



Empowering Teachers in Indonesia: A Framework for Project-Based Flipped Learning and Merdeka Belajar

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Abstract. This article proposes the use of Project-based Flipped Learning to support the ‘Merdeka Belajar’ curriculum in Indonesia, which aims to restore learning and increase student engagement. The study conducted a literature review of existing articles and theoretical studies, highlighting the crucial role of teachers in creating an effective learning environment and promoting student engagement. The findings suggest that Project-based Flipped Learning can be an effective tool for achieving learning outcomes, and the teacher’s role is essential in supporting this approach. The study provides a framework for the implementation of the ‘Merdeka Belajar’ Project-based Flipped Learning, which can potentially improve the quality of education in Indonesia and address the learning crisis.

Keywords: Project-based Flipped learning environment · teacher’s role · Merdeka Belajar

1 Introduction

21st Century Education requires that every child has a learning community. Learning is obtained from various sources, not only from books but also from the internet, various kinds of technology & information platforms, and global curriculum development. In Indonesia, it is defined as ‘Merdeka Belajar’ [1]. For this reason, teachers in individual learning must adapt strategies, models, and teaching methods based on the characteristics of this generation. In addition, teachers must also be innovative by enriching and updating knowledge and skills to present exciting and interactive learning activities using technology [2]. They are changing the teaching paradigm from teacher-centered to learner-centered learning. A learning approach is needed to encourage students to develop 21st-century skills in their daily lives. Students must have generic skills to overcome everyday challenges, including inquiry, critical thinking, communication, and collaboration skills [3, 4]. The constructivist learning approach is suitable for developing these skills [4, 5]. This trend places new demands on teachers and requires better designs for teacher development.

The Indonesian government socializes ‘Merdeka Belajar’ as an effort to change the mindset of the teacher center to become a center of collaboration. In the concept of

'Merdeka Belajar', teachers and students are subjects in the learning system. The role of the teacher in the classroom is not to plant or standardize the truth according to the teacher but to explore reality, reason, and critical thinking in students to see the world and phenomena. Opportunities for developing the internet and technology are the momentum for learning independence [6]. Thus, teachers and students can collaborate to create super-active and productive learning [7]. Nadiem Makarim, the 'Minister of Education, Culture, Research and Technology of the Republic of Indonesia (Kemendikbud RI), stated that teachers must create an ideal and happy learning atmosphere for students to show learning achievements. Teachers are the key to the success of the 'Merdeka Belajar' education system because they must adapt to the new approach to have competence and skills. Strengthening new literacy for teachers is vital to change, revitalizing literacy-based curricula, and enhancing the role of teachers with digital competence [6]. However, the complexity of the Independent Curriculum provides its challenges and problems for each academic unit that will implement it. The reality on the ground, socialization related to the new learning paradigm, seems uneven. This can be seen from the teacher's lack of understanding of the new paradigm of learning and the low curiosity of teachers. They even tend to be skeptical of the government's current prototype curriculum. In addition, these conditions impact the teachers' low competence in designing teaching materials/modules according to the Independent Curriculum, especially the preparation of the 'Projek Penguatan Profil Pelajar Pancasila' (P5) [8].

Based on the explanation above, it is necessary to have a learning environment that can be an alternative for teachers to create a fun learning using flipped learning. The research that researchers have done about the learning environment has an essential role in increasing motivation and a sense of comfort in students. Flipped learning is a learning approach by flipping lessons from school to home and from home to school. Flipped learning provides more opportunities for students to engage in critical thinking, independently facilitate their learning, and more effectively interact with and learn from their peers. In addition, teachers need more flexibility in choosing student assignments in understanding the material that is the target of learning and providing time in class to apply learning opportunities based on problem-solving activities and offer appropriate feedback/guidance to students [9]. This research presents a Flipped learning environment to facilitate P5, identifies challenges for teachers in new instructional environments, and proposes a teacher role development model to support 'Merdeka Belajar'. The teacher's role in introducing a flipped learning environment to meet students' learning needs in the 'Merdeka Belajar' curriculum is essential. This change helps create a conducive learning environment so students can access information, communicate and share information with colleagues, and build knowledge through technology inside and outside the classroom and implement P5.

2 Methodology

The method used in the literature review through systematic approaches to perform data analysis with a simplified process. Design articles research by Randomized Controlled Trials (RCT) by tracing research results and curriculum policies in Indonesia. Papers intended to be used in the original article empirical research or research articles

contain the results of actual observation or experience men where there is an abstract, introduction, methods, results, and discussion.

3 “Projek Penguatan Profil Pelajar Pancasila” (P5) in ‘Merdeka Belajar’

Principles of learning and assessment. In the independent curriculum, each activity must result in a project. For this reason, the school holds exhibitions to display its students' works. Even though they don't have a large yard, they work with parents or agencies to support the implementation of the exhibition The 'Freedom to Learn' curriculum currently being developed by schools in Indonesia is the 'Projek Penguatan Profil Pelajar Pancasila' (P5). The school seeks to train students to explore real problems in their environment and collaborate to solve them. The Pancasila student profile is a form of translation of national education goals. Based on these considerations, the profile of Pancasila students consists of six dimensions, namely: 1) having faith, fearing God Almighty, and having noble character, 2) being independent, 3) working together, 4) global 'diversity', 5) critical thinking, and 6) creative. This profile needs to be simple, easy to remember, and implemented by both educators and students so that it can be lived in daily activities [10].

One of the things that academics can do today is to activate literacy activities in a society that can develop knowledge, creativity, critical thinking skills, good communication skills, and skills in using technology-based devices. Based on the results of an analysis of the literature study conducted by Kahfi, the implementation of the Pancasila Student Profile was not optimal because various obstacles caused a lack of understanding conveyed by educators, namely limited time for Teaching and Learning Activities, lack of lesson substance, At least science and technology carried out by educators. Student interest in subjects is still low, students are still passive in the learning process, there are still teachers who have not prepared appropriate lesson plans, learning strategies lack variation from educators, parents pay less attention to children's and teacher learning patterns, and there is speculation about the provision of learning materials. While the understanding and knowledge of students in their living environment regarding the inculcation of Pancasila values is still lacking, for example, divine values are only understood to be limited to the act of praying and making ceremonies [11].

The Ministry of Education and Culture's hope for the implementation of the Pancasila student profile is to make the Pancasila student profile a culture and habit all the time in everyday life. The embodiment of this hope can be carried out with students who can understand, understand, and apply the profile of Pancasila students both in the realm of schooling, the domain of work, and their daily lives [11]. To realize P5, implementing the Merdeka Teaching Platform platform is very helpful in implementing the Pancasila Student Profile in a new paradigm. Pancasila Student Profile is applied in the daily character that is built and lived in each student through school culture, intra-curricular, co-curricular, and extra-curricular learning at school.

4 The Teacher's Role in Supporting 'Merdeka Belajar'

Differentiated teachers choose topic, methods, and products for students. Differentiated teachers may change one or more of these aspects to help students achieve learning goals. Teachers in the 21st century must be creative, resourceful, and use high-quality tools. Over their lives, teachers must adapt to changing learners, standards, learning environments, and tools. Teachers can succeed in a changing world by becoming educational designers [12].

To enhance human life, educators must use the Internet of Things, artificial intelligence, big data, and robots [1]. Schools are changing as teachers become more creative and aware of students' hobbies, talents, needs, and abilities. Pancasila students study the independent curriculum in driving schools to become competent and moral. Implementing a distinct curriculum in driving schools is harder than turning the palm, especially getting school members on board. The principal must motivate, guide, and inspire teachers to improve education. To best implement the independent curriculum in driving schools, teachers, school principals, agencies, parents, and related parties must cooperate [13].

5 Learning Environment Project-Based Flipped Learning (PjFL)

The environment is a particular space where people carry out learning activities. In a different learning environment, students with the same developmental tasks and characteristics can interact with the surrounding factors in the learning process. Students can also use content resources, technical tools, learning methods, and people with relationships, which can be a common background from the context of the physical and social environment [14]. The learning environment can be seen as an ecology, which includes teachers, learners, teaching materials, evaluation, technology, and so on, and there are interactions between these components [15, 16]. For this reason, a learning approach is needed in a learning environment that meets current learning needs.

Flipped learning is a pedagogical approach taught by the teacher with time before class to increase opportunities for students and teachers to interact. In flipped learning, the activities carried out by students at home are at a low level of cognitive learning, namely remembering and understanding teacher instructions through learning videos. And when students are in class, they cultivate high-level cognitive learning, namely applying, analyzing, evaluating, and creating [17]. Teachers need to review teaching content, analyze the essence and objectives of teaching, use technology and use more appropriate learning strategies. Therefore, when adopting flipped learning, the teacher must have good teaching skills, build learning experiences and knowledge, analyze the curriculum, and design activities so that students understand the meaning of learning and can achieve results from flipped learning. However, other scientists believe that the means of self-study before class are not only limited to videos or the Internet. As long as appropriate learning content and suitable guidance are offered to students, similar learning objectives can be achieved [18].

Flipped learning instructors guide students to think and discuss and provide professional feedback and ideas. Self-study can improve problem-solving, dialogue, and

debate. In flipped courses, students actively participate and use expert help to learn relevant concepts. The teacher assists, not teaches. Flipped learning has shifted technology training from school to home. Homework and self-practice involve classmates and tutors [19].

Previous research defines project-based learning as learning that engages students in learning authentic themes, asking questions, raising hypotheses, seeking relevant information, planning investigations, collecting data, critical thinking, discussing, sharing ideas, reasoning, and decision making, developing products, and presenting it to the audience [20–23]. This study used problem-solving skills to find relevant theme-related material, plan investigations, collect data, discuss, and make decisions in project-based learning. [24] showed that problem analysis and representation could improve problem-solving skills. Based on the explanation above, the researcher describes the teacher's role in introducing a PjFL environment.

In a flipped learning PjFL environment, students and teachers can explore a diversity of ideas. Teachers can help the class converge on important curricular ideas. For example, for 'Merdeka Belajar,' students are given several projects on plastic waste processing. This way, schools, students, and parents will interact with the community learning environment, especially waste management; parents' work environment; home environment; school environment; and family environment. Through the videos presented by the teacher, students can collect studies and descriptions of waste in the background. In class, the teacher can divide students into groups to gather evidence about destruction in all neighborhoods or discuss various ideas about junk. The activity on the following day was for students to observe a video of processing waste into several handicrafts. In class, students can work and present their work. P5 is achieved if teachers understand PjFL based on learning outcomes in 'Merdeka Belajar'. They can even review learning content or do exercises on their way from home to school. In addition, learning can also appear in students when observing scientific phenomena that are by their learning interests so that they are active and independent. Teachers must be able to identify and analyze the learning environment to design project topics given to students. The teacher must also understand the mechanism of flipped learning with sound planning to obtain clarity on student activities at home and school based on the projects they have designed.

6 Conclusions

PbFL differs from specific projects. Use different learning environments to emphasize collaboration across tasks. PbFL students collaborate to fulfill learning missions [25]. Thus, when planning lessons, teachers must consider the mission's intricacy. PbFL-based lessons teach pupils teamwork and knowledge at home and school. Presentation, digital storytelling, waste utilization, gardening/planting, livestock, and product ventures are common PjFL. Example: PowerPoint project. When given videos at home, students must collaborate to find, organize, and complete learning tasks. Digital storytelling requires writing, shooting, and editing videos on a specific theme. Product projects require students to collaborate on a big project like an experiment or artwork. Students aid each other like in learning activities. Thus, at home, they can learn about a topic, the division of labor, parental supervision, and discussions.

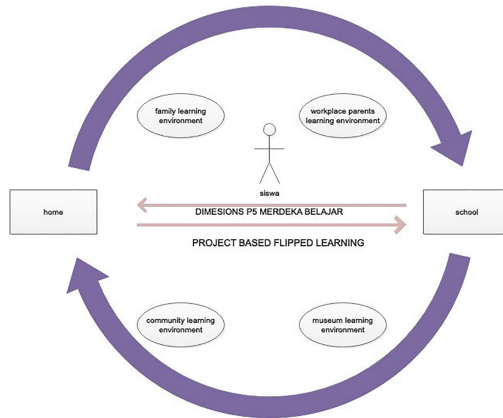


Fig. 1. The teacher's role in introducing a Project-based Flipped learning environment

In school, they collaborate and interact. Teachers should use learning videos on relevant project themes to help students discuss and plan digital storytelling projects in class. (making videos to introduce their hometown). After the field, they take images and videos and interview people according to the plan. They then show videos to classmates and tutors. Figure 1 shows researchers how teachers can use PbFL to promote independent learning. Teachers must also grasp their regions' student learning environments and create supportive projects. This study is a literature review, but future researchers may offer P5 menus in elementary and secondary schools to help teachers implement P5.

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