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E-MODULE COMPUTER ACCOUNTING BASED PROJECT BASED LEARNING

[1]Annisa Fatimah, [2]Rika Wijayanti, [3]Marlina Magdalena
[1,2,3] Politeknik Negeri Malang

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ABSTRACT

In the implementation of the teaching and learning process, educators have a number of alternative methods for knowledge transfer. Selected media and methods are used as tools for educators to be able to convey the material correctly, which is coherent, easy to understand, and also clearly conveyed. This study aims to design and conceptualize online learning to support lectures with a project approach. The Blended Method using the Learning Management System (LMS) developed by the State Polytechnic of Malang (Polinema) is integrated with the Project Based Learning (PjBL) approach which is relevant because it take advantage of the online teaching system for students who have native digital skills. Because it is based on digital applications, LMS also makes it easier for students to access all learning content from anywhere and anytime. The Blended Method of LMS and PjBL is a combination of learning methods of exploration, interpretation, and synthesis to produce a product that strives to meet adaptive characteristics with the times. Through qualitative research methods, it is hoped that the results of this study can describe the implementation of the LMS and PjBL blended methods that meet the characteristics of self-contained, stand alone, self-instructional where students can study comprehensive learning resources independently, both with and without lecturer guidance. In addition, user-friendliness is one of the important characteristics that must be met so that learning media must be easy to understand, use, and use as widely as possible. This model does not only focus on value as the end result, but emphasizes how a team can solve the problem and finally produce a product. This approach allows students to gain invaluable experience by actively participating in working on their projects.

E- mail :
annisa.fatimah2019@gmail.com,
rikawijayanti.aksa@gmail.com,
magdanana14@gmail.com.

1. INTRODUCTION

One of the competency units in the Indonesian National Work Competency Standard (SKKNI) is that it can operate accounting computer applications in accordance with the procedures set at the company (Suharyono & Widodo, 2017). Computerized accounting is an accounting system assisted by computer technology to run applications used in processing accounting transactions and at the same time to produce financial statements. *The main output* of this accounting computer is that accountants can provide accurate and timely information as a consideration of strategic management decisions. In addition, through computer accounting, *human error* can be minimized because the level of computer accuracy is higher. The competency unit for computer accounting applications based on SKKNI consists of 5 competency elements, namely: preparing initial company data, compiling the initial setup of the company to input the initial balance, making transaction *entries*, printing financial statements / other reports and making *backup* files.

The potential vacancies of accounting students are still wide open even though fast-growing information technology is ready to take over human capabilities. In fact, the official page (Ma'soem University, 2020) states that many jobs will not be replaced by any technology, one of which is computerized accounting students. The reason for this is partly because accounting is the backbone of the company as a provider of company financial data in a certain period. The data is used by management as a material for strategic considerations, especially not all company owners understand accounting so that competent human resources in accounting computers are needed to operate accounting *software*. The trend of *startups* in the field of *financial technology* (fintech) is also growing, even in Indonesia it is experiencing an increase of 39% and is expected to increase (Ma'soem University, 2020).

Seeing this opportunity, accounting competence, especially in the field of computer accounting,

should be one of the focuses of development for accounting education providers. However, since the emergence of the Covid-19 pandemic in Indonesia at the end of 2019. The government provides policies to impose restrictions on social, economic, religious activities including lecture activities (Ulfa & Mikdar, 2020). Covid-19 has also drastically changed the learning model, all learning activities are carried out online from elementary school to university levels (Pratiwi, 2020). Based on the Circular Letter of the Minister of Education Number 03 of 2020 concerning the Prevention of Corona Virus Disease (Covid-l9) in the education unit states that to break the chain of spread of COVID-19, learning activities are carried out *online* for all levels of education (Kemendikbud, 2020). According to (Simanihuruk et al., 2019) pembelajaran secara *online* memadukan teknologi dengan berbagai terapan praktis dan dengan easy access to learning resources, to teachers and to fellow learners via the internet. *Online* learning makes it easier for both parties because the teaching materials are delivered online and web-based learning can be done.

Description of theoretical studies and the results of previous research such as (Aji, 2020; Pratiwi, 2020) and (Ulfa & Mikdar, 2020) showsthat C ovid-19 has both positive and negative impacts on learning, social and health behaviors. Mahasiswa is becoming more adaptive, namely recognizing technology that can support learning outcomes, increasing social interaction through online communication and increasing the application of a healthy lifestyle. However, the pandemic has also provided some endalain the implementation of online learning, for example the problem of unsupportive internet connection (Pratiwi, 2020), declining skills (Aji, 2020), Still not familiar with educators and students in applying supporting applications (Abidin et al., 2020), and (Hasanah et al., 2020) mentioned the majority of psychological problems experienced by students in the online learning process, namely anxiety. (Ridhuan, 2021) Proposing the strengthening of *original thinking*, considers it very important for everyone to pave the way to success and innovation, but leading students to think originally and creatively in doing assignments during online learning, requires a motivation in completing the task.

This research departs from the phenomenon of preliminary research results that provide evidence that the results of the teaching and learning process are not optimal in computer accounting courses that occur during the pandemic (Ashari & Nugrahanti, 2021; Gusnan, 2021). Students should have maximum mastery of computer accounting and practice. According to (Pujiati, 2016) Accounting is a field of science that is not enough to only be studied in terms of theory, but if it is done through real accounting practice, it is certainly easier to understand. Basic accounting provides students with manual knowledge and skills about the accounting cycle both manually and by using certain application programs through accounting computers. This is why the computer accounting course is continuous with the previous course, such as introduction to accounting (Yuliana & Listiadi, 2021), akuntansi keuangan menengah, serta akuntansi biaya dan akuntansi manajemen yang memberikan pengetahuan dasar yang harus dimiliki mahasiswa jurusan akuntansi.

(Afichamala & Hariyanto, 2021) also added that accounting is designed to allow students to practice both skills and theories, information systems, research methods, and ethics in the field of accounting simultaneously. For this reason, studying accounting requires accuracy, perseverance, critical and rational thinking, and being good at analyzing in order to solve problems. Therefore, if *knowledge transfer* only relies on *online* learning , it is not easy. The issues mentioned above should be considered in the implementation of the teaching and learning process during lectures (Pujiati, 2016). Tenaga pendidik harus memiliki beberapa pilihan metode untuk proses *knowledge transfer*. Media and the selected method is used as a tool for educators to be able to deliver the material appropriately, namely in order, easy to understand, and also clearly conveyed.

From this background, the *Project Based Learning* (PjBL) method integrated through the E-Module will be interesting to implement. This study aims to design and conceptualize online learning support through lecture e-modules with a project approach. *Blended Method* using the *Learning Management System* (LMS) developed by the State Polytechnic of Malang (Polinema) integrated with the PjBL approach is very relevant because it can take advantage of an online teaching system for students who have *digital native* skills. Because it is based on digital applications, LMS also makes it easier for students to access all learning content from anywhere and anytime. *Blended Method* LMS and PjBL is a combination of learning methods of exploration, interpretation, synthesis to produce products that are sought to meet adaptive characteristics with the times.

The preparation of the learning design should be sought to have *self-contained* characteristics where the content of the module includes all learning materials. The learning module is a summary of learning materials given to students to be studied independently. The systematics that have been determined can be used as a handle by lecturers and students. The next characteristic is stand alone so that it can be used as a source of learning that can stand *alone* and *self-instructional* where students can carry out learning activities independently, both with and without the guidance of lecturers. Through the use of this module, students can still learn even if the lecturer in the course cannot fill the class for one reason or another so that learning activities can still run. When compiling learning methods, *user friendly* is one of the important characteristics that must be fulfilled so that learning media must be easy to understand, use, and use as widely as possible. After that, this method has been attempted to meet

adaptive characteristics with the development of the times.

The LMS developed by Polinema is a software designed to create, distribute, and organize the delivery of learning content, one of which is the learning module described earlier. This system is considered very helpful for lecturers to plan and make Semester Learning Plans (RPS), manage learning materials, manage student learning activities, manage grades, recapitulate student attendance, and manage *the display of e-learning*. Because it is based on a digital application, LMS also makes it easier for students to access all learning content from anywhere and anytime.

When the LMS is integrated with the PjBL method, it is hoped that it will not only focus on the final result to provide opportunities for students to deepen their knowledge as well as develop skills through *problem solving* activities and analysis of observation results to the creation of products/services. This method is expected to provide challenges for students related to problems to be solved in groups. This approach allows students to gain invaluable experience by actively participating in the work on their projects.

The results of this study can add references to the study of project-based models in online learning. In addition, the results of this study can open up further research opportunities related to the effectiveness of this learning model on student competencies. In addition, the results of this study can be considered for educational institutions, and lecturers in creating a project base model for online learning. Through these results, an integrated learning system can be developed during the pandemic that accommodates technical competency requirements in order to participate in educating the public towards improving the quality of

2. METHODS

This type of research is descriptive research with a qualitatif approach because it seeks to understand the condition of a context by leading to a detailed and in-depth description of the portrait of the condition in a natural context (*natural setting*), about what actually happens according to what is in the field of study based on the opinion of (Ashari et al., 2010). Based on (Widayati, 2008; Prihantoro & Hidayat, 2019) itwas conducted as *Classroom Action Research* (PTK) using the Stephen Kemmis and Robyn McTaggart model which focused on efforts to change the current real conditions towards the expected conditions.

The results of this study are expectedto describe the process over time in a natural situation without the researcher's engineering, and can uncover a reasonable relationship between the researcher and the informant. It is possible to carry out inductive analysis oriented towards exploration, discovery and inductive logic, to find theories that are sourced to patterns and realities that actually occur. In addition, it is alsopossible to describe human behavior in a natural context, namely the context of complete roundness.

This research was conducted in 4 classes of Computer Accounting (5th semester students), namely in class 3A and 3C of the D3 Accounting study program and classes 3H and 3E in the D4 Management Accounting study program.

Data collection is one of the important stages in research so it must be done precisely and carefully in order to produce data that has high credibility. As previously explained, the data in this study is all information, both oral and written, it can even be in the form of pictures or photos, which contribute to answering research problems as stated in the formulation of the problem or the focus of this research. In this study, data collection techniques were used.

The research data used is in the form of observations / observations on the online learningprocess through *participant observations* with direct observation to the field and researchers and data participants / subjects participate in the activities studied or that are being observed by the researcher so that the data obtained is more comprehensive, focused and can be more in-depth and even does not rule out the possibility of being able to know at the level of meaning of each behavior the apparent. This technique is used to collect data, for example, observing learning activities and student behavior as informants, observing their geographical location and existing infrastructure in the informant's place of study before and during the pandemic.

This research is a Class Action Research (PTK) using the Stephen Kemmis and Robyn McTaggart model which consists of four stages: planning (*plan*), action (*act*), observation (*observe*), and reflection (*reflect*). Planning is in the form of all things that will be implemented at the action stage. According to (Prihantoro & Hidayat, 2019) At this stage of the action, it is carried out as well as observing the results of the new action obtained research data. The data is analyzed through the reflection stage to ascertain whether the research goals and results have been achieved "perfectly" or not. Researchers can carry out a cycle or second round starting from planning to reflection again if at the previous reflection stage the researcher has not been able to validate the achievement of the research goals and results. Here is the cycle carried out on this study:

1. Planning (*Plan*)
2. *Action and Observation*
3. *Reflection*
4. *Revised Plan*

3. RESULTS AND DISCUSSION

1. Preparation of PjBL Design

To compile the e-module, several considerations are carried out based on (Zahara, 2021), among them: 1) Formulation of basic competencies that must be mastered; 2) Determination of assessment methods; 3) Preparation of materials; 4) The order of delivery of teaching materials; 5) Structure of teaching materials (e-modules). After that, the development of the PTK model that has been carried out for this research is as follows:

Finding the initial idea of applying PTK is how to meet learning outcomes for computer accounting courses in class.

The preparation of the PjBL e-module should not be separated from the learning objectives that must be achieved. Based on the Learning Outcomes of Study Program Graduates (CPL-PRODI) charged in this course, students should be able to internalize academic values, norms, and ethics in order to contribute to improving the quality of life in society, nation, state, and the advancement of civilization based on Pancasila. For this reason, students must be able to cooperate and have social sensitivity and concern for the community and the environment. When students can internalize the spirit of independence, struggle, and entrepreneurship, students can show an attitude of responsibility for work in their field of expertise using logical, critical, systematic, and innovative thinking and can make decisions appropriately in the context of solving problems in their field of expertise, based on the results of information and data analysis.

Conducting a pre-survey is to know in detail the condition of the class to be studied. Before a problem is established/formulated, several questions such as below are identified as answers:

1. Is the student's initial competence sufficient?

The curriculum of the Polinema Accounting Department provides prerequisites for students' initial competence to take accounting computer lectures. Computer accounting courses are given in Semester 5 where prerequisite courses after passing include Introduction to Accounting 1, Introduction to Accounting 2, Intermediate Financial Accounting 1, Intermediate Financial Accounting 2, Cost Accounting, and Accounting Information Systems. Based on these data, it can be concluded that the initial competence of students is sufficient to take the course.

2. Is the learning process from the previous year's experience effective enough?

Based on observations made by researchers, the experience of previous years has achieved several competency achievements, including students mastering the working concepts of accounting computer application programs by operating various accounting computer application program facilities in various company fields. But unfortunately some students have not been able to operate accounting computers precisely, they have not been able to integrate knowledge in previous courses such as accounting cycles and information systems. In addition, practical activities are only carried out in a computer laboratory room, limiting the potential of students to actualize their knowledge so far.

As prospective graduates who will go directly to the community, students should be able to present their skills in solving industrial or MSME problems related to the preparation of financial statements and provide consideration for management through managerial analysis from the output of accounting computer applications. One of them is because students cannot imagine real problems in the world of work because they have not been able to do field practice related to the course.

3. Are the learning facilities and learning environment sufficient?

The LMS developed by Polinema is a software designed to create, distribute, and organize the delivery of learning content, one of which is the learning module described earlier. This system is considered very helpful for lecturers to plan and make Semester Learning Plans (RPS), manage learning materials, manage student learning activities, manage grades, recapitulate student attendance, and manage the display of e-modules. Because it is based on a digital application, LMS also makes it easier for students to access all learning content from anywhere and anytime.

The online learning module developed is in the form of a digital practice module (video) by making your own using the help of the Wondershare Filmora software. The video that has been created is then uploaded on Google Drive and then embedded in the Polinema LMS in the Computer Accounting Course. Broadly speaking, the content of the module developed includes 3 main topics, namely compiling Financial

Statements, conducting managerial analysis using MYOB accounting software tools in various versions (Version 19, 13 Premier, and 18ED); Accurate, as well as other software, namely Zahir Accounting.

Analyze that there are problems in the classroom that will determine the design of learning strategies, media used and others related to the teaching and learning process.

(Mayasari et al., 2016) explains clearly that there are many learners in this century who have not yet gained the expected skills which include *life and career* skills, *learning and innovation* skills, and *information media and technology skills*. One of the causes refers to the opinions expressed (Saavedra & Opfer, 2012) that the skills required are cross-disciplinary and relevant to many aspects of contemporary life in a complex world. These skills don't have a specific space in most curricula. It can be seen from the current learning process involving aspects of skills and understanding but many emphasize tendencies such as curiosity, creativity, and collaboration that are not really skills. Educators who realize the importance of such skills will definitely seek to equip students who are packaged in a learning model. Learning models that can answer these challenges, one of which is PjBL (Mayasari et al., 2016; Nurhayati & Harianti, 2019; Slough & Milam, 2013).

Pada model PjBL di mata kuliah komputer akuntansi ini mahasiswa dihadapkan pada concrete problems such as finding MSMEs around their place of residence and then trying to provide solutions to the preparation of simple financial statements needed (through accounting computers) and working on the project in a team. Thus this learning model makes students not only understand the theory and practice, but also cultivate social skills how they can play a role in society. Because through this project communication skills, resource and time management, research skills, self-assessment and reflection skills, group participation and leadership, and critical thinking are honed in one activity at a time.

Define a specific plan relating to the design of cycles per cycle.

Determining specific plans related to the research cycle is first mapped in the preparation of the RPS. The RPS of the computer accounting course that has been described in **appendix 1** has several expected competency achievements, including students mastering the working concept of the accounting computer application program by operating various accounting computer application program facilities in various company fields. However, to be able to operate properly, they must master the application of information systems and transaction data processing to service companies using computer program applications.

As explained in the previous point, that in addition to course competencies, students are expected to have CPL-PRODI charged in this course including the ability to internalize academic values, norms, and ethics and must be able to cooperate and have social sensitivity and concern for society and the environment. Students should be able to demonstrate survival skills through internalizing their spirit of independence, struggle, and entrepreneurship as well as an attitude of responsibility for work in their field of expertise using logical, critical, systematic, and innovative thinking and be able to make decisions appropriately in the context of solving problems in their field of expertise, based on the results of information and data analysis.

After analyzing some of the data collected during the pre-survey, the scheduled lecture topics were compiled in 16 weeks of learning as follows:

1. The scope and scope of the transaction processing system with the accounting computer application program
   a. Introduction to the accounting computer application program
   b. Comparison of manual accounting and computerized accountants
2. Facilities and working system of MYOB computer application
   a. MYOB Facilities
   b. The principle of working with MYOB
   c. *Initial setup* of the MYOB program
3. Setup MYOB for the first step of business purposes
   a. Company setup file
   b. Prefrences setup
   c. Command centre
   d. Account list
   e. Linked accounts
   f. Tax codes
   g. Job and category list
   h. Card list

i. List items
j. Account opening balances
k. Customer and supplier opening balances
l. Inventory opening balances

4. Accounting process in service and trade companies.
   a. Cash Receipts and Expenditures system uses the *banking* module.
   b. Purchasing and Debt System using *the purchases* module
   c. Sales and receivables system using sales module
   d. Inventory recording system using inventory module
5. Accounting process in service companies (advanced) and trading companies.
   a. The payroll system uses the Payroll *module of* the Memorial Journal and the Adjustment Journal using the general journal.
   b. Recording of recurring transactions.
   c. Bank Reconciliation
6. Financial Statements using *the report* menu
7. Accounting cycle process in Multinational Companies
   a. The Cash Receipts and Expenditures system uses a banking module in Multinational Companies.
   b. The Purchasing and Debt System uses the purchases module in Multinational Companies.
   c. Sales and receivables system using the sales module in multinational companies
   d. Inventory recording system using inventory module in multinational companies
   e. The payroll system uses the Payroll module of the Memorial Journal and the Adjustment Journal using general journals in Multinational Companies.
   f. Recording of recurring transactions.
   g. Bank Reconciliation

- Accounting cycle process in Manufacturing Companies
1. Purchasing system and debt to manufacturing enterprises
2. Production process at manufacturing enterprises
3. The system of sales and receivables at manufacturing enterprises
4. Cash receipt and expenditure system at manufacturing enterprises
5. Memorial journals and end-of-period processes
6. Cost of goods ordered method

- Accurate computer accounting process in service and trade companies.
1. Facilities and working system of Accurate computer applications
2. Accurate setup for the first step of business purposes
3. Cash Receipts and Expenditures System
4. Purchasing and Debt System
5. Sales and receivables system
6. Inventory Recording System
7. Recording System through General Journals
8. Preparation of Financial Statements

- Project Based Learning – Preparation of Financial Statements along with Managerial Analysis Reports using Computer Accounting Applications
1. Object identification
2. Analysis of accounting system design
3. Determining the reference setup
4. Initial setup for the initial steps of business needs in the project case
5. Execute transactions according to the accounting cycle
6. Preparation of Financial Statements along with Managerial Analysis Reports

From the lecture topic, the schedule and learning method are planned. The following is a plan of lecture topics at each week's meeting and the learning methods are broadly outlined:

Table 1 Accounting Computer Lecture Topic Plan

Planned Final Capabilities	(Learning Materials)	Forms and Methods of Learning (Offline/Online)		Student Learning Experience
1. Mastering the working concept of accounting computer application programs. 2. Able to compare between manual accounting and computerized accounting. 5. Understand the role of computerized accounting. 7. Able to operate various facilities of the MYOB accounting computer application program.	The scope and scope of the transaction processing system with the computer application program of accounting.	1. Lectures 3. Q&A and discussion	Video/ e-Module – Polinema LMS Meeting Zoom	1. Describes the concept of work of the accounting computer application program. 4. Compare manual accounting and computerized accounting and then discussthe role of computerized accounting. 6. Defines various facilities MYOB / Accurate / Zahir. 8. Understand the principle of working with MYOB / Accurate / Zahir. 9. Operate the initial setup of the MYOB program.

In the first week, as illustrated in Table 1, the student learning experience is focused on the concept of the scope of the transaction processing system through the application of computer accounting. The criteria and forms of assessment that can be drawn up for this first week's meeting are the accuracy of the explanation of the working concept of the accounting computer application program through structured tasks. Furthermore, for the completeness of the comparison of manual accounting and computerized accounting through the criteria and form of assessment, it is carried out during discussions through zoom meetings and LMS forums. The activeness of providing opinions when discussing the role of computerized accounting through discussion is also included in the assessment but taking into account the accuracy of defining various facilities of accounting computer applications.

Table 2 2 Computer Accounting Lecture Plan Week 2

Planned Final Capabilities (Sub-CP-MK)	Study materials (Learning Materials)	Forms and Methods of Learning		Student Learning Experience
		Offline	Online	
Able to operate and master the application of *setup* as a first step to facilitate the completion of the accounting cycle process.	Setup MYOB for the first step of business purposes	1. Practical Exercises 2. Discussion	Video/ e-Module – Polinema LMS	1. Operate *the company setup file.* 2. Defines the *preferences setup* and *command centre functions.* 3. Operate *the preferences setup.* 4. Operate the *command centre.* 5. Compile a list of accounts. 6. Operate the *account list* menu. 7. Understand how accounts are related to transactions. 8. Operating the *linked account* menu 9. Define and operate *tax codes, job lists, category lists, card lists,* and *item list* functions. 10. Defines the nominal position on the replenishment of the balance

Planned Final Capabilities (Sub-CP-MK)	Study materials (Learning Materials)	Forms and Methods of Learning Offline	Online	Student Learning Experience
				sheet, the helper book of debts and receivables, as well as the inventory card. 11. Operate the menu of account opening balances, customer and supplier opening balances, and *inventory opening balances.*

In week 2 the accuracy of the *operation of the company file* setup, *preferences setup* and *command centre* is assessed through structured tasks. Some of the sub-assessment points are *account list*, *linked accounts*, *tax codes*, job lists, category lists, card lists, and *item lists*, account opening balances, *customer* and supplier opening balances , and *inventory opening balances*. . Full marks are obtained if the operation of the menus is carried out quickly, coherently, and completely.

Table 3 3 Computer Accounting Lecture Plan Week 3

Planned Final Capabilities (Sub-CP-MK)	Study materials (Learning Materials)	Forms and Methods of Learning Offline	Online	Student Learning Experience
Able to operate and master the application of information systems and transaction data processing in simple service companies using computer program applications.	Accounting process at a Service Company.	1. Discussion 2. Practical Exercises	Video/ e-Module – Polinema LMS Zoom Meeting	1. Defines the *Account function of the general journal entry*. 2. Operate various transactions using *the General Journal (Record Journal Entry) module.* 3. Defines the functions of the purchases module. 4. Operate a purchase and debt system using the purchases module. 5. Defines the functions of the sales module. 6. Operate a sales and receivables system using the sales module. 7. Defines the functions of the inventory module. 8. Operate an inventory recording system using the inventory module.

At the 3rd week meeting, students have been able to operate various memorial transactions using the *General Journal (Record Journal Entry)* module, purchases and debts using the *purchases*, sales and receivables modules using the *sales* module, and operating the inventory system using the inventory module. For this reason, the assessment given is related to the process that is carried out in a sequence, complete and fast manner.

Table 4 Computer Accounting Lecture Plan Week 44

Planned Final Capabilities (Sub-CP-MK)	Study materials (Learning Materials)	Forms and Methods of Learning Offline	Online	Student Learning Experience
Able to operate and master the application of information systems and transaction data processing related to	Accounting process in Service Companies (continued)	1. Discussion 1. Practical Exercises	Video/ e-Module – Polinema LMS Zoom Meeting	1. Defines the functions of the *payroll module.* 2. Operate an inventory recording system using the *payroll* module.

Planned Final Capabilities (Sub-CP-MK)	Study materials (Learning Materials)	Forms and Methods of Learning		Student Learning Experience
		Offline	Online	
payroll systems in complex service companies and trading companies using the MYOB computer program application.	and Trading Companies			
Able to operate and master the implementation of the *recurring transaction* menu function.	Recurring transaction logging	3. Discussion 1. Practical Exercises		1. Defines the *recurring transaction* menu function. 2. Operate various transactions using the *recurring transaction menu.*

At the week 4 meeting, the student assessment was on the operation of the inventory system using the *payroll* module and the *recurring transaction* menu was carried out in a sequence, complete and fast manner so that subsequently students could enter the case study and its application into accounting computer practice.

Table 5 Computer Accounting Course Plans Weeks 5-6

Planned Final Capabilities	Study materials (Learning Materials)	Forms and Methods of Learning		Student Learning Experience
		Offline	Online	
Mastering the concept of bank reconciliation and able to operate the *account reconcile* menu on MYOB.	Bank Reconciliation	1. Q&A 2. Practical Exercises	Video/ e-Module – Polinema LMS Zoom Meeting	1. Defines the *function of the reconcile account* menu. 2. Operate the *account reconcile menu.*
Able to provide various financial reports using the *report menu.*	Financial Statements using *the report* menu	1. Frequently Asked Questions 2. Discussion		1. Defines the function of the *report* menu. 2. Operate the *report menu.*

At the week 5 meeting, students were given an understanding that companies should check the traffic of money transactions in and out through reconcile accounts. The operation of the reconcile account menu is carried out in a sequence, complete, and fast manner so that at the 6th meeting the provision of data through the *report* menu can help students' managerial analysis skills. Next, from week 7 to 16 (as listed in Table 6) students begin to carry out the first stage of the PjBL learning model.

Table 6 Computer Accounting Course Plans Weeks 7-16

Study materials (Learning Materials)	Forms and Methods of Learning		Student Learning Experience
	Offline	Online	
Operate and master the implementation of the overall service , trade, and manufacturing accounting cycle	Project Based Learning Demonstration	Video/ e-Module – Polinema LMS Zoom Meeting	Operate and master the application of the service and trade accounting cycle as a whole in real terms in the case of MSMEs

1. The implementation of actions is the realization of an action that has been planned including the strategy to be used, the material to be delivered and so on. There are several modifications when carrying out the PjBL learning process in certain classes because researchers want to ascertain whether students have met the expected achievements. This activity will be explained further in the next sub-chapter.
2. Observation is observation and monitoring that can be done by the researcher himself, in this case the teaching lecturer to recognize and evaluate the developments that occur as a result of the action, namely recognizing whether the implementation of the action is in accordance with the action plan and whether there has been an increase in the presence of actions. In general, the implementation of PjBL into the classroom has a different response for students. Because with this model, several rules are given that stimulate students to actualize community social skills, make presentations on their ideas and have discussions regarding what solutions are most appropriate for real cases in MSMEs. The ability of each class to meet achievements does take different times, but relatively simultaneously. This activity will be described in detail in the next sub-chapter.
3. Reflection is an effort to evaluate or reflect and then an improvement in action is carried out (the next cycle). This activity will be explained in detail in the next sub-chapter.

Preparation of Semester Learning Plan (RPS) for the PjBL model

In this sub-chapter, PTK steps number 5 – 7 are carried out which have been explained in general above. As is well known, the Computer Accounting course is a practical course that introduces students to electronic data processing using software. Processing transaction data with software makes it easier for users to access the required accounting information. Furthermore, with the introduction of one of the accounting computer programs, students are expected to be able to adjust to various accounting computer application programs that will be faced while working later. Students are also expected to be able to take advantage of the accounting computer application program in managing transactions that occur in an entity that manages resources both in service, trading and manufacturing companies, even in foundation entities or other non-profit organizations.

When developing the PjBL Computer Accounting e-module, it has gone through the following steps:

1. Opening the topic of the course with a challenging question (start with the *big question*) begins with the one that can assign students to do an activity. The topic of discussion is in accordance with the real-world reality experienced by MSMEs around which the student lives.
2. Plan *a plan for the project*. Planning is carried out collaboratively between lecturers and students so that students feel they have the project. Planning includes implementation rules, selection of MSMEs and account design (*Chart of Account*) that can answer questions in the rubric by integrating various supporting subjects, as well as informing data that can be used to complete the project.
3. Create *a schedule*. Lecturers and students collaboratively schedule activities in completing projects. The project completion time is set to end at the UAS so that students can manage the time available. Lecturers remain time *keepers* and ensure that student activities are in accordance with project objectives by reporting project progress regularly. Because this project takes a long time to work on, the project is carried out at and outside of lecture hours. During lecture hours, students are ready with progress reports and presentations via video sent to the LMS.
4. Monitor the *progress of the project*. Monitoring is carried out by facilitating students in each process. Each student can choose their own role by not ruling out the interests of the group. Then every obstacle is directly communicated with the lecturer even outside of lecture hours in order to immediately get a solution to the problem that occurs.
5. Assessment of the resulting project *output* (*assess the outcome*). Performance appraisal on PjBL is carried out individually despite the work per team taking into account the quality of the financial statements produced, the depth of understanding of the theory shown, and the contribution made to the ongoing project realization process. This assessment is carried out to measure the achievement of competencies and provide feedback on the level of understanding that has been achieved by students. In addition, this stage helps lecturers develop the next learning strategy.
6. Evaluate *(evaluate the experience*). At the end of the learning process, lecturers and students reflect on the entire process and results of the project that has been carried out. At this stage, students express their feelings and experiences during the completion of the project.

Figure 1 shows the initial appearance of the Polinema LMS, to be able to enter the virtual class, each of them must first enter the lecturer's account and password. Here's a look at the PjBL-based e-modules seen on the Polinema LMS taking an example for the D4 Management Accounting class 3E:

http://ejournal.seaninstitute.or.id/index.php/Ekonomi
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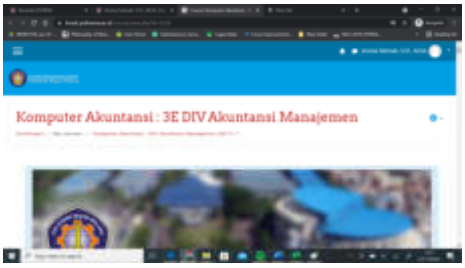

Figure 1 Initial View of Polinema LMS
Data Source : https://slc.polinema.ac.id/

In the LMS e-module, each course holder is also an admin who is authorized to manage one or more courses and classes. Generally, the lecturer's duties in the e-module are: 1) Edit the topic/chapter of the course and add a brief description of the topic; 2) Add *activities* to each topic (power point material, practicum *jobsheet*, assignments, quizzes); 3) Conducting assessments on tasks; 4) Enroll *students* and create groups (if not already done by admin). Before starting lectures, students are given rules for following lectures first to ensure that the conditions of the teaching and learning process run conducively. The rules are written on the e-module as in Figure 2 below:

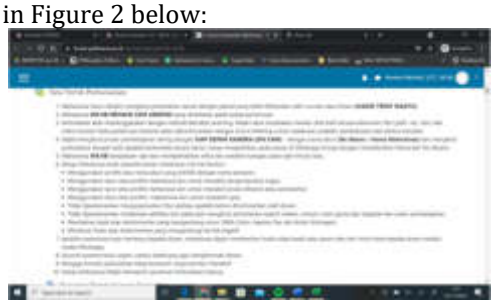

Figure 2 Rules for Lectures at the Beginning of a Lecture
Data Source : https://slc.polinema.ac.id/

Even though in the preparation of e-modules, lecturers are given the freedom to present related to learning information, be it descriptions (writings), videos, films and so on but must still follow the required competency signs (Triyono, 2021). The e-module of this computer accounting course has a structure of teaching materials at each meeting, namely written modules (*.pdf), practice videos (using the wondershare filmora application), LMS forums, and LMS structured tasks. This teaching material is expected to help students to gain an understanding of abstract concepts, making it easier for students to get sources of knowledge so that they can increase their learning motivation. In addition, e-modules allow students to overcome the limitations of physical classrooms because teaching materials are easily accessible at any time.

Each meeting will be given a written module in the form of *.pdf mainly containing the steps of practicing computer accounting using various accounting software. Because the accounting *software* can be accessed online, the *installer link* has been embedded in the e-module. Although written teaching materials are available, students are worried about finding it difficult to follow practical steps if only based on digital written modules so that practical videos of work are made according to the cases in the written module. For making videos, this practice also experiences several obstacles because the lecturer has limited ability in video editing so that the process is carried out simply but does not reduce the content of the material.

If students have utilized the e-module, both written descriptions (*.pdf) and videos, students will get a lisa question session from the video where students can answer or even open discussion topics even if they access the material outside of class hours. Students can take advantage of the Discussion Forum feature where students who open discussion topics and students who respond to these topics will get additional scores.

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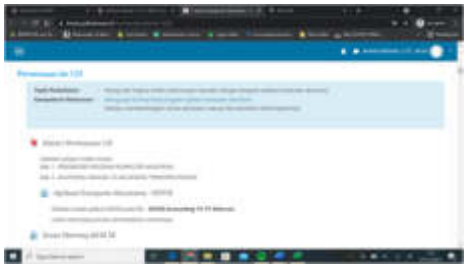

Figure 3 Week 1 Meeting E-module Display
Data Source : https://slc.polinema.ac.id/

Finally, to ensure that students have practiced the steps in the e-module, students must document / video the process of working on the exercise as proof. To minimize academic fraud, students are also asked to collect a database of their work per day. The documentation process must be collected on the Polinema LMS with a certain deadline. Examples of teaching materials have been shown such as Figure 3.

At this first meeting, students have also been informed starting that during the learning process in this semester the learning model used is PjBL. Implementation of PjBL itself is carried out starting from week seven, while the first to sixth week of the learning process uses videos in e-modules to learn the practices that students must master. To ensure that the practice carried out by students has been coherent, fast and precise, students are asked to submit a database whose account and password are adjusted to the Name and Student Identification Number (NIM) on each structured practice assignment. The transition of the learning model from a video-based practical exercise to the PjBL model begins with socialization through an e-module and is re-presented by the lecturer during *a Zoom meeting* as shown in Figure 4 (in detail has been attached to **Appendix 2**).

Figure 4 Display of PjBL Implementation Guide via E-Module
Source : https://slc.polinema.ac.id/

Students are given the understanding that the learning process of the PjBL model has many benefits as well as challenges for students and lecturers as appraisers. Because the computer accounting course has certain achievements that must be met, this course tries to prepare students to be able to practice expertise in the field of accounting as well as apply these skills. Students are also given the understanding that the indicators of a student mastering accounting are not only shown from the values he gets in the course, but also an understanding of accounting concepts. In addition, the purpose of this model is also expected to increase student confidence, open up the widest potential for *life skills* needed by the current generation.

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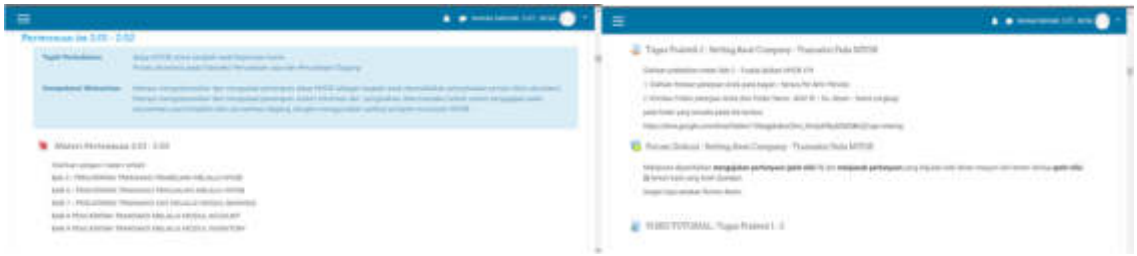

Figure 5 Week 2 Meeting E-Module Display
Data Source : https://slc.polinema.ac.id/

Figure 4 shows one example of an e-module at the 2nd week meeting. The next capture screen can be viewed in detail per meeting in **appendix 3**. Furthermore, for weeks 7 – 12, the preparation of the PjBL team began and preliminary observations where each group consisted of 3 students to be able to subsequently complete PjBL in weeks 13 to 16 as shown in Figure 5 below.

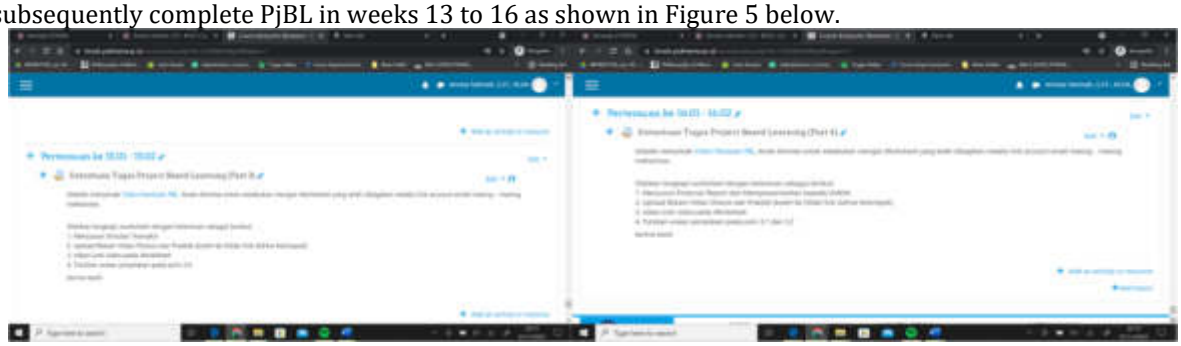

Figure 6 Display of PjBL E-Module in LMS
Sumber Data : https://slc.polinema.ac.id/

Preparation of Assessment Rubric

After students can master the working concepts of the accounting computer application program. The mechanism of the data entry and processing process is described in a series of specific activities such as purchasing (account *payable*), sales (*account receivable*), payroll, ledger, and others. This is due to the characteristics of a business that are not the same and the variety of existing transactions.

In principle, the accounting (financial) program is intended to make it easier for users to produce Financial Statements such as *the Balance Sheet*; Profit and loss (*Profit Loss Statement*); Cash *Flow* Statement and other reports that support strategic management analysis. Students understand better that when compared to how accounting manuals work, accounting software can save time. Financial statements and management reports can be directly presented. Financial statements that can generally be applied for are profit/loss statements, balance sheet statements, cash flows, and statements of changes in capital. Management reports that can be generated include inventory stock reports, payable/receivable mutation data, inventory lists, to analysis data and financial ratios.

The assessment packaging is structured to help measure competency achievement, evaluate student progress, and provide feedback on student understanding. Lecturers can also develop the next learning strategy. In Figure 7, the following is an example of the Assessment Rubric display linked to the Google Drive of each student team (details attached to **Appendix 5**).

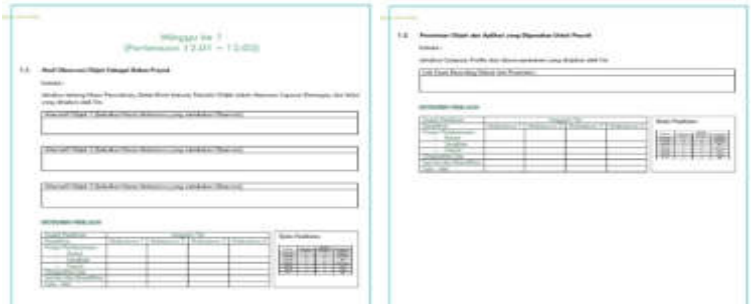

Figure 7 PjBL Rubric Example Display
Data Source : https://slc.polinema.ac.id/

During PjBL, students can see real cases in the world of work by helping MSMEs around the location where students live in the preparation of Financial Statements through the help of accounting computer applications. The assessment in this computer accounting course uses several aspects ranging from activeness, collapse, completeness, and speed in the implementation process, originality of ideas, innovation and creativity, and so on (the ability to communicate and build roles in social society). The assessment was inspired by several previous studies as revealed (Surya et al., 2018) that the assessment of learning in PjBL must be carried out thoroughly which includes the attitudes, knowledge and skills acquired by students during learning. This is because PjBL activities start from investigations from planning, collecting data, organizing activities, processing and presenting data. The PjBL assessment also ensures students' understanding of the ability to apply accounting computers. Every existing learning model must have advantages and disadvantages.

1. The Impact of PjBL Implementation on Improving Student Skills

The application of PjBL has a variety of responses to improving student skills can be seen from the entire implementation process proven by students able to:

1. Make decisions about a team framework from sharing the roles of each team member, strategizing for data collection as a subject for problem-solving discussions.
   Through the framework, students can finally design a process to determine solutions to problems faced in the real life of MSMEs related to the preparation of financial statements using computer accounting applications. Students can also be collaboratively responsible for managing information data to solve problems.
2. Students are able to take a social communication approach to the community, especially MSME owners.
   When students make initial observations, they go to businesses owned by the surrounding community and then conduct unstructured interviews as material for preliminary investigations of problems or challenges posed. Of course, the communication ability of each student has increased.
3. Students evaluate the activities that have been carried out continuously for all the processes that have been passed in this PjBL assignment.
4. The final product of this PjBL activity is not only evaluated and assessed by lecturers but also qualitatively evaluated by MSMEs as the object of the PjBL.
   The owner or staff of the employee of the MSME gave his response to the solution offered by the student team through the final product, namely the design of preparing financial statements through an accounting computer application.
5. Increase students' learning motivation to learn from various media and knowledge sources and encourage their ability to do important work.
6. The learning situation is very tolerant of theoretical discrepancies and changes that must be made to adjust to the needs of MSMEs. Students feel valued for all decisions that result from collaborative cooperation during the assignment.
7. Make the learning atmosphere fun, because students seem to be actively proposing meetings inside and outside the class schedule *online / offline* for consultation on the analysis that the team has built.
8. This method can meet most of the achievements charged by the study program. This is because in addition to emphasizing aspects of skills or knowledge at the level of application and analysis, but also can modify, design, use, operate, and then demonstrate to MSME owners.

A project activity in order to get real experience in the world of work, requires a lot of energy, a long time, careful planning. Especially if the lecturer has an additional role outside the main task of the function (tupoksi), it will be difficult to do it optimally. These findings are supported also by (Fiddaraini et al., 2016) which mentions so many responsibilities and demands as a lecturer such as guiding, conducting research, doing additional tasks, and doing community service can reduce the work productivity of a lecturer and will have an impact on the learning system.

4. CONCLUSION

The PjBL method integrated through e-modules is interesting to implement. Research designs and conceptualizes online learning support through lecture e-modules with a project approach. *The Blended Method* using the LMS developed by Polinema integrated with the PjBL approach is very relevant because it is based on a digital application, making it easier for students to access all learning content from anywhere and anytime.

The application of PjBL has a variety of responses to improving student *skills* can be seen from the entire implementation process proven by students able to:

1. Make decisions about a team framework from sharing the roles of each team member, strategizing for data collection as a subject for problem-solving discussions.
2. Students are able to take a social communication approach to the community, especially MSME owners.
3. Students evaluate the activities that have been carried out continuously for all the processes that have been passed in this PjBL assignment.
4. The final product of this PjBL activity is not only evaluated and assessed by lecturers but also qualitatively evaluated by MSMEs as the object of the PjBL.
5. Increase students' learning motivation to learn from various media and knowledge sources and encourage their ability to do important work.
6. Make the learning atmosphere fun, because students seem to be actively proposing meetings inside and outside the class schedule *online / offline* for consultation on the analysis that the team has built.
7. This method can meet most of the achievements charged by the study program.

However, PjBL, which is designed so that students are able to solve problems with a project activity in order to get real experience in the world of work, requires a lot of energy, a long time, careful planning.

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