Implementation of Technology as A Media With Character Education Integration On Teaching Skill In Vocational High School

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Abstract  
In learning, we always expect to have an interesting, fun and easy to understand method that can make teachers and students' activities becoming more active, creative and fun. In order to have the environment, technology as a media can be embedded into teaching strategy. Moreover, character building as a significant part of education should be included in most of teaching materials. To do so, the character education can be integrated in the learning plan material that can be used in skill learning process based on the need and basic competencies of the subject. The aim of this research is to produce teaching material which contains character education that can be used in teaching skill in Vocational High School. The result which obtained through focus discussion group (FGD) with field practitioners such as teachers and vocational lecturers showed that the use of technology media was more interesting, practical and effective in practice learning in Vocational High Schools.

Keywords : Technology Media, Teaching and Learning, Character Education, Vocational High School

I. INTRODUCTION

Several problems show that the weaknesses of learning system in many vocational high school (sekolah menengah kejuruan, SMK), have direct impacts in the low skill competency of the students. These may also lead to the low character value in the learning process. The matching of these skill competency and integration of character building to the students need specific approach and learning method that should be designed based on the aims of the development of curriculum 2013.

The development of character building through environmental factor design can be achieved by using contextual approach in practical subjects that will be varied according to the aims of learning process. As there are three competency areas which affected the learning process, which are cognitive, affective and psychomotoric, therefore the character values can be included into learning plan (rencana pelaksanaan pembelajaran, RPP) implementation in practical subjects. Through these learning planning, the inserted character values can be designed based on the needs and aims of basic learning competency.

Innovation can be done in learning process by using computers as a visual medium that have advantage as they can display physical objects in the classroom in more interesting way. Innovative learning based contextual paradigm can help students to internalize, reshape, or transform new information. Through this learning method that using visual media, it may make all teachers and learners’ activities becoming more active, creative and fun. In accordance with the function of learning media, then the media may be said as practical and effective tools especially when they are used in practical learning as a teaching aid that can affect the environment and condition created by the teacher.

Based on the philosophy of learning by contextual approach that aimed to achieve competence as individuals, students learn to master the competencies in several stages, individually, up to the condition that can change their behavior. Therefore, in order to achieve basic competence in the implementation of vocational learning in practice, it is possible to implement of the learning process by emphasizing on the achievement of students' skills.

The theory which is based on the achievement of students' skills requires teachers to consider several approaches or methods that will be used in information processing. For example, in teaching practice, the emphasis is on the mental processes of students in acquiring the knowledge to understand the function of electrical symbols per drawing and original components. The development of Cognitive theory that greatly affect learning process is varied by using Contextual Teaching And Learning (CTL) that will assist students in the learning process through the seven approach components, namely: (1) Constructivism, which emphasizes the formation of students' understanding in active, creative, and productive ways; (2) Inquiry, locate a core part of the activity-based contextual learning that begins with the observation of phenomena; (3) Questioning, the knowledge that one has which always begins with asking activity; (4) Learning Community, where the study results can be obtained between friends and groups. In this process, the idea sharing occurred between those who know to those who do not have the idea; (5) Modelling, modeling in learning skills with a model that can be emulated by the students; (6) Reflection, is a way of thinking about learning new things; (7) Authentic Assessment, is a data collection process that gives an overview of the development of student learning.


The study in this paper is limited to the implementation of technology in the learning media skills with the integration of character education in
vocational high schools especially electrical technology programs. It is a part of the grant competition research project that aims to find practical and decent learning tools which will be used as the electrical competency-based learning model integrated with characters in vocational high school.

II. METHODS

Through this study, there are two types of data were collected. The collected data are qualitative and quantitative data. The qualitative data obtained from the identification process on the electrical installation needs competency in world of work such as installing electricity in simple to the bigger buildings. It also includes the identification of learning needs in the schools. Quantitative data obtained through expert validation test activities on the material and assessment tests in school through observation during the learning process in the class.

Model Development

This research is a research and development (R&D) which is commonly called just R&D research. Referring to the opinion of some experts who claim that the development research aims to develop and produce a product, including learning devices (media, materials, etc.) which should be valid and proven to be successful in improving learning processes in the classroom/laboratorium, not to be used only to test the theory. Muklas Samani (2008:4); Nieven (1999:127-128).

Procedure Product Development

R&D research procedures consist of several steps to develop a product that has been available in order to make the product to be a perfect one. Sukmadinata (2008:164-165). Therefore, in this study, the development stage is used referring to the stages of research according to Borg and Gall (1983:784-785) which is then modified into five stages, namely: (1) requirements analysis phase, (2) development design stages, (3) expert validation and revision, (4) the testing phase, and (5) evaluation stage.

Based on the research phase, the activities are divided into two activities, namely the pre-development and development. In the pre-development phase, the activities to be done are: (1) needs analysis, (2) design development, (3) expert validation and revision through group discussions (FGD). After the revision, it will be followed by development activities, namely: (4) the testing phase, and (5) evaluation stage.

For the pre-development activities, the output will be a preliminary prototype which has been validated and revised through Forum Group Discussion (FGD). To clarify the outcomes and indicators of achievement in this activity, especially at the design stage that has developed competency matrix with designed components of learning model. The results of the development of competency matrix will be analyzed to establish standards of competency and basic competences (SKKD). This will be followed by designing instructional and teaching materials process which integrated achievement of character values in the learning plan (RPP). For the implementation of learning activities, specifically in the media that will be implemented in the form of visualization, it is expected to function properly, so it will be practically and effectively used as a teaching aid that could contribute to the learning environment.

Expert Validation Phase and Revision

At this stage, internal validation is conceptually done to the first prototypes. Results and suggestions from the validator, used as a reference to revise the initial prototype which is designed to obtain the data of this study. Outcome at this stage is the viable initial prototypes which will be practically used in the learning process.

III. CONCLUSION

Research results through focus group discussions with field practitioners (Teachers and Polytechnic Lecturers), it was found that the outcomes of the pre-development phase, namely: (1) basic competence (KD), (2) SKKD profile, (3) Learning Tool. For the development of learning tools, especially in the use of media technologies, it is strongly supports the achievement of the three competences which can be conducted through learning skills process. Instructional materials for learning practices, planned by inserting on the character values to the learning plan (RPP). Therefore, in the learning process that requires visualization media as teaching materials, the learning plan can be implemented to achieve the required competence indicators in order to gain basic competency achievement goals. Validation through the learning content experts, it was found that the use of media technologies were more attractive, practical and effective when they are used in teaching practice in vocational high school.

REFERENCES


