

PROJECT-BASED LEARNING IMPLEMENTATION IN VOCATIONAL ACCOUNTING EDUCATION: A CASE STUDY AT SMK NEGERI 1 KLATEN

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Keyword

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Abstract

This study investigates the implementation of the Project-Based Learning (PjBL) model in accounting subjects at SMK Negeri 1 Klaten, particularly in the XI AKL class. The background of this research is the need for innovative learning models that enhance students' understanding of accounting through real-world experiences. The purpose of the study is to describe the stages of PjBL implementation and identify the challenges faced by teachers and students. A qualitative descriptive method was employed, with data collected through interviews, observations, and documentation. The findings show that the PjBL model was applied by assigning students to complete accounting cycle projects based on data from local service-based MSMEs. The learning process involved project planning, data collection through field visits, group discussions, and the preparation of financial reports. The model improved students' collaboration, critical thinking, and engagement. However, several obstacles were identified, including students' varying academic abilities, limited prior knowledge of accounting, and issues in group task distribution. It is recommended that future implementation be accompanied by strengthened guidance, differentiated support, and structured evaluation to maximize learning outcomes and prepare students for the professional world.

INTRODUCTION

Education cannot be separated from the order of life. Education has a very important role in shaping the character and potential of students. Laoli et al., (2022) revealed that improving the quality of graduates at all levels of education in Indonesia is an effective first step to improving the quality of human resources. To improve the quality of human resources, especially in learning in schools, can be done through practical planning and maximum learning processes in each given subject. The skills needed in 21st century learning are not only memorization skills as happens in most learning processes in Indonesia. Rather, it is on the ability to think critically, creatively, and solve problems in daily life (Anwar, 2022). The curriculum as a framework used in planning, teaching, and assessment is expected to suit the needs of different students and the ability to adapt to rapid change (Lubis et al., 2023).

The role of teachers is very important in the learning process in the classroom. One of the efforts that teachers can make is to design learning activities that vary in accordance with the expectations of an independent curriculum. Teachers also no longer play a role as the center of learning, but students must play an active role in the learning process (Rahayu, 2019). Students' experiences will thrive if the learning process gives them the opportunity to interact with each other. Both interactions between students and teachers, students with learning resources and students with their peers. The good interaction that occurs between a student and his peers

actually contributes to the development of more conducive and enjoyable learning conditions (Budhyani et al., 2022).

To overcome the above problems, it is necessary to consider an effective, innovative and interactive learning model for students. With the right learning model, it is hoped that it can make it easier for students to face various problems in learning. One of the learning models that is able to provide a forum for students is Project-Based Learning (PjBL). Project-based learning is learning that requires a comprehensive approach designed so that students are able to authentically investigate problems, understand the material, and complete the task (Siahaan & Meilani, 2019). The Project Based Learning (PjBL) learning model is a student-centered learning model where students can express opinions packaged in a project so that they are more creative in completing the project (Dewi Anggelia et al., 2022). Project-based learning can be said to be the operationalization of the concept of production-based education in vocational schools which functions to prepare graduates who are ready to work (Pangestuti, 2014).

In a study conducted by Pratama et al., (2018) on the influence of PjBL on students' ability to live. The results of the study show that the PjBL model can affect students' life skills. However, the implementation of PjBL in learning activities also needs to consider the abilities of the students themselves. This is intended so that students can still produce their own products according to their abilities more optimally. In implementing the project-free learning model, there are several obstacles that occur. Not a few students are not able to find the concept of learning in their own way (Fitria et al., 2020). Students find it difficult to explain the results of the discussion. In addition, students are not used to using real cases in the learning process. Students' critical thinking skills have not been managed and developed properly by schools, especially in providing facilities for accounting learning (Cahyani & Sulastri, 2021). The role of teachers in inviting students to engage in real cases is needed to encourage students to think critically. Teachers play a role in keeping paying attention to the focus of students so that the material presented can be accepted properly as expected (Nismawati et al., 2015).

This study aims to determine the success of the application of PjBL in accounting learning materials. This is seen from the effectiveness, learning outcomes, and skills of students in accounting subjects. By continuing to develop innovative learning models, it will improve the quality of education. This learning also provides an opportunity for students to gain real experience by engaging in the field in the activity of searching for data on business units as material for recording and making financial statements. The application of a project-based learning model has been proven to help students realize skills and abilities in learning. Research conducted by Dewi Anggelia et al., (2022) shows that the results of their research show that the learning model applied is in accordance with the achievement of creativity and the independent curriculum, because students can accept Project Based Learning as a learning model that helps them in developing their creativity in learning according to the independent curriculum. However, in the implementation of previous research, there are still several obstacles. Therefore, the researcher wants to find out how the project-based learning model can be applied systematically and successfully in the accounting learning process at SMK N 1 Klaten.

METHOD

The method used in this study is a case study with a qualitative research approach to provide an overview of the application of the project-based learning model in accounting learning and the obstacles in its application. The research was carried out from May to June 2025 at SMK Negeri 1 Klaten. The data collection techniques used in this study are interviews with resource persons, and documentation related to the application of the project-based learning model to accounting learning. The research subjects consisted of several interview sources, namely two accounting teachers and four students in the Accounting and Finance Expertise Program of SMK N 1 Klaten. Teachers were chosen as resource persons because of the role of teachers who have directly implemented the project-based learning model. Meanwhile, students were chosen as resource persons to see different and in-depth perspectives related to student experiences during project-based learning.

An examination of the validity of the data is carried out to prove whether the study is scientific research that is carried out seriously to test the data obtained. The validity of qualitative data in this study uses triangulation of data sources. This technique is carried out by researchers to test the credibility of the data carried out by examining data obtained through various data sources through interview techniques, and documentation (Sugiyono, 2015). The data validity test technique in this study is source triangulation. Source triangulation was carried out by comparing the suitability of the information obtained from the interview results from informant 1 with other informants as well as from the documentation obtained. The analysis technique uses an interactive analysis model from Miles, Huberman, & Saldana (2014), which begins with the first stage, namely the collection of research data through interviews and documentation. The second stage is data reduction, which is a process of selecting, summarizing and focusing data in accordance with the research objectives, namely the application of the PjBL model and its constraints. The third stage is data presentation, at this stage the data that has been reduced is presented in the form of a descriptive narrative, table, or graph so that it is easy to understand. The fourth stage is conclusion drawing and verification, where initial conclusions are made based on data analysis and verified to ensure accuracy. This analysis technique is designed to provide an in-depth overview of the implementation of the project-based learning model at SMK N 1 Klaten, including identifying obstacles that occur in the implementation of PjBL.

RESULTS

The Implementation of Project-Based Learning Model in Accounting Subjects at SMK N 1 Klaten

Based on the data obtained through teacher and student interviews and documentation, the project-based learning model has been applied to the Financial and Institutional Accounting expertise program at SMK N 1 Klaten. This project-based learning is applied by providing real projects that are relevant to the Learning Objectives Flow (ATP) of the Basic Competency of Accounting and Finance Expertise of the Institution. Project-based learning at SMK N 1 Klaten has been carried out in class XI AKL in the Accounting Practicum Elements of Services, Trade, and Manufacturing Companies.

In the implementation of the project-based learning model, it is carried out in several stages. In the first stage, the teacher informs the students regarding the planning of the project assignment that will be given. The information conveyed included an overview of the implementation of project-based learning, its objectives, and benefits.



Figure 1. Teachers Deliver Project-Based Learning

Based on the results of the documentation contained in figure 1, it can be seen that the teacher is delivering information in front of the class. Teachers provide understanding to students regarding the concept of project-based learning and its implementation stages. The teacher then gives directions to the students to form a random group. In its application in class XI AKL SMK N 1 Klaten, each group consists of 3-5 students. With this group, it is hoped that it can be a forum

for students to collaborate with each other and develop their skills to solve problems in a project to be worked on.

The second stage is the determination of the project topic in accordance with the predetermined learning outcomes, namely compiling the Accounting Cycle of Service Companies. In the project-based learning process, students are involved in analyzing and structuring the accounting cycle. Students are asked to visit a Micro, Small and Medium Enterprises (MSMEs) unit engaged in services to dig up data that will be used in the preparation of project assignments. After forming a group and knowing the topic of the project to be worked on, students carry out discussions to develop strategies used when working on project tasks, such as preparing a plan for visits to the company, analyzing what data is needed, and dividing tasks between group members.

TRANSAKSI "CHELSEA LAUNDRY"	
PERIODE AGUSTUS 2024	
Berikut adalah transaksi-transaksi yang terjadi pada "CHELSEA LAUNDRY" selama bulan Agustus 2024, kegiatannya adalah sbb;	
1 Agustus 2024	Chelsea Laundry membeli pewangi pakaian dari Toko Harum sejumlah Rp350.000, namun belum dibayar
3 Agustus 2024	Chelsea Laundry menerima pembayaran dari pelanggan untuk jasa cuci pakaian sebesar Rp500.000
4 Agustus 2024	Pembelian plastik dan perlengkapan lainnya senilai Rp70.000
5 Agustus 2024	Telah dibayarkan beban listrik dan air untuk bulan Juli sebesar Rp345.000
6 Agustus 2024	Chelsea Laundry membayar hutang kepada Toko Harum atas pembelian pewangi pakaian pada tanggal 1 Agustus
7 Agustus 2024	Chelsea Laundry menerima pembayaran jasa pengiriman antar jemput laundry sebesar Rp50.000
8 Agustus 2024	Telah dibayarkan beban gaji karyawan untuk bulan Juli sebesar Rp2.100.000
10 Agustus 2024	Chelsea Laundry menerima pembayaran dari Ny. Elly untuk jasa cuci dan setrika pakaian sebesar Rp600.000, tetapi karena belum dibayar, transaksi dicatat sebagai piutang
11 Agustus 2024	Menerima Laundry dari Panti Asuhan Cahaya Bunda berupa jasa cuci sejumlah Rp500.000 dan jasa setrika pakaian sejumlah Rp100.000, tetapi akan dibayar sekaligus dengan jasa laundry yang akan datang
12 Agustus 2024	Pembelian mesin cuci baru di Cahaya Elektronik seharga Rp4.500.000 secara kredit
14 Agustus 2024	Pembayaran untuk jasa kebersihan lingkungan sekitar dan sampah sebesar Rp75.000
15 Agustus 2024	Ny. Nining Widati menarik kas untuk keperluan pribadi sebesar Rp1.300.000
15 Agustus 2024	Dibayarkan untuk beban lain-lain sebesar Rp170.000
17 Agustus 2024	Chelsea Laundry menerima pembayaran dari Ny. Elly untuk jasa cuci pakaian sebesar Rp600.000, yang sudah tercatat sebagai piutang sebelumnya pada tanggal 10 Agustus 2024
18 Agustus 2024	Menerima laundry dari Panti Asuhan Cahaya Bunda berupa jasa cuci sejumlah Rp400.000. Akan dibayar pada tanggal 22 Agustus 2024 bersama dengan transaksi jasa laundry tanggal 11 Agustus
18 Agustus 2024	Ny. Nining membuat banner iklan seharga Rp100.000 dibayarkan secara tunai
21 Agustus 2024	Pembayaran sewa tempat usaha sebesar Rp1.000.000 dilakukan menggunakan kas untuk bulan Agustus
22 Agustus 2024	Menerima pelunasan piutang tanggal 11 dan 18 Agustus 2024 dari Panti Asuhan Cahaya Bunda sebesar Rp1.000.000
24 Agustus 2024	Chelsea Laundry menerima pembayaran dari pelanggan untuk jasa cuci dan setrika pakaian sebesar Rp700.000
27 Agustus 2024	Pembayaran hutang kepada Cahaya Elektronik atas pembelian mesin cuci pada tanggal 12 Agustus 2024 sebesar Rp4.500.000
31 Agustus 2024	Disusutkan untuk kendaraan sebesar 10%
31 Agustus 2024	Dilakukan penyesuaian terhadap beban sewa yang telah terpakai selama bulan Agustus, mencatat bagian sewa yang terpakai Rp600.000 sebagai beban
31 Agustus 2024	Terjadi penyusutan mesin cuci sebesar Rp1.500.000
31 Agustus 2024	Penyusutan peralatan berupa keranjang yang rusak untuk bulan Agustus 2024 sebesar Rp200.000
31 Agustus 2024	Perlengkapan yang belum terpakai sebesar Rp300.000

Figure 2. Example of Laundry Services MSME Transaction Data

Based on the results of the interviews and evidenced by the documentation in figure 2, it can be seen that students carry out visits to MSME units engaged in *Laundry* services, students carry out interviews and documentation in a business unit chosen to be a place to collect data and then process the data obtained to compile the accounting cycle of the service company. The data obtained by students includes business unit profiles, financial data and transaction data in a certain period. From the data obtained, students analyze and compile it into an accounting cycle from recording to general journals to balance sheets after closing. In project-based learning in the Accounting Practicum for Services, Trade, and Manufacturing Companies, the role of peers is indispensable. Group discussions can make it easier for students to understand the material in depth related to the accounting cycle of service and be able to solve problems or projects being worked on. This learning activity also allows students to be able to develop useful student skills to improve their quality so that later they will become graduates who are able to compete in the world of work.



Figure 3. Project Discussion and Monitoring Activities

Based on figure 3, it can be seen that teachers monitor student discussion activities. Monitoring is carried out to determine the development of students both individually and in groups in the learning process. With monitoring, teachers can see the activeness of students during discussions. So that teachers can provide direction and guidance to students according to the needs of each individual or group in completing the project. At this stage, the teacher also plays a role in arousing students' enthusiasm for learning so that they are more active in discussions, able to collaborate with group members and responsible for completing the project tasks that have been given. The period of work on the learning project for the preparation of the accounting cycle of this service company is scheduled for 3-4 meetings. With the first meeting being used for project planning, then the second meeting carried out visits to business units and processed the data obtained to be compiled in the accounting cycle of the service company, and the last was the project evaluation stage.

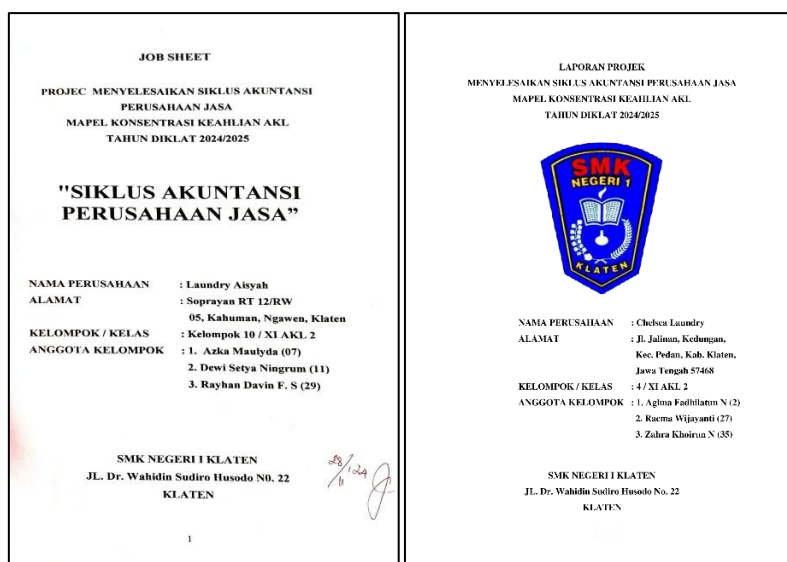


Figure 4. Service Company Accounting Cycle Project Results Report

Figure 4 shows that students have successfully completed assignments in project-based learning by compiling a service company's accounting cycle project report. The results of the students' work are presented in the form of written reports containing the profile of the business unit visited, business unit transaction data during the period and recording the accounting cycle

from making the initial balance sheet, general journal, etc. to the balance sheet after closing. After completing the project assignment, students do not carry out presentation or presentation activities of their project results but directly gather with the teachers of the Accounting Practicum for Services, Trade, and Manufacturing Companies to be evaluated and assessed by the teacher.

The application of the project-based learning model in class XI AKL SMK N 1 Klaten can provide an experience for students to understand the accounting cycle in real projects so as to expand their horizons and develop students' skills. Project-based learning models can increase student engagement in learning. During the project work process, students are active in discussions, dare to express opinions, and are able to find solutions to the problems given. Students are also more motivated to learn because they do not feel bored with the learning applied and feel that the projects they work on will definitely be useful for preparing for the world of work.

Obstacles in the Implementation of Project-Based Learning Model in Accounting Subjects at SMK N 1 Klaten

There are several obstacles that occur in the implementation of project-based learning at SMK N 1 Klaten. The obstacles that occur in the implementation of this project-based learning model are experienced by teachers and students. The obstacles experienced include different levels of understanding and character of students so that they affect the process of completing project assignments given by teachers. The level of individual ability and willingness of students in working on project assignments greatly affects the results of the project work being carried out.

There are some students who find it difficult to analyze financial data and transactions of a business unit when making records. This is due to the subject of accounting which is a new scientific field for students where previously students from junior high school had never received accounting material and were only obtained at vocational schools so it took a long time to analyze the correct classification of accounts based on the transaction data obtained. The results of this account analysis are used to compile a journal so that they must be careful in working on them in order to get the appropriate results.

The enthusiasm of some students in learning is still lacking because students are less motivated to be active in group discussions during project-based learning. This causes students who are less active in project assignments and not disciplined in working on project assignments. In addition, students also complained about project tasks that were carried out in groups, especially in the division of tasks that were not appropriate so that the work process was not optimal.

DISCUSSION

The Implementation of Project-Based Learning Model in Accounting Subjects of SMK N 1 Klaten

The implementation of the project-based Learning Model at SMK N 1 Klaten has a positive impact on learning activities. With the implementation of PjBL, it can improve students' skills in learning. During the project, students are required to be active in discussions to put forward ideas and solve problems faced in the project being done. Jatmika & Alviantoro (2025) in their research at SMK N 1 Musuk stated that in implementing project-based learning, students are invited to find innovative solutions in analyzing problems in depth so as to improve students' ability to think logically and systematically in making decisions.

Students are motivated to complete this project assignment because they find the learning process challenging and relevant to real life and become a valuable experience to face the world of work. In addition, project-based learning also encourages students to improve their communication skills. Communication skills that can be honed in project learning include in group discussions, both in expressing opinions and receiving opinions between group members. Furthermore, the ability to communicate with the community or outside parties, in the context of project-based learning, the party is the owner or business actor in the field of services visited to explore the information needed to compile the project report.

Students' ability to collaborate in the implementation of project-based learning at SMK N 1 Klaten can be improved through a collaborative process between group members. In a group, it is very important to have cooperation in order to solve the problems faced effectively, such as discussing the project task work plan in terms of division of tasks and determining the time to work, cooperation and awareness of group members are needed so that the project can be completed as planned. This is in line with research conducted by Permatasari & Asmawan (2024) that the project-based learning model influences the activities of student groups. Students gain the benefits of learning to communicate and collaborate effectively through project assignments in this learning.

The results of the study show that the implementation of project-based learning has a good impact on the student learning process. With PjBL, students find it easier to understand the subject matter provided by the teacher and understand the application of the knowledge gained in the real world, especially in the service business unit according to the place that has been chosen to find data and process it into the accounting cycle. PjBL provides a more dynamic and collaborative approach compared to traditional learning methods. By giving students the freedom to think independently and work on real projects, students not only understand the theories taught by teachers, but are also able to apply them in a broader context. The implementation of PjBL has a significant impact on improving learning achievement, practical skills, and providing a more meaningful learning experience. This strengthens the understanding that PjBL not only improves academic outcomes, but also prepares learners to face the challenges of the world of work in the future (Yetti, 2023).

PjBL helps students to develop practical skills that are relevant to the world of work. With the experience of carrying out this project, it can prepare students to face challenges in the world of work, where students must be able to solve problems independently and make the right decisions. In his research Andalusia, et al., (2024) stated that the practical skills that can be realized from the implementation of this project-based learning not only offer an in-depth view of theoretical concepts but also provide concrete illustrations of how students will face challenges in a real work environment. Student engagement in project-based learning also creates a strong understanding to apply in an industry context. PjBL can bring students closer to the reality of work and provide a solid foundation for students' professional career development.

In addition, PjBL can also develop students' character. Through project-based learning, students are required to be responsible in solving problems. Students are trained to work on projects with discipline both in process and results. The teacher gives an assessment to the students not only to see how the project works but also in the process. Student activeness and collaboration in discussion activities to complete projects are also teachers' assessments related to student character formation.

Obstacles in The Implementation of Project-Based Learning Model in Accounting Subjects at SMK N 1 Klaten

The application of the *Project-Based Learning* (PjBL) model at SMK N 1 Klaten faces a number of obstacles that affect the learning process, both from the teacher and student side. The obstacles experienced include different levels of understanding and character of students so that they affect the process of completing project assignments given by teachers. In accordance with the findings of Andalusia, et al., (2024) in their research it is stated that students have different characteristics, which affect the fair grouping of students. It is undeniable that students may complain about being in a group that does not match their preferences. However, this will ultimately help students in learning to discern. There are some students who find it difficult to analyze financial and transaction data of a business unit when recording so that it takes a long time to analyze the correct classification of accounts based on the transaction data obtained. The results of this account analysis are used to compile a journal so that they must be careful in working on them in order to get the appropriate results.

The enthusiasm of some students in learning is still lacking because students are less motivated to be active in group discussions during project-based learning. This causes students who are less active in project assignments and not disciplined in working on project assignments.

In addition, students also complained about project tasks that were carried out in groups, especially in the division of tasks that were not appropriate so that the work process was not optimal. In line with the opinion of Sulistiyowati et al., (2024), the implementation of PjBL requires cost, time, adequate tools, and active participation from students. Without active involvement, students are at risk of having difficulty understanding the material thoroughly.

CONCLUSION

The application of the *Project-Based Learning* (PjBL) model in Accounting subjects in class XI AKL SMK Negeri 1 Klaten has been proven to be able to increase students' understanding of the accounting cycle contextually through direct experience in the business world. Learning activities that involve visits to MSMEs, collection and analysis of transaction data, and preparation of accounting cycle reports provide meaningful experiences for students in developing critical thinking, collaboration, and problem-solving skills.

The structured learning process through the stages of planning, project implementation, and evaluation, shows that students are more active in discussions, motivated to learn, and feel that learning is more relevant to the needs of the world of work. However, several obstacles are still found, including differences in the level of student understanding, low motivation of some students, difficulties in analyzing transactions, and challenges in uneven division of group tasks.

To overcome these obstacles, support from schools is needed in the form of providing supporting facilities, intensive mentoring by teachers, and training in basic accounting skills individually. In addition, industry involvement and presentation of project results through presentations can be strategies to increase students' sense of responsibility, confidence, and communication skills. Thus, PjBL can be an effective approach in preparing vocational school students to compete in the world of work professionally. The next study is suggested to expand the scope by involving more schools, so as to allow a comparative analysis of the effectiveness of the implementation of Project-Based Learning (PjBL) compared to conventional learning. In addition, future research needs to pay attention to various factors that affect the success of the implementation of PjBL, such as teacher training in mastering this learning model, more optimal time management, and the development of resources that support the implementation of the project to the maximum.

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