Ethnopedagogy Oriented Learning Model

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Abstract-One of the visions of PGRI Semarang University is to have its identity, and to achieve the identity vision, character education is developed in integration with subjects. In addition, institution quality is developed by following the development of the higher education institution’s policies and the trend of civilization development towards cybernetic century. The research’s objective is to develop ethnopedagogy based learning model with assistance of website to improve prospective teachers’ teaching ability. This research employs a mixed method which emphasizes collection of qualitative and quantitative data and employs embedded design of embedded experimental model type. A learning model with ethnopedagogical approach with assistance of website and necessary learning media had been developed in the first year. Expert’s validation result states that the development of ethnopedagogy oriented learning model with assistance of website is valid.

Keywords: Model, Ethnopedagogy, Website, Character.

I. INTRODUCTION

Science learning which is able to mediate combination of learners’ culture with school’s scientific culture will make learners’ learning process effective. Learning with cultural concept as the source of learning may improve learners’ ability to utilize knowledge. This is related to Vygotsky’s theory which emphasizes on interaction of interpersonal (social), cultural-historical and individual factors as the key to human development. According to Vygotsky’s theory in Schunk (2012:339), cognitive change takes place in ZPD (zone of proximal development) when teacher and learner share cultural instruments and interact with cultural mediation. In line with Vigotsky’s theory, Parrish (2010) states that culture oriented learning is highly needed by learners, since it will teach them attitude and love towards culture and nation, and introduce them to a region’s potentials for them to understand their cultures. In addition, learners are also taught of the importance of preserving cultural diversities as a priceless asset to solve many challenges faced in the global era (Mason, 2007).

Learning which may be accessed everywhere, any time and by anyone is website based learning. This learning is part of e-learning which may be utilized: (1) to send teaching materials; (2) as support; (3) to improve learning quality; and (4) for learning and assessment as well as to distribute learning materials (Gilbert & Jones, 2001). Website’s capability to hold discussion and social interaction in learning process may be observed in Figure 1.

![Figure 1. Website’s capability for learning](image)

Based on the description, an ethnopedagogy oriented learning model with assistance of website is developed in this research to improve prospective teachers-students’ teaching ability.

II. METHODS

This research employs a mixed method which emphasizes collection of qualitative and quantitative data. An embedded design will be employed in this research, involving experimental
activities (Cresswell, 2008). Embedded experimental model will be employed, where qualitative data will be used in experimental design. The research’s main priority is developed from quantitative data, with experimental methodology, and qualitative data following/in support of the methodology. One-phase approach is employed in this research, of which selection is based on the effectiveness during the research. The researcher uses this design to include qualitative data in answering the research problems in the wide quantitative study. This design is employed since the researcher needs to embed the qualitative component in the quantitative design.

The research procedure conducted in the research of Ethnopedagogy Based Learning Model with Assistance of Website to Improve Prospective teacher’s Teaching Ability is as follows:

1) Literature study, in the literature study section, the results of previous research and theoretical study of learning model with ethnopedagogical approach with assistance of website to improve prospective teachers’ teaching ability will be studied.

2) Empirical study, in the empirical study section, the implementation of in-class learning process will be explored to obtain learners’ qualitative data and result of learning achieved by the learners, which are of qualitative data.

3) Designing learning model with ethnopedagogy approach with assistance of website to improve prospective teachers’ teaching ability, based on the existing result of field empirical study, an ethnopedagogy based learning model with assistance of website to improve prospective teachers’ teaching ability will be designed.

4) Expert test, the first expert test will be conducted by experts for an overview of the outcome of design made for the learning model with ethnopedagogical approach with assistance of website to improve prospective teachers’ teaching ability.

5) Draft 1 of learning model with ethnopedagogical approach with assistance of website to improve prospective teachers’ teaching ability, the result of expert validation test will be revised, which is later called draft 1 of learning model with ethnopedagogical approach with assistance of website to improve prospective teachers’ teaching ability.

Based on the steps, figure 2 shows the research procedures.

Figure 2. Research Procedures

The research’s subjects of experiment were students of mathematics education and physics education study programs of UPGRIS who took subject apprenticeship 2. The samples were 4 classes consisting of 2 classes of mathematics education and 2 classes of physics education. The research was conducted in 2017 (first year) and 2018 (second year).

The research instruments employed to collect accurate research data are:

1) Validation Sheet. This Sheet is used to collect data of experts’ (validator) opinion of the
product design (learning model and media) arranged in draft-I, to be the reference for or guideline on revision.

2) Assessment rubric is employed as the guidelines on measurement for assessment and is a scoring tool containing criteria of work implementation or delivery.

III. RESULTS AND DISCUSSION

A. Literature Study

The preliminary research phase, constituting research and information collecting as well as planning activities consists of some main activities, which are literature study (literature review and result of previous research) and field study as well as planning of learning activities or objects of which quality is to be improved. This phase covers reviewing the literatures, particularly relevant theories and concepts to the issue studied, and analyzing the necessities. Preliminary field study is conducted with an observation in Batang, Pekalongan and Semarang in examining the existing cultural condition, particularly regarding: (1) various cultures to be integrated into learning, (2) searching for information of cultural heritage actually to be inherited, (3) reviewing culture from knowledge aspect, and (4) planning learning to be conducted with ethnopedagogy, oriented learning model with assistance of website.

In addition, a documentation study is also conducted in the form of a study of learning plan of subject Apprenticeship 2 and teaching materials to be used. The matters to be examined from the learning media made are: (1) formulation of subject learning achievement (2) selection of culture (ethnopedagogy) to be used, (3) innovation of ethnopedagogy based learning model with assistance of website.

The preliminary study also covers interview with the people in examining the culture. The interview includes the following questions:

1. What culture develops in your area?
2. What do you know about the cultural heritage?
3. Do children in the surrounding area are still aware of the cultural heritage?
4. What are local people/government’s attempts to preserve the cultural heritage?

The preliminary study results in design of ethnopedagogy based learning model with assistance of website to be developed.

B. Designing Model

What is meant by model of ethnopedagogy oriented learning model with assistance of website in this case is the Technological Ethnopedagogical Content Knowledge (TECK). The TECK model is a learning model design which integrates three aspects of technology, ethnopedagogy and knowledge material. This model attempts to integrate teachers/prospective teachers for them to be aware of the appropriate learning to surrounding environmental/cultural condition from the perspective of knowledge along with latest technology.

The learning model developed has the following characteristics:

1. Syntactic
   Phase 1: information
   Prospective teachers-students explore information of local environment/cultures (list is available at website) to be taken as the topic to be integrated into learning.
   Phase 2: investigation
   Prospective teachers-students investigate the information of environment from the perspective of knowledge pursuant to learning objective.
   Phase 3: discussion
   Prospective teachers-students discuss on the result of investigation in group to be presented in class under microteaching principle.
   Phase 4: presentation
   Prospective teachers-students present their investigation result
   Phase 5: evaluation
   Lecturer and prospective teachers-students evaluate learning result from the perspective of content and presentation.

2. Social system

Social system is a condition/situation/rule applicable to a learning model. It may also be called a pattern of relationship/communication between lecturer and prospective teachers-students in learning process. The social system in this learning model is focused on the role and relationship between students and lecturer and between students and prevailing norms during learning implementation.

3. Reaction principle

Reaction principle is related to how lecturer appreciates and responds, including how lecturer asks question, answers, and responds to what students do. Lecturer is demanded to react to any actions of prospective teachers-students in any condition and event in order to direct them to have appropriate teaching method in appropriate environmental/cultural condition with appropriate materials and oriented website presentation.

4. Supporting system

Supporting system is all facilities and instruments needed to implement the TECK model. The TECK model supporting system is ethnopedagogy oriented learning instruments consisting of Semester Learning Plan, teaching
material, assessment instrument, and website www.etnopedagogi.com.

5. Learning impacts
   The impacts of ethnopedagogy oriented learning are improvement of prospective teachers-students’ teaching skill and their concern about local potential and its cultural heritage.
   The advantages, constraints and chances of ethnopedagogy oriented learning model with assistance of website are:
   Advantages:
   1) **Prospective teachers-students** will be engaged in getting to know their local potentials and cultural heritage.
   2) **Prospective teachers-students** will love their nation even more
   3) Developing **prospective teachers-students’** thinking skill pursuant to the issues they face
   4) Presenting real activities pursuant to issues faced in the environment
   5) Growing social skill through cooperation
   6) Tolerant, communicative and responsive to others’ ideas
   7) Giving example of wise use of technology
   Constraints:
   1) Exploration of knowledge related to local potentials and cultural heritage is not easy to conduct
   2) Internet server must not be disconnected during learning using www.etnopedagogi.com

Chance of Development

TECK model is a prototype learning model which needs further study. Therefore, its chance of development is high and it will not be outdated since it is subject to change pursuant to technology development commonly used by the society.

C. Learning Model Validation

The learning model validation phase is conducted with desk evaluation by experts in assessing the feasibility of draft ethnopedagogy based learning model with assistance of website, both in regard to bases of concept and theory used. The instrument used in this phase is Validation Sheet. This instrument is used to collect data of the experts’ (validator) opinion of the learning model arranged in draft-I as reference for or guidelines on revision of the model arranged. The questions in the validation sheet are related to the characteristics of learning model and web design. The validators’ average score is 74 out of 120. This means that the ethnopedagogy oriented learning model with assistance of website still needs considerable revision. Furthermore, the result of assessment, comments and suggestions are discussed in determining improvement of the draft learning model. Students’ response to the learning model is also needed and the average percentage of questionnaire response value is 84.2%, which means that the students agree on the application of ethnopedagogy oriented learning model with assistance of website. The advantages in the form of various cultures and how to teach materials in the ethnopedagogy based learning model with assistance of website are something attractive to students.

D. Learning Model Revision

Based on validators’ suggestion, revision is made to the ethnopedagogy oriented learning model with assistance of website.

IV. CONCLUSION

Ethnopedagogy based learning model with assistance of website has syntactic characteristics, reaction principle, supporting system, social system and impacts. Preliminary analysis was conducted with observation of culture in Demak, slope of Mount Merapi, Pekalongan, Batang dan Semarang. Based on the ethnopedagogy based learning model with assistance of website development process, we may conclude that the process and result of development of ethnopedagogy based learning model with assistance of website are valid but a considerable revision needs to be made. Based on the validation result, an improvement will be made on the draft teaching materials and other instruments.

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