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Learning Design for Strengthening of Learner Self-Concept

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Abstract: Learner's characteristic is a form of self-concept. Students have a need for self-development to deal with scientific eras. The flip Pedagogy Construction Model is a learning model that uses exploration on learning materials both online and off-line before meeting in class. Construction of the flip pedagogy model is a life-based learning construction. Design learning reinforcement learner self-concept contributes to embody the character development of learners in Life Based Learning which can be accounted for empirically.

Keywords: learner's characteristic, self-concept, life-based learning

I. INTRODUCTION

The Flip Pedagogy Construction Model is a learning model where students learn through online learning material explorations before meeting in class. Cognitive reinforcement before the meeting at the beginning of the class can be: (1) to motivate students towards for active learning; (2) improve the ability to think critically; and (3) improve collaborative skills (Dagen and Morewood, 2016). Chronology of the pedagogical system in general is putting cognitive reinforcement face-to-face before students are given assignments online. So the basic knowledge subject matter on-line from various sources in the application of Online and Offline Learning Applications only become a complement to the teacher's information when face to face in class.

The concept of flip pedagogy was proposed by (Bergmann and Sams, 2012). They record class lectures and provide videos online so students can watch and review teaching content more easily. With such a strategy, significant results were obtained, which inspired them to use it further (for example, instructing via online video) in front of the class. In this way, students can prepare the class by watching the video and thus can form basic knowledge in front of the class. As a result, more classroom discussions or exercises can be done to engage students in deeper learning and help them clarify any misunderstandings (Bergmann and Sams, 2012).

Life-based learning through flip pedagogical methods proposes a learning framework for developing student capabilities in willing and collaborating as a characteristic of student abilities. Learning is not confined only to the competence but require the capability building of student's concretely tangible character of learners. Life-Based Learning recognizes that the living environment becomes a very broad learning resource, thus opening up opportunities for students who have initiatives and collaborate with anyone to develop their capabilities.

Figure 1
Purpose of Learning Flip-Classroom Activities

The educational objectives in Figure 1 of inverse learning can be overcome based on the Educational Objective Taxonomy proposed by Bloom (1994) and modified by (Anderson et al., 2001). There are six levels: knowledge, understanding, application, analysis, synthesis, and evaluation. As shown in Figure 1, in reversing learning, what students do before and after class is included in remembering and understanding, namely lower cognitive levels. Video instructions are used to express the basic contents of the target subject. In class, higher levels of cognitive learning are cultivated, such as application, analysis, and evaluation (Francl, 2014).

II. METHODS

The Learning Development Model in Figure 2 uses the development of an integrated blended system by accommodating meeting systems and online learning systems through the web. The development model refers to Davidson-Shivers and Rasmussen (2006) based on conformity to the needs of development characteristics. The need for learning development is the development of a management system for face-to-face learning and learning activities through web-based learning. Overall the Shivers and Rasmussen (2006) model is a development method that has dominant characteristics in the development of learning Web-based.

The Method of Developing Web-Based Learning Design Models of Shivers and Rasmussen (2006) have other development phases: (1) analysis; (2) evaluation plan; (3) concurrent phase which includes design, system development, testing and formative implementation and evaluation, this phase can be done repeatedly until an unspecified time limit; (4) comprehensive implementation; and (5) summative and research evaluation. The development method of web based model design davidson-shivers and rasmussen models can be described as an activity that starts from the activities:

Analysis. The analysis process includes4 steps, namely: (1) Audience Analysis (teacher), this analysis describes the student's target, this analysis provides a description in the context of the student population; (2) technology and media analysis, technology analysis describes the technology for developing management systems for reverse pedagogical models which are technologies related to hardware, software and their interconnections, analysis of media described in the media used in learning. Description includes learning objects based on text, image, audio, video and web; (3) situation analysis, this analysis describes which environment, this flip pedagogy model will be implemented and the characteristics of the learning environment itself; and (4) objective analysis (content), this analysis describes learning objects that will be used in flip pedagogy models.

Figure 2
Learning Development Model (Davidson-Shivers and Rasmussen, 2006)

The evaluation design, developer's learning in this case the researchers determine the formative evaluation instruments for general improvement during the process of developing learning model into a prototype. The form of instrument design is an evaluation item of flip pedagogy which includes: (1) effectiveness; (2) efficiency; and (3) attraction (appeal).

Simultaneous Design. Simultaneous Design is an activity that is patterned in related and continuous process models that are interlinked. Activities with one another are a series of mutual influences. In the linked design there are several stages and processes, among others: (1) activity planning, activity planning stage in the process image is not described because it is only the stage that initiates the design process; (2) design process, in the design process an investigation is carried out on: (a) specification of supporting objects such as hardware, software and resources, (b) drafting assessment, or better known as Task Objective Assessment Item Blueprint (TOAB) to see the initial feasibility of the system, and (c) realizing the initial learning syntax as a reference for the learning process flow; (3) development process, the development process can't be separated from the trial process, formative evaluation and design process. This process is an inverse pedagogical model building activity with the implementation of learning. The result is a prototype of a flip pedagogical model; (4) trial implementation, this stage is carried out a trial to run a web-based collaboration management system for laboratory or limited; and (5) formative, formative evaluation is an evaluation activity that is conditioned to provide validation of the flip pedagogy model. Validation results are the basis of the implementation process. In the evaluation of Web-based Learning Design, the main stages are carried out.

Comprehensive Implementation Process. Comprehensive Implementation Process is carried out to obtain a concrete picture qualitatively. The developer will be the main instrument to see the implementation of the flip pedagogy system. The developer is involved as a lecturer.

Summative Evaluation Process. Not done at the time of the study. This process will be carried out by the learning quality assurance team. Because the urgency of summative evaluation is the final decision on whether to use *Life Based Learning* and as a tool by policy holders. So that it requires an independent party outside the developer or researcher.

III. RESULTS AND DISCUSSION

Design activities have resulted in inverse learning designs as shown in Figure 3. Middle school students are given access to several learning resources in addition to learning like they can. This learning activity gives students the opportunity to choose learning resources that become habitual.

Learning resources are provided with books, videos and web sites. Enrichment of learning resources is a way to construct students so that they have the foundation for developing the independent development project. To access learning resources on the web as shown in Figure 4.

Figure 3
Self-Concept Strengthening Learning Design Access Learning Resources

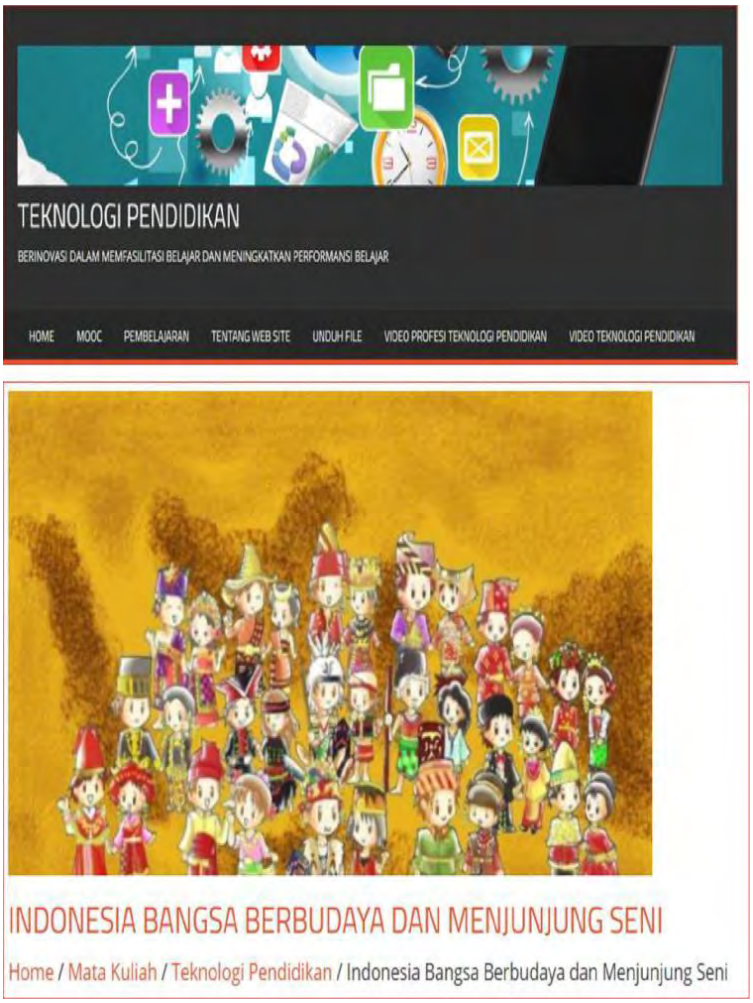

Figure 4
Enrichment of Learning Resources in *teknologipendidikan.org*

A. Selection of Learning Resources

The teacher provides in-class guidance in depth to the desires of students. The choice of learning resources for student activity is strongly related to teacher guidance. Teachers have a key role in learning selection activities. In general, the selection of learning resources is a strengthening of the will of students in the independent project.

B. Independent Task

The independent task is student activity in developing project design. Project design is a breeding action but more intensive. Students are guided in the class to build their will by making the art project they hope for. In this case students are given projects to make songs. This activity is not intended to leave students or allow students to work on their own, but the teacher provides direction and does not provide a dominant example.

C. Strengthening Analysis

Strengthening analysis is building students by giving reinforcement in a narrative manner (figure 5). Narrative reinforcement is an effort to improve students in the condition of constructing their knowledge. They are still given knowledge support even though using the web.

Figure 5
Strengthening Analysis

D. Guidance

The most decisive learning activity is intensive guidance. Guidance is a method that is carried out in order to provide a concrete briefing on some needs and preparation of independent project making. This learning activity provides technical skills to strengthen skills. This technical guidance is to guide step by step to working on a project.

E. Project Development

Project development is an activity to provide space for students to be able to show their existence. This independent project development can be juxtaposed with the student's final project.

The construction model of flip pedagogy is very relevant to the policy of integration of learning management technology in the network of Laboratory Schools State University of Malang. Management of learning in the network The Laboratory School of Malang State University currently in principle has met the standards of general pedagogy and has been in accordance with the requirements of the Life Based Learning environment. So that it has the potential to have empirical support to bring a new perspective of students to the world of initiative so that they can develop their life skills. In line with Higgins (2016) is the level of class technology integration combined with a pedagogical system so that it is aligned with the learning style that students like will encourage student capability? Students need sufficient and open scientific insight to have the will in the form of initiative to act and as a provision for constructing science through collaboration with teachers and other students. This will not be realized if the pedagogical system at the beginning of learning is still in the form of giving transfer or copying the mindset through class meetings which are explanatory, definitive, doctrinal or otherwise.

In the process of willing students need to be supported by their logical thinking patterns. doVale et al., (2016) explains that children's development begins to be able to think logically is at the stage of formal operations, namely at the age of 12 years and above. Bandura (1991, 1989) describes the socio-cognitive development of adolescents starting to be able to organize and assess themselves.

The construction of inverted pedagogy is a field of learning that gets the impact of educational psychology and scientific learning environment. Pedagogical construction by utilizing the integration of technology proposed in this study has a common root in the field of educational psychology (Hilsenroth et al., 2015) and formalized structural modeling as characterized by structural equation modeling (Lomax and Schumacker, 2012). The development of pedagogy can no longer be separated from the integration of technology in the learning environment. Learning has been recognized as a complex problem for decades.

The flip pedagogical model provides broad control over learning in the hands of students at an early stage as a strategic step. Praherdhiono (2016) explains that Self-Regulated Learning has been able to build equitable activity and creativity of students individually or in groups. Pedagogy upside is learning models that are not serving content during a meeting in the class (Baker, 2000; Strayer, 2007), but learned by the student prior to do a class meeting, the class time is used for activities of active learning that is centered to student (Bland, 2006; Foertsch et al., 2002). During this time general learning at the Malang State University Laboratory School was based on teacher-centered instructors.

In the pre-class learning phase, students gain basic subject knowledge by seeing the instructor available material in the learning management system / LMS which is presented in various media formats, such as online video, podcasts, or text-format material, as was done by (Baker, 2000; Bergmann and Sams, 2012; Strayer, 2007).

IV. CONCLUSION

In general, this study constructs flip learning so that students have the Learner's characteristic willing and skilled in collaborating as a form of Self - concept and the need for self-development of students in facing the scientific era. Research will continue in the implementation process to be applied in school activities. The Flip Pedagogy Construction Model is a learning model where students learn through learning material exploration both on-line and off-line before meeting the substance in class.

The construction of an inverted pedagogy model is the learning and learning construction needed in a micro scale application Life-based learning or macro curriculum After the Laboratory of Malang State University. The flip pedagogy model will contribute to the concrete realization of the development of student characters that are in accordance with Life Based Learning that can be accounted for empirically.

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