



How The Project Based Learning Implemented In “Kurikulum Merdeka”: A Case Study

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ABSTRACT

This study aimed to describe project-based learning implementation in the “Kurikulum Merdeka” at TK Aisyiyah Nyai Ahmad Dahlan. This study used a qualitative approach and a case study type of research. The study subjects were the principal, curriculum team, class B teachers, and class group B4. Data collection techniques used interview techniques, observation, and documentation. Primary data sources comprised the principal, curriculum section, teachers, implementation of project learning, and their documents. The data analysis technique used the Miles and Huberman interactive analysis model. The data from the research results were re-tested for validity using triangulation techniques and sources. The study results showed that TK Aisyiyah Nyai Ahmad Dahlan implemented project-based learning in the “Kurikulum Merdeka”, which included the preparation, implementation, and assessment processes supported by factors of facilities, learning media, and activity actors. Meanwhile, project-based learning at TK Aisyiyah Nyai Ahmad Dahlan also experienced several obstacles, such as limited literature and references, differing perceptions between teachers regarding “Kurikulum Merdeka” learning, and loose part learning less varied media.

INTRODUCTION

Education in Indonesia has experienced several changes in its curriculum from time to time. The curriculum changes started from the 1947 curriculum to the current latest curriculum, namely the Independence curriculum. In the changes, there are differences in One or more parts of the curriculum in each period Because existence changes for each person, which involves Good Teachers, students, head schools, owner schools, older adults, and public relations in education (Muhammedi, 2013). Developing society’s demands, needs, and conditions results in curriculum changes. The curriculum as a subsystem of education must inevitably change to follow the developments of the times. These developments have developed a specific and appropriate curriculum to meet society’s demands, needs, and conditions (Nurdyansyah, 2015). Thus, with the development of the curriculum, educators can follow the flow of change and adapt to the latest curriculum. As reported by (Kejarcita, 2022), sources of literacy and references regarding the “Kurikulum Merdeka”, the school movement program, and the Pancasila student profile project or P5 are still limited.



The Ministry of Education (Kemendikbudristek) of the Republic of Indonesia issued a new curriculum called the Merdeka Curriculum in the 2021/2022 academic year. This curriculum was issued due to *learning loss* and, simultaneously, to answer the challenges caused by the *COVID-19 pandemic* to restore learning in Indonesia. This has been stated in Permendikburistik Number 56 of 2022, which contains three curriculum options that schools can use to restore learning: the 2013 curriculum, the emergency curriculum (a simplified 2013 curriculum), or the Merdeka Curriculum. Schools are given the freedom to choose and implement the curriculum according to the conditions and readiness of each school for later implementation. However, based on the results of an unstructured interview with a principal at TK ABA Gadungan, it was shown that the school was still implementing the 2013 or emergency curriculum because it did not fully understand the Merdeka Curriculum.

Schools or institutions are under the auspices of the Ministry of Education, Culture, Research and Technology (Kemendikbudristek) of the Republic of Indonesia to implement policies made by the government. The success of an institution or school cannot be separated from the learning model used by the institution or school and educators. The learning model applied in kindergarten can use various learning models. The learning model also pays attention to the needs and characteristics of students in order to determine the appropriate learning model. The learning model is designed to create an environment that allows children to interact and adapt during the learning process to change the child's behavior or development (Lestarinigrum, 2017). Like learning models, the learning approach used in institutions or schools must also be based on students' conditions, needs, and problems. Moreover, each student has their characteristics. Children's problems in learning activities, such as lack of independence, require a learning approach that can stimulate independent behavior so that children are actively involved in learning activities. One approach that can be applied in learning process activities to deal with these problems is scientific (Sofianti & Afrilianto, 2021).

The scientific approach aims for students to know, understand, and practice what is happening scientifically because the scientific approach is based on the scientific process. In the scientific approach, students will play a more active role in building their knowledge, understanding, and skills independently from the learning process results. Educators play a role in directing and facilitating students to learn what is being studied together (Nurdyansyah, 2015). This approach is considered very suitable to be applied because this approach emphasizes the activeness of students throughout learning activities (Indriyanti et al., 2017). To increase activeness in children, appropriate learning is needed to overcome these problems using methods relevant to the current "Kurikulum Merdeka" program.

The learning model required is a learning model with a scientific approach using the *project-based learning method* or a learning method based on projects. Project learning is considered very suitable because, in its implementation, project learning is centered on students. Project learning provides opportunities for students to solve problems in everyday life, individually or in groups (Sari & Astuti, 2018). According to Killpatrick, *projects* lead to the maturity and development of children's character. Children are naturally active, especially when socializing, especially along social lines. The teacher acts as a guide to stimulate children's development. Project learning is child-centered and requires teachers to place each child at the center of the learning process by developing activities around children's interests (Kilpatrick, 1918; Maryatun & Firdhaus, 2022).

In this study, the school chosen was the Aisyiyah Nyai Ahmad Dahlan Kindergarten, located in Rejowinangun, Kotagede, Yogyakarta. Based on the Ministry of Education, Culture, Research, and Technology data, Aisyiyah Nyai Ahmad Dahlan Kindergarten is the second generation of driving schools. This school has implemented the Merdeka curriculum for 1 year. The principal and teachers at this school have received training in compiling KSP and its implementation in learning. This makes teachers and principals skilled in implementing the Merdeka curriculum, which includes project learning. This school even has a curriculum team tasked with developing and training the implementation of the Merdeka curriculum with a project learning approach. The P5 (Proyek Penguatan Profil Pelajar Pancasila) project was planned at the beginning of the year by all elements of the school, namely the principal, curriculum team, and teachers. Initial information found that the project was carried out simultaneously for each class, although the themes differed.



This background underlies the researcher digging deeper into the implementation of the project in the Merdeka curriculum at the Aisyiyah Nyai Ahmad Dahlan Kindergarten to describe it in detail. The “Kurikulum Merdeka” aims to develop *soft skills* possessed by students. Educators can create fun, quality, and meaningful learning to produce competent graduates per Pancasila values through the Pancasila Student Profile Strengthening Project (P5). Therefore, the researcher is interested in conducting research at the Aisyiyah Nyai Ahmad Dahlan Kindergarten because the implementation of the “Kurikulum Merdeka” has been going on for one year, and the researcher wants to explore information about how to implement project-based learning based on the “Kurikulum Merdeka”. The presentation of this article refers to the question, “How is the implementation of *project-based learning* in the “Kurikulum Merdeka” in kindergarten?”

METHOD

The method used is a case study method with a qualitative approach. This method is considered appropriate to reveal the phenomena related to implementing *project-based learning* in the “Kurikulum Merdeka” at the kindergarten level. This research was conducted on March 23 - June 23, 2023, at Aisyiyah Nyai Ahmad Dahlan Kindergarten in Rejowinangun, Kotagede District, Yogyakarta City. The objectives of this research include the planning process, implementation, and assessment of project learning based on the “Kurikulum Merdeka” in kindergarten. The subjects of this research are all people involved in implementing *project-based learning* based on the “Kurikulum Merdeka” at Aisyiyah Nyai Ahmad Dahlan Kindergarten, including the principal, curriculum team, class B teachers, and class B students. The requirements for the research subjects include (1) the principal, curriculum developer, and teacher who has practiced implementing the “Kurikulum Merdeka” through various training. (2) The curriculum development team is selected from people involved in preparing the KSP based on the “Kurikulum Merdeka” project. (3) Meanwhile, the teachers selected have carried out project learning for at least one year in their class. Moreover, (4) The children as the subjects of this research are Group 5-6 years kindergarten children whose class teacher has given project learning.

The data collection methods used were observation, interviews, and documentation. Observations were carried out in the classroom to observe and record the implementation of project learning in the “Kurikulum Merdeka” and the results in field notes. Observations were carried out during the learning P5 which was carried out in two project themes. Data analysis used the Miles and Huberman interactive analysis model. Interviews were conducted using semi-structured guides with the principal, curriculum team, and teachers. The results of the interviews were collected as interview notes. Documentation was carried out by collecting files related to P5 in the form of Teaching Modules or RPP, photos of P5 implementation, P5 implementation assessment results, and other assessment documents. The documentation results were recorded as documentation notes to complement field notes and interviews. The validity of the research data was guaranteed using technical and source triangulation. Technical triangulation includes data collection techniques such as observation, interviews, and documentation. Source triangulation consists of data sources, namely the principal, curriculum team, and class teachers. The data was then analyzed using the Miles and Huberman flow, which consists of a cycle of data collection, reduction, presentation, and drawing conclusions.

RESULTS AND DISCUSSION

This article refers to the research question, “How is the implementation of project-based learning in the independence curriculum in Kindergarten?” The study's results found that the implementation of project-based learning in the independent curriculum in kindergarten was carried out in three stages, namely planning, implementation, and assessment, as described below.

Project Planning in the “Kurikulum Merdeka” at Aisyiyah Nyai Ahmad Dahlan Kindergarten

Planning begins with the formation of a P5 facilitator team. The P5 facilitator team at TK Aisyiyah Nyai Ahmad Dahlan is a school committee team consisting of 3 people, namely the principal and two educators who are also members of the school curriculum team. The task of the facilitator team is to plan P5 learning activities



that educators and students will carry out. The learning planning includes determining the theme, topic, dimensions, implementation time, and activity teaching modules and making a P5 assessment format for assessing student project results. This refers to the guidebook (Kemendikbudristek, 2022b; Kilpatrick, 1918; Maryatun & Firdhaus, 2022), which explains the formation of a facilitator team. The P5 learning facilitator team is formed and managed by the head of the education unit, who is tasked with planning, implementing, and evaluating the P5 project. The principal and curriculum team explain this below.

Headmaster: "So every semester, if there are three facilitators, the principal and two teachers. These two teachers are included in the curriculum team because they are the principals, that's why they are included in the facilitator team."

Curriculum Team: "We take the facilitator team per class 1. In total, there are nine curriculum teams, 10 with the principal. For this one, the facilitator team is only 3. There is the principal and two regular teachers. So that's what compiles the new P5, and then it is passed down to the curriculum team and then passed down to friends."

The second step is to identify the readiness of the institution. Identification of the institution's readiness is carried out after the facilitator team has planned the theme, topic, and activities of P5. The facilitator team gathers with the curriculum team and the class teacher to discuss the theme, what activities have been determined and will be implemented during P5 learning, and the duration of the P5 implementation activities. Identifying the institution's readiness is carried out by discussing what tools and materials are needed for learning activities to run well and smoothly. This refers to the guidebook (Kemendikbudristek, 2022b), which explains the readiness of educational units to identify how an institution's initial readiness is in carrying out P5 project learning. The following principle explains this step.

Principal: "If the identification is related to P5, what differentiates it is only the topic, so what is done from various preparations and so on, the difference is only that the tools, materials like that are indeed different because they are adjusted to the theme taken."

The third step is that the institutional unit chooses one of the four major themes that have been determined by the Ministry of Education, Culture, Research, and Technology and can be narrowed down by the institution; the learning topics used are adjusted to the characteristics of each school environment, the dimensions chosen to be the focus of the P5 project targets are not all chosen, but only two dimensions are chosen to be the focus of the target, the allocation of time for implementing P5 during one semester is only one profile project when all have been agreed upon together, the facilitator team creates a teaching module for the P5 project. The theme chosen in P5 learning during the research was "We Are All Brothers," while the learning topic determined was "The Beauty of Sharing Food Packages." The allocation of time for implementation for this P5 project activity lasted 8 days. This refers to the guidebook (Kemendikbudristek, 2022b; Kilpatrick, 1918; Maryatun & Firdhaus, 2022), which explains the design of dimensions, themes, and time allocation for P5 learning. School institutions choose dimensions that are not too many; two to three dimensions are chosen to be the focus of the learning targets of the profile project. The theme of the profile project learning has been determined by the Ministry of Education, where there are four main themes that educational institutions can narrow down according to the characteristics of each institution's region. The allocation of time for implementing the profile project is carried out one to two times a year for the profile project. The series is as described by the following respondents.

Curriculum Team: "That was at the beginning, so we had at least 2 dimensions, what dimensions would appear was already initiated at the beginning when KOSP was created, it was already like this,



approximately if P5 is the first, what dimension will appear, then P5 is the second, what will appear, that was already created when KOSP was created."

Teachers B1 and B2: "...the dimensions have also been determined by the curriculum team. The theme was discussed in the curriculum at that time together with the teacher and the curriculum team..."

The fourth step is the creation of teaching modules. The learning-teaching modules created by the facilitator team contain the institution's identity, dimensions, themes, topics, learning media, learning objectives, learning tools and materials, facilities and infrastructure, learning steps, and assessments or assessments of student project results. This refers to the guidebook (Kemendikbudristek, 2022b) for preparing P5 teaching modules. The components that must be included in the profile project module are: 1) module profile consisting of the theme and topic or module title, target level, and duration of activities; 2) objectives consisting of mapping dimensions, elements, sub-elements that are the objectives of the activity and achievement rubrics (for elementary and secondary education); 3) activities consisting of the general profile project activity flow and detailed explanations of the stages of activities and their assessments; 4) assessment, an instrument for processing student learning outcomes to conclude the achievements of the profile project achieved by students.

The final planning step is the preparation of the report on the results of the student project made by the facilitator team. The indicators used to assess the student's project results are taken from the objectives of the learning activities. Three assessment techniques are used at TK Aisyiyah Nyai Ahmad Dahlan, including *checklists*, short narratives, and a collection of documentation in the form of photos and videos of children's activities while carrying out project learning. This refers to (Kemendikbudristek, 2022b), which discusses the planning of reporting the results of student projects by determining the learning objectives that are used as guidelines in carrying out assessments carried out by educators to find out and measure the achievement of the learning objectives made in the profile project activities. From the assessment results, it can be seen how much achievement students have achieved inside and outside the classroom. If there are students who have not achieved the learning objectives, the educator will develop learning activities to achieve the achievement of these competencies.

The first planning process is preparing the theme and topic of the extracurricular project determined by the school curriculum team. The theme chosen during the research was "Mosque." The allocation of time for implementing extracurricular learning is conditional according to the conditions of each class; if students want to play with the same topic, the time for implementing the activity will be added and will end according to the mutual agreement between the teacher and students. This refers to the learning guidebook (Hastasasi et al., 2022), which explains the structure of the intracurricular learning curriculum. The government does not determine the theme of intracurricular learning for PAUD units. However, it is chosen, determined, and developed by each institutional unit and adjusted to the characteristics of the school environment. The allocation of learning time at TK Aisyiyah Nyai Ahmad Dahlan in one week is 1,200 minutes. 2,40 minutes per day and multiplied by five effective learning days. This shows that Aisyiyah Nyai Ahmad Dahlan Kindergarten has met the minimum time for extracurricular learning activities according to the learning guidebook (Hastasasi et al., 2022) regarding the allocation of learning time for PAUD units aged 4-6 years of at least 900 (nine hundred) minutes per week while the time allocation for PAUD aged 3-4 years is at least 360 (three hundred and sixty) minutes per week.

The curriculum team plans the learning theme planning process, or each class can choose a theme for learning activities that week so that each class's themes and learning objectives are different. Planning of learning objectives and achievements is prepared before carrying out learning activities by each class teacher after observing learning resources and making a concept map with students. This refers to the theory presented by Tanumasely Y (2022) regarding learning planning. Learning planning consists of designing learning needs and formulating learning objectives. The learning components consist of learning media, learning materials, learning methods, learning strategies, learning resources, and learning environments.



The following process is the preparation of teaching modules made by each class teacher after making a concept map and determining the play activities together with students. Teaching modules cannot be made at the beginning of the activity because the play activities have not been determined. The play activities in the teaching module are purely derived from students' ideas when discussing the creation of concept maps, and educators act as student facilitators in the classroom. In compiling teaching modules, teachers write general information about school identity, learning objectives, learning models, phases, general descriptions of activities, tools, materials, and infrastructure used in learning activities. The way to compile teaching modules is to determine the learning outcomes to be achieved by students, and then the learning outcomes (CP) are reduced to learning objectives. Learning outcomes consist of three (3) achievements: Religious and moral values, Identity, and Basics of literacy and STEAM. Other components are in the form of learning activity steps consisting of initial activities, core activities, and final activities. This refers to the guidebook Kemdikbudristek (2022), which explains the preparation of teaching modules. Teaching modules contain learning objectives, learning steps, learning media, assessments, and other learning information and references that can help educators implement learning. Teaching modules in the "Kurikulum Merdeka" aim to help educators be more flexible and contextual when teaching and not always use textbooks.

The children's daily Learning Implementation Plan (RPP) is made after learning activities. This is because the child chooses the play activities carried out, so in the RPPH, the activities listed are chosen by the child. Each class teacher prepares this RPPH once a week. The learning plan contains class identity, activity objectives, learning activities from the beginning, core, and end, assessment or assessment plans, and reflections. This refers to the theory put forward by (Nasution et al., 2022, pp. 101-103) regarding the definition of RPP. The teacher makes the Learning Implementation Plan (RPP) to assist the classroom's teaching and learning process (KBM), including learning objectives, learning activity steps, and learning assessments.

Implementation of Project Learning in the "Kurikulum Merdeka"

Learning for P5 in the "Kurikulum Merdeka" that is implemented consists of initial, core, and final activities. The initial activity of the P5 project learning is a discussion of learning topics between teachers and students before observing learning resources to explore information owned by students. Furthermore, educators will invite students to observe the selected learning resources by directly observing the community environment around the school. This observation aims for students to get additional information about the learning topics that will/are being implemented. Students are encouraged to collect as much information as possible from these observations. To strengthen information about the learning topic, educators add other learning resources for reinforcement by watching learning videos. The learning videos shown during the research are the characteristics of people entitled to alms. During this activity, educators also provide trigger sentences to children to recall the information they get when making direct observations and watching learning videos. This is in line with the opinion of Roopnarine Jaipaul, L & Johnson James E (2009), Kilpatrick (1918), and Maryatun & Firdhaus (2022) regarding the sequence phase in project learning. The first phase of the project learning sequence starts the project, and the second phase is developing the project. In the project initiation phase, educators/teachers seek information about the interests and talents of students obtained from the students themselves. This aims to see their knowledge of the topic. On this occasion, many questions will arise from students, and educators/teachers are advised not to rush to provide the right answers and correct student misunderstandings. This will be used as a provision for students to dig up as much information as possible and explore what they will face in the next phase. The second phase is developing the project to obtain information from direct observation or *outing class*. After making direct observations, children can recall what they have learned and develop and dig deeper into information from the first phase.

The core activities of profile project learning consist of initial and reflection or final activities. Initial activities begin with observing the surrounding environment, making basic food baskets, decorating baskets, filling baskets, and distributing basic food packages. At the end of the activity, the whole school conducted a reflection in the hall. Students carry out all activities, from preparation to reporting project results to educators/teachers. Educators/teachers review project learning and record student development during individual and group activities.



During the learning process, educators/teachers play a role in facilitating the tools, materials, and learning media students need. This is in line with the opinion of Roopnarine Jaipaul, L & Johnson James E (2009), Kilpatrick (1918), and Maryatun & Firdhaus (2022) regarding the third phase of the project learning sequence, namely completing the project. In this phase, children complete the entire series of individual and group project activities.

Reflection activities are activities carried out at the end of learning after the entire series of learning activities have been carried out. Reflection activities aim to recall and evaluate the learning by conducting a question-and-answer session with students. Educators ask students how they feel when carrying out the profile project, what they make when carrying out the profile project, and so on. The peak of the P5 project learning activity is an activity that collaborates with external parties, namely the local community. This aligns with the opinion of Roopnarine Jaipaul, L & Johnson James E (2009) regarding the third phase of the project learning sequence, namely completing the project. This phase is an activity to review what has been learned; the project completion phase can exhibit students' work and evaluate their work.

The P5 project learning assessment/assessment is carried out daily by teachers to see the achievements of student development. The assessment techniques used in P5 project learning consist of three assessment tools: photo series, *checklists*, and short narratives. This assessment is also used for end-of-semester reports or student report cards. This refers to the Decree of the Minister of Education, Culture, Research and Technology No. 56 of 2022 concerning Guidelines for implementing the Curriculum in the context of Learning Recovery regarding the principles of assessment or evaluation. The Minister of Education, Culture, Research and Technology Decree explains that the assessment functions as feedback for educators, students, and guardians in determining further learning strategies. The assessment is designed to determine the techniques and timing of the assessment in order to achieve practical learning objectives. The assessment is designed to explain students' progress and determine the following steps to develop appropriate learning programs. Reports on student learning progress and achievement results are informative and straightforward. The assessment results are used by students, educators, education personnel, and guardians to improve the quality of learning. The assessment tools used in processing the assessment results are also by the guidebook (Kemendikbudristek, 2022b), which requires documentation of project activities in the form of journals containing individual development records for periodic reflection activities and portfolios, which are collections of assessment results documents, work, and student awards.

The implementation of intracurricular learning also consists of initial activities, core activities, and final activities. The initial activities in extracurricular project learning are observing learning resources and making concept maps with students. In observing learning resources, students are encouraged to use their senses to explore information through direct observation. After direct observation, the teacher and students make concept maps and determine play activities together. The core project activities in extracurricular learning are implementing play activities determined and chosen by students. The play activities determined by students are 1) making a path to the mosque, 2) making a scarecrow of a mosque, 3) making prayer times, and 4) making a mosque. The learning media used are project-based learning in the classroom. Educators also use various methods to deliver learning activities that students can understand to achieve learning goals. Students can be creative in playing with the existing invitations according to their ideas and imagination. The role of the teacher in extracurricular project learning is as a facilitator for students in the classroom to prepare and find the tools and materials needed by students in their activities.

In addition, educators also monitor students; this monitoring is an activity of observing students in achieving learning outcomes and objectives. If these learning outcomes and objectives appear, the teacher can assess students using the assessment tools that have been determined. After all play activities are complete, students are asked to tidy up the tools and materials used. If students want to play again the next day, the tools and materials are unchanged. This refers to the guidebook (Kemendikbudristek, 2022), which explains the implementation of "Kurikulum Merdeka" learning. Learning is carried out by providing varied learning materials according to the student's understanding. This aims to ensure that each child can achieve the expected learning objectives. In its implementation, educators conduct assessments at the beginning of learning to assess the readiness of each student to learn the material that has been designed. Based on the assessment results, educators modify the plans that have



been made and/or adjust them for some students. Then, carry out learning and use various formative assessment methods to monitor learning progress. The assessment at the end of learning aims to determine the achievement of learning objectives and can be used as an initial assessment in the next learning.

Intracurricular project assessments are carried out at least once a week and not every day as long as students have four types of assessments at the end of the semester. So, this assessment is flexible and makes it easier for teachers to use a checklist assessment in the first week while the assessment uses the work results in the second week. However, it is possible that students can complete all of the assessments in one week. The assessment tools used in extracurricular projects are *checklists*, work results, series of photos, and anecdotal notes. Educators carry out assessments by observing or observing students when carrying out learning activities and recording the development or achievements that have been achieved. Student assessments at the end of the semester (report cards) are reports on children's learning outcomes to be reported to parents. The final report on student learning outcomes contains the student's identity and a narrative of the learning achievements that students, reflections from parents, and documentation of each learning achievement have achieved. This refers to the guidebook (Kemdikbudristek, 2022) regarding the processing of assessment results; the assessment of each learning objective is obtained from qualitative results in the form of rubrics or observations and quantitative results in the form of numbers and will be compared with the learning outcomes of other students to be compiled into a student learning outcome report (report card). The final report format contains information regarding the achievement of student learning outcomes, information regarding the growth and development of children, information about the child's height and weight, NIK ownership, and parental reflections on child development (Kemdikbudristek, 2022).

Supporting Factors for Project Learning in the "Kurikulum Merdeka"

First, First, supporting facilities in project learning consist of various components: Human Resources (HR). The resources in question are the readiness of a teacher in learning activities. Quality resources, adequate facilities, and infrastructure are also needed, such as the learning media and learning resources used for learning activities. This refers to the theory put forward by Tanumasely Y (2022) regarding learning planning, which requires designing learning needs and formulating learning objectives. Learning components consist of learning media, learning materials, learning methods, learning strategies, learning resources, and a learning environment supporting the learning process.

Second, the learning media used in project learning at TK Aisyiyah Nyai Ahmad Dahlan uses *loose parts media*. *Loose parts media* utilizes used materials that are no longer used, and these materials are/come from the surrounding environment. Examples of this learning media are used bottles, bottle caps, beads, scraps of cloth, and so on. The learning resources used in project learning also use learning resources from the natural environment around the child and are related to everyday life. For example, children make direct observations at the mosque around the school environment. Through these observation activities, children will observe and collect as much information as possible about what they are learning. This refers to the theory (Suyadi & Ulfah M, 2015) regarding learning media and resources in project learning that can come from the surrounding natural environment. Learning media from used materials can be managed well and innovatively as learning media that attracts children's attention.

Third, the teacher acts as a companion or facilitator for children during the learning process. The teacher will not discuss organizing and demanding children to be as taught. However, the teacher only directs and brings up children's creative ideas through the trigger sentences, such as "what are we going to make today?" "what materials will be used?", "what do you see?". This aligns with the opinion of Roopnarine Jaipul L & Johnson James E (2011) regarding the role of teachers who help children stimulate their minds and cooperate with their peers. Teachers play a role in facilitating, guiding, and supervising learning activities and children's progress, observing children during the project learning process, and recording children's development. Teachers who have the ability and knowledge about projects in the "Kurikulum Merdeka" and have also participated in BIMTEK training, workshops, and so on will find it easier to quickly adapt and implement learning activities in the classroom. This refers to the theory put forward by Ulfah M (2015) regarding teacher competency, which is to



master the basic principles of education in organizing PAUD, including understanding the curriculum and mastering the basics of PAUD development.

Barriers to Project Learning in the “Kurikulum Merdeka”

First, the obstacles encountered by class teachers in P5 project learning are confusion in compiling P5 teaching modules, differences in perception between teachers regarding the P5 program, classroom conditions that are not conducive, teachers' understanding and experience regarding P5 are still limited because there is not much literature and references, learning media that are not varied enough, lack of teacher understanding in assessment. This is caused by the P5 program, a new program from the “Kurikulum Merdeka.” This program is made separately from intracurricular learning, so teachers must understand the P5 program. The efforts made to overcome these obstacles are to hold joint discussions between the principal, curriculum team, and class teachers to align perceptions regarding the P5 program and its assessments and look for references and related literature regarding P5 to strengthen teacher understanding. Create quizzes to condition students in the classroom and create game rules together. This is in line with the opinion of Susanti (2008) in Al-Tabany, T (2014) regarding the weaknesses of project learning, namely the class conditions are difficult to control so that the class will become noisy because students are given freedom in the learning process so that the role of a competent teacher is needed in mastering and managing the class well to condition the class.

Second, the obstacles encountered by class teachers in intracurricular project learning are a limited time for children's play activities due to regular class hours, teachers' limitations in determining the learning resources to be used, play activities that are not carried out due to the tight school schedule, teachers' difficulties in making invitation sentences, monotonous play activities, assessment formats that are still being adjusted, and student assessments that are delayed due to the tight schedule of teacher activities both inside and outside school. The efforts made by the school to overcome these obstacles are to determine, plan, and arrange a good activity schedule so that all play activities can be carried out, hold discussions with other teachers if they find problems in the classroom, find other learning resources, for example in choosing videos, teachers must find and choose videos that are by children's learning activities, the arrangement of play activities must be made more interesting, motivate themselves to immediately carry out assessments. This is in line with the opinion of Mulyasa (2017) regarding the weaknesses of project-based learning, namely: a) Project-based learning requires much time to solve a problem, meaning that the implementation of project learning is not enough if it is only one day; b) Project learning requires much equipment for the learning process, this is related to the principle of “Kurikulum Merdeka” learning, namely independent learning, independent play. Therefore, project learning requires various learning media to facilitate students in children's play activities and is not monotonous.

CONCLUSION

From the presentation of the results and discussion of the research data, it can be concluded that the Implementation of Project-based learning in the “Kurikulum Merdeka” at TK Aisyiyah Nyai Ahmad Dahlan is carried out in stages (1) Planning for profile project learning (P5) is prepared by all school components, namely the principal, curriculum development team, and class teachers. While each class teacher prepares the planning for extracurricular project learning, (2) Implementation of learning projects to strengthen the Pancasila student profile (P5) and extracurricular learning has been prepared, including three learning phases. The first phase starts the project; the second phase is developing the project, and the last phase is the project completion phase. (3) At the end of the project learning activity, the teacher conducts an assessment or evaluation of the results of students' work to see the achievement of student learning objectives. The various learning assessment techniques used by TK Aisyiyah Nyai Ahmad Dahlan use short narrative techniques/anecdotal notes, series of photos, work results, and *checklists*.

Supporting Factors for Project-based learning in the “Kurikulum Merdeka” at Aisyiyah Nyai Ahmad Dahlan Kindergarten consist of three things, namely: human resources (HR), learning media, and the role of the activity actors consisting of the principal, curriculum team, teachers, and students. The obstacles encountered by schools



and class teachers are as follows: a) the “Kurikulum Merdeka” is a new curriculum, so educators inevitably have to adapt to the “Kurikulum Merdeka.” Efforts to overcome these obstacles are that the school and teachers hold regularly scheduled meetings to hold joint discussions and participate in existing BIMTEK; b) teachers’ understanding and experience of the “Kurikulum Merdeka” and the P5 program is still limited. To overcome these obstacles, teachers and the curriculum team must hold joint discussions and provide an understanding of the teacher’s difficulties.

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