



Educational management perspective on project-based learning in collaborative subjects: Case study of student-centered learning (SCL) paradigm in Indonesia

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Abstract

This research aims to examine and analyse in depth how project-based learning is implemented in collaborative science subjects from an educational management perspective. The method used in this research is qualitative research with a case study type. Data collection techniques include observation, interviews, and documentation studies. Data analysis using the Miles and Huberman model includes the stages of data collection, data reduction, data presentation, and conclusion. The research results show the application of Project-Based Learning in collaboration subjects (social and science subjects) in educational management reviews, including planning, implementation, and evaluation. Student-Centered Learning (SCL) paradigm through PjBL has still needed the involvement of teacher and parents, while it promoted the independency of students in learning activity. The research is limited to social and science collaboration subjects (*IPAS*). Therefore, it is recommended that further research be conducted on other subjects and another class level to see different interpretations.

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Introduction

Education policy in Indonesia began to move towards learning with Student-Centered Learning (SCL) scheme, which only started when the *Merdeka Belajar*

curriculum policy was published by the Indonesian Ministry of Education and Culture in early 2020. The Indonesian Education Roadmap (2019–2024) is to provide students with full access to the freedom to learn using the *Merdeka Belajar* curriculum.

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The Independent Learning Curriculum (*Merdeka Belajar* curriculum) is the essential framework established by the government to cover particular curricula for certain institutions (Maipita et al., 2021). The curriculum under the framework is *KOSP* (school driving curriculum), Emergency Curriculum (implemented during the COVID-19 pandemic), Freedom to Learn (K-13 with institutional adjustments), Freedom to Change (K-13 with hybrid learning), and Freedom to Develop (K-13 with hybrid learning).

According to the tagline of the current Indonesian education system for “Freedom to Learn”, all institutions have the right to choose and implement a particular curriculum (Taufiqurrahman, 2022). On the other hand, implementing the curriculum faces several obstacles caused by internal and external factors, namely, the unpreparedness of teaching staff, lack of learning technology facilities, and psychological and physiological unpreparedness of students. The schools need adjustment time as well as collaboration to adapt the new paradigm of Student-Centered Learning (SCL). The points are the readiness of the teaching staff, the technology used, and the psychological and physiological readiness of students.

The considerations are related to educational management. Mover Schools (*Sekolah Penggerak*) focus on holistically developing student achievement in literacy and numeracy competencies, character formation, and quality human resources (Nousopoulou et al., 2022). In developing student achievement, schools must review certain educational management items. Mover Schools highlight educational management in five categories: student achievement, learning environment, learning process, self-reflection, and impact.

One of the schools that implements SCL is *SDN Bojong Kiharib* in *Cigombong, Bogor*. The school is 27 km from the city centre and is becoming a pilot project for the Mover Schools in Indonesia. Schools implement PjBL in most subjects, such as mathematics, science, and social studies. The school has integrated science and social studies into its curriculum, with 20 percent of its instructional planning structured around Project-Based Learning (PjBL).

PjBL begins with a real-life problem guided by a question that leads to a search for answers using a series of actions (Li et al., 2022). These actions need to be planned with a timeline procedure. These activities are sometimes monitored and ultimately assessed. At the end of the project, actions need to be evaluated. This PjBL involves students managing the project. Somehow, project management requires an awareness

as a team. Then, from this situation, the question arises whether stage B students at *SDN Bojong Kiharib* are eligible to use PjBL or not.

Previous research discussed the Mover Schools conceptual model, which creates the best ecosystem in education in Indonesia (Afrina et al., 2022). Furthermore, teachers are the leading agents in the educational ecosystem (Satriawan et al., 2021). Research focusing on student learning achievement, is a learning experiment using Flipbook on Math for stage A students (Vikiantika et al., 2022). Another focus on character formation based on Pancasila is also discussed through literature studies on the three phases (Rachmawati et al., 2022) and adapting it to local wisdom (Nurasiah et al., 2022). Improving the human resources of Mover Schools begins with first improving the principal (Aminah & Syaâ, 2023). For the learning aspect, the research discusses the implementation of a school-driving curriculum in mathematics e-learning using Moodle (Taban, 2021). Learning from other countries such as Thailand, most Thai schools apply humanistic, democratic, and behaviouristic models to create effective classrooms (Lathifah et al., 2022).

Students at the lower grade level, namely, grades 3 and 4 of elementary school, will now be referred to as students at stage B. They still encounter significant obstacles in implementing PjBL, especially independent learning. For this reason, research is needed to discuss PjBL in Primary Mover Schools and review it from the educational management perspective in elementary schools in Indonesia. Specifically, an in-depth analysis will be carried out on applying PjBL in collaborative subjects, namely, science and social subjects.

Literature Review

Mover Schools

Mover School is a promotion program for the Indonesian education system through *Merdeka Belajar* (Sihombing et al., 2021). Mover School is a program that is a breakthrough for the government in realizing the vision of Indonesian education, namely, realizing an advanced Indonesia that is sovereign, independent, and has personality through the creation of Pancasila Students (Minsih et al., 2024). The Mover School program focuses on holistically developing student learning outcomes (Markula & Aksela, 2022), including literacy and numeracy abilities/competencies and

character, starting from superior human resources (i.e. school principal and teachers) (Sternberg & Rodríguez-Fernández, 2024). In general, the Mover School program aims to encourage educational units' transformation process to improve education quality by achieving holistic student learning outcomes to realize the *Pancasila* student profile (Rachman et al., 2024; Winarno et al., 2023). The profile of students demonstrating exemplary character encompasses traits such as cultivating faith in God Almighty, fostering independence, embracing collaborative teamwork, nurturing awareness of global diversity, applying critical reasoning, and expressing creativity. Complementing these foundational objectives, the Mover School program advances broader goals, including enhancing student competence and character through alignment with the *Pancasila* student profile (Hermansyah et al., 2024), promoting equitable educational quality by strengthening school principals' leadership capacities to achieve impactful learning outcomes, prioritizing systemic quality improvement, and fostering a collaborative ecosystem among educational stakeholders, spanning school communities, local governments, and national policymakers to drive sustainable progress in education.

The Mover School program is part of the Indonesian education system through the *Merdeka Belajar* Curriculum. It is an update of the previous curriculum, namely, *KTSP* and *K - 13* (Aulia, 2021). *KTSP* is a curriculum that allows teachers to organize their students' learning. Meanwhile, *K - 13* is a simplified *KTSP* with a centralized curriculum determined by the government. Both curricula were adopted to improve learning by utilizing each curriculum. Curriculum integration allows each academic community to learn according to their needs and follow the Indonesian education roadmap (Isabella et al., 2024).

In this way, Mover Schools have a direction toward the transformation of Indonesian education, especially with the demands of the 21st century regarding adaptive, collaborative, and innovative learning. In addition, Mover Schools highlight educational management in five categories: student achievement, learning environment, learning process, self-reflection, and impact (Zhai et al., 2023). Students must be differentiated in challenging conditions to achieve the best student achievement (Qorib, 2024). Student learning achievement is correlated with the learning process (Christ et al., 2022; Jovanović et al., 2021). Hence, the student learning process is facilitated and conditioned to be functional and enjoyable (Mueller & Wulf, 2022).

In Elementary Mover School, students are categorized into three stages (A, B, and C), which consist of a set of competencies that students must acquire (Marlina, 2022).

The benefits of the Mover School Program for schools include improving the quality of education for three academic years, increasing the competence of school principals and teachers as managers and educators, accelerating the achievement of the *Pancasila* student profile, accelerating school digitalization, and having the opportunity to be part of the catalyst for change for educational units (Fatimah et al., 2024). Others receiving intensive guidance in transforming educational units receive additional subsidies.

Mover School, as a program with goals and benefits, will enforce change in education transformation in Indonesia. Thus, indirectly, the presence of Mover Schools will boost higher achievements related to the quality of Indonesian education.

IPAS Collaboration Subject

The science subject is integrated into two subjects: science and social studies. It is considering the increasingly rapid progress and needs of the times (Knott et al., 2022). Apart from that, the development of science and technology continues to develop, so it is possible that science and knowledge that has existed in the past and currently could experience shifts (Srichailard, 2024). Therefore, science is dynamic and will continue to develop and be developed by humans to reveal further truths (Schuijt et al., 2021).

Meanwhile, nature, which provides the carrying capacity to meet human needs, is decreasing, and the population is increasing over time. It often triggers the birth of many problems. Existing problems often cannot be solved from just one point of view, either from natural sciences or social sciences, but are needed from a more holistic point of view across various scientific disciplines (Kuhnt & Passet-Wittig, 2022). In this way, the combination of natural science subjects (*IPA*) and social science subjects (*IPS*) is expected to contribute to this understanding in students, which is called the term *IPAS* (Surul & Septiliana, 2023).

The social and science subject is a form of responding to the challenges and needs of the times and the rapid development of science and technology. It is not uncommon for these developments to trigger new problems that require answers from various scientific discipline points of view. Therefore, *IPAS* is unique, especially in implementing a project-based learning model.

Project Based Learning

Project-Based Learning (PjBL) focuses on student activities in creating a project (Rahmania, 2021). This method encourages good critical thinking and includes what are listed as characteristics of 21st-century learning: critical thinking, collaboration, creativity, and communication (Gabuardi, 2021). PjBL is a learning method that encourages students to create something individually or in groups, where they can construct their knowledge by following the given sequence (Hussein, 2021). PjBL allows students to face real-world problems, find solutions, and form teams to overcome these problems. This situation will have an impact on students facing society in the future (Chen et al., 2021). The significant impact of PjBL obtained by students is in communication, presentation, management, research, investigation, self-reflection, teamwork, leadership, and critical thinking skills (Marnewick, 2023). PjBL is mandatory in learning design in Mover Schools. Implementing PjBL may improve points of creativity, involvement, self-confidence, dependence, critical and analytical thinking of students (Suradika et al., 2023). Some researchers found that some essential components of PjBL were overlooked, while it also had some issues of effect studies, such as the lack of control groups (Loyens et al, 2023). The effects of the multiple literacies in PjBL science intervention proved that students had higher scores when they received the intervention, and had improved their self-reflection and collaboration during the activity (Krajcik et al., 2023). Teachers require seminars/workshops on how to apply this method in the classroom (Martinez, 2022). PjBL is mainly identified in junior high schools, high schools, and vocational schools (Sudjimat & Permadi, 2021; Yang et al, 2024).

Methodology

The research uses a qualitative approach with a case study type of research, namely, recording and analyzing documents or other things found during research and investigating and exploring real life. According to Amolo et al., (2018), a case study is research in which the researcher explores a particular phenomenon (case) at a specific time and activity (program, event, process, institution, or social group) and collects detailed and in-depth information using various data collection procedures over some time. This research employs a case study methodology focused on project-based

learning (PjBL), leveraging a multi-perspective approach to data collection (Bagozi et al., 2022). Rather than limiting insights to the case itself, the study actively incorporates input from all stakeholders with in-depth knowledge of the PjBL implementation, ensuring a holistic understanding. The flexible and iterative design of this qualitative research enables dynamic adaptation during the investigative process, thereby enriching data depth while maintaining methodological rigor (Lim, 2025). This approach not only captures nuanced realities of PjBL in practice but also aligns with higher-order thinking by synthesizing diverse viewpoints into actionable educational insights.

The subject of this research is the school principal, who is the institution's manager and is fully responsible for the activities of the educational institution, so it is considered essential to be one of the subjects in the research. Four school teachers driving phase B, teachers as facilitators and actors in the educational process, are expected to be able to provide comprehensive information regarding the topics in the research, especially the Mover School committee teachers, four class IV students as students who experience and undergo the educational process for appropriate to add information sought in the research, and three representatives of the School's parent committee as external representatives of the School.

Data Collection Technique

Technique data collection used observation, interview, and documentation study techniques in this research. The research steps and research data collection are complete as follows:

1. Research Guide: This is an internal guide for the study consisting of an interview guide and guide observation research related to deep project-based learning perspective education Management.

2. Field observation is carried out using direct observation regarding the learning of the *IPAS* project. During seven observations, including initial observations and permission to carry out activities, observations of the school environment, observations of the first social and science learning, second social learning, third science learning observation are done. The activity observation implied the principles of *Pancasila* Student Profile (Rachman et al., 2024; Winarno et al., 2023): (1) Commemoration Day *Pancasila*, and (2) Market Day.

3. Interviews are conducted using structured techniques, namely, directed questions and answers, to collect relevant data according to the research focus and guidelines for the study's main problem.

Apart from that, in-depth interviews were also carried out, namely, by digging for information in depth by being directly involved with the lives of the informants and asking questions freely without being guided by previous questions so that the atmosphere became lively. Such was carried out several times until the data obtained were sufficient. The resource persons include school principals, Mover School committee teachers, parents or school committee members, and class IV students as shown in Table 1. More details are as follows:

4. Documentation Study: Data collection techniques include documents such as teaching modules, *KOSP* (Educational Unit Operational Curriculum), student assessment results, teaching materials such as assessment instruments, and learning media collected during observations and interviews.

Data Analysis

The research data analysis uses the analysis model from Miles and Huberman (1999), which has several stages. The analysis stages include data collection, reduction, presentation, and conclusion. More details are in the following description:

1. Data collection: The researcher collected data using several techniques, including observation, interviews, and documentation studies.

2. Data reduction: At this stage, the data are selected and separated into relevant and irrelevant data regarding this research.

3. Data presentation: After the data are reduced, they are arranged in tables, matrices, or graphs to visualize patterns, relationships, or comparisons between units of analysis.

4. In conclusion, after the data presentation stage, everything was reviewed and compared to conclude.

Data Validity

The research uses data testing to test the data's validity using credibility criteria with triangulation techniques. The triangulation technique examines data by utilizing something else, which can be understood as examining data resulting from research findings by comparing it with sources, methods, and theories Sherman and Webb (2004). According to Sugiyono and Lestari (2021) there are three types of triangulation: technical, source, and time. The triangulation used in this research is technical.

Result and Discussions

Project-Based Learning in Collaborative Subjects

Based on the research results, one of the schools implementing PjBL, SDN Bojong Kiharib, students in phase B (class IV) are challenged to observe further daily life in their environment. Next, students are invited to identify environmental problems, such as preserving natural and socio-cultural resources and identifying the existence of materials changes. In other words, students in this phase observe and record natural and social phenomena as much as possible in groups. Science subjects can be taught by teachers using four learning models (problem-based, project-based, cooperative, and discovery learning). It focuses on PjBL in *IPAS* collaboration subjects. The PjBL for science and social subjects at the *Bojong Kiharib* Primary School has several stages, including planning, implementation, and evaluation.

Table 1 Informant of the research

No.	Informant	Code/Initials	Interview Date
1.	Headmaster	K.S	May 20, 2022
2.	Motivating School Committee Teachers	ID	April 22, 2022
3.	Motivating School Committee Teachers	YY	June 08, 2022
4.	Motivating School Committee Teachers	BW	June 04, 2022
5.	Motivating School Committee Teachers	IU	June 08, 2022
6.	Student Parent Committee	MI	May 13, 2022
7.	Student Parent Committee	MR	May 13, 2022
8.	Student Parent Committee	M.A	May 13, 2022
9.	Student	R	May 24, 2022
10.	Student	S	May 24, 2022
11.	Student	DV	May 24, 2022
12.	Student	I	May 24, 2022

Source: Processed data (2023)

Planning

At the planning stage, the research found six things, namely: (1) designing the Educational Unit Operational Curriculum (*KOSP*), (2) teaching module, (3) teaching materials, (4) learning media, (5) learning methods, and (6) learning strategies. The initial lesson planning stage involves designing the *KOSP*, where the school started to plan for the next year program itself, including learning outcomes and a flow of learning objectives.

Overall, planning for the Mover School program begins with designing the *KOSP*, which includes learning outcomes, learning objectives, and projects that will be implemented in learning that support the formation of *Pancasila* student character. The *KOSP* design was carried out in In House Trainings (IHT) and workshops. It is carried out in the first semester, so the teachers will be well-prepared for the teaching module while the workshops program is carried out to discuss the main program of Mover School curriculum and produced *KOSP*.

The teaching module contains the theme of teaching material, indicators of activity success, learning preparation, sequence of learning activities, teacher reflection, and student worksheets, or even more complete like teaching materials and assessments sheets. Apart from teaching modules, things that need to be prepared in planning science lessons are teaching materials in the form of science course textbooks for teachers and students which are provided at school, in the form of manual or digital media.

Meanwhile, science and social project learning require media of choice by asking students to bring materials for the project. However, the materials used are difficult to obtain. In that case, teachers make other alternatives by studying through videos shown via a projector or on laptops in the form of Chrome books provided in computer labs. Based on the results of observations and documentation at *KOSP*, the process standards used by the Mover Schools were selected based on standard needs, including problem-based learning, project-based learning, cooperative learning, and discovery learning. In this *IPAS* project, the PjBL method allows students to understand everyday problems by producing a product.

In terms of learning strategy, the teachers used to provide meaningful learning through group works, students discuss and exchange opinions regarding particular material or problems to reach an agreement or conclusion as well as doing much practice like making windmills, planting flowers, and hanging coloured papers as shown in Figure 1.

Implementation

Based on the results of the observations as visualised in Figure 1, the stages of implementation of social and science learning project learning were carried out during the opening, main course, and closing activities. In the opening activity, the teacher prepares the students' physical and psychological conditions, provides inquiry questions and feedback, and conveys the learning objectives. In main course learning activities, the class teacher creates adequate learning conditions by using learning methods appropriate to the material to be studied. The method for implementing social and science learning is PjBL, where students become centres for learning on solving existing problems with the teacher as a facilitator. For example, in Figure 2, there is an example of a PjBL that asks students to plant green beans, and spinach. This project allows students to choose the type of plantation they will plant.



Figure 1 Student study group

Project Execution Steps

Level 1: Grow Crops

1. Prepare your assignment book which will be used as a project journal.
2. Plant the types of plants that grow fast enough such as green beans, spinach, kale, etc
3. Prepare equipment for planting such as:
 - 2 pots (use used items to make pots);
 - Land;
 - Fertilizer;
 - Seeds to be planted;
 - Water.
4. Give both pots a name and code. For example: Banu - Pot A, Banu - Pot B
5. Make holes for the water to come out around the pot.
6. Plant seeds in pots that have been filled with fertilizer and soil. Sprinkle water until the soil is wet enough
7. Store pot A in a place exposed to sunlight. Store pot B in a place not exposed to sunlight.
8. Observe the growth of the plants every week



Figure 2 Student handbook page. 27

Note: Figure 2: Experimental setup for plant growth comparison: Pot A (Sun): Placed in sunlight, labeled with student name (e.g., "Banu - Pot A") and Pot B (Shade): Shielded from sunlight, labeled similarly. Both pots feature drainage holes, soil, fertilizer, and fast-growing seeds (e.g., mung beans, spinach). Weekly growth observations are recorded in a journal.

Several steps guide students through working on the project sequentially. The guide (Figure 2) also mentions the tools that students must prepare in groups. The teacher's role here is to ensure students follow the steps to start a group discussion, remind them to discuss the person responsible for each process, and guide them through monitoring their project, as shown in Figure 3.

PjBL is a long learning process that can take several days to weeks. Students can conduct further discussions at this level to record their observations in developing the plantation (Figure 4). The project ends when all steps have been completed and produce good or bad results (Figure 5).

Teachers can add tasks related to how students communicate with the community, especially their friends, by inviting students to make posters after observing the growing plants (Figure 5). In Figure 6, the poster reminds others that schools must maintain cleanliness. The idea is not directly related to the project. However, this poster reminds us of their process of watering plants.

Teaching Stages	Jmh JP	Core Material	Learning Objectives per stage	Teaching Strategies	References and teaching media
Learning projects	5	Planting plants	1. Students can create plant life cycle charts based on the results of observations and practice. 2. Students can care for plants until they grow well 3. Students learn about data as a source of information and a way to prove something.	1. Planting and caring for plants 2. Conducting observations and data collection 3. Processing data 4. Analyzing data 5. Making a conclusion 6. Creating presentation media 7. presentation	• Student equipment: 1. Vegetable seeds; 2. Planting equipment such as pots, soil, fertilizer, and water; 3. Ruler; 4. Coloring tools; 5. Cardboard • Site preparation: 1. A suitable school environment for storing pots is in bright and dark conditions; 2. Class/school area for presentation activities

Figure 3 Teacher handbook

Note: Figure 3: Teaching framework for a hands-on botany experiment:

Stages: Planting, observation, data analysis, conclusion, and presentation (5 hours total).

Objectives: Students understand plant structures, care techniques, and data validation.

Methods: Practical planting, guided observation, and peer presentations.

Resources: Pots, soil, journals, and designated school areas for sun/shade testing.



Figure 4 Students discuss and record their observations of their projects

The floor was messy because the students' shoes left mud. Thus, students automatically understand the situation and present the poster as a reminder. Ultimately, the teacher reflects on how well students understand the lesson. Reflection is done by inviting students to comment on how they felt while working on the project.



Figure 5 Students observe growing plants



Figure 6 Posters related to the project

Note: Figure 6: Classroom cleanliness campaign sign is designed to promote hygiene awareness in educational settings.

Evaluation

Evaluation of learning programs concerns various matters related to the quality of input, the quality of process, and the quality program implementation results. There were three points found, in term of evaluating science learning process: (1) Evaluation of learning outcomes, (2) Reflection, and (3) Supervision.

There are two types of evaluation of student learning outcomes, namely, formative assessment and summative assessment. Formative assessments include attitude assessments obtained from observation, self-assessment, and peer assessment. Meanwhile, summative assessments include skills (practices, projects, products, and portfolios) and knowledge (written and unwritten).

The formative assessment aims to continuously monitor or review the learning process and evaluate science learning achievements. It aligns with the Ministry of Education and Culture's statement in the *Merdeka Mengajar* system, which aims to monitor and improve the learning process and evaluate the achievement of learning objectives. Following its objectives, formative assessments can be carried out at the beginning and throughout the learning process. The summative assessment aims to assess student learning achievements at the end of the learning period, such as the middle or the end of the semester, and as a consideration for class promotion or graduation. This is in line with the Ministry of Education and Culture's statement in the *Merdeka Mengajar* system. Assessment or summative assessment at primary and secondary education levels aims to assess student's achievement of learning objectives and learning achievements, as a basis for determining grade promotion and graduation from an educational unit. Assessment of student learning outcomes is carried out by comparing the achievement of student learning outcomes with the criteria for achieving learning objectives.

Reflection activity is carried out once a week, where the learning outcomes of each class, both regular and project learning, are discussed. It can be an opportunity for teachers to improve the quality of learning. The reflection activities are an essential moment for teachers to improve the quality of learning by emphasizing sensitivity to various things that occur in the learning process and critical thinking to improve or improve things that can influence student learning outcomes. Apart from reflecting on learning independently, teachers also reflect with colleagues and the school principal, which is held once a week.

Reflection activity (Figure 7) is carried out once a week, where the learning outcomes of each class,

both regular and project learning, are discussed. It can be an opportunity for teachers to improve the quality of learning. The reflection activities are an essential moment for teachers to improve the quality of learning by emphasizing sensitivity to various things that occur in the learning process and critical thinking to improve or improve things that can influence student learning outcomes. Apart from reflecting on learning independently, teachers also reflect with colleagues and the school principal, which is held once a week.

Management System in PjBL

Design learning using PjBL must be managed into a management system for outstanding results at the end of the teaching-learning process. The management system follows the famous, successful management (planning, organizing, acting, controlling) (Aguinis, 2023). In the planning section, the students are led by inquiry questions and procedures for making projects from the student handbook. In the organizing section, the students note the following step by step in their handbook, which step comes first and which step comes forward. In the acting section, the students do some actions following the numbering on the book from top to bottom of the pages inside the book. The book itself is shown in numbers to help students understand the sequences. Students do daily observation and note-taking for later evaluation in the controlling section.

As Phase B students, they need some help from their parents. The parents help prepare some materials and equipment needed based on the books. For example, the students must bring soil, polybags, and seeds. The parents help the students provide them. The role of the teacher is to help them take action and control them at School.

The structured management system in Project-Based Learning (Figure 8) consists of four key stages: planning, organizing, acting, and controlling. These stages form a cyclical process to ensure effective project execution. Parents, students, and teachers play collaborative roles in this system: teachers guide the process as part of their instructional duties, students actively carry out tasks, and parents provide support to facilitate learning. This integrated approach emphasizes shared responsibility and systematic progress in PjBL implementation. This model underscores the importance of coordination among all stakeholders to achieve project goals efficiently.



Figure 7 Reflection activities

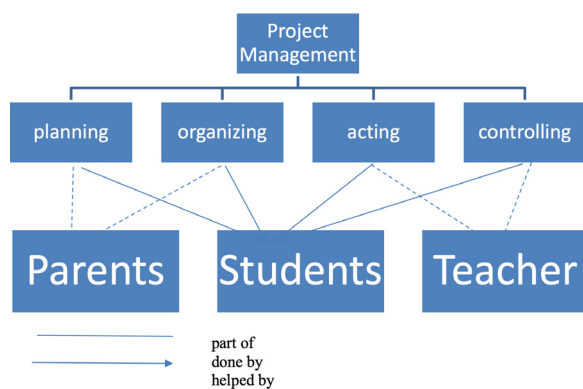


Figure 8 Model of management system in PjBL

Conclusion and Recommendation

Based on the research findings, implementing the *IPAS* project in the education management review includes planning, implementation, and evaluation. Moreover, the conclusions can be drawn as: (1) At the planning stage, the teacher creates a teaching module which consists of methods, models, media, and teaching materials when preparing for learning; (2) The implementation stage of social and science learning will be carried out only in class VI and will be carried out in stages. The *IPAS* project is carried out at the end of the material or when regular learning has been completed. In the core activity using the PjBL learning method, the teacher organizes students into several groups, directing them to find solutions to problems. The teacher will continue to monitor student activities while carrying out projects so that students take the proper steps in completing the project; and (3) At the evaluation stage of the Science and Technology Project learning program in Mover Schools, various program activities are carried out, including assessment of student learning outcomes, reflection once a week by teachers and principals, and internal supervision activities once a semester by the principal, deputy principal in the academic field, and colleagues targeting teachers. Apart from internal supervision, supervision or training is also carried out with a team of experts to monitor learning progress and develop the competence of school principals and teachers. The training programs themselves include exhibition activity (*Lokakarya*), *PMO*, and *KKG*.

In developing student achievement, schools need to review certain things in their educational management. The school motivator highlights education management

in five categories: student achievement, learning environment, learning process, self-reflection, and the impact of project-based learning (PjBL), a learning method that focuses on student activities in creating a project. Phase B students (Class 3 and Class 4) require the help of parents and teachers in implementing a management system when working on a project. Parents help by providing materials and equipment, while teachers help at School to ensure students' learning process.

This research's limitation is that it only uses PjBL in science subjects. You may see different results when using PjBL with other subjects. Therefore, this research recommends conducting PjBL research using other subjects and stages.

The management system is essential for the success of the learning process, emphasizing educational management in five categories: student achievement, learning environment, learning process, reflection, and impact. Student learning achievement is related to the learning process. Therefore, the learning process must be facilitated and personalized to be functional and enjoyable. Students are classified into several stages to maximize the achievement of learning outcomes. A flexible time location is needed based on the student's pace and an initial analysis of the student's skills as a bridge to achieving subsequent skills.

School management should minimize the involvement of teachers and parents in helping students work on their learning projects. The success of implementing the Independent Learning Curriculum depends on how well the management system has been running and the realization of student independence in learning.

Conflict of Interest

The article has no conflict of interest to be declared. It is the original work and research of the research team and did not involve any unmentioned external parties.

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