



## Application of project-based learning method in Entrepreneurship education (PKWU) subjects of Labschool UPI

Dzakira Syawalia<sup>1</sup>, Amanda Febrilyanti Suryana Putri<sup>2</sup>, Razka Raditya Fahmi<sup>3</sup>, Dimas Saputra<sup>4</sup>

<sup>1,2,3,4</sup>Universitas Pendidikan Indonesia, Bandung, Indonesia

[dzakirass03@upi.edu](mailto:dzakirass03@upi.edu)<sup>1</sup>, [amandafebriliyanti@upi.edu](mailto:amandafebriliyanti@upi.edu)<sup>2</sup>, [razkaraditya16@upi.edu](mailto:razkaraditya16@upi.edu)<sup>3</sup>  
[dimassaputra@upi.edu](mailto:dimassaputra@upi.edu)<sup>4</sup>

### ABSTRACT

This study reviews the application of project-based learning methods in PKWU subjects of SMA Labschool UPI. The subject of Entrepreneurship Education (PKWU) has an important role in preparing students for the world of work and entrepreneurship. In this context, the purpose of the study is to identify the potential and effectiveness of project-based learning methods in improving students' understanding and skills in PPKWU subjects at the senior secondary level. This research also aims to design, implement, and evaluate the implementation of project-based learning methods that can integrate theory with practice in the classroom. This study used qualitative research methods using interview instruments to explore student experiences in the application of Project Based Learning Methods in PKWU subjects at SMA Labschool UPI. The results of this study show that the application of project-based methods in learning Crafts and Entrepreneurship subjects has a positive and significant impact on student development. One key aspect that stands out is the increased involvement of students in learning.

### ARTICLE INFO

#### Article History:

Received: 2 Nov 2023

Revised: 29 Jan 2024

Accepted: 30 Jan 2024

Available online: 11 Feb 2024

Publish: 21 Jun 2024

#### Keyword:

Entrepreneurship; learning methods; project based learning

#### Open access

Curricula: Journal of Curriculum Development is a peer-reviewed open-access journal.

### ABSTRAK

Penelitian ini mengulas tentang penerapan metode pembelajaran berbasis proyek pada mata pelajaran PKWU SMA Labschool UPI. Mata pelajaran Pendidikan Kewirausahaan (PKWU) memiliki peran penting dalam mempersiapkan siswa untuk dunia kerja dan kewirausahaan. Dalam konteks ini, tujuan dari penelitian adalah untuk mengidentifikasi potensi dan efektivitas metode pembelajaran berbasis proyek dalam meningkatkan pemahaman dan keterampilan siswa dalam mata pelajaran PPKWU di tingkat sekolah menengah atas. Penelitian ini juga bertujuan untuk merancang, menerapkan, dan mengevaluasi pelaksanaan metode pembelajaran berbasis proyek yang dapat mengintegrasikan teori dengan praktik di dalam kelas. Penelitian ini menggunakan metode penelitian kualitatif dengan menggunakan instrumen wawancara untuk mendalami pengalaman siswa dalam penerapan Metode Pembelajaran Berbasis Proyek (Project Based Learning) pada mata pelajaran PKWU di SMA Labschool UPI. Hasil penelitian ini menunjukkan bahwa penerapan metode berbasis proyek dalam pembelajaran mata pelajaran Prakarya dan Kewirausahaan memiliki dampak yang positif dan signifikan terhadap perkembangan siswa. Salah satu aspek kunci yang menonjol adalah peningkatan keterlibatan peserta didik dalam pembelajaran.

**Kata Kunci:** Kewirausahaan; metode pembelajaran; project based learning

### How to cite (APA 7)

Syawalia, D., Putri, A. F. S., Fahmi, R. R., & Saputra, D. (2023). Application of project-based learning method in Entrepreneurship education (PKWU) subjects of Labschool UPI. *Curricula: Journal of Curriculum Development*, 3(1), 81-94.

### Peer review

This article has been peer-reviewed through the journal's standard double-blind peer review, where both the reviewers and authors are anonymised during review.



### Copyright

2023, Dzakira Syawalia, Amanda Febrilyanti Suryana Putri, Razka Raditya Fahmi, Dimas Saputra. This an open-access is article distributed under the terms of the Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)

<https://creativecommons.org/licenses/by-sa/4.0/>, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author, and source are credited. \*Corresponding author: [dzakirass03@upi.edu](mailto:dzakirass03@upi.edu)

## INTRODUCTION

Education is a process of changing the attitudes and behavior of an individual or group of individuals in an effort to mature humanity through teaching and training (Manggala & Nugraha, 2019). Education is one of the key factors in the development of high-quality human resources and a thriving society. Practical and relevant teaching approaches are crucial in improving the quality of education at the high school level. One subject that plays a significant role in preparing students for the workforce and entrepreneurship is PKWU (Entrepreneurship Education).

This background includes the need to introduce innovative learning methods in PKWU subjects. Project-based learning has proven to be an effective approach in developing students' practical skills, problem-solving, and creativity. Creativity is a term widely used both in and outside of school. People generally associate creativity with creative products (Budi, 2019).

A learning model that yields tangible results is needed to hone students' creativity. Where learning is not only theoretical, but students can also develop the knowledge they have learned so far and apply it in the form of practical skills to create products. Therefore, a project-based teaching approach is a strategy that can develop students' creativity. (Jedinasrul *et al.*, 2022).

Implementing Project-Based Learning (PBL) in the teaching and learning process is crucial for enhancing students' critical thinking skills and fostering a sense of independence in learning (Anggreadi & Sutaya, 2019). PBL emphasizes long-term learning processes, where students are directly involved in various issues and problems of daily life, learning how to understand and solve real-world problems, are interdisciplinary, and involve students as active participants from planning, designing, implementing, to reporting the results of their activities in the form of products and implementation reports, meaning that learning is student-centered (Fitrianti, 2021). This method also highlights how to create more engaging and practical learning for students. By focusing on concrete projects, such as creating products or designing small businesses, students can develop skills relevant to the real world. By applying this method, students can gain a deeper understanding of concepts in PKWU while developing the skills necessary to face future challenges.

Changes in the increasingly dynamic and global job market emphasize the importance of students having strong entrepreneurial skills. Therefore, this study aims to examine the impact of implementing project-based learning methods in PKWU subjects on the development of students' entrepreneurial skills and their readiness to face real-world challenges after graduating from high school. This study is expected to make a positive contribution to improving education at SMA Labschool UPI and also has broader relevance in the context of national education.

PKWU learning is tailored to the needs of the 21st century. 21st-century learning enables students to acquire 21st-century skills, namely character skills, competencies, and literacy. The competencies are communication, critical thinking, creative thinking, and collaboration (Pardede, 2020; Supena *et al.*, 2021). In the 2013 Curriculum, the Creative Products and Entrepreneurship (PKK) subject aims to enable students not only to generate creative and

innovative ideas but also to realize them in the form of tangible works and continue to market their creation activities to realize the economic value of these activities (Hermawati, 2021).

This study identified two primary issues affecting PKWU subjects at the senior high school level. First, students' lack of practical involvement in learning can hinder the development of creativity and understanding of the material. Second, low student motivation is often caused by the lack of relevance of the material to the real world and the limited application of relevant practices. Additionally, this study highlights the insufficient development of critical thinking skills and problem-solving abilities among students in the context of PKWU learning. Project-based learning methods are expected to serve as a solution by providing students with opportunities to develop these skills through exploration, collaboration, and reflection in an interactive learning environment.

The primary objective of this study is to assess the potential and effectiveness of project-based learning methods in enhancing students' understanding, skills, learning motivation, creativity, and critical thinking abilities in PKWU subjects at the senior high school level. This study also aims to design, implement, and evaluate the implementation of project-based methods that can integrate theory with practice in the classroom. This study will also provide better insights into the effectiveness of this learning approach in improving the quality of education at the high school level, particularly at SMA Labschool UPI, which is the research context.

The article will discuss the importance of entrepreneurship education, challenges in the PKWU subject, and how project-based learning methods can be an effective solution to enhance students' preparation for the real world. It will also provide an initial understanding of the role of this approach in improving education at the high school level..

## **LITERATURE REVIEW**

### **Learning Methods**

Learning methods are the ways teachers use to implement learning plans designed to achieve educational goals. In other words, methods are how teachers present material to students (Ulfa & Saifuddin, 2018). Learning methods, such as lectures, discussions, question-and-answer sessions, simulations, and practical exercises, can vary. Learning has several important components that support one another. One such component is the learning method. The term "method" originates from the English word "method" and the Greek word "methodos." "Methodos" means "after" or "beyond," and "hodos" means 'way' or "path." In terms of definition, a method is used to achieve predetermined objectives (Nadeak, 2020). When selecting a method, several factors should be considered, namely: 1) the objectives to be achieved in learning, 2) the teacher's abilities and background, 3) the students' abilities and background, 4) the conditions under which the learning process takes place, and 5) the availability of tools or resources (Diana & Rofiki, 2020). Thus, it can be concluded that a learning method is a way of presenting material or lessons to be delivered to achieve specific objectives.

The learning objectives must align with the competencies or skills students wish to achieve. Second, learning methods must consider students' characteristics, such as learning styles, interests, and individual needs. Effective learning methods must be able to accommodate individual differences among students. Third, learning methods must actively involve students in the learning process. Learners should be involved in activities that encourage critical thinking, collaboration, and problem-solving. Fourth, learning methods should utilize various relevant learning resources and media, such as textbooks, multimedia, and the internet. The use of appropriate learning media can increase students' interest and understanding. Fifth, learning methods must provide students with constructive feedback. This feedback can help students enhance their understanding and improve their performance. Finally, learning methods must be evaluated regularly to assess their effectiveness (Suhada *et al.*, 2020).

### **Project-Based Learning**

Project-based learning (PBL) is a learning approach that utilizes projects and media. Students are guided to explore, assess, interpret, synthesize, and present information in groups, which is helpful for the learning process (Pratiwi & Setyaningtyas, 2020). This model actively involves students in the learning process and problem-solving activities, enabling them to work in groups and produce valuable outcomes. PBL focuses on questions or problems that require students to engage with the core concepts and principles of a particular discipline (Thomassen & Stentoft, 2020). In PBL, students are allowed to work independently within their groups, while teachers act as facilitators and accommodators in the learning process (Melinda & Zainil, 2020).

The PBL orientation process emphasizes inquiry-based learning opportunities, which are structured experiences based on the belief that learning occurs when individuals are asked to investigate and explore issues (Niswara *et al.*, 2019). PBL focuses on student activities that involve gathering information and utilizing it to produce something beneficial for the students and others, while still being related to the curriculum's competencies and learning outcomes (Nurhadiyati *et al.*, 2020). The PBL model in learning activities is no longer teacher-centered but student-centered (student-centered learning), so students must be more active in the learning process. The students' independence in completing their tasks is the goal of PBL (Erlinawati *et al.*, 2019).

### **Entrepreneurship**

In simple terms, entrepreneurship means the ability to trade. However, more definitively, entrepreneurship is defined as the ability to produce, sell, and build one's market share (Fanny, 2020). Based on this definition, a business is not just about selling. However, it requires many skills, at the very least the ability to produce a product, sell that product to consumers, and build good relationships with customers. The findings from this theory indicate that entrepreneurship involves broader aspects than just trading activities. The ability to produce products, sell them, and build one's market share underscores the complexity of entrepreneurship. An entrepreneur must have expertise in selling products, production skills, and the ability to build and maintain a market share (Dias *et al.*, 2021;

Fachrurazi *et al.*, 2022). Thus, understanding and mastering these various skills are key to success in entrepreneurship.

On a broader scale, entrepreneurship involves aspects of business management. This means it requires the ability to manage a business in an organized manner (Hidayat & Citra, 2020). For example, organizing products (production, storage, and delivery), organizing employees (by placement and tasks), and organizing consumers. In the field of consumer organization, business actors are required to be proficient in developing marketing strategies, such as offering discounts or price reductions to increase purchasing interest, introducing technology-based sales systems to facilitate consumer transactions, providing rewards (such as cash back, buy 2 get 1, and vouchers), and setting standards for friendly and responsible service (Mukrodi *et al.*, 2021).

Entrepreneurship involves various aspects, including having a strong attitude, perseverance, mental resilience, diligence, tenacity, as well as constructive and creative thinking. An entrepreneur must possess characteristics such as mental resilience to face various risks in the future (Akbar *et al.*, 2020). Entrepreneurship also involves various aspects, including opportunity identification, innovation, risk-taking, resource management, and business strategy development. An entrepreneur is an individual who can recognize business opportunities, develop new ideas, and take action to turn those ideas into successful businesses. Entrepreneurs must also possess managerial and leadership skills, as well as the ability to adapt to market changes.

Entrepreneurship also involves a proactive attitude and mindset, namely the ability to think creatively, take initiative, and face challenges with courage and perseverance. Entrepreneurs must possess high motivation, perseverance, and the ability to learn from failure and apply lessons from their experiences. In an economic context, entrepreneurship plays a crucial role in creating jobs, driving economic growth, and fostering innovation. In addition, the development of an entrepreneurial spirit and economic capabilities is also influenced by the environment, thereby contributing to the overcoming of social and environmental problems through sustainable and responsible business practices. In practice, entrepreneurship encompasses a range of activities, including planning and developing business ideas, securing funding sources, establishing networks and partnerships, managing business operations, and making strategic decisions (Hasan, 2020).

## METHODS

In this study, we applied a qualitative research method with a descriptive approach to investigate the application of the PBL method in Entrepreneurship Education (PKWU) subjects at SMA Labschool UPI. Qualitative research is a method based on postpositivist philosophy, used to study natural conditions, with data collection techniques involving data triangulation. The data analysis is inductive/qualitative, and the research results emphasize meaning over generalization (Amalia *et al.*, 2023). This study employed qualitative data collection techniques, including observation, interviews, and documentation (Eviani & Khusna, 2023).

The descriptive approach enables us to thoroughly describe and analyze the experiences and perceptions of students regarding PBL within the context of the PKWU subject. Qualitative

methods were chosen because the primary focus of the research is on interpreting meaning and the social context of PBL implementation. With this qualitative approach, it is hoped that the authors can reveal an in-depth discussion of the problems faced by schools and problem-solving or solutions that can provide answers to possible obstacles for teachers in applying entrepreneurship education in developing entrepreneurial character (Aulia *et al.*, 2018).

The research participants were students and PKWU subject teachers at SMA Labschool UPI. Students were involved in the PBL method learning process, while teachers acted as facilitators in implementing this learning method. Participants were selected based on criteria relevant to the objectives of this study. Data was collected through in-depth interviews with students who had participated in learning using the PBL method. The interview instrument was structured with questions related to their experiences with the PBL method, the benefits they felt, the obstacles they faced, and their opinions on the effectiveness of the PBL method in PKWU lessons.

Data analysis was conducted by identifying patterns, themes, and concepts that emerged from the interviews. The results of this analysis will help us gain a deeper understanding of how the application of the PBL method affects the learning process and students' understanding of the PKWU subject.

## **RESULTS AND DISCUSSION**

### **Results**

#### **Application of Project-Based Learning Methods in PKWU Subjects**

Learning is any action educators take to create a learning process for students. In this context, implicit tasks involve selecting, determining, and developing methods to achieve the desired learning objectives (Junaedi, 2019). PBL is a teaching method that involves students undertaking a project over a certain period, requiring them to solve real-world problems or answer complex questions. Project-Based Learning is an educational approach that focuses on students' active participation in solving problems without clear boundaries and applying their knowledge in developing a project that produces authentic, real-world products (Widiastuty, 2023).

The process of implementing PBL in PKWU involves several important steps. First, teachers need to identify the learning objectives to be achieved through the project. These objectives must align with the curriculum, be specific, measurable, achievable, relevant, and have clear time limits. Next, teachers must select a real-world problem or complex question relevant to the PKWU subject. The problem or question must be challenging enough to motivate students to apply their knowledge and skills. Afterwards, teachers must design a project requiring students to solve real-world problems or answer complex questions. This project must be designed in such a way that it allows students to work collaboratively, apply their creativity, and develop critical thinking skills.

Furthermore, teachers play an important role in providing guidance and support to students throughout the project. Teachers must facilitate the learning process, provide feedback, and encourage students to reflect on what they have learned during the project. Finally, teachers

need to evaluate the project based on the learning objectives set at the beginning of the project. The evaluation should be based on the quality of the project, the level of student engagement, and the achievement of learning objectives. Based on the research results, it can be concluded that applying PBL in PKWU subjects involves these important steps: identifying learning objectives, selecting real-world problems or complex questions, designing projects, providing guidance and support, and evaluating projects.

These steps were effectively implemented by teachers in applying the PBL method in the PKWU subject. Teachers identified learning objectives related to the project of making and selling chocolate bananas and salted eggs. These objectives were carefully formulated, ensuring they aligned with the curriculum and were specific, measurable, and relevant to the project. Next, teachers select real-world problems that become the project's focus, such as market analysis for chocolate banana and salted egg products. These problems challenge students to apply their knowledge and skills in the business world.

In designing the project, teachers plan it carefully. This project allows students to plan, produce, and sell chocolate bananas and salted eggs. They work collaboratively, develop creativity, and hone critical thinking skills in food business management. Teachers also play an important role as facilitators in providing guidance and support to students throughout the project. They offer valuable feedback on business planning, assist students in the production process, and encourage them to overcome challenges that arise during the project.

Finally, the teacher evaluates the project based on criteria established at the beginning of the project, such as success in production and product sales, profits generated, and students' understanding of business concepts. This evaluation helps to measure the achievement of learning objectives accurately. In this case, the teacher has set a good example in applying project-based methods in learning, providing students with valuable learning experiences in the business world..

### **Advantages of Project-Based Learning Methods in PKWU Subjects**

Based on the study results, there are several advantages to applying PBL methods in PKWU subjects. First, PBL involves students in solving real-world problems or answering complex questions, making the learning process more interesting and relevant to their lives. Second, PBL enhances students' independence, allowing them to work independently and take responsibility for the learning process, increasing motivation and self-confidence. Additionally, PBL helps develop entrepreneurial skills such as creativity, innovation, and critical thinking, which are crucial for success in the PKWU field. Not only that, PBL has been proven effective in improving students' learning outcomes in PKWU subjects, as well as strengthening their collaboration and teamwork skills. Finally, PBL allows students to reflect on their learning process and the skills they have developed, helping them identify areas for improvement and set goals for future learning.

Project-based learning also focuses on the outcomes achieved by each student. In this method, all cognitive skills possessed by the child are assessed and applied in real-world contexts. Therefore, project-based learning does not evaluate a single aspect but involves

the student's overall potential and abilities. This is particularly beneficial in the context of entrepreneurial outcomes, as students can develop their entrepreneurial skills holistically. Thus, the application of PBL in PKWU subjects not only enriches students' learning experiences but also helps them develop comprehensive entrepreneurial skills, preparing them for success in the field of PKWU.

## **Discussion**

### **Positive Impact of Project-Based Learning Method on Students' Readiness in Entrepreneurship**

The implementation of PBL in PKWU subjects has a significant positive impact on students' readiness in the field of entrepreneurship. Entrepreneurship itself is an action and attitude, while an entrepreneur is an individual who possesses innovative traits, can anticipate changes, is proactive, willing to take risks, and has a profit-oriented mindset (Kusnadi *et al.*, 2022). Through project-based learning, students can develop various entrepreneurial skills, such as creativity, innovation, and critical thinking, which are essential for achieving success in PKWU. In addition, PBL provides valuable opportunities for students to work independently, take responsibility for their learning, and increase their motivation and self-confidence. In group work, students also strengthen their ability to collaborate and work in teams. When someone is interested in the business world, they need to acquire knowledge about entrepreneurship. The goal is that when they decide to trade or become an entrepreneur, they have sufficient knowledge to overcome competition (Wahyudi *et al.*, 2020). Through understanding and mastering entrepreneurship, students have great potential to become competent entrepreneurs in the future.

The use of the PBL method in PKWU lessons is recommended for implementation because it has significant effectiveness (Bayram & Deveci, 2022). This learning process provides space for reflection, where students can reflect on their personal development and the skills they have developed, which in turn helps them identify areas for improvement and set future goals. The research results also indicate that PBL effectively improves students' learning outcomes in the PKWU subject. Thus, the application of PBL in the PKWU subject has a significant positive impact on developing entrepreneurial skills, enhancing independence, collaboration, reflection, and students' learning outcomes. All of these factors collectively prepare students to succeed in entrepreneurship by leveraging each individual's strengths through group work and a comprehensive learning process.

### **Challenges and Solutions in the Application of Project-Based Learning Methods in PKWU Subjects**

By implementing PBL, students are trained to develop entrepreneurial skills as if they were in a real business environment. This involves facing challenges that an entrepreneur would encounter (Pandangwati *et al.*, 2018). Through the project-based learning model, students are allowed to conceptualize and apply their ideas in the actual work they produce. In implementing PBL in PKWU subjects, teachers and students face several challenges that must be overcome. One challenge is time constraints, as PBL requires more time from students to work on projects, and this can be a problem in PKWU subjects with a dense curriculum.

Additionally, there are also resource limitations, such as materials, equipment, and technology, which are not always available in all schools.

Several solutions can be implemented to overcome these challenges. Teachers can manage time efficiently by breaking projects down into smaller tasks and setting clear deadlines so students can work in a structured and timely manner. In terms of resources, teachers need to plan well and identify what is needed for the project, seek collaboration with other teachers, or even seek external resources if necessary.

In addition to challenges related to time and resources, there are also challenges regarding student assessment. Project assessment involves aspects of project quality, student engagement, and achievement of learning objectives. Teachers can overcome these challenges using various assessment strategies, such as rubrics, student self-assessments, or peer assessments. Providing feedback during the project process can also help students improve the quality of their work.

Another challenge in this project is the financial aspect, as students work in groups and incur costs. Financial challenges arising because students work in groups and need to incur costs for their projects can be addressed by teaching financial management principles in PKWU learning. Teachers can include material on managing project finances, including budget planning, expense tracking, and determining appropriate financial strategies. Students can be taught how to create project proposals that include cost and revenue estimates, enabling them to plan their finances more wisely.

In addition, the final evaluation should include a financial analysis of the project. This helps students understand whether their project is profitable, and they can identify what improvements or developments are needed for future projects. Thus, students will have a more holistic understanding of the financial aspects of business and entrepreneurship, which are valuable skills for their future.

## **CONCLUSION**

This study provides valuable insights into the role of project-based learning methods in improving the quality of education at the high school level. The findings indicate that implementing project-based learning methods in teaching Vocational Education and Entrepreneurship subjects has a positive and significant impact on student development. One key aspect that stands out is the increased student engagement in the learning process. This method allows students to be more actively involved in the learning process, positively impacting their understanding of the learning material and enhancing their motivation to learn.

Additionally, project-based learning methods have been proven to foster the development of creativity, critical thinking, and collaboration skills among students. This creates an environment that promotes more effective problem-solving and the ability to think outside the box. By integrating theoretical concepts with practical applications in real-world projects, students have the opportunity to experience deeper and more relevant learning that aligns with the real world. Beyond academic benefits, project-based learning methods also help

students develop practical skills that enable them to succeed in the workplace. The ability to plan, execute, and evaluate their projects is a valuable asset that can be applied in various work contexts. This provides students with a strong foundation for their future, as project-based skills are becoming increasingly important in various professions.

This study highlights the importance of integrating project-based learning methods into the craft and entrepreneurship curriculum in high schools. This can lead to an improvement in the overall quality of education and prepare students to face the challenges of today's global era. By focusing on implementing innovative and interactive project-based learning methods, this article helps pave the way for positive changes in high school education, ultimately providing long-term benefits for students, schools, and society.

### **AUTHOR'S NOTE**

The author states that there are no conflicts of interest related to the publication of this article. The author affirms that the data and content of the article are free from plagiarism.

### **REFERENCES**

- Akbar, D., Salam, A., & Aziz, A. (2020). Pengaruh pemberian modal produktif dan sikap kewirausahaan terhadap pemberdayaan ekonomi keluarga dampaknya pada kesejahteraan masyarakat Gabuswetan Indramayu. *Inklusif: Jurnal Pengkajian Penelitian Ekonomi dan Hukum Islam*, 5(1), 50-61.
- Amalia, F. D., Setiawan, F., & Afiani, K. D. A. (2023). Project based learning sebagai solusi melatih keterampilan berpikir kreatif siswa SD dalam pembelajaran IPS. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 8(1), 4034-4052.
- Anggreadi, K. Y., & Sutaya, I. W. (2019). Penerapan project based learning dengan asesmen autentik untuk meningkatkan hasil belajar Prakarya dan Kewirausahaan. *Jurnal Teknik Elektronika Undiksha*, 1(1), 28-39.
- Aulia, A., Suarman, S., & Nasir, M. (2018). Implementasi pembelajaran Kewirausahaan dalam menumbuhkembangkan karakter kewirausahaan pada siswa di SMK Negeri Pertanian Terpadu Provinsi Riau. *Jurnal Manajemen Pendidikan Penelitian Kualitatif*, 4(1), 1-10.
- Bayram, H., & Deveci, H. (2022). The effect of problem-based learning on students' entrepreneurship level in social studies course. *International Journal of Contemporary Educational Research*, 9(2), 359-377.
- Budi, S. S. (2019). Penerapan model Project Based Learning (PBL) untuk meningkatkan kreativitas dan prestasi belajar siswa pada kompetensi desain produk dan pengemasan karya rekayasa elektronika praktis di kelas XII IPS 2. *Literasi: Jurnal Ilmu Pendidikan*, 10(1), 21-33.
- Diana, E., & Rofiki, M. (2020). Analisis metode pembelajaran efektif di era new normal. *Jurnal Review Pendidikan dan Pengajaran (JRPP)*, 3(2), 336-342.

- Dias, C., Gouveia Rodrigues, R., & Ferreira, J. J. (2021). Small agricultural businesses' performance—What is the role of dynamic capabilities, entrepreneurial orientation, and environmental sustainability commitment?. *Business Strategy and the Environment*, 30(4), 1898-1912.
- Erlinawati, C. E., Bektiarso, S., & Maryani, M. (2019). Model pembelajaran project based learning berbasis STEM pada pembelajaran Fisika. *FKIP E-Proceeding*, 4(1), 1-4.
- Eviani, N., & Khusna, N. I. (2023). Implementasi model pembelajaran project based learning menggunakan media flip chart untuk meningkatkan hasil belajar siswa pada pelajaran IPS kelas VII MTS PSM Tanen Rejotangan. *Jurnal Sadewa: Publikasi Ilmu Pendidikan, Pembelajaran dan Ilmu Sosial*, 1(3), 240-252.
- Fachrurazi, F., Zarkasi, Z., Maulida, S., Hanis, R., & Yusuf, M. (2022). Increasing micro small medium enterprises activity entrepreneurial capacity in the field of digital marketing. *Jurnal Ekonomi*, 11(3), 1653-1660.
- Fanny, R. I. M. P. N. (2020). Menumbuhkan semangat Kewirausahaan bagi pemuda dalam membangun nagari. *Jurnal Pengabdian kepada Masyarakat Dewantara*, 3(1), 24-29.
- Fassbender, U., Papenbrock, J., & Pilz, M. (2022). Teaching entrepreneurship to life-science students through problem based learning. *The International Journal of Management Education*, 20(3), 1-12.
- Fitrianti, F. (2021). Penerapan model project based learning untuk meningkatkan hasil belajar peserta didik pada mata pelajaran PKWU kelas XII TKJ 1 SMKN 2 Pekanbaru. *Innovative: Journal of Social Science Research*, 1(2), 719-721.
- Hasan, H. A. (2020). Pendidikan kewirausahaan: Konsep, karakteristik, dan implikasi dalam memandirikan generasi muda. *Pilar*, 11(1), 99-11.
- Hermawati, N. (2021). Penerapan model pembelajaran berbasis proyek untuk meningkatkan prestasi belajar peserta didik pada mata pelajaran produk kreatif dan Kewirausahaan kelas XII BC SMK Negeri 2 Kota Bogor. *JPG: Jurnal Pendidikan Guru*, 2(2), 91-98.
- Hidayat, M., & Citra, C. (2020). Pengaruh kompetensi kewirausahaan, orientasi pasar dan motivasi berwirausaha terhadap kinerja bisnis warung kopi di Kota Makassar. *Jurnal Mirai Management*, 5(1), 244-256.
- Jedinasrul, J., Waskito, W., Ambiyar, A., & Elfizon, E. (2022). Penerapan pembelajaran berbasis proyek dalam meningkatkan jiwa kewirausahaan siswa pada SMK Negeri 6 Merangin. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, 8(3), 1815-1822.
- Junaedi, I. (2019). Proses pembelajaran yang efektif. *JISAMAR (Journal of Information System, Applied, Management, Accounting and Research)*, 3(2), 19-25.
- Kusnadi, E. W., Nugroho, L., & Utami, W. (2022). Kajian dinamika dan tantangan jiwa kewirausahaan pada generasi muda. *Jurnal Cakrawala Ilmiah*, 2(4), 1645-1656.
- Manggala, D. K. D., & Nugraha, I. N. P. (2019). Penerapan model project based learning untuk meningkatkan hasil belajar mata pelajaran prakarya dan kewirausahaan. *Jurnal Teknik Elektronika Undiksha*, 1(1), 40-51.

- Melinda, V., & Zainil, M. (2020). Penerapan model project based learning untuk meningkatkan kemampuan komunikasi matematis siswa sekolah dasar (studi literatur). *Jurnal Pendidikan Tambusai*, 4(2), 1526-1539.
- Mukrodi, M., Wahyudi, W., Sugiarti, E., Wartono, T., & Martono, M. (2021). Membangun jiwa usaha melalui pelatihan Kewirausahaan. *Jurnal PKM Manajemen Bisnis*, 1(1), 11-18.
- Nadeak, B. (2020). The effectiveness of distance learning using social media during the pandemic period of COVID-19: A case in Universitas Kristen Indonesia. *International Journal of Advanced Science and Technology*, 29(7), 1764-1772.
- Niswara, R., Muhajir, M., & Untari, M. F. A. (2019). Pengaruh model project based learning terhadap high order thinking skill. *Mimbar PGSD Undiksha*, 7(2), 85-90.
- Nurhadiyati, A., Rusdinal, R., & Fitria, Y. (2020). Pengaruh model Project Based Learning (PBL) terhadap hasil belajar siswa di sekolah dasar. *Jurnal Basicedu*, 5(1), 327-333.
- Pandangwati, T., Ulfa, S., & Toenlio, A. J. (2018). Pembelajaran berbasis proyek mata pelajaran Prakarya dan Kewirausahaan dengan rangkaian LEAD (Listen, Explore, Analyze, and Do) untuk menumbuhkan adversity quotient berbantuan mobile learning schoology. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 3(7), 873-877.
- Pardede, P. (2020). Integrating the 4Cs into EFL integrated skills learning. *Journal of English Teaching*, 6(1), 71-85.
- Pratiwi, E. T., & Setyaningtyas, E. W. (2020). Kemampuan berpikir kritis siswa melalui model pembelajaran problem based learning dan model pembelajaran project based learning. *Jurnal Basicedu*, 4(2), 379-388.
- Suhada, S., Bahu, K., & Amali, L. N. (2020). Pengaruh metode pembelajaran mind map terhadap hasil belajar siswa. *Jambura Journal of Informatics*, 2(2), 86-94.
- Supena, I., Darmuki, A., & Hariyadi, A. (2021). The influence of 4C (Constructive, Critical, Creativity, Collaborative) learning model on students' learning outcomes. *International Journal of Instruction*, 14(3), 873-892.
- Thomassen, A. O., & Stentoft, D. (2020). Educating students for a complex future—why integrating a problem analysis in problem-based learning has something to offer. *The Interdisciplinary Journal of Problem-Based Learning*, 14(2), 1-11.
- Ulfa, M., & Saifuddin, S. (2018). Terampil memilih dan menggunakan metode pembelajaran. *Suhuf*, 30(1), 35-56.
- Wahyudi, M., Mukrodi, M., Harras, H., & Sugiarti, E. (2020). Wirausaha muda mandiri: Learning, sharing & practice. *Scientific Journal of Reflection: Economic, Accounting, Management and Business*, 3(1), 101-110.

Widiastuty, H. (2023). Peningkatan prestasi belajar produk kreatif dan kewirausahaan melalui penerapan model pembelajaran project based learning pada siswa kelas XII. *Edu Cendikia: Jurnal Ilmiah Kependidikan*, 3(1), 101-107.

