IMPLEMENTATION OF COOPERATIVE AND PROJECT-BASED LEARNING METHOD TO CREATE INNOVATIVE LEARNING: THE CASE OF MANAGEMENT INFORMATION SYSTEM COURSE

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ABSTRACT

The main purpose of the education is to help each student as an adult to develop themselves through education, precisely the process of learning. Teaching and learning activities of adult education place students as adults not just "passive recipients" but rather as individuals who play an active role. A learning model that prioritizes students actively builds their own learning independently and transfers complex information. In this case, lecturers provide students opportunities in the process of learning and dissemination of sustainable, oriented to cooperative learning. Learning with discussion method of cooperative learning and project-based learning with the ultimate goal of students able to prepare a proposal properly and true is the embodiment of learning methods based on the concept of Constructivist or Constructivist Theories of Learning. One hundred and nine student who take MIS (Management Information System) courses participate in this study. This study find that the successful implementation of the cooperative learning and project-based learning method in order to achieve the learning objective of study methodology lecture is firstly supported by various materials or materials as follows: (1). Availability of Work Plan (RKBM) Management Information System Course, one semester activity, 3 credits weight. (2). Availability of Hand Out Courses Research Methodology (3). Availability of Student Case Collection with designing of cooperative learning and project-based learning (4). Student learning contract book (5). Individual task formatting format. In addition, all of the things that are composed with the main tasks and functions of class leaders, representatives and head of the group.

KEYWORDS*: Management Information System, Coorperative Learning, Project-based Learning.*

INTRODUCTION

Human civilization has evolved over several eras, including the era of agriculture, industry and has now entered the information age. The information that floods in this era is a double-edged knife. On the one hand, information can be a strategic asset for those who can manage processing access and utilize it well. But on the other hand, flooding information can drown and mislead those who do not have a good information management strategy. It is in this context that the course of Management Information Systems becomes highly relevant. Management Information System (MIS) is one of the required subjects for all students of Manajamen Department for all concentrations.

Management Information System must be taken by students in semester 6 where the prerequisite of taking the subject of MIS is Introduction to Management. After following this course students are expected to understand the management of information systems that include the introduction of computer-based information systems, the use of information technology to achieve competitive advantage, the use of information technology in e-business, information resources, organizational information systems, and matters related to security implications and ethics in information technology. Good information system, able to manage the flow of information and the flow of goods so that the company becomes effective and efficient is needed in the company's operations.

Lectures are done so far is a tutorial, lecturers have provided handouts and a collection of

small cases of textbooks and scientific journals. So far there has been no case of MIS that is relevant to the problems of companies in Indonesia is quite a constraint for students to learn MIS applications. A preliminary survey has been conducted on the students of MIS course, they argue that this course is quite difficult to understand because many discuss the development of information technology and they are difficult to imagine the SIM application if only from theory alone. Students need a medium that can help them learn about things that are applicative (Arsyad, 2007). So, it should be thought of a method of learning that can encourage the process of thinking of students so that this course not only be knowledge in learning management, but students are also able to apply it later when they have to compete in real business.

Several learning methods are proposed that are cooperative learning method where students can cooperate in groups to learn the concept of MIS and its application through various sources of information available. Students are not only dependent on lecturers during lectures, but they can prepare for self-study and group learning. So that students also know the application of the MIS concept, then proposed a learning method that complements the model of Cooperative Learning is Project Based Learning. It is hoped that the collaboration of these two methods can create an innovative learning method.

OBJECTIVES OF THE STUDY AND BENEFITS

Based on the formulation of the problem, then the purpose and the benefits of the application of cooperative learning methods and Project-based learning can be formulated as follows.

1. To find out whether PBL cooperative learning method and Project-Based Learning can improve students' learning spirit.
2. Knowing how seriousness / seriousness of students in learning Management Information System through cooperative learning methods and Project-based Learning in solving MIS problems.
3. To know whether cooperative learning and Project-Based Learning can improve the mastery of Management Information System materials.
4. To know how the perceptions and assessments of students on cooperative learning methods and Project-Based Learning.

While the benefits that can be obtained for learning managers, especially lecturers who teach Management Information Systems are as follows:

1. The benefits of this learning method is to improve students' activity and interdependence in learning and increase student's learning intensity. Growing individual accountability that measures the

mastery of each group's subject matter, and gets feedback from both other groups and lecturers. In the learning process, the partnership relationship between the faculty-students in building and developing the concepts of knowledge will be created; situations such as this will not occur in conventional learning (lecture) lectures.

2. When the learning of the two methods is done the lecturers continue to monitor through observation and intervene if there is a problem in inter-group cooperation in the learning process and working on the completed project.
3. Lecturers are better prepared for lectures because of the availability of Textbooks, Silabi Plans, Cases, Activity Plans and Adequate teaching facilities.

LITERATURE REVIEW
Management information System

This course aims to equip students with knowledge of basic concepts and utilization of MIS in the organization. Management information system is an interdisciplinary course that combines various organizational concept, technology and individual behavior in organization. This course specifically aims to provide basic framework for students in utilizing and managing information technology, including software, hardware and communication network tools. After completion of this lecture the students are expected to be able to recognize, understand, and observe various aspects related to the planning, utilization and development of information systems.

There are various things that can be put forward and make the reason for the importance of studying Management Information Systems such as because of increasing demand for information by managers, there is almost no necessity to use information systems to manage and filter incoming data into them and transform information useful for the organization. The need for organizations to be smart, given the change in the information society means that they also need planning and information change supported by Information Technology resources (Mc. Leod and Schell,2004). The evolution of information systems in recent years as well as the networks established by them, McLoeod and Schell (2004) in their book, shows that the technical basics of today's information systems are wider than in the past and also the most complementary Computers no longer operate alone, but on most networks. There are various networks connecting desktops, notebooks, businesses, suppliers, offices around the world. The second major advancement in information processing is done through computers connected through the network. This country is the Internet. The number of users accessing the Internet has increased greatly, as an important point exploding the internet as a medium more than promising television deployment. It is a more open,

decentralized, and therefore more threatening medium to the group's political and economic nature. Increase the number of people or groups who create their own journals on the Internet, radio or television broadcasts, without asking permission to the State or having links to traditional economic sectors. Everyone can tell it what you want, talk to those who want to offer services that are considered appropriate (Ellitan and Anatan, 2015) Distance today is not primarily geographical, but economic (rich and poor), culture (effective access to resume education), the ideological (way of thinking and feeling) and technology (or not having access to the field of communication and technology). One of the clearest expressions of digital manifested in democracy is the possibility for internet access and mastering tool theories to find their full potential (Ellitan and Anantan, 2015). Thus, analyzing the above facts, we note that the information systems generated for working with the Internet, can bring many benefits to today's globalized world, such as losing borders between different cultures around the world, and the software that makes this system require constant updates and improvements to get maximum benefits for offering a global network.

In detail this course covers several subjects as follows (Mc. Leod & Schell, 2010, Ellitan and Anatan 2015):

1. Introduction to information management: The importance of Information Management within a company due to the increasing complexity of the task of management of the existence of tools to solve problems Manager's role in managing information management, management skills of managers and company systems. Data and Information: Computers as Elements in Information Systems, Evolution of Computer Based Information Systems, Efforts to Achieve Computer Based Information Systems. The purpose of this chapter provides an overview of information management and computer-based information systems. Students are expected to understand the basic concepts of information management and can explain the role of managers in the management of information management in the company. Students are also required to explain the evolution of computer-based information systems and efforts to achieve them.

2. General Company Model: General Company System Model, Understanding model, The basic concept of general enterprise system model, and Use of general system model. Students are expected to understand the basic concepts of the company's general system model. Specifically the students are required to know the general system model of the company and the use of the system model.

3. System approach to problem solving and decision making: System Approach, Basic Understanding of Problem Solving and Decision Making, Problem Solving Stages by Using System Approach, Human Factors Affecting Problem Solving. Students are expected to be able to understand the basic concepts of systems approach in solving problems and making decisions. Students are also required to understand the concept of system approach in solving problems and making decisions

4. The basics of computer processing which includes discussion of Computer Architecture and Role of Input and Output Equipment And Software. Students are expected to be able to understand the basic concepts of computer processing. Students should be able to explain the basics of computer processing and its role in problem solving.

5. Database includes discussion of Data Hierarchy, Data Processing, Database, and Role of Database and DBMS in Solving. Students are expected to be able to understand basic database concepts and understand basic database concepts and their role in problem solving.

6. Data and Data Communications including Data Communications, Basic Communication Models, Data Communications on Computers, Data Communication Equipment, Data Communication Software, Network Manager, Role of Data Communication in problem solving. Students are expected to understand the basic concepts of data communication and understand the basic concepts of Data Communication and its role in problem solving.

7. Security and control include: Importance of Control of Information Systems, Control Tasks in Computer Based Information Systems. Students are expected to understand the concept of security and control of information systems and understand the role of control and supervision of information systems in maintaining computer security

8. E-Commerce: Trade Through Electronic Networking, Trade Strategy Through Electronic Network, Inter-Organization System (IOS), and Technology of Trade Through Electronic Network. In this case the students are expected to be able to understand the trade through electronic network (e-commerce) which includes all computer-based company activities.

9. System life cycle includes several materials, among others: Basic Computer Based Information System Planning, System Life

Cycle and Prototyping. Students are required to understand the concept of life cycle

10. Information Resource Management covers a wide range of topics including, IRs, Information As Strategic Sources, Strategic Planning For Information Endowments, Management and End User Computing Strategies. Students are required to understand the concept of information resource management and understand the potential role of strategic information in providing benefits for the company.

PROPOSED LEARNING METHOD

The proposed Information Systems Learning currently includes cooperative learning methods and Project-based learning. In detail the concepts and theories underlying both proposed methods will be discussed in the following sessions.

(1). Cooperative Learning Method

Cooperative learning methods take shelter under constructivist learning method. Cooperative learning arises from the concept that students will more easily find and understand difficult concepts if they are discussing with their friends. In cooperative learning students learn together in small groups of 4-6 people. Cooperative learning has been developed intensively through various researches, aiming to increase academic cooperation among students, establishing positive relationships, developing self-confidence, and enhancing academic ability through group activities. In cooperative learning there is positive interdependence among students to achieve learning objectives. Every student has the same chance to succeed.

Student-centered learning activities in the form of discussions, doing joint tasks, helping each other and supporting each other in solving problems. Through effective learning interactions, students are more motivated, confident, able to use high-level thinking strategies, and able to build interpersonal relationships. Cooperative learning model allows all students to master the material on the level of mastery of the relatively equal or parallel.

There are 4 kinds of cooperative learning model proposed by Arsyad (2007), that is; (2) Group Investigation, (3) Jigsaw, and (4) Structural Approach. The other two approaches designed for low classes are; (1) Cooperative Integrated Reading and Composition (CIRC) is used in reading and writing at levels 2-8 (kindergarten to elementary level), and Team Accelerated Instruction (TAI) is used in mathematics learning for grades 3-6 (equivalent to kindergarten).

The characteristics of cooperative learning model are; (3) learning from friends in groups, (5) learning in small groups, (1) learning together with friends, 6) productive speech or mutual opinion, (7) the decision depends on the students themselves, (8) active students (Johnson, et al. 2000). In line with these characteristics, (Johnson, et al., 2000).

suggested the characteristics of cooperative learning are; (1) there is positive interdependence 2 among group members, (2) individual accountability, (3) heterogeneous, (4) sharing of leadership, (5) sharing responsibilities, (6) emphasis on duty and togetherness (7) forming social skills, (8) the role of teachers / lecturers observe the learning process of students, (9) the effectiveness of learning depends on the group. The learning process occurs in small groups (4-6 members), heterogeneous without regard to differences in academic, gender, ethnic, or other abilities.

Cooperative learning model is developed based on several approaches that are assumed to improve the process and student learning outcomes. The approach in question is active learning, constructivist, and cooperative. Some of these approaches are integrated to provide a model of learning that enables students to develop their potential optimally. Active learning, shown by the existence of high intellectual and emotional involvement in the learning process, not just physical activity alone. Students are given the opportunity to discuss, express their opinions and ideas, explore the material being studied and interpret the results together in groups. Students are freed to search for relevant sources of learning.

Such activities enable students to interact actively with the environment and groups, as a medium for developing knowledge. Constructivist approach in cooperative learning model can encourage students to be able to build their knowledge together in groups. They are encouraged to discover and construct material that is beingstudied through discussion, observation or experiment. Students interpret together what they discover or they discuss. In this way, the subject matter can be built together and not as a transfer from the lecturer. Knowledge is shaped together based on experience and interaction with the environment within the learning group, resulting in mutual enrichment among group members. understanding of the phenomenon being studied increases. They are encouraged to come up with different points of view on the same matter or problem, to then build a point of view or construct their knowledge together. This is the realization of the nature of constructivism in learning.

Cooperative approach encourages and gives students the opportunity to communicate skillfully. That is, students are encouraged to be able to express their opinions or ideas clearly, listen to others and respond with right, ask for feedback and ask questions well. Students are also able to build and maintain trust, open to accept and give opinions and ideas, willing to share information and resources, willing to give support to others with sincerity. Students are also capable of leading and skilled in managing controversy (managing controvercy) into problem solving situations, critiquing ideas not persona person.

This cooperative learning model will be done well if it is possible to grow a learning atmosphere that allows students and lecturers to feel free to express their opinions and ideas, and to be free to review and explore important topics in the curriculum. Lecturers can ask various questions or problems to be solved within the group. Students try to think hard and discuss each other in groups. Lecturers and other students can then pursue their opinions on ideas from different perspectives. Lecturers also encourage students to be able to demonstrate their understanding of the subjects that are studied in the group way.

Based on the above learning characteristics, it is assumed that cooperative learning model can motivate students in carrying out various activities, so they feel challenged to finish creative tasks together. This learning model can be applied in learning in various subject areas, both for abstract and concrete topics. Competencies that can be achieved through cooperative learning model in addition(; (1) an understanding of values, concepts or problems related to a particular discipline, and (2) the ability to apply concepts / solve problems, and (3) the ability to produce something collectively based on the understanding of the material that is the object of his study, can also be developed (4) softskills critical thinking ability, communicate, responsible, and cooperate. Of course, such abilities may only be possible if opportunities to appreciate these abilities are adequately provided, in a sense, cooperative learning models are applied correctly and adequately.

Appropriate material presented using cooperative learning models are materials that require a high understanding of values, concepts, or principles, as well as actual problems that occur in society. Skill materials to apply a concept or principle in real life can also be given. Materials can come from various fields of study, such as language, socio-economic issues, community life issues, natural events, and skills and other problems. Basically, the learning activities are divided into four steps, namely; orientation, group work, quizzes, and awards. Each step can be further developed by the lecturers by adhering to the essence of each step as follows (Trianto, 2008):

1. Orientation

As in every lesson, activities begin with an orientation to understand and agree on what to learn and how to learn strategies. The lecturer communicates the purpose, the material, the time, the steps and the expected end result controlled by the student, as well as the scoring system. In this step the student is given the opportunity to express his opinion on anything, including the workings and expected outcomes or the scoring system. Negotiations can occur between lecturers and students, but at the end of the orientation is expected to have a mutual agreement.

2. Group work

At this stage students do group work as the core of learning activities. Group work can be in the form of problem-solving activities, or understand and apply a learned concept. Group work can be done in various ways such as discussing, doing ekslporasi, observation, experiment, browsing via the Internet, and so forth. Time for group work is tailored to the breadth and depth of the material to be worked on. Activities that take a long time can be done outside of school hours, while activities that require less time can be done during class hours. In order to focus group activities, a brief guide should be given as a guide for activities. This guide should be prepared by lecturers. Guidance should include the group's goals, materials, timing, workings and responsibilities, and expected outcomes. For example, students are expected to develop appropriate media in learning. For that, students together need to discuss, analyze the learning components such as; what competencies are expected to be achieved by the learner, what material is learned, the learning strategy used, and the form of the evaluation. Students are also exploring to develop appropriate media.

Exploration can be done individually or in groups as agreed. Exploration results are discussed in groups to produce appropriate instructional media appropriate to achieve learning objectives. Lecturers act as facilitators and dynamicators for each group, by monitoring students' learning activities, directing cooperative skills, and providing assistance when needed.

3. Quiz

At the end of the group activities expected all students have been able to understand the concepts / topics / issues that have been studied together. Then each student answers a test or quiz to find out their understanding of the concept / topic / problem being studied. This individual assessment includes mastery of cognitive, affective and skill domains. For example, how to do learning analysis? Why do we need to do a learning analysis before developing the media? Students may also be asked to create appropriate media prototypes that have high interactive levels in learning, etc.

4. Group awards

This step is intended to reward groups who successfully gain scores in individual tests. The score increase is calculated from the difference between the base score and the individual test scores. Calculating the scores obtained by each group by summing the scores obtained by students in the group then calculated average. Furthermore, based on the average score is determined each group award. For example, for a group that gets an average increase in scores up to 15 gets the award as "Good Team". A score increase of more than 15 to 20 gets the "Great Team" award. While a score increase of more than 20 to 30 was awarded as "Super Team". Group members can be rotated for a certain period of time, so that in one unit of learning time group

members can be rotated 2-3 rounds. This is intended to increase group dynamics among group members in the group. At the end of face to face the lecturer gives a conclusion to the material that has been discussed at the meeting, so there is common understanding on all students.

5. Evaluation

Evaluation of learning done at the beginning of the lesson as prates, during learning, as well as student learning outcomes both individuals and groups. During the learning process, evaluation is done by observing attitudes, skills and ability to think and communicate students. The sincerity of doing tasks, exploration results, critical and logical thinking skills in providing views or arguments, willingness to work together and assuming shared responsibilities, are examples of aspects that can be assessed during the learning process. While the evaluation procedure:

a. Individual assessment is an evaluation of the level of students' understanding of the subject matter, covering the cognitive, affective, and skill areas.

b. The group assessment includes various indicators of group success such as cohesiveness, decision making, cooperation, etc. Assessment criteria can be mutually agreed upon at the time of orientation. This criterion is needed as a guidance of lecturers and students in the effort to achieve learning success, whether it is in accordance with the competencies that have been determined.

Cooperative learning model can not be separated from the weakness in addition to the strength that exists on it. The weakness is related to the readiness of lecturers and students to be involved in a learning strategy that is different from the learning that has been applied. Lecturers who are accustomed to giving all the material to their students may take time to gradually change the habit. The unpreparedness of lecturers to manage such learning can be overcome by means of training which is then accompanied by a strong willingness to try it. Meanwhile, the unpreparedness of the students can be overcome by providing guidance that includes clear work methods, guidance on explorable sources, descriptions of expected outcomes, evaluation systems, etc. Another obstacle is time. Cooperative learning strategies require a long and flexible time, although for certain topics the time required may be twice face-to-face plus activities outside of school hours.

Apart from its weaknesses, cooperative learning model has strength in developing student soft skill such as, communication ability, critical thinking, responsible, and cooperation. If weaknesses can be minimized, then the strength of this model will result in the process and learning outcomes that can spur the increase in student potential optimally. Therefore, it is expected that lecturers try to apply cooperative learning model. Lecturers can develop

this model in accordance with the field of study, maybe even from this model the lecturers can develop other models more convincing.

(2). Project Based Learning Method (Project Based Learning)

Project-based learning is individual or group projects and implemented over a period of time, producing a product, whose results will then be displayed or presented. During classroom work with active or student-centered learning approaches using: kontruktivis, problem solving, inquiry, research, integrated studies, knowledge and skills, evaluation, reflection, and others. Two methods he bag (Cooperative and Project Based Learning) consider aspects: Student learning style, Taxonomy of learning, Multiple intelligence.

PBL (Project Based Learning) is a learning method that uses problems as a first step in collecting and integrating new knowledge based on experience in real activity. PBLs are designed to be used on complex issues that students need to investigate and understand. Here is the definition of PBL according to some experts. PBL is a systematic teaching method that engages learners in complex knowledge and skills learning, authentic questions and product and task design (University of Nottingham, 2003). PBL is a constructive way of learning approach to the deepening of learning with a research-based approach to issues and questions that are weighty, real and relevant to their lives (Barron, B. 1998, Wikipedia) .c. PBL is a comprehensive approach to teaching and learning designed to enable students to research real problems. (Blumenfeld et al., 1991) .d. PBL is a constructive way of learning to use problems as a stimulus and focuses on the activities of learners. This method is compatible with the concept of educational engineering innovation, especially in the following areas: (1). Learners acquire basic sciences useful to solve the problem of the field of engineering it encounters, (2). learners are actively and self-directed with an integrated material presentation that is relevant to actual reality, often called student-centered, (3). students are able to think critically, and develop initiative. There are three general categories of project implementation for the learner: developing skills, researching problems and creating solutions. Creativity of a project fosters individual growth. Based on research results that PBL provides cognitive and motivational skills that result in improved learning and the ability to better maintain / apply knowledge. In the PBL model the learner is involved in solving the assigned problem, allowing the learner to actively build and organize his learning, and can make the student realistic. This approach refers to the following: a. Curriculum: PBL is not like in traditional curriculum, because it requires a target strategy in which the project as center.b. Responsibility: The PBL emphasizes the responsibility and answerability of learners to themselves and their role models. c. Realism: student activities are focused on jobs

similar to the actual situation. This activity integrates authentic tasks and generates a professional attitude. Active-learning: fosters issues that culminate in the question and the learner's desire to find relevant answers, thereby establishing an independent learning process. Feedback: discussions, presentations, and evaluations of learners generate valuable feedback. This leads to experiential learning. General Skills: PBLs are developed not only in basic skills and knowledge but also have a major influence on fundamental skills such as problem solving, teamwork, and self-management. Driving Questions: PBLs are focused on the questions or issues that trigger the learner to do the problem with the appropriate concepts, principles and knowledge. Constructive Investigations: as the focal point, the project must be tailored to the learner's knowledge. Autonomy: the project makes student activity very important.

1. Organize groups and create a comfortable atmosphere.

2. Ensure that before beginning each group has a member in charge of reading the material, while his friends listen, and a member in charge of recording important information throughout the course of the discussion.

3. Provide material or information at the right time, in accordance with the group's development.

4. Ensure that each group discussion session concludes with self-evaluation.

5. Keep the group focused on achieving goals.

6. Monitor the course of the discussion and make notes on the various problems that arise in the learning process, and keep the learning process going on, so that no stages in the learning process are skipped or ignored and that each stage is done in the right order.

7. Maintain student motivation by maintaining an element of challenge in the completion of tasks and also provide direction to encourage learners out of trouble.

8. Guiding the learner's learning process by asking the right questions at the right time. This question should be an open question that encourages learners to seek a deeper understanding of concepts, ideas, explanations, points of view, and so on.

9. Evaluate the learning activities of the learners, including their participation in the group process. Teachers need to ensure that each learner is involved in the group process and shares thoughts and views.

10. Evaluate the implementation of the PBL that has been done.

The approach of project-based learning is also supported constructivist learning theory. Constructivism is a broadly supported learning theory that rests on the idea that students build their own knowledge within the context of their own experiences. The Project Based Learning Approach can be viewed as one of the approaches to creating a learning environment that can encourage students to

construct their personal knowledge and skills. When this project approach is conducted in a collaborative learning mode in small groups of students, this approach also receives theoretical support derived from Vygotsky's social constructivism that provides the foundation for cognitive development through increased intensity of interpersonal interaction (Moore, 1999). The possibility of conveying ideas, listening to other people's ideas, and reflecting on one's own ideas on others' ideas, is a form of individual empowerment experience. Interactive process with colleagues it helps the process of knowledge construction (meaning-making process). In this view social transactions play a very important role in the formation of cognition. The process of interpersonal cognitive negotiation as a form of proposing ideas, debates, and accepting or rejecting during interaction with peers allows the expansion and refinement of knowledge and skills. From this theoretical perspective, this project-based learning approach provides an alternative to an authentic learning environment in which learners can help enable students to improve their skills in work and collaborative problem solving. As a new learning approach, Potential Project Based Learning has been successful in improving learning practices in education (Thomas, et. al 1999).

A project-based learning approach has great potential to create an exciting and meaningful learning experience for adult learners to enter the workforce. According to Thomas, (2000) experience, in project-based learning that is applied to develop the competence of the company's workers, trainees become more active in their learning, and many workplace skills are built on projects in their classes, such as team-building skills, making cooperative decisions, group problem solving, and team management. These skills are of great value in the workplace and are skills that are difficult to teach through traditional learning. The results of the US Department of Education (ED) study showed the same thing. The results of cross-regional studies show that the tasks that are carried out in the form of activities that are challenging and impressive on the learners themselves have a positive influence on the motivation, understanding, and performance of learners. The potential of project-based learning effectiveness is also supported by collaborative learning research findings that are proven to improve academic achievement, higher-order thinking and better critical thinking skills, the ability to view the situation from a better perspective, a deep understanding of learning materials , more positive toward the field of study, more positive and supportive relationships with peers, and increasing motivation to learn (Thomas, 2000; Johnson, Johnson, & Stanne, 2000).

Project-based learning is an innovative learning model or approach, which emphasizes contextual learning through complex activities. The focus of learning lies in the concepts and core

principles of a study discipline, involving learners in problem-solving investigations and the activities of other meaningful tasks, allowing learners to work autonomously constructing their own knowledge, and reaching the peak of producing real products (Thomas, 2000). It usually takes several stages and some duration, not just a series of classroom meetings, as well as collaborative group learning. The project focuses on product development or performance, which generally learners do activities: organize their group learning activities, conduct research or research, solve problems, and synthesize information. Projects are often interdisciplinary.

For example, a project designing a draft for building structures (construction of a particular building) involves learners in the activities of investigating environmental influences, preparing documents of development process, and developing worksheets, which will include the use of concepts and skills depicted from mathematics, drafting and / or design courses , environmental and occupational health, and possibly trade in materials and buildings. Project-Based Learning has tremendous potential to create a more engaging and meaningful learning experience for adult learners, such as students, whether they are studying in college or transitional training to enter employment. In Project-Based Learning, learners become more actively encouraged in their learning, instructors are positioned behind and learners take the initiative, instructors facilitate and evaluate projects both meaningful and applicable for their day-to-day lives.

Not all active learning activities and involving projects can be called Project-Based Learning. Starting with the question "what should the project have to be classified as Project Based Learning," and the uniqueness of Project Based Learning found in a number of letters and research results, Thomas (2000) sets out five criteria whether a project-oriented lesson is included as a Project-Based Learning. Projects in Project-Based Learning are central or core curricula, not a curriculum supplement. In Project-Based Learning, the project is a learning strategy; learners experience and learn the core concepts of a discipline through the project (Blumenfeld et al. 1991). There are project works that follow traditional learning by means of which the project provides illustrations, examples, additional practices, or previously taught practice applications for other purposes. However, according to the above criteria, the project application can not be categorized as Project Based Learning.

Projects in Project-Based Learning are focused on questions or problems, which encourage learners to undergo (by hard work) the core concepts and principles or subject matter of the discipline. This criterion is very subtle and rather difficult to touch. The project definition (for learners) should be made in such a way as to establish a relationship between activity and conceptual knowledge that is expected to develop into a wider and deeper. Usually

done with the filing of questions or ill-defined problems (Thomas, 2000). Projects in Project-Based Learning may be built around thematic units, or the intersection of topics from two or more disciplines, but that is not entirely a project.

The project involves learners in constructive investigations. Investigations may be design processes, decision-making, problem-solving, problem solving, discovery, or model building processes. However, in order to be called a project meeting the criteria of Project-Based Learning, the core activity of the project should include the transformation and construction of knowledge (with the understanding of: new understanding, or new skills) on the part of the learners (Bereiter & Scardamalia, 1999). If the center or core of the project activity does not present the "difficulty level" for the child, or it can be done with the application of information or skills that are readily studied, the project in question is nothing more than an exercise, and not a Project-Based Learning project in question. Cleaning laboratory equipment may be a project, but may not be a project in Project Based Learning as proposed.

Project encourages learners to a significant degree. Projects in Project Based Learning are not teacher creations, written in manuscripts, or bundled. Laboratory exercises are not an example of Project-Based Learning unless they focus on the problem and are at the core of the curriculum. Projects in Project-Based Learning do not end with predetermined results or retrieve predefined paths (procedures). Project Project is realistic. Characteristics of the project to give to the learners punctuality. These characteristics may include topics, tasks, roles played by learners, the context in which project work is carried out, collaborators working with learners in projects, products produced, audiences for project products, or criteria in which products or performance are assessed. Project-Based Learning involves real-life challenges, focusing on authentic (not simulative) questions or problems, and the solution is potentially applicable in the real field. Project-based learning can be revolutionary in the issue of learning reform. Projects can change the nature of the relationship between teachers and learners. Projects can reduce competition in the classroom and lead learners more collaboratively than individual work (Moore, 1999). Projects can also shift the focus of learning from fact recall to exploration of ideas.

METHOD OF LEARNING QUALITY DEVELOPMENT

Based on background, problem formulation, objective of teaching method development, theoretical review, this chapter will explain the method of development of strategy implementation of learning of course Information System course. These explanations include (a) Learning methods, (b) Teaching and Learning Activity Plans, (c). Assessment Systems, (d) Evaluation of Results.

Learning Methods

Learning method that will be implemented using two methods namely coorporative learning and Problem-based Learning. In detail the implementation of the proposed learning method includes:

1. Tutorial Activity (lectures) conducted during face to face (3 SKS) to explain the basics of Management Information System

2. Cooperative Learning: a) Orientation: The lecturer communicates the objectives, materials, time, steps and expected final results mastered by the students, as well as the assessment system. In this step the student is given the opportunity to express his opinion on anything, including the workings and expected outcomes or the scoring system. b) Group work. At this stage students do group work as the core of learning activities. Group work can be in the form of problem-solving activities, or understand and apply a learned concept. Group work can be done in various ways such as discussing, doing ekslporasi, observation, experiment, browsing via the Internet, and so forth. Time for group work is tailored to the breadth and depth of the material to be worked on. c) Quiz. At the end of the group activities expected all students have been able to understand the concepts / topics / issues that have been studied together. Then each student answers a test or quiz to find out their understanding of the concept / topic / problem being studied. d) Group awards. This step is intended to reward groups who successfully gain scores in individual tests. e) Evaluation, evaluation of learning done at the beginning of the lesson as prates, during learning, as well as student learning outcomes both individuals and groups. While the evaluation procedure: 1. Individual assessment is an evaluation of the level of student understanding of the material under study, covering the cognitive, affective, and skill areas. 2. The group assessment includes various indicators of group success such as, cohesiveness, decision-making, cooperation, etc. Assessment criteria can be mutually agreed upon at the time of orientation.

3. Project-based learning, in this case is based on an analysis of the problems that the company faced in each chapter. After students learn the basic theories and concepts, students who have been formed in groups are required to work on several projects based on existing cases. For example how to design the web used to market a company's product, How to make decision support system, and analyze its strategic aspect. Thus the students work real, as if there is in the real world that can produce the product realistically. The underlying principle is that with this complex activity, most of the learning processes that occur are not well structured. The alternative use of PBL is something quite different. From experience there are two dimensions to classifying PBL alternatives: 1) key task completion and learning lessons, 2) project management and skill learning in general. The activities of the teachers and students vary depending on the degree of control given to the learners in both dimensions.

Teaching Syllabus and Schedule

Learning Activity Plan

The Management Information System course has a well-structured syllabi. This Silabi has been implemented for several years, and revised or up date is done in January 2008. In addition, the learning process activities have been compiled in a complete learning activity plan (RKBM).

Evaluation of Learning

In relation to the problem formulation in the previous chapter, evaluation of the learning process will be done by:

1. Evaluate each task given both group assignments and independent tasks. The results of this evaluation can be used as an indicator to measure the increase in student spirit in the learning process.

2. Evaluate the results of cooperative learning with indicators of outcomes and participation in each group task

3. Evaluating project outcomes and dissemination, dissemination process, student activeness, and quality and accuracy of student analysis in providing solutions to various problems or existing cases.

4. Evaluation of theory and application theory related to Management Information System materials

5. The final grade will be determined based on the lecturer's assessment of student performance in the three activities mentioned above. In particular the components of value and contribution are as follows:

Table 1. Distribution of Assessment

❑ Mid Semester Evaluation 40%	
	15%
❑ Group Duties	10%
❑ Individual Assigment	15%
❑ Activity (participation)	60%
❑ Mid Term Exam	
❑ Final Semester Evaluation 60%	
	10%
❑ Group Assigment	15%
❑ Project	15%
❑ Dissemination of project report	60%
❑ Final Exam	

Performance Indicators

The success of this course's grant program is measured by various indicators (MIS Syllabus, 2017):1. Settling syllabus of Management Information System with cooperative learning learning pattern and project based learning 2. The

existence of SIM module that can be used by students as one of learning source.3. Project Task SIM can be a material collection of corporate cases in Indonesia.4. The student's response to lunar duration increased, as measured by the student's average score of B being increased or getting score A.

EVALUATION OF IMPLEMENTATION

In the evaluation of the implementation of learning methods with two methods: participatory discussion and documentary analysis techniques, data processed using SPSS release program 14. Refer to the formulation of the problem in chapter one, before describing the findings of the relationship between variables first displayed variable description in the mean (means) Theory Value, Participatory Discussion, Project-Based, and Final Exam. Therefore, the evaluation stage of the application is presented as follows: (1) Descriptive Variable Classroom Action Research (2) Correlation between classroom action research variables, (3) Evaluation of implementation. Here is an explanation of each stage. .

Descriptive Statistics

In the formulation of the problems presented in chapter one can be drawn a few things in the learning method with the technique of participatory distribution and project-based learning. The application of this method is actually also a classroom action research that includes several variables such as: Theory Value, Cooperative Learning, Project-Based Analysis, Final Exam. By using SPSS program release 12 results of descriptive processing of research variables can be displayed in the following Tables.

Distribution Score for Theory

Table 3 below shows in greater detail the distribution of theoretical mastery grades after being categorized into five groups. The majority of students still scored less and did not pass the mastery of theory, with a cumulative percentage of 48.6%. Twenty-four point eight percent included in the sufficient category and about 20% are good in theoretical mastery. While very few are included in the special category, which is only 7 of 109 people or about 6.4 percent.

Table 3
Distribution Score for Theory

	Frequency	Percetage
E: Failed	19	17.4
D: Low	34	31.2
C: Moderate	27	24.8
B: Good	22	20.2
A: Excelence	7	6.4
Total	109	100

Score for Participative Discussion

Furthermore, for the illustration in the mastery of student theory it seems quite different from the value of participatory discussion, see table 5. The majority of students get special grades (35.8%), and Good (32.1%), indicating that participatory discussion methods are very helpful to students in the learning process. Only seven students failed to learn by this method. This is caused by students' mistakes such as the lack of role during the cooperative learning process. Fifteen students (13.8%) were included in the 'less' grade category, and thirteen students scored enough (11.9%).

Table 4 Distribution Score for Participative Discussion

	Frequency	Percetage
E: Failed	7	6.4
D: Low	15	13.8
C: Moderate	13	11.9
B: Good	35	32.1
A: Excelence	39	35.8
Total	109	100

Distribution Score for Project-Based Learning

For the category of Problem-based scores are summarized in Table 6 below. The phenomenon in this case is similar to the method of participatory discussion, and it may be said that the results achieved are better than the results of participatory discussions. Only one student failed project-based and 10 students scored less. The majority of students (57 out of 109 students, 52.3%) received special grades, and 37 students (33.9%), indicated that documentary analysis methods also greatly assisted students in the learning process. In addition, project-based learning also helps students in writing final assignment papers especially those related to Information Systems Management and Information Technology Management.

Tabel 5 Distribution Score for Project-Based Learning

	Frequency	Percetage
E: Failed	1	9
D: Low	10	9.5
C: Moderate	4	3.7
B: Good	37	33.9
A: Excelence	57	52.3
Total	109	100

Distribution Score for Final Exam

For the preparation of satisfactory Final Exam, see table 6. More than fifty percent of students get satisfactory grades (49.5%) and 18.3% are exceptional. This is because the students have obtained supplies from theory, cooperative learning, and project-based learning. Students have also learned from real cases in small, medium and large companies. Only 3 students failed in final assignment score, and 14 received less satisfactory score.

Table 6
Distribution Score for Final Exam

	Frequency	Percetage
E: Failed	3	2.8
D: Low	14	12.8
C: Moderate	18	16.5
B: Good	54	49.5
A: Excelence	20	18.3
Total	109	100

Final Score

Overall learning methods that emphasize cooperative learning and project-based learning produce the final outpot in Table 7 below. Only one student (0.9%) did not graduate, while seven people scored less (6.4%). This indicates that students who fail through this learning method is under 10%. Meanwhile more than sixty per cent of the total students were successful with 59.6% of Goods and 7.3 per cent getting special grades. The general conclusion that can be drawn from this phenomenon is that the cooperative learning and project-based learning proved to be very helpful for students in the process of teaching and learning of Business Management Information Systems courses.

Table 7 Final Score

	Frequency	Percetage
E: Failed	1	0.9
D: Low	7	6.4
C: Moderate	28	25.7
B: Good	65	59.6
A: Excelence	8	7.3
Total	109	100

Correlation between Score of Theory, Cooperative Learning, Project-Based Learning, and Final Values

In Table 8. The following shows the correlation between the value of theory, cooperative learning and project-based learning, and the final grade achieved by students in the course of Management Information Systems. The results of the practice of learning methods with cooperative learning and project-based learning indicate that:

1. Score of theory correlates with liveliness in cooperative learning. Students who master the theory better will be more active in cooperative learning.
2. Theorizing of the theory is positively correlated with documentary analysis. The better the score of the theory the better the ability of students in doing project-based learning.
3. Score of theory does not correlate with student ability in Final Exam Score.
4. Cooperative learning is positively correlated with project-based learning.
5. Cooperative learning is positively correlated with the student's ability in the Final Exam Score.
6. Project-based learning positively correlates with the ability of students to complete the final exam. This provides evidence that the implementation of Project-based learning can improve the quality of the preparation of research proposals. Furthermore, this also indicates that the mastery of the material with the method of documentary analysis is said to be good.
7. Score of theory, Cooperative learning, Project-based learning positively correlated with final grade. The most powerful correlation is in Project-based learning and followed by Cooperative learning.

Tabel 8 Correlation between Score of Theory, Cooperative Learning, Project-Based Learning, and Final Values

	Nilai teori UTS Theory-Mid Term	Cooperative learning	Project-based	Theory-Final Exam	Final Grade
Theory-Mid Term	1 .000 109	.388** .000 109	.344** .000 109	.179 .063 109	.670** .000 109
Cooperative learning	.388** .000 109	1 .000 109	.433** .000 109	.337** .000 .109	.763** .000 109
Project-based	.344** .000 .109	.433** .000 109	1 .000 109	.235* .014 109	.748** .000 109
Theory-Final Exam	.179 .000 .109	.337** .000 .109	.235* .000 .109	1 .000 109	.616** .000 .109
Final Grade	.670** .000 .109	.763** .000 .109	.748** .000 .109	.616** .000 .109	1 .000 109
** Korelasi signifikan pada level 0.01 * Korrelasi signifikan pada level 0.05					

Evaluation of Learning Methods

Learning method with cooperative learning and project-based learning, has been implemented for one semester. The evaluation results for one semester of implementation can be summarized in Table 9 below. This assessment was taken from 2 classes, and involved 109 students who were evaluated. From the results of the application of participatory discussion methodology and documentary analysis it was found that:

1. The average score for the lowest semester student examination (55.17) when compared with cooperative learning learning method (70.78), project-based learning (76.16), and final exam semester (68.47). From these results indicate no significant differences in student achievement in both cooperative learning and project-based learning. Mastery of theory is relatively low, just reaching the lowest limit of "Enough" value. Meanwhile, the students' ability in solving the theory problem in UAS "is good enough".

2. The lowest score of students in mastering theory is 10, in cooperative learning is 30, in project-based learning is 27, theoretical value in UAS 40 and the final value of 40.

3. The highest score achieved by the students in theory mastering is 92, in cooperative learning 92, in project-based learning 89, in UAS 80. The highest end value is 85.40. There is no meaningful difference for the highest score achieved by students for the highest achieved by students in theory mastery of 92, in cooperative learning, project-based learning, project-based learning, in the UAS and the final value.

4. Range or range for theory mastery of 82, cooperative learning and project-based learning 62, UAS 40, and final value 45. The enormous range in mastery theory shows the magnitude of the mastery gap student theory. The smallest range is in the UAS, which indicates that the students' gap capability in theory mastery at UAS is not as large in the mastery of theory during UTS, cooperative learning and project-based learning.

Tabel 9 Score of Theory, *Cooperative Learning, Project-Based Learning*, and Final Score

	Mid Term	Cooperative Learning	Project-Based Learning	Final Exam	Final Score
N Valid	109	109	109	109	109
Missing	0	0	0	0	0
Mean	55.17	70.78	76.11	68.47	68.56
Median	56	77	80	70	70.60
Dev. Std.	15.197	15.360	12.089	10392	9.010
Range	82	62	62	40	45.40
Minimum	10	30	27	40	40
Maximum	92	92	89	80	85.40

The results of this study indicate that students will have better skills if working together using discussion methods and corporative learning. The number of study groups formed with 5 people per group member is intended to avoid student dependence on other students who have higher ability. This small group was formed to improve the responsibilities and roles of students in every learning process activity. UAS value indicator is done individually because of the mastery of theory, cooperative learning and project-based learning of students have been considered to get sufficient supplies and able in preparing research proposals.

1. Cooperative learning can improve students' learning spirit. It is also encouraged by the appraisal system applied that is based on the activity of students either individually or in groups.

2. Students have a fairly good level of seriousness that can be measured with the average achievement of cooperative learning value is 70.16.

It also indicates that cooperative learning is enough to assist students in mastering the material.

CONCLUSION

Lecture activities Management Information in Universities, especially in Management Studies Program, Faculty of Business Unika Widya Mandala Surabaya, is one form of adult education. The main purpose of this education is to help each student as an adult to develop themselves through education, precisely the process of learning. Teaching and learning activities of adult education place students as adults not just "passive recipients" but rather as individuals who play an active role.

As an adult education method of learning methodology lectures research refers to the concept of Constructivist or Constructivist Theories of Learning. A learning model that prioritizes students actively builds their own learning independently and transfers complex information. In this case, lecturers provide students opportunities in the process of learning and dissemination of sustainable, oriented to

cooperative learning. Learning with discussion method of cooperative learning and project-based learning r with the ultimate goal of students able to prepare a proposal properly and true is the embodiment of learning methods based on the concept of Constructivist or Constructivist Theories of Learning.

The successful implementation of the cooperative learning and project-based learning method in order to achieve the learning objective of study methodology lecture is firstly supported by various materials or materials as follows: (1). Availability of Work Plan (RKBM) Management Information System Course, one semester activity, 3 credits weight. (2). Availability of Hand Out Courses Research Methodology (3). Availability of Student Case Collection with designing of cooperative learning and project-based learning (4). Student learning contract book (5). Individual task formatting format. In addition, all of the things that are composed with the main tasks and functions of class leaders, representatives and head of the group.

For some suggestions in the development of further learning methods based on several findings are: (1). Needed to be added case use as reference learning Management Information System. (2). A project-based format should be developed that discloses links between chapters and if it is clear that it is compiled; (3). In the final value of materials Management Information Systems are given a standard portion so that mahaisiswa seriously apply between theory and practice.

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