The Implementation of Teaching Strategy Model for AIS by Using Paikem Project Based Learning and Multimedia

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Abstract

The learning of AIS in State Polytechnic of Malang has not given a significant contribution that meets industrial needs seen from cognitive, psychomotoric, and affective aspects. Based on that case, the researchers develop a Project Based Learning by using multimedia as a new teaching strategy. The objective of this study is to develop and implement the Paikem method based on projects and the use of multi-media to generate high quality human resources who are competitive in the global era. This is a classroom action research. The research method employed is Applied-qualitative. The researchers identified the problem of the classroom, checked it, planned learning projects, implemented it, observed the problem, and evaluated it. The problem would be analyzed and solved by the students based on their knowledge, presented in the classroom, and discussed in groups by using multi-media. The expected results of this research are to make students more competent in understanding theory, implementing theory into real world, and solving problems in real situation, generating a prototype in teaching strategy called Project-based Learning Strategy, teaching aids based on multimedia, teaching materials, and the report of implementing AIS into UMKM. The conclusion of this research is that the project-based learning method was successfully applied in studying AIS in State Polytechnic of Malang.

Keywords: Multimedia, Project-based learning, Paikem

1. Introduction

State Polytechnic of Malang is a vocational higher education that is focused on skill development to produce graduates with proper professional skills that can be implemented in the society. Accounting Study Programme is one of departments in the State Polytechnic of Malang that is assigned to produce ready for use graduates, competent at accounting skill, and can compete in the global era based on the vision-mission of the department. The quality of education is seen from the basic attitude on academic-critical attitude and is willing to keep searching for facts. An educational concept is not only a matter of measuring knowledge by using a test (cognitive). It also covers skill establishment (psychomotoric), and basic attitude or affective, such as critical attitude, creativity, and open minded to innovation and any finding. All the aspects are needed to make the graduates survive and able respond to any challenges. A teacher, in this case, does not only function as a knowledge transferer. He/she also functions as a motivating agent. The teacher’s idealism called eutika, is the field that helps the students generate innovation and knowledge. Helts 2003-2010 issued by the Higher Education Directorate in April 2010 assigns colleges to implement Student-centered Learning (CSL) in a teaching process. There are several teaching strategies in SCL, such as Case-based Learning, Co-operative Learning, and Project-based Learning [1]. The teaching strategy that has been mostly
implemented is lecturing. When attending a course by implementing this strategy, students tend to make notes only. Since lecturing strategy is teacher-centred, students will feel sleepy soon. In this case, the teacher (the lecturer) becomes the centre of the whole activity and as if he/she were the only source of the knowledge. The level of effectiveness of this teaching method is very low.

Teaching method where the teacher is active and the students are passive have a low level of effectiveness. Students study when they will get a test. Teaching these days is only focused on understanding materials only. The students do not have any idea how to implement the theory in business world. That is why this teaching method has not developed the students’ analyzing skill, the sensitivity of problems, problem solving, and evaluating a problem holistically. The formulation of this study is how to implement the improved AIS based on projects by using multi-media. The specific objectives of this research are as follows:

a. To change the teaching strategy from teacher-centred into student-centred.
b. To generate a new “paikem” teaching strategy by placing the students as the centre (student-centred), not teacher-centred any more through project-based learning.
c. To improve the students’ ability in understanding theory and implementing it to solve real problems.
d. To prepare handouts for Accounting Information System (AIS).
e. To prepare a power point animation on Accounting Information System (AIS).
f. To create an effective teaching-learning situation related to the competence and curriculum.
g. To create a more enjoyable teaching-learning situation by using teaching materials and teaching aids

The main reason why “paikem” must be supported by teaching materials and multi-media are as follows:

a. Learning requires real cases as the examples to implement the theory.
b. Lecture-based learning often makes the students passive. That is why a strategy is needed to make them active by involving them in projects (student-centred learning).
c. An effective learning must involve reflection (double loop learning).

1.1 Literature Review

1.1.1 Previous Researches

A research on Student Active Learning and Project-based learning has been conducted by Waras kamdi [2]. The finding shows that Student Active Learning and Project-based Learning is very good to be implemented in a vocational education. By implementing this teaching strategy, the students will know the delivered materials better because they must implement the materials in an internship programme first before they enter the real business world.

1.1.2 The Concept of Paikem

Paikem is the short term of active teaching, innovative, creative, effective, and fun [1]. Active teaching means the teacher/lecturer should be able to create such a situation so that the students will have a courage to ask, talk about, and express their ideas. Depdiknas [3]. Paikem is an active teaching strategy, innovative, creative, effective, and fun. Furthermore, Paikem can be described as a teaching approach that is used together with a certain teaching strategy so that it becomes an
active teaching strategy, innovative, creative, effective, and fun. Muhammad [4] states that Paikem stands for an active teaching strategy, innovative, creative, effective, and fun. What is meant by an active teaching strategy is that the teacher/lecturer should be able to create such a situation so that the students actively ask, talk about, express ideas, and solve problems. An innovative teaching strategy can be adopted from a fun teaching strategy such as project-based teaching strategy, cooperative, case studies, assignments, the use of multi-media, and teaching aids.

Paikem is an idealistic teaching strategy. Through this teaching strategy, the students are helped get their own ideas during the teaching-learning period. The positive impact of Paikem is that the students are highly motivated to know things around them. Paikem is closely related to the pillars of education (learning to how, learning to be, learning to do, and learning to live together).

1.1.3. Kinds of Teaching Strategies

a. Project-based Learning is an approach or a teaching strategy that is planned to make senior students closer to job market by telling them to write a project report based on their observation in the real business or industry as one of the assignments of this approach. Project-based Learning will be effective if it is supported by teaching technology [5]. The technology used in this strategy is multi-media and teaching aids. The multi-media and teaching aids are used to improve the quality of the project done by the students. The results of this strategy are not only a written report but it is also in the form of presentation with multi-media that can be presented by using the combination of graphics, photos, slides, tapes, animation, videos, audio, and teaching aids that are familiarly called e-learning. The presentation can be presented through a web-site, computer presentation, video programme (San Mateo County Office of Education 2011). It is expected that through this teaching strategy, the students’ skill can be improved and meet the industrial need.

b. Co-operative learning generally is described as a small group of heterogeneous students who work together to do a certain work [6]. This teaching strategy is as an alternative to overcome the weaknesses of the traditional one (Phipps, Maurice et al., 2011). Several studies proved that this teaching strategy can improve students’ achievements and their non-cognitive skills such as self-esteem, behavior, toleration, and supports for other students (Baer, John, 2014).

1.1.4 The Advantages of Project-based Learning

The advantages of implementing Project-based Learning are as follows:

a. To improve students’ motivation.: Written reports about this teaching strategy state that the students tend to work very hard to finish their projects. Teachers also report that the students’ frequency of coming late also declines. The students’ presence increases. Students say that studying in groups is enjoyable.

b. To improve students’ ability to solve problems.: The research on high-level cognitive development proves that students’ presence is needed in problem solving. Special trainings in finding and solving problems are also needed. Several sources state that project-based learning makes students more active and can solve complex problems.

c. To improve collaborative skills: Students need to develop and implement good communication skill in group works [2]. Cooperative group work, students’ evaluation,
exchanging information through internet are the collaborative aspects of a project. New cognitive and constructive state that learning is a social phenomenon and students will learn more in a collaborative environment [2].

d. To improve students’ ability in managing sources: Part of becoming independent students is their responsibility to finish their complex works. Project-based learning that is well implemented will give the students training and implementation in organizing projects, sources to do works and allocating time.

**Conceptual Framework**

Kognitif aspect  Psikomotoric aspect  Affective aspect

Paikem (Project Based Learning) and Multimedia

### 2. Research Methodology

Lewin in Kemmis and Carr (2005) states that a classroom action research is a kind of reflective research that is conducted by the researcher in a social environment and is used to improve and understand the work/situation where the researcher conducts the research in which education is included (Kemmis & Carr, 2010). A classroom action research is also described as dynamic process the four aspects (planning, acting, observing, reflecting) must not be understood as a static process that will accomplish automatically but it must be understood as a spiral moment that is related to planning, acting, observing, reflecting (Kemmis & Taggart, 2010).

![Action Research Spiral](image)

**Figure 1.** the Action Research Spiral by Kemmis & Taggart, 1988

### 3. Results And Discussion
3.1 Results And Data Analysis

This is a classroom action research by employing an applied qualitative method. The various data is primary data. The data collecting method is interviews and documentation. The analysis data technique is the researcher who identified the problems in a certain classroom, checked them, planned the suitable teaching strategy, implemented the plan, observed the plan, and evaluated the result. The problems found would be analyzed and solved by the students by using the skill and theory they have. The result of the analysis would be presented in groups by using multi media. The sample used are 300 students of the third semester, year 2014/2015 of Accounting Department State Polytechnic of Malang who have got AIS materials. The date were collected through interviews and documentation.

Dealing the Place of the Research, the research involved industries or UMKM as places to implement the AIS materials based on SAK Etap and the students of D3 (IIA, IIB, IIC, IIE, IIRK1) and D4 (IIA, IIB, IIC, IID, IIE). All of the UMKM (Micro, Small, and Medium Business) where students taken data did not apply AIS yet.

3.2 Results

The results of this research are as follows: a new teaching strategy, lesson/lecture plans, a teaching-learning guide line, teaching materials on AIS, teaching aids on AIS equipped with power points and animation, a report of the implementation of AIS in UMKM done by groups of students, students’ achievements on attending AIS courses, 85% of the sample got A. 10% of the sample got B+. 5% of the sample got B. 5% of the sample got C+. Students’ responses show that 90% of the sample agreed on the new teaching strategy, 10% of the sample still agreed on the previous teaching strategy.

3.3 Discussion

The result of this research is the creation of a new teaching strategy for AIS materials. The new strategy makes the students more active and able to solve complex problems related to AIS. By giving projects to the students, the students are more active, more cooperative in finishing their works. The other impact is that they understood the AIS materials more easily. The design of the teaching plan is based on the theory and concepts that have been discussed during the teaching-learning schedules and are related to the existing curriculum. The design of this system will help companies to prepare their financial reports because these days, a lot of UMKMs have not used accounting systems so that they get problems in preparing their financial reports. In the classrooms, the teaching-learning is easier and more fun. The impact is that the students can understand and implement the AIS materials more easily. Figure 1 presents students studying and doing the AIS exam.
Based on the research results, then the obtained results are as follows:

a. The learning method with project based learning was successful to be implemented in the vocative education at Malang State Polytechnic.

b. The curriculum based learning competence was improved through learning development plan (RPP)

c. The learning development plan was made the GBPP (Teaching Program Outline) and SAP (Course Outline)

d. The learning materials were created in AIS learning.

e. The demonstrative tools were made by using multimedia in the AIS learning.

f. The new learning method of project based learning and cooperative learning and also student centered learning were made.

g. This method was success in helping SME in AIS designing up to financial report making from the project based learning implementation.

h. Survey showed that students enjoyed more in the project based learning.

i. The students’ marks on AIS were better than before.

4. References


