RESEARCH METHOD AND DEVELOPMENT APPROACH

This research method uses the approach of Research and Development (Research and Development) and abbreviated as R & D. This R & D research model by Borg & Gall (2007), is the research process which continued by developing program, validate the program and continued by examine the effectiveness of program. In general, the goal of this research and development is to produce a design of enhanced learning program or a new learning program. In these research and development are started from the procedures and processes or steps to design a learning program design tutorial of "Integrative Learning" model that used by post graduate student (S2) of UT during this time. The development of learning programs is designed to use the system approach of Dick, W., Carey, L., & Carey, James, O's model (2015), as follows:

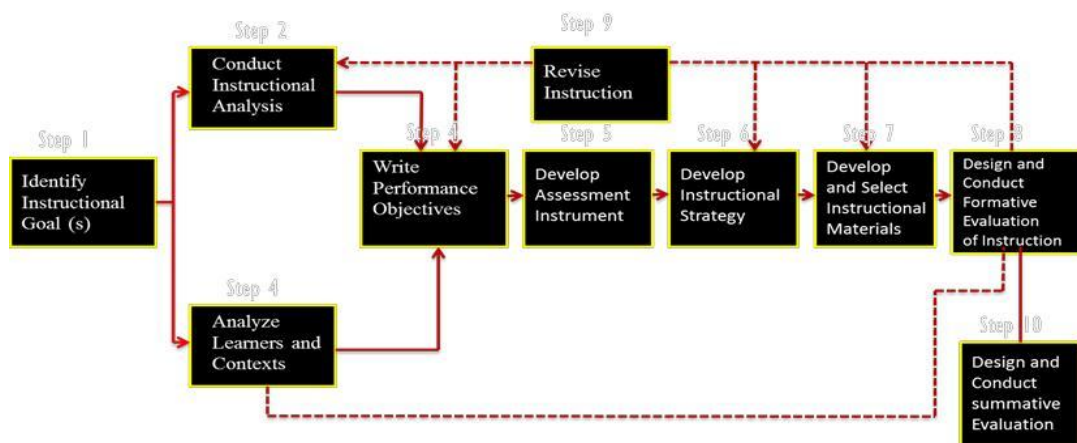


Figure 1. Steps of System Approach Model Of Educational Research and Development (Dick, W., Carey, L., & Carey, James, O. 2015)

3.1 POPULATION AND SAMPLE

The population of this study were all students of the 1st and the 2nd semester of 2016 who took the course "Design and Innovative and Interactive Learning Model for Primary Education" located throughout Indonesia. The study sample consisted of 30 students from Postgraduate Program facilitated by four facilitators of online tutor. Selection of students is done randomly regardless of ability or certain capacity. Because many limitations, this development research is only at the program revision stage. In other words, it doesn't not come to mass production and validation test. The timing of the studies is adjusted to the schedule that applies to the implementation of Online Tutorials (Tuton) for UT students. The program evaluation conducted in this study is using a modified Formative Evaluation Instrument of *The Council of Minister of Education Canada (CMC)*, and *Learning Quality Instruments plus the recording of documents, and interviews*.

3.2 DATA ANALYSIS TECHNIQUE

Data analysis techniques at an early stage use descriptive analysis for the research data through observation. The data analysis was conducted to determine the various needs for the modeling. The instrument data will be analyzed by grouping the data to determine the dominance of data on the items analyzed. The program evaluation conducted in this study is using a modified Formative Evaluation Instrument of The Council of Minister of Education Canada (CMC), and Learning Quality Instruments plus the recording of documents, and interviews. Collecting data in this study are grouped into two, namely: 1. Introduction Study and 2. Testing and revision of data collection at the preliminary study stage, use questionnaires/questionnaire, observation and documentation, which are used simultaneously and completed mutually. At testing phase and the revision of the data are collected relating to the four trials were conducted. In the testing phase was given a questionnaire and researchers conducted observations, to determine whether the design of this model can be applied correctly in accordance with the criteria of a good presentation, good learning criteria, and the criteria of effectiveness of learning programs.

4. RESEARCH AND DEVELOPMENT RESULT

4.1 Development Result

Research and Development of Tutorial Learning Program is implemented by following the steps of learning program developing of Dick & Carey (2015) and from Borg and Gall (2007), which is described in Chapter 3 of the methodology design used in this study, the combination from expert researchers and developers was modified into six steps that should be implemented to obtain new teaching program as follows:

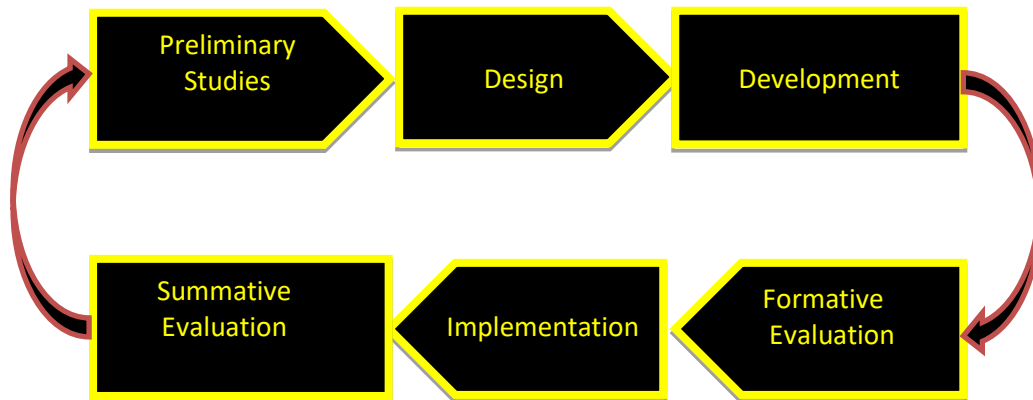


Fig. 3.1.1. The Six Phases of the Systematic Approach to Design
(Modification from Borg & Gall, Dick & Carey, Nigel Harrison)

First Phase: Preliminary Studies

The initial steps in R & D is a preliminary study, the first step is in accordance with the research procedures applicable by Borg & Gall (2007). The preliminary studies are conducted by using observation and interviews with respondents and tutor of design course and innovative and interactive teaching model for primary education. Activities of a preliminary study was done by researching and gathering information, or also called the identification of problems, including conducting literature study/library, conducting the needs analysis, and describing the analysis of the findings. This is done to find the actual data information from the field. In this preliminary study activity, to seek information and qualitative data collection is done to 2 Tutors and 8 students. On the other hand, the researchers collected data on what exactly the expectations of students towards learning program that is being developed. As for the expectations of respondents had been stated as follows

- 1) That the learning process should be interactive and use of media such as online tutorials that they follow in the past semester;
- 2) Interactive learning process must be developed in order to motivate learning students;
- 3) The material presented must be consistent with the learning objectives;
- 4) Discussion between students and tutors must be active;
- 5) The tasks given must be clear and not too heavy;
- 6) The response from the tutor must be given, if there are questions from the students;
- 7) The material provided should be in accordance with the evaluation conducted;
- 8) To allow students easy access to send and easy to get a course material; and
- 9) Through Tutorial, the student must earn a lot of material that can be learned through initiations that add understanding of the subjects being studied.

Therefore, this Tuton learning program should be designed well by the designers of learning and the development must be in the correct procedure.

Second Phase: Program Design

The second phase is entering the stage of development of learning program design activities. This Research and Development starts from designing Kit Tutorial. According to the Postgraduate Guidelines (2012), Tutorial Kit of Postgraduate Program contains:

- a. One Design of Tutorial Activities for subjects related.
- b. Four Events Tutorial Unit for the Face to Face Tutorial, and eight Events Tutorial Unit for Online Tutorials.
- c. One task design for the three tasks tutorial, which measure some competencies that must be achieved by the students in related subjects. Tutorial job description are developed by Tutor based on the tasks grilles.

Within research and development activities, the Design of Tutorial Activities is compiled based on tutorial

courses: Design and Innovative and Interactive Learning Model of Primary Education. Tutorial activities is arranged by integrated in the activity plan, Face to Face Tutorial and Online Tutorial, and this is structured as a reference to developed Tutorial Unit and tutorial task grilles. The initiation material is prepared by Tuton. Kit tutorial planned, systematic, and comprehensive in helping and guiding the students learn to achieve the expected competencies.

Third Phase: Program Development

The third phase is the stage of development of the Learning Program. In the development of learning programs is designed to use the model of Dick, W., Carey, L., & Carey, J. O (2015). This development is carried out in accordance with the applicable procedures as follows:

- a. Identification of Learning Objectives, is the first step taken to develop a Learning Program. Determine learning objectives can be obtained from a series of learning objectives found from the analysis of needs. The final step in the process of learning objective analysis is to determine the skills, knowledge, and attitudes that will be required by the entry behavior students to begin studying;
- b. Analysis of Learning, after identifying learning objectives, at this stage the aim is to avoid the development of program activities do not develop learning content that is not necessary. Then analysis of instructional, which is a procedure used to determine the skills and knowledge that are relevant and needed by students to achieve competence or determine the steps that can be taken to achieve the stated goals. Creating a competency map that can represent aspects: *cognitive, psychomotor, and attitudes*. This competency map describes the linkages and relationships across the skills and abilities necessary in order to achieve the learning objectives as required;
- c. Identifying Behaviors and Early Characteristics of Learners. The important thing that applied on this model is the analysis of the Characteristics of students who will be studying and learning contexts. Both of these can be done in parallel. The Characteristics of students are related to prior knowledge, knowledge of the content of the subject matter, academic motivation, education levels and abilities, preferences or pleasure to learn how certain attitudes toward organizing institutions, while the context of the analysis is related to the environmental setting, learning setting, conditions associated with applying the skills and knowledge learned;
- d. Writing Instructional Objectives. According to Pribadi (2009), it is important to develop competencies or specific learning objectives that should be mastered by students to achieve the general learning objectives. In formulating the specific learning objectives, there are some things that need to be addressed: 1). determining the necessary knowledge and skills possessed by the student after a learning process. 2). the conditions needed to allow students to carry out the performance capabilities of the knowledge that has been studied. and 3). An indicator or criteria that can be used to determine a student's success in taking the learning process.
- e. Developing a Learning Outcomes Assessment Tool, the next step is to develop a learning outcome assessment instrument, to measure the achievement of student learning. This measurement tool should be able to measure the performance of students in accordance with their determined goals.

Furthermore, the preparation of the four evaluation instruments for evaluating the learning program are:

1. Instrument to measure Presentation Criteria.
 2. Instrument to measure Learning Criteria; and
 3. Instruments for measuring Program Effectiveness Criteria
- .
- f. Developing a Learning Strategy, the instructional strategies developed to implement the learning activities, include: pre-learning activities, presentation of information, practice and feedback, training and follow-up. Learning strategies used are selected from the latest theories on learning activities, research, media Characteristics of learning that will be used to convey the subject matter. Learning strategies are used more emphasis on the process and freedom in exploring knowledge and effort in constructing an experience that will give liveliness to the students for learning to find their own competence, knowledge or technology, and other things needed to develop itself. Learning strategy like this in accordance with constructivism basic concepts;

- g. Developing and Selecting Instructional Materials, furthermore, developing teaching materials, strategies based on Constructivism learning approach. Developing learning materials that correspond to the learning objectives, so it is able to develop initiation material of Tuton that motivate students to learn actively. Material initiation is learning materials developed by Tuton to initiate, trigger, and stimulate online learning process. Initiation material is sourced from The Main Book Topic as the main reference and a brief description of the topic tutorial and essential concepts that should be discussed and studied by students. Material initiation is enriched with other relevant learning resources including OERs.
- h. Revising Learning, data obtained from the formative evaluation becomes the input for revising learning programs, in order to solve a problem or difficulty faced by students to achieve the goal. Formative evaluation is not only focused on learning materials, but also deals with aspects of the design of the learning system used in teaching, such as instructional analysis, entry behavior, and students characteristic, assessment of learning outcomes, etc.

Fourth Phase: Formative Evaluation & Revising Program

Research and development are entering a fourth phase, that is, the stage of the formative evaluation or testing and revision of the learning program. Ragsdale (1982) stated that the formative evaluation conducted since the program development to obtain feedback so that programs created higher quality. In line with these opinions, Hannafin & Peck (1988) said, formative evaluation should be carried out so that the learning program is designed more effectively and efficiently. Formative evaluation is done with four stages as follows: First stage is the assessment of two Experts of Learning Designer. This activity is done by reviewing the initial program, and giving input for improvement. This evaluation process is also called the Expert Judgment, including analysis of conceptual as material for revision of the program, information on the accuracy of the substance, the accuracy of the method, and the design precision of the learning model used. In testing this first stage, the points that need attention are as follows: 1. The first component is related to the goal. Each program has a goal of learning that must be clearly legible in the form of statements; 2. The second component is related to the learning content, systematic learning materials, depth, accuracy, and power reading; 3. The third component relates to engineering design, this section emphasizes the display to enable the familiarity of users (user friendly). Privileged demonstration of color, sound, graphics, and ease of graphs should be described; 4. The fourth component is related to implementation support, this section emphasizes on learning materials and the availability of tutor functions that implement the program; and 5. The fifth component is related to the summary. After the first phase of the trial is completed, the test results become input to revise the program. The feedback from the test results relating to the five components mentioned above are as follows: 1). must reorganize the material in accordance with the purpose of competence that has been determined; 2). describing competencies into learning objectives; 3). selecting and defining more appropriate learning materials; 4). learning materials is less suitable with development of information and technology; 5). It must use a combination of several learning methods. 6) using wider learning resources; 7). material delivered less systematic; 8) learning model should be able to improve student learning motivation; 9) giving instructions of learning to the students should be clear 10) giving feedback for every questions or discussion from students; 11). giving an assessment to the students openly; 12). It makes students disciplined and on time in sending the task 13). growing the participation and enthusiasm of student learning; and 14). learning model should be able to improve the competence of students. Furthermore, learning programs is revised as input from designers of learning or Expert Judgment.

The Second Stage, doing the trial to 3-4 as the models user plus two tutors by using the revised program. Evaluating such programs are called also One to One Evaluation. Enter from the trial results of One to One Evaluation used to improve the program in order to be more perfect.

Third stage, conducting field trials are limited to small groups (Small Group Evaluation) using programs already revised. Conducting field trials on a limited scale is involving 12 students as respondents. From the results of this trial, there is some input to improve the learning programs in terms of learning and presentation of the material, namely: 1) learning instruction is less clear; 2) initiation given doesn't help students to understand module; 3) discussion given is less responded by students; 4) the sequence of showing material is less systematic; and 5) as for the other components are all in good condition. The last stage of trial is all the inputs rectified in accordance with the proposed.

Fifth Phase: Implementation of Program (Main Field Trial)

Implementation of the learning program will be conducted after the program assessed nearly perfect.

Implementation of the learning program is the fourth step of the formative evaluation involving a class of students who are attending regular at Open University. The learning program should be reviewed before used by the designers of Learning so that it becomes a final learning program in order to do the implementation of the learning program. At the final stage of the development of learning programs that are developed in this study, there are three objectives, namely: The first is the learning program that was developed to meet the criteria of a good presentation. Second, is the learning program that was developed to meet the criteria of good learning and third, is the learning program that was developed to meet the effectiveness of the program. The end of the research and development process have resulted a learning program design of Tuton with Blended Learning models of constructivism-based learning on the course of "Development Design of Innovative and Interactive Learning Model for Primary Education".

Sixth Phase: Summative Evaluation and Innovation and Diffusion

Designing and Conducting Summative Evaluation. Summative evaluation is different with formative evaluation. Summative evaluation is done after completion of learning program has been evaluated formatively in accordance with the applicable procedures. Summative evaluation is out of the system design process of learning, summative evaluation does not involve the program developer, but involves an independent appraiser. According to Suparman (2012), summative evaluation stage is conducted by the other party, not the developer of learning. At the time of wide-scale implementation, education managers need to know whether the new instructional system to be better than the already existing. When it is known that the new instructional system is more effective than the old, then a new instructional system should be maintained, or vice versa. Decisions like this are a fundamental feature of summative evaluation results. In the next stage, education managers can be more daring disseminate the use of new instructional system through the process of diffusion of innovation.

4.2 Research Results

The data collected in this development is with A through D grading scale (A = excellent, B = good, C = poor, and D = very poor). Assessment category is based on the alternative of respondents who expressed an excellent with range between (A) 91% until 100% and respondents expressed a good with range between (B) 71% until 90%, respondents who expressed unfavorable with ranges (C) 51 until 70% and respondents who expressed a very unfavorable with ranges (D) 31% until 50%. The research results of the presentation aspects are as follows:

Table : 4.2.1. Program with the Good Presentation Criteria

No	Statement	Percentage
1	Are you experiencing problems in accessing and opening the page of online tutorial at Open University	88%
2	Overview on showing the initial program motivated me to learn the material in the program	87%
3	understand the purpose of this program	84%
4	The introduction to this program is helpful in preparing me to learn the contents of the program	86%
5	Introduction motivated me to learn the contents of the program	88%
6	Description of program material is showed interestingly	89%
7	Deliberation of materials helped me to understand the content of the material	90%
8	Sequence of materials showing helped me to understand the content of the material	88%
9	The program content is useful for me	87%
10	Initiation served ease me through this material	93%
11	I am easy to back again to that I want when I studied this material.	92%
12	I was pleased to learn of these materials using the Program	89%
13	Instructions for using this program is quite clear	92%
14	I am easy to find an information in this Program	93%
15	If I wanted to get out of this program, I can do it any time	94%
16	The combination of colors used is quite good	92%
17	Text is easy to read	89%
18	The existing animation is in accordance with the content	86%
19	The existing animations help me to understand the contents of Program	93%
20	The existing illustration help me to understand the contents of Program	94%
21	The illustration presented is in accordance with the content	93%

N = 50

Table :4.2.2. Program with the Good Learning Criteria

No	Statement	Respon Student	Percentage
1	Do you have a module for the courses that you join with its tutorial?	Yes, I have	100%
2	Is the way to present this course module easy for student to understand the material contents	Very easy	93%
3	In your opinion, because of the degree of difficulty, whether this subject matter really needs a tutorial?	Very important	94%
4	Are you happy with how to learn through the help of this online tutorial?	Very happy	93%
5	What is the form of innitiation that was provided by Tutor	Summary of module	94%
6	Is the Initiation given by Tuton of this course helps you to understand the process of understanding modules?	Very Helpful	93%
7	At the beginning of the online tutorial, whether tutorials provide guidance on the best way for students to follow tutorial	Giving Guidance	92%
8	Are you active in opening / study initiation?	Always	90%
9	Is the Initiation given by Tuton of course helps you to understand the module?	Very Helpful	89%
10	Do tutors provide additional materials or links to additional materials that help to understand the material module	Many	85%
11	Do tutors provide additional training that helps the understanding for material of module?	Enough	87%
12	Are you active in the discussion forum?	Active	86%
13	Do you think the Discussion Forum provides benefits for your learning?	Very beneficial	89%
14	Do you express your opinion or ask a question in a forum discussion?	Often	83%
15	Is the existing feedback in discussion forums useful for students to learn more?	Usefull	87%

N = 50

Table : 4.2.3. Criteria of Effectiveness Program

No	Statement	Effective	Ineffective
1	The learning program designed based on the Special Objectives Instructional	√	
2	Designed according to the Characteristics of the students	√	
3	Students learn to interact directly with the computer as part of the learning activities.	√	
4	This program has the potential to organize learning activities in accordance with the needs of individual students.	√	
5	This learning program is effective in defending the student interest	√	
6	Program is effective because it can approach the students in a positive way	√	
7	Program preparing a variety of feedback.	√	
8	Program match with learning environment	√	
9	Program is effective in assessing the student performance properly	√	
10	Program is effective because it uses computer resources to the maximum.	√	
11	Program is effective because it has been designed based on the principle of learning design.	√	
12	Program is effective because the entire program has been evaluated in the field.	√	

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

Based on the research and development program, it can be concluded as follows:

- a. In learning activities of ODL systems implemented at Universitas Terbuka, online tutorial activities have a very important role, because it can serve as a guide in learning activities of students.
- b. In this activity, students learn the process of online tutorials conducted under the guidance of tutors as facilitators, resource persons and managers of the learning activities. Tutor in the learning process is very useful and effective way to improve the quality of the learning process. Provide benefits in terms of saving time and preserving a more rational way of thinking.
- c. In the ODL systems implemented at Universitas Terbuka. Face to Face Tutorial (TTM) activities is an integral part of the student's learning process. TTM activity is a process of providing assistance and guidance to learn from one person to another.
- d. TTM describes learning activities that shows the interaction between the student - tutor - learning resources and student to student. This tutorial activity is planned, systematic, and comprehensive in helping and guiding the students learning to achieve the expected competencies.
- e. Online tutorial model of "Integrative Learning" is a unity that is designed integrative with TTM that

conducted via the Internet (*online*). Online tutorial model is an appropriate interactive learning media, if it can be used as a substitute for the role of tutor, because this program has the ability as an interactive medium.

5.2 Suggestion And Recommendations

- a. Universitas Terbuka as one of the College of distance learning process should provide learning support to students learning to use the Internet-based media, or better known as the Online Tutorial, in order to increase the quality of the learning process.
- b. The learning program that is ready for use by students, this learning programs should be carried the formative evaluation first. The formative evaluation or a free trial aimed to make better quality of learning process, so it can help the learning process of students, in enhancing understanding, expanding vision, and foster self-reliance in study.
- c. On the other hand, using quality learning program is expected that the students will have the will and the ability to observe, think, act, and act in facing a concept of science and technology.
- d. Learning program which has been developed based on the method of R & D (Borg & Gall) and through the six-step model of Dick & Carey has been tested and has been qualified in terms of the criteria of presentation, learning criteria and the criteria of effectiveness of the program. Thus we can say this learning program may be feasible to equip The Main Material Books or the course of “Design and Innovative and Interactive Learning Model for Primary Education “.

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