

Implementation Of Differentiation Learning With The Project Based Learning Model In Primary School IPAS Learning

Elya Umi Hanik*

Institut Agama Islam Negeri Kudus

elyaumi@iainkudus.ac.id

Nafila Fitrotul Laili**

Institut Agama Islam Negeri Kudus

nafila209@gmail.com

Abstract

The purpose of this research is to describe the implementation of differentiated learning using the Project Based Learning model in science and science learning, to find out the impact of implementing differentiated learning with the Project Based Learning model in science and science learning, to find out the supporting and inhibiting factors for implementing differentiated learning with the Project Based Learning model in science and science learning. . This type of research is field research with a qualitative approach. Data collection techniques use observation, interviews and documentation methods. Test the validity of the data using credibility with three triangulations (source, technique and time). Data analysis techniques are carried out by reviewing all the data, reducing, compiling, and drawing conclusions or verification. The results of this research show that the implementation of differentiated learning using the Project Based Learning model in class IV science and science learning at SD 2 Kedungdowo Kaliwungu Kudus went through 3 stages, namely planning, implementation and evaluation. The impact of implementing differentiated learning using the Project Based Learning model in class IV science and science learning at SD 2 Kedungdowo Kaliwungu Kudus can be seen from the achievement of indicators of students' creative abilities, namely Fluency, Flexibility, Elaboration, Originality, so that can be guaranteed to increase students' creativity. The impacts after using indicators of student creativity include: students are able to think creatively, students' curiosity is high, students' enthusiasm for learning is high, and students' feelings of confidence are high. Supporting and inhibiting factors for implementing differentiated learning using the Project Based Learning model in class IV science and science learning at SD 2 Kedungdowo, namely supporting factors include professional teachers, social conditions related to the school environment, students' motivation and interest in new things, and infrastructure. Meanwhile, the inhibiting factor is that it requires quite a long time and requires tools and materials to be prepared which are usually not available in schools.

Keywords: *Differentiated Learning, Model Project Based Learning, IPAS*

INTRODUCTION

The progress of education in Indonesia has been transformed by progress in the education sector, namely the transition from the KTSP curriculum to the Merdeka curriculum. This development has had a tremendous impact on the education system, especially in elementary schools. The Independent Curriculum is an educational strategy that was recently implemented and was introduced by the Ministry of Education, Culture, Research, Technology, and Higher Education, namely by Nadiem Anwar Makarim, on February 11, 2022, online. Nadiem stated that the independent curriculum is a more concise, efficient, and adaptable curriculum designed to help learning loss recovery due to the COVID-19 pandemic. The aim is to bridge the gap between Indonesian education and other countries (Safitri et al., 2023). The implementation of the independent learning policy is to facilitate transformative education with the aim of developing human resources that realize the Pancasila Student Profile. Currently, many schools, especially at the elementary school level, are starting to implement the independent learning curriculum. (Wulandari Erika, Pangestika Rintis, 2023)

In connection with this, educators try to make efforts to improve learning, especially by implementing differentiated learning, which adapts the learning process to the individual needs of students. This differentiated learning aims to improve students' creative thinking abilities. Differentiated learning refers to the practice of presenting educational content in a captivating way as an alternative approach. (Sarie, 2022) Differentiated learning is not a new educational approach; differentiated learning is a very good and effective educational approach to meet the individual needs of students. It is highly recommended to use this approach because it prioritizes the specific needs of each student. Emphasizing concern for students is an important aspect of this learning approach because it prioritizes attention to students' strengths and needs. Differentiated learning is an educational approach that focuses on meeting students' individual needs, including their readiness to learn and students' learning profiles, interests, and skills. (Nuryani dkk., 2023)

There are three approaches to implementing differentiated learning, namely content, process, and product. Content differentiation refers to the specific knowledge and skills that students acquire in relation to the curriculum and learning materials. Process differentiation refers to the way students engage and understand concepts and information, including the selection of particular learning styles. Product differentiation refers to the process by which learners demonstrate their acquired knowledge and skills. Even though differentiated learning is not a new concept, the implementation of teaching and learning activities is still rarely carried out. (Yuono Audy, Toharudin Moh, 2023) In this case, the researcher will focus his research on the implementation of differentiated learning IPAS in elementary schools.

Science learning is a curriculum development that combines science and social studies content into one subject. Studying Natural and Social Sciences (IPAS) involves acquiring knowledge about sciences relating to living things and inanimate objects in

the universe; this also includes an understanding of human existence both as individuals and as creatures involved in social relations with their environment. (Wicaksana & Rachman, 2018) The aim of IPAS learning is so that students can develop the skills and knowledge needed to be in line with the Pancasila Student Profile; this will empower them to actively contribute to the preservation and management of the natural environment and natural resources in a sustainable manner. Acquire and understand IPAS concepts and apply them in practical situations, while growing the ability to investigate, define, and solve problems through real action. (Safitri dkk, 2023)

Based on the results of initial observations carried out by researchers, it can be seen that differentiated learning using the project-based learning model really helps students in improving their creative abilities. This encouraged researchers to conduct research at SD 2 Kedungdowo Kaliwungu Kudus using differentiated learning with the project-based learning model. The main factor behind students is the change in the curriculum, namely the Merdeka curriculum. Besides that, it is also influenced by the existence of IPAS subjects, which are a combination of science and social studies subjects, so that students are required to think creatively.

The existence of the problems above explains that a way is needed to encourage students' creativity so that they can immediately create an interest in learning. One model that suits these problems and can be used in learning is differentiated learning with the project-based learning model, where the definition of the project-based learning model is a learning model that invites students to create a project or activity that produces a product based on creativity. Alone. The focus in learning lies on core concepts, involving students in solving problems and other task activities, and providing opportunities for students to construct their own thoughts and reach the peak of producing real products.

This research is relevant to the results of research conducted by Amelia Diah Fernanda and Raras Seto Retno with the title "Project-Based Learning as a Form of Independent Learning to Increase Science Learning Achievement Through Differentiated Learning for Class V Students at SDN 1 Mojorejo." The aim of this research is to determine the success of learning outcomes using the application of the project-based learning model through differentiated learning for fifth grade elementary school students. This research is Classroom Action Research (PTK), consisting of 2 cycles. In accordance with research conducted using differentiated learning with the project-based learning model is effective in improving student learning outcomes compared to using conventional learning. (Wulandari et al., 2022) Given the problems above, the researchers intend to use the project-based learning model in IPAS learning because, according to the researchers, in their research they succeeded in determining the level of students' creative thinking abilities. This is a pretty good technique and maximizes the learning process. So, it can be concluded that the use of a differentiated learning model makes students more challenged to discover knowledge through direct interaction between students and the environment.

METHODS

The type of research used in this research is field research. Field research is research where the source of the data obtained must be collected directly from the field on the object being studied. This research uses a qualitative approach. A qualitative approach is a research process that is carried out fairly and naturally in accordance with objective conditions in the field without any engineering, as well as the type of data collected. (Albi Anggito & Johan Setiawan, 2018) A qualitative approach is an approach that collects information obtained from research activities, not from statistical tools. According to Bogdan and Taylor, quoted by Lexy J. Moleong, the qualitative approach is defined as a research procedure that produces descriptive data in the form of written or spoken words from people and observable behavior (Muhammad, 2019). The collection techniques use observation, interviews, and documentation methods. Next, to obtain data, the author took primary data sources, namely the school principal, class IV teacher and class IV IPAS subject teacher, and class IV students. Secondary data includes the school profile of SD 2 Kedungdowo, the vision, mission, and objectives of SD 2 Kedungdowo, and archive documents relating to the school and students. Test the validity of the data using credibility with three triangulations (source, technique, and time). Data analysis techniques are carried out by reviewing all the data, reducing, compiling, and drawing conclusions or verification.

RESULTS AND DISCUSSION

Implementation of Differentiated Learning with the Project Based Learning Model in Class IV IPAS Learning at SD 2 Kedungdowo Kaliwungu Kudus

The implementation of differentiated learning using the project-based learning model, which is carried out on natural resource material and its conservation, can provide opportunities for students to improve students' creative learning abilities. The implementation of differentiated learning using the project-based learning model, which is carried out on material on natural resources and their conservation at SD 2 Kedungdowo, is also considered effective because it makes it easier for students to learn a learning concept. This type of differentiated learning with the project-based learning model is suitable for effective learning in the classroom because it can be used and applied to identify the diversity of students and can facilitate learning outcomes. (Harianja, 2020)

Differentiated learning is learning that is tailored to the abilities and needs of each student so that they can be creative and think creatively. In this regard, when students have different learning abilities, they can complement each other in achieving maximum learning. Students who have fast abilities can help students who have slow abilities. Likewise, students who have slow abilities can help students who have fast abilities to expand their knowledge. The diversity of students is known based on the results of diagnostic assessments, which become a reference for teachers in applying the important components of differentiated learning. (Avandra & Desyandri, 2023)

The components in differentiated learning that must be considered are differentiation of content, process, product, and learning environment. Content differentiation is a way to provide material that can facilitate the readiness of students' level of learning understanding. Process differentiation is a meaningful learning activity or model that students use to gain learning experience in the classroom. Product differentiation is the final result of learning to demonstrate students' knowledge, skills, and understanding after completing one lesson material. Meanwhile, differentiation of the learning environment is the personal, social, and physical structure of the class. The learning environment can create a pleasant atmosphere for students to feel safe, comfortable, and calm when studying because their needs are met. (Elviya & Sukartiningsih, 2023)

Implementation of differentiated learning using the project-based learning model prepares learning concepts that will take place starting from diagnostic assessments, teaching modules, worksheets, formative assessments, summative assessments, and learning media aimed at achieving learning objectives. (Puspitasari & Wahyuni, 2023) Then, the stage of implementing the learning process using the project-based learning model begins with giving starter/basic questions to students. The next step is to design a project plan that will be completed during the learning process. The project designed is to make glowing decorative bottles consisting of used bottles from the surrounding environmental health. Students are given the freedom to be creative to see their creative abilities. This is a form of product differentiation. Give students the freedom to be creative in making projects or products. The next step is to arrange scheduling, monitor students, and monitor project progress, assessing results. The project that is assessed is where students present the results of the project by explaining the glowing decorative bottles they made. Other groups are given the freedom to ask questions to the group that is making a presentation in front of the class. The final step is evaluating the results of the project. At the end of the lesson, the teacher provides an evaluation regarding the project work process and during the presentation. The teacher said that during the project creation process, each group had its own advantages and disadvantages. (Dinda & Sukma, 2021)

This is in accordance with research conducted by Richard Adony Natty, Forosalia Kristin, and Indri Anugraheni using the project-based learning model to measure student creativity and learning outcomes. This research uses creativity-measuring tools and high, medium, and low-scoring rubrics. In the learning process, students are asked to create their own project assignments or products, where students look for their own ideas about the product that are related to the material being studied. Students will plan what project assignments they will create with teacher guidance, then students in groups schedule the completion of the project assignments. Once completed, each group will make a final report regarding the project assignment, which will then be presented in front of the class. After that, students work on evaluation questions as a form of assessing learning outcomes in accordance with learning indicators. (Natty et al., 2019)

In this way, if implementing differentiated learning using the project-based learning model is carried out appropriately and well, the learning objectives will be achieved, students' learning motivation will increase, and they will be able to increase students' creative abilities. Studying differentiated learning with the project-based learning model can show very positive results for students in learning. To create a lively, interesting, and enjoyable learning environment.

Impact of Implementation of Differentiated Learning with the Project Based Learning Model in Class IV IPAS Learning at SD 2 Kedungdowo Kaliwungu Kudus

The application of differentiated learning using the project-based learning model to improve creative abilities has several indicators that will be achieved in learning. implementing an independent curriculum that includes 21st century skills, which are often called 4C skills, including creativity skills. Skills can be interpreted as learning outcomes in the psychomotor domain, which are shaped like cognitive learning outcomes and the ability to do or carry out something well and optimally. This skill has several categories, including the creativity category, which can be interpreted as a person's skill in creating new combinations (Marzoan, 2023).

The application of differentiated learning with the project-based learning model in class IV IPAS at SD 2 Kedungdowo has several benefits for students, including improving the skills students have in solving problems and making real decisions, improving creative thinking skills that will emerge if knowledge increasingly grows through processes with real situations that are of interest to students, and increasing curiosity and objective ways of thinking individually and in groups. (Donni Juni Priansa, 2017)

In the context of IPAS learning for class IV SD 2 Kedungdowo, the implementation of differentiated learning using the project-based learning model focuses on the topic of natural resources and their conservation. Teachers apply 4 indicators, namely fluency, flexibility, elaboration, and originality, to ensure the success of the learning process. This learning activity allows students to improve their creative talents, facilitating the exploration of new and creative ideas. Yunita Lema's statement is in line with the idea that using the project-based learning model in varied learning can foster a fun and focused learning environment, as well as increase students' abilities in creativity and innovation. This is demonstrated through the successful implementation of a structured learning approach that fosters an environment conducive to students' self-expression and the development of individual talents and abilities. In addition, evaluation of creativity and innovation skills is carried out through project-based activities and video production that displays extraordinary levels of creativity. The implementation of differentiated learning using the project-based learning model in class IV IPAS learning at SD 2 Kedungdowo on natural resources and their conservation can be said to be successful because the learning that has been implemented has been achieved, including:

- a. *Fluency*, This creative ability is meant by fluency. The fluency in creating a multitude of ideas can be seen in how someone can find these ideas smoothly. The fluency referred to here is when students can answer the problems given by finding ideas or suggestions smoothly. (Adi, 2023) In assessing the creative abilities of class IV students at SD 2 Kedungdowo Kaliwungu Kudus, the teacher looked at their fluency in expressing ideas, especially in conveying their ideas fluently. The teacher's role here is in motivating students, namely by encouraging creative thinking skills so that they have the courage to always express their opinions or ideas to their friends according to their daily activities.
- b. *Flexibility*, What is meant by this creative ability is flexibility. Flexibility shapes student behavior that produces many ideas and suggests answers from different directions of thought. Students' flexibility to have high imagination and manage group activities. (Adi, 2023) This achievement is proven in the fact that the majority of students' answers do not just follow the commonly taught solution method. Answers that include many ideas or thoughts are not limited to one point of view but are able to consider various views. It was even found that students' answers presented many different concepts. However, a number of common or standard answers were identified, even though these ideas were less relevant to the given case.
- c. *Elaboration*, What is meant by this creative ability is detail. Detailedness is defined as the ability to communicate creative ideas; the category of student ability is to develop ideas and try new things. (Adi, 2023). In assessing the creative abilities of class IV students at SD 2 Kedungdowo Kaliwungu Kudus, the teacher looked at the ability to develop ideas and try new things by working on the glowing decorative bottle project and completing it well.
- d. *Originality*, This creative ability is meant by authenticity. The authenticity of students' thought processes can be seen in ideas or concepts that are unique and unusual. (Adi, 2023). Learners see general concepts expressed in their own language and based on their personal experiences. Students have the ability to produce ideas that originate from their own thoughts. Unfortunately, there are still examples of the same answers, thus showing that many students collaborate in solving the problems given.

With this explanation, it can be analyzed that the impact of implementing differentiated learning using the project-based learning model in IPAS learning for class IV SD 2 Kedungdowo Kaliwungu Kudus really motivates students to participate and develop creative abilities by explaining their ideas and relating their ideas to everyday life. -day. This is characterized by student activity, enthusiasm, increased interest in learning, and not feeling bored when learning takes place. So this can help students hone their creative abilities to contribute to producing experiences in everyday life. Proven as follows:

- 1) 1 Students are able to think creatively. Differentiated learning with the project-

based learning model can train students to think creatively about problem-based questions. Students are able to think creatively because they are trained how to solve a concrete problem so that students can think about how the problem can be resolved.

- 2) 2) Students' high curiosity. Students who are curious about learning are more effective and prefer it. One of the benefits of differentiated learning using the project-based learning model is finding that students' curiosity always keeps their brains in a condition that allows them to learn and retain information. This makes students motivated to learn and absorb all information about the environmental challenges around them.
- 3) High level of student enthusiasm. Based on observations made during learning, it shows that students are involved and complete the work without experiencing boredom while studying. It can be seen from their actions and behavior that these students are very enthusiastic about learning and have a strong drive to succeed academically.
- 4) High self-confidence of students. Students gain self-confidence and the will to succeed after using differentiated learning with the project-based learning model. They are also more willing to take risks and overcome challenges. Apart from that, students show enough courage to move forward on their own to work in groups because they are able to understand their friends' mistakes. When given the opportunity to grow as individuals, students develop bold ideas and gain self-confidence because they want to be recognized for their abilities.

Supporting and inhibiting factors in the Implementation of Differentiated Learning with the Project Based Learning Model in Class IV IPAS Learning at SD 2 Kedungdowo Kaliwungu Kudus.

In a learning process, of course there is something that hinders and supports the learning process. Supporting and inhibiting factors are always related to various components in the implementation of learning. Based on the research results, supporting and inhibiting factors can be analyzed in implementing differentiated learning using the project-based learning model in class IV IPAS learning at SD 2 Kedungdowo. Supporting factors during learning activities include professional teachers, social conditions related to the school environment, students' motivation and interest in new things, and facilities and infrastructure that support success in learning. Not only are there supporting factors in the implementation of differentiated learning using the project-based learning model in class IV IPAS learning at SD 2 Kedungdowo, but there are also inhibiting factors, including requiring quite a long time and requiring a lot of materials to be prepared. (Harianja, 2020)

Supporting factors for the implementation of differentiated learning using the Project Based Learning model in class IV IPAS learning at SD 2 Kedungdowo, namely:

- a. Professional teacher: A teacher, as a professional and qualified educator, must

be able to pay attention to his qualified staff with real behavior in the learning process.

This action can take the form of interactions between teachers and students; a teacher not only carries out routine educational activities but is also required to be proficient in using strategies, models, and media that are appropriate to the students' conditions. (Suhelayanti, 2023) Therefore, teachers are part of supporting success in implementing differentiated learning using the Project Based Learning model.

- b. Social conditions related to the school environment, maintaining good and harmonious relationships with each other. During the learning process, the implementation of differentiated learning using the project-based learning model, communication between teachers and students goes well, and students and students also do so, so that a harmonious relationship can be created and can be supported during the learning process..
- c. Students' motivation and interest in new things; students' learning motivation can grow students' enthusiasm for learning. The role of the teacher has a very important and significant action in the learning process. The implementation of differentiated learning using the project-based learning model helps increase students' motivation and interest in learning new things. The results of the research show that students increase their motivation and interest in learning; apart from that, students' creative abilities also increase due to the use of differentiated learning with the project-based learning model..
- d. The facilities and infrastructure owned by the school at SD 2 Kedungdowo are sufficient and complete to be able to support the implementation of differentiated learning using the Project Based Learning model..

Factors inhibiting the implementation of differentiated learning using the Project Based Learning model in class IV IPAS learning at SD 2 Kedungdowo, namely:

- a. Differentiated learning with the Project Based Learning model requires quite a long time because it has to go through several learning stages such as looking at students' learning needs, students looking for new ideas to solve the problem, then students analyzing the ideas that have been found so that they can be applied so that they can solve the problem. , after students apply the ideas that have been found, students design conclusions from the problems that have been solved. After that, students need to plan projects, determine projects, and evaluate projects. Learning by implementing differentiated learning using the Project Based Learning model in class IV IPAS learning at SD 2 Kedungdowo, each meeting takes 2 class hours or 2 JPx 35 minutes.

- b. Implementing differentiated learning using the Project Based Learning model requires a lot of materials that must be prepared by teachers, and these are usually not available in schools, so teachers have to prepare their own tools and materials because they don't want to burden students. However, this can be overcome by utilizing used goods in the surrounding environment.

CONCLUSION

There are three steps in implementing differentiated learning using the project-based learning model in class IV IPAS learning at SD 2 Kedungdowo Kaliwungu Kudus, including planning, implementation, and evaluation. Planning is the main thing; initially, the teacher will prepare teaching modules, learning materials, diagnostic assessments, learning approaches and models, as well as learning objectives. The stages of implementing differentiated learning using the project-based learning model in IPAS learning are in accordance with those in the teaching module; there are three preliminary, core, and closing activities. The introduction includes preparation for learning by chanting Asmaul Husna, followed by the teacher making the presence of students and conducting anapperception. The core activities include the delivery of material and the explanation of procedures for implementing differentiated learning using the project-based learning model, starting with providing a diagnostic assessment sheet to students to determine the level of understanding of the teaching material presented. After providing a diagnostic assessment to students, learning continues by applying the four components of differentiated learning, namely differentiation of content, processes, products, and learning environments. Content differentiation begins with the teacher preparing problems that occur around them by watching the video on the projector screen. Process differentiation begins with the application of the steps of the project-based learning model, namely, providing trigger/fundamental questions, designing a project plan, creating a schedule, monitoring and supervising project progress, assessing results, and evaluating project results. In these steps, product differentiation begins to be implemented, followed by differentiation of the learning environment by appreciating the results of students' projects by reflecting on activities during learning. The final stage is the evaluation of assignments and questions and answers regarding the material carried out by the teacher as a form of confirmation to determine the level of understanding and creative abilities of students regarding the material that has been presented. The impact of implementing differentiated learning with the project-based learning model on class IV IPAS learning at SD 2 Kedungdowo using observations carried out aimed at observing learning activities in the classroom using indicators of creative ability. So that the researchers obtained observation

results with an indicator of creativity ability, namely fluency, students were able to convey ideas well, as evidenced by the students being able to answer questions from the teacher regarding natural resource material and its conservation. Flexibility: Students can produce free thinking, as evidenced by students being able to express opinions by communicating and exchanging opinions with their friends. Elaboration (detailedness): students can organize ideas and expand them into better ideas, as evidenced by students being able to analyze solutions to problems by creating projects. Originality: Students can provide an idea that originates from their own thoughts, proven by students being able to draw conclusions from project results from problems to completion of the project. The impacts after using indicators of student creativity include: students are able to think creatively, students' curiosity is high, students' enthusiasm for learning is high, and students' feelings of confidence are high. Supporting and inhibiting factors for implementing differentiated learning using the project-based learning model in class IV IPAS learning at SD 2 Kedungdowo. Supporting factors for implementing differentiated learning using the project-based learning model include professional teachers, social conditions related to the school environment, students' motivation and interest in new things, and infrastructure. Meanwhile, the inhibiting factor in implementing differentiated learning using the project-based learning model is that it requires quite a long time and requires tools and materials to be prepared, which are usually not available in schools..

REFERENCES

- Adi, Y. K. (2023). Profil Kemampuan Berpikir Kreatif Peserta Didik Kelas VI Ditinjau Dari Prestasi Akademik. *Jurnal Sinektik*, 5(1), 82–87. <https://doi.org/10.33061/js.v5i1.7533>
- Albi Anggito & Johan Setiawan. (2018). *Metodologi Penelitian Kualitatif*. CV. Jejak.
- Avandra, R. & Desyandri. (2023). Implementasi Pembelajaran Berdiferensiasi Terhadap Keterampilan Berpikir Kritis Peserta didik Pada Pembelajaran IPA Kelas VI SD. *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, 8(2), 2944–2960. <https://doi.org/10.36989/didaktik.v8i2.618>
- Dinda, N. U., & Sukma, E. (2021). Analisis Langkah-Langkah Model *Project Based Learning* (PjBL) Pada Pembelajaran Tematik Terpadu di Sekolah Dasar Menurut Pandangan Para Ahli (Studi Literatur). *Journal of Basic Education Studies*, 4(2), 54–62.

- Donni Juni Priansa. (2017). *Pengembangan Strategi & Model Pembelajaran*. CV PUSTAKA SETIA.
- Elviya, D. D., & Sukartiningsih, W. (2023). *Penerapan Pembelajaran Berdiferensiasi Dalam Kurikulum Merdeka Pada Pembelajaran Bahasa Indonesia Kelas IV Sekolah Dasar Di SDN Lakarsantri I/472 Surabaya*. 11.
- Harianja, J. K. (2020). Model Pembelajaran *Project Based Learning* Dalam Meningkatkan Keterampilan Berpikir Kreatif dan Komunikasi Matematis Peserta didik. *JARTIKA Jurnal Riset Teknologi dan Inovasi Pendidikan*, 3(2), 201–214. <https://doi.org/10.36765/jartika.v3i2.114>
- Marzoan. (2023). *Penerapan Pembelajaran Berdiferensiasi Di Sekolah Dasar (Tinjauan Literature dalam Implementasi Kurikulum Merdeka)*. 3(2), 113–122.
- Natty, R. A., Kristin, F., & Anugraheni, I. (2019). *Peningkatkan Kreativitas Dan Hasil Belajar Peserta didik Melalui Model Pembelajaran Project Based Learning Pada Peserta didik Sekolah Dasar*. 3(4).
- Nuryani, S., Nugraheni, N., & Artiningsih, A. (2023). Pembelajaran Berdiferensiasi Untuk Meningkatkan Kemampuan Berpikir Kreatif Peserta Didik Menggunakan Media Kantong Budaya. *Madani: Jurnal Ilmiah Multidisiplin*, 1(6), 1018–1030.
- Puspitasari, V., & Wahyuni, A. (2023). Analisis Penerapan *Project Based Learning* (PjBL) Pada Pembelajaran IPAS Peserta didik Kelas 4 Dengan Kurikulum Merdeka. *Jurnal Ilmiah Pendidikan Dasar*, 8(2), 2517–2530.
- Safitri, R., Subekti, E. E., & Nafiah, U. (2023). Analisis Penerapan Model Problem Based Learning Pada Pembelajaran IPAS Kelas IV Di SD Supriyadi Semarang. *Journal Of Social Science Research*, 3(2), 297–308.
- Sarie, F. N. (2022). Implementasi Pembelajaran Berdiferensiasi dengan Model Problem Based Learning pada Peserta didik Sekolah Dasar Kelas VI. *Tunas Nusantara*, 4(2), 492–498. <https://doi.org/10.34001/jtn.v4i2.3782>
- Suhelayanti, Syamsiah Z, Ima Rahmawati, Year Rezeki Patricia Tantu, Wiwin Rewini Kunusa, & Nita Suleman. (2023). *Pembelajaran Ilmu Pengetahuan Alam Dan Sosial (IPAS)*. Yayasan Kita Menulis.
- Wicaksana, A., & Rachman, T. (2018). Pembelajaran Ilmu Pengetahuan Alam Sosial (IPAS). In *Angewandte Chemie International Edition*, 6(11), 951–952. (Vol. 3, Issue 1).
- Wulandari Erika, Pangestika Rintis, S. (2023). Efektivitas Strategi Pembelajaran Berdiferensiasi Terhadap Hasil Belajar Peserta didik Pada Mata Pelajaran IPAS Kelas IV SD Muhammadiyah Bayan. *JIPDAS : Jurnal Ilmiah Pendidikan Dasar*, 1(3), 74–82.

- Wulandari, I., Selamat, K., & Suardana, I. N. (2022). Analisis Pengelolaan E-Learning pada Pembelajaran IPA Di MTsN Karangasem Tahun Ajaran 2020/2021. *Jurnal Pendidikan dan Pembelajaran Sains Indonesia (JPPSI)*, 5(1), 20–31. <https://doi.org/10.23887/jppsi.v5i1.45677>
- Yuono Audy, Toharudin Moh, N. (2023). Implementasi Pembelajaran Berdiferensiasi Pada Mata Pelajaran Bahasa Indonesia Kelas II DI SDN Klampok 01. *Jurnal Pendidikan*, 2(5), 282–288.

