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# PBET Learning Strategies in Vocational Education: Linking Journalism Education and Digital Business

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**ABSTRACT**

Vocational education plays a crucial role in preparing students for the workforce, particularly in journalism and digital business. This study examines the implementation of Project-Based Education and Training (PBET) in an industrial internship (PKL) at PT Kreasi Ngalam Media and evaluates its impact on vocational high school students' competencies using SWOT analysis. Data were collected through a Likert-scale questionnaire to measure students' perceptions and open-ended questions to gather qualitative insights. The analysis categorized responses into strengths, weaknesses, opportunities, and threats, followed by descriptive statistical analysis to determine the average score for each component. The results show that strengths (2.21) and opportunities (2.16) significantly outweigh weaknesses (1.1) and threats (1.07), indicating PBET's effectiveness in enhancing students' industry adaptability and hands-on experience. A strengths-opportunities (SO) score of 4.37 reinforces its potential to develop relevant vocational skills. However, lower scores in weaknesses and threats highlight ongoing challenges, particularly in bridging the gap between school-based theory and industry practices. To address this, the study recommends structured hands-on training, stronger industry mentorship, and improved school-industry collaboration, ensuring that students acquire practical competencies aligned with industry demands. These recommendations are directly based on the SWOT findings, emphasizing the need for real-world application within PBET to optimize vocational education outcomes and prepare students for the digital workforce.

**Keywords:** PBET; SWOT; Vocational education; Learning strategies.

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## 1. INTRODUCTION

Vocational education has a strategic role in preparing graduates who are ready to work according to industry demands. In this context, Project-Based Education and Training (PBET) has been developed as a solution to overcome the limitations of conventional learning methods that still focus on theory without paying attention to the practical skills needed in the industrial world. Astarina et al. (2020) mention that PBET is an innovative approach that connects theoretical learning with direct practice in the field, enabling students to acquire more applicable skills in line with job demands. In the field of journalism and digital business, Rongmin & Fah (2024) emphasize that rapid industrial development demands graduates with competencies that are not

only theory-based, but also have practical experience in a real work environment. However, the traditional education system has often been unable to meet this challenge, requiring a more innovative learning approach to ensure that graduates have the competencies required by the world of work.

As a project-based approach, PBET emphasizes learning that combines theory with hands-on practice. According to Balandin et al. (2023), this approach has been shown to improve students' technical skills while supporting the development of soft skills such as communication, teamwork, and problem solving. Berková et al. (2019) add that the implementation of PBET in vocational education allows students to be directly involved in projects that are in line with industry conditions, so that they can understand how academic concepts are applied in everyday work. Not only that, research by Long (2023) shows that PBET also encourages students' creativity and independence, enabling them to learn actively and adapt to the evolving challenges of industry. In addition to the skills aspect, PBET also plays a role in increasing student involvement in the learning process. Kaharuddin et al. (2022) revealed that the utilization of digital platforms and instructional videos in PBET has contributed to increasing student participation and motivation in vocational learning. Thus, PBET not only improves the quality of education, but also helps students prepare for the increasingly digitized dynamics of the world of work.

However, the implementation of PBET in vocational education still faces various challenges, especially in aligning the theory taught in schools with the ever-evolving industry practices (Prasetya et al., 2024). According to Abdel-Basset et al. (2018), one of the main obstacles in the implementation of PBET is the lack of industry involvement in the learning process, so that students do not gain enough experience to understand how theory is applied in everyday work. In addition, research by Hein et al. (2020) shows that the limited time in the Field Work Practice (PKL) program is often an obstacle in optimally supporting project-based learning. Meanwhile, Paramitha et al. (2024) emphasized that although field work practices have been proven to improve students' job readiness, the effectiveness of this program depends heavily on how the skills acquired during learning at school can be effectively implemented in the industrial world. Therefore, a more structured learning model is needed that is integrated with the needs of the industry so that students can get the most out of PBET.

In this context, the on-the-job training at PT Kreasi Ngalam Media is a relevant case study for evaluating the effectiveness of PBET in improving students' job readiness in the fields of journalism and digital business. Ramadhan et al. (2021) note that media companies such as PT Kreasi Ngalam Media provide an appropriate learning environment for vocational students to gain real experience in the journalism and digital production industries. Research by Zulhijah et al. (2024). also supports this finding, where project-based work experience can provide more in-depth industry experience and enable students to develop the skills needed in the world of work. Nevertheless, the challenge of aligning the school curriculum with the needs of industry remains a major obstacle. Therefore, this study aims to explore how PBET can be optimized in work experience programs, as well as to identify factors that influence its effectiveness.

One of the main advantages of PBET is its ability to connect journalism training theory with digital business practices in a real industrial environment. According to Jaya et al. (2023), the project-based learning model allows students to understand journalistic concepts in a real work context.  adds that with this method, students can develop more mature professional skills, including communication, teamwork, and analysis and preparation of content that meets industry standards. In the highly competitive media and digital business industries, Astuti & Stiawati (2023) underline the importance of mastering these skills as a major factor in graduates' job

readiness. Therefore, the PBET-based work placement program not only focuses on improving technical skills (hard skills), but also prioritizes the development of soft skills that support the competitiveness of graduates in the industrial world.

Although PBET offers various benefits, there are several key challenges that need to be overcome in its implementation, especially in an ever-changing industry such as digital business. Khanh Quan et al. (2023). highlight that rapid technological developments require students to constantly update their skills to remain relevant to industry needs. One of the problems often faced in PBET is the lack of synchronization between the skills taught in schools and the skills needed by industry, as revealed by Serkina et al. (2022). In addition, Sciberras (2019) and Lamichhane (2024) note that the lack of industry support in the form of effective mentoring and adequate facilities is often an obstacle to the optimization of project-based learning. Therefore, this study will explore strategies that can be used to overcome these challenges, including how schools and industry can collaborate more closely in creating more relevant and effective work placement programs.

## 2. METHODS

This study uses a descriptive quantitative approach to describe the application of Project-Based Education and Training (PBET) in Field Work Practices (PKL) at PT Kreasi Ngalam Media. According to Bell (2010), this approach aims to describe the process and experience of students without testing causal relationships or proposing hypotheses. In the context of vocational education, Suryandoko (2023) emphasizes that PBET can help bridge the gap between theory taught in school and practice in the industrial world. Ohara (2023) also emphasizes that the application of PBET in the media industry and digital business can provide direct insights to students regarding the application of theory in a professional environment. Therefore, this study focuses on evaluating how PBET is applied in vocational education, especially in the fields of journalism and digital business, as well as how the theory learned in school can be integrated with industry practices, as shown in Figure 1.

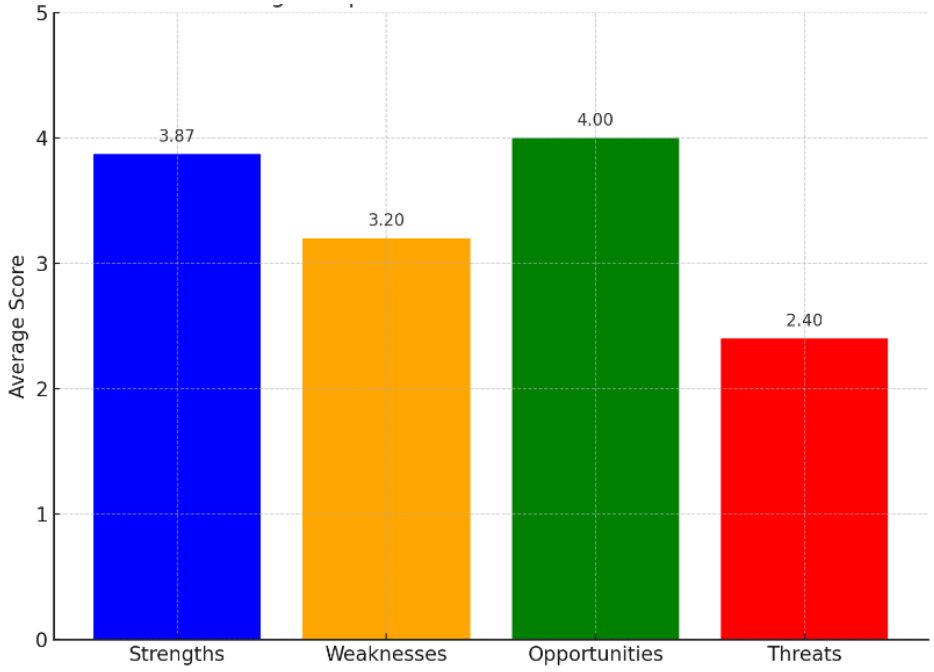


**Figure 1.** Mean Respondents on the SWOT Dimension

In this study, as many as 15 respondents who are grade XI students of the Visual Communication Design Department (DKV) from SMK PGRI 2 Malang and SMKN 1 Purwosari were included in this study because they had participated in a PBET-based PKL program at PT Kreasi Ngalam Media. Respondent selection was carried out using purposive sampling, as recommended by Ratten & Jones (2021) who emphasized the importance of selecting respondents who had direct experience with the phenomenon under study. The main criterion in the sample selection was students who had undergone PBET-based work placement for at least two months, so that they had sufficient experience to provide relevant information. Setiawan et al. (2022) mention that in vocational education-based research, a smaller sample size can still provide meaningful findings if the respondents have homogeneous characteristics, as applied in this study. Therefore, even though the number of respondents is relatively small, the data collected can provide a representative picture of the effectiveness of PBET in improving students' skills.

Data collection was carried out through participatory observation and Likert scale-based questionnaires. Participatory observation allows researchers to directly understand how PBET is applied in the PKL environment, as explained by Santos & Horta (2018), who state that direct involvement in the learning process can provide deeper insights into students' experiences. In this study, observations include student interactions with industry mentors, assigned tasks, and the extent to which theory taught in school can be applied in PBET-based projects. Meanwhile, questionnaires were used to obtain quantitative data consisting of 20 statements on a 5-point Likert scale, categorized into SWOT (Strengths, Weaknesses, Opportunities, Threats) dimensions. According to Salamah et al. (2024), this approach allows for a more structured evaluation of the strengths and weaknesses of PBET as well as the opportunities and threats in its implementation. The data obtained from the questionnaire is then converted into numerical values for descriptive analysis. To complete this analysis, answers to open-ended questions were analyzed using thematic coding, a method that Şahin (2021) found effective in grouping qualitative data based on the main themes that emerged from student responses.

To ensure data accuracy, this study applied validity and reliability testing to the questionnaire instrument before distributing it to the main respondents. Content validity was tested through expert judgment, involving experts in the fields of vocational education and journalism to review the questionnaire items and ensure their alignment with the PBET concept. In addition, construct validity was tested using factor analysis, a technique that according to Şahin (2021) can ensure that each item in the questionnaire actually measures the aspect it is supposed to measure. Reliability was tested with Cronbach's Alpha, where an $\alpha$ value $\geq 0.70$ is considered to indicate a good level of internal consistency (Setiawan et al., 2024). After the data was analyzed, the results were interpreted by comparing the scores on each SWOT dimension. If strengths and opportunities have higher scores than weaknesses and threats, then PBET is considered to have great potential to improve students' skills. However, if weaknesses and threats are high enough, this study will develop strategies to overcome these obstacles, such as increasing collaboration with industry and refining project-based curricula. The interpretation of these results aims to provide data-based recommendations to increase the effectiveness of PBET in vocational education and help students prepare for challenges in the digital industry.

## 3. RESULT AND DISCUSSION

The implementation of Project-Based Education and Training (PBET) in the Field Work Practice (PKL) program at PT Kreasi Ngalam Media has had a significant impact on the development of students' skills, especially in the fields of journalism and digital business. According to Rasyid & Khoirunnisa (2021), this method allows students to integrate the theory they have learned in school with real practice in the industry. In the process, students not only gain relevant work experience, but also improve communication, problem-solving, and collaboration skills that are essential in the modern workplace. Tegeh et al. (2023) also add that PBET not only plays a role in improving technical skills but also in shaping students' professional character and work ethic. In addition, this project-based approach provides students with the opportunity to work in teams and understand industry workflows, which is an important factor in their readiness for careers in journalism and digital business (Skliarova, 2021).

In the context of journalism education, PBET provides students with hands-on experience in media content production. Siitonen et al. (2019) explain that project-based methods improve collaboration and innovation skills in the work environment, so that students are better prepared to face the challenges of the dynamic journalism industry. In addition, research by Skliarova (2021) shows that students who are involved in project-based learning are more likely to develop the analytical and critical thinking skills needed in the modern media industry. They not only learn the theory of writing news and articles, but are also involved in the practice of creating content that meets industry standards. This process involves various stages, from research, interviews, script writing, to editing and publication. With this direct involvement, students can hone their critical thinking and creativity in presenting interesting and informative information. In addition, collaboration with industry mentors helps students understand how the resulting content can be optimized for various digital platforms, such as websites, social media, and online news channels (Almulla, 2020).

In addition to journalism, the integration of theory and practice in education is also an important aspect in responding to broader industry changes. With the growing technology and market needs, the PBET approach in PKL equips students with relevant and adaptive skills. According to Fakhira & Darusman (2022), this project-based training program not only aims to improve students' technical skills, but also helps them understand how the industry operates as a whole. Rohman et al. (2022) add that the project-based approach is effective in guiding students to be better prepared for industry challenges and to be able to develop skills that match the needs of the job market. In research conducted by Watson and Rozan et al. (2024), it was found that the PBET approach can significantly improve students' job readiness by providing more in-depth and industry-based experiences. With the support of industry mentors, students can better understand the relationship between the theory they learn and practice in the world of work, so that they are more confident in applying the knowledge they have gained (Sudarsono et al., 2022).

To understand the effectiveness of the implementation of PBET in this PKL program, SWOT analysis is used as an evaluation tool. Devi et al. (2022) explain that SWOT analysis allows for the identification of internal factors such as strengths and weaknesses, as well as external factors such as opportunities and threats faced in the implementation of this program. Some of the strengths identified include improving students' technical skills, direct experience in the industry, and the guidance of professional mentors. Meanwhile, the challenges faced include students' difficulties in connecting theory with practice and time constraints in completing projects optimally. Lestari & Mariah (2018) emphasize that SWOT analysis can be used to maximize strengths and opportunities, while minimizing weaknesses and threats in a program. Besides being used in

business strategy, Isnani (2023) revealed that this approach is also widely applied in educational institutions to formulate better policies in the development of project-based training programs. In a recent study by Merliana et al. (2025), it was concluded that SWOT analysis can provide broader strategic insights in designing project-based training programs to improve learning effectiveness. Thus, PBET in PKL not only benefits students, but also educational institutions and industry partners in creating graduates who are ready to work and competitive in the ever-evolving industrial world.

### 3.1 Explanation of IFAS and EFAS Matrices

In this study, an analysis was conducted on the factors that influence the application of the project-based learning method (PBET) in the Field Work Practice (PKL) program at PT Kreasi Ngalam Media. To understand these factors, two main analytical tools were used, namely IFAS (Internal Factors Analysis Summary) and EFAS (External Factors Analysis Summary). The IFAS matrix helps to evaluate internal factors that can support or hinder the success of the PBET strategy. One of the key factors that has a significant influence is the quality of teaching, where project-based methods enable fieldwork participants to develop skills through real experience (Apsari et al., 2019). Evenddy et al. (2023) also emphasize that project-based learning is more effective than conventional methods because participants are trained to think critically and solve real challenges in the industry. In addition, the competence of mentors or educators is also a factor that determines the effectiveness of this strategy. According to Arya et al. (2023), mentors who have direct experience in the industry can provide more relevant insights for participants. This is reinforced by Lian et al. (2021) who found that participants who received guidance from experienced mentors had up to 35% higher job readiness than those who only received theory-based training. Not only the quality of teaching and mentors, but also supporting facilities and technology play a major role in the effectiveness of PBET. Pradanti & Muqtada (2023) emphasize that the availability of computer equipment, design software, and stable internet access enable participants to complete their projects better and more efficiently.

On the other hand, the EFAS matrix is used to analyze external factors that can be opportunities or challenges for the implementation of PBET in WBL. One of the main opportunities that supports the implementation of this strategy is government policy support. According to Wibowo et al. (2023), current education policies are increasingly leading to the implementation of project-based learning to improve the readiness of WBL participants in the world of work. Xu et al. (2023) add that this policy has been proven to improve problem-solving and collaboration skills, which are key competencies in the modern industrial era. Apart from policy factors, the development of the digital and journalistic industries is also a great opportunity for PKL participants. Yulastri et al. (2023) mention that the increasing demand for labor in this sector encourages companies to work more actively with educational institutions in developing project-based programs. However, despite the various opportunities, the implementation of PBET also faces several challenges. Increasingly fierce industry competition and rapid technological change require PKL participants to continuously update their skills to remain relevant to industry needs. Mampuru et al. (2024) remind us that participants who are unable to adapt to technological developments tend to have difficulty in getting jobs that match their competencies. Therefore, it is important for educational institutions and companies to keep updating learning methods so that the PBET strategy in apprenticeship remains relevant and provides maximum benefits for participants.

### 3.2 Data Results of IFAS and EFAS Matrices

This study used IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) analysis to help PT Kreasi Ngalam Media evaluate the internal and external factors that influence the success of PBET (Experience-Based Training). According to Büyüközkan & Ilıcak (2019), a deep understanding of internal factors such as strengths and weaknesses is essential in developing strategies to improve the effectiveness of project-based training. In the context of PT Kreasi Ngalam Media, the superiority of an experienced team and the use of advanced technology are the main supporting factors. However, the limited availability of human resources with special expertise remains a significant challenge (Chueh & Kao, 2024). On the other hand, great opportunities come from industry and government support, as argued by Mustamin et al. (2024), who emphasize that synergies between the education sector and industry can accelerate the development of project-based skills. Nevertheless, fierce competition with other institutions is also a threat that must be anticipated. To overcome this challenge, PT Kreasi Ngalam Media can improve training for teachers, strengthen partnerships with industry, and continue to innovate in the curriculum to maintain its competitiveness. With this approach, PBET can be a more effective training method in improving students' abilities and readiness to face the industrial world. The following Table 1 shows the final scores and analysis data used to determine strengths, weaknesses, opportunities, and threats.

**Table 1.** IFAS Matrix Results (Internal Factors Analysis Summary)

| Internal Factors | Weight | Rating | Score |
|---|---|---|---|
| Strengths | | | |
| 1. The PBET approach helps students develop practical skills relevant to the journalism and digital business industries. | 0.12 | 4 | 0.48 |
| 2. The use of the PBET method provides students with opportunities to engage directly in projects similar to the challenges they will face in the workplace. | 0.12 | 4 | 0.48 |
| 3. Students are able to enhance their analytical and critical skills through hands-on experiences at PT Kreasi Ngalam Media. | 0.11 | 3 | 0.33 |
| 4. The PBET approach supports students' collaborative skills development within teams, which is essential in the journalism and digital business industries. | 0.11 | 4 | 0.44 |
| 5. The use of digital technology in PBET-based learning is highly relevant to the needs of the current digital business and social media industries. | 0.12 | 4 | 0.48 |
| Total Strengths | 0.58 | | 2.21 |
| Weaknesses | | | |
| 1. Challenges in integrating theoretical concepts taught in class with hands-on practice in the field through PBET. | 0.07 | 2 | 0.14 |
| 2. Limited time during internships makes it difficult for students to delve deeper into journalism and digital business materials. | 0.11 | 4 | 0.44 |
| 3. Difficulties in accessing resources or technology needed to support PBET-based learning. | 0.07 | 2 | 0.14 |
| 4. Lack of adequate training or mentoring from PT Kreasi Ngalam Media mentors regarding specific skills in journalism and digital business. | 0.08 | 3 | 0.24 |
| 5. Students feel that some assignments given are too complex and not aligned with their level of understanding. | 0.07 | 2 | 0.14 |
| Total Weaknesses | 0.4 | | 1.1 |
| Total IFAS Score | 0.98 | | 3.31 |

The Project-Based Experiential Training (PBET) approach at PT Kreasi Ngalam Media has been proven effective in improving students' practical skills in the fields of journalism and digital business. Balandin et al. (2023b) state that direct involvement in projects that resemble the challenges of the world of work allows students to develop critical thinking skills, collaboration, and the use of relevant digital technology. However, Bondie et al. (2019) revealed that one of the main obstacles in project-based methods is the difficulty students have in connecting theory with practice, which also occurs in the implementation of PBET. In addition, limited training time often hinders a deeper understanding, especially if students face obstacles in accessing the necessary resources and technology. The lack of training from mentors is also a challenge, as students need guidance to overcome the complexity of the assigned tasks (Gutgarts, 2020). Nevertheless, the internal factor analysis shows that the advantages of PBET are more dominant, with a score of 3.31. Therefore, improvements in the aspects of mentor assistance, access to technology, and workload balance can increase the effectiveness of this method and better prepare students for the world of work, as shown in Table 2.

**Table 2.** EFAS Matrix Results (External Factors Analysis Summary)

| External Factors | Weight | Rating | Score |
|---|---|---|---|
| Opportunities | | | |
| 1. Opportunities to expand collaboration between vocational schools and PT Kreasi Ngalam Media to create more in-depth and diverse internship experiences. | 0.11 | 4 | 0.44 |
| 2. Developments in digital marketing and social media can be leveraged to enhance the relevance of the PBET strategy to the journalism and digital business industries. | 0.11 | 4 | 0.44 |
| 3. Challenges faced by students during internships can serve as opportunities to develop more innovative and applicable PBET learning methods. | 0.10 | 4 | 0.4 |
| 4. A more structured and sustainable internship program with PT Kreasi Ngalam Media can open job opportunities for students after graduation. | 0.11 | 4 | 0.44 |
| 5. The continually evolving media and digital industry trends provide opportunities to align the PBET strategy with the latest skills required by the industry. | 0.11 | 4 | 0.44 |
| Total Opportunities | 0.54 | | 2.16 |
| Threats | | | |
| 1. Changes in education policies that may affect the implementation of PBET-based internships at PT Kreasi Ngalam Media. | 0.06 | 2 | 0.12 |
| 2. Intense competition in the job market, where students may struggle to stand out despite undergoing PBET-based learning. | 0.09 | 3 | 0.27 |
| 3. Discrepancies between skills taught in class and actual industry needs can lead to skill gaps. | 0.09 | 3 | 0.27 |
| 4. Rapid technological advancements may render some learning methods applied during internships obsolete or irrelevant. | 0.07 | 2 | 0.14 |
| 5. Limited budgets or resources to support further development of the PBET program in vocational school internships. | 0.09 | 3 | 0.27 |
| Total Threats | 0.4 | | 1.07 |
| Total EFAS Score | 0.94 | | 3.23 |

Based on the analysis of external factors, the Project-Based Experiential Training (PBET) Field Work Practice (PKL) program at PT Kreasi Ngalam Media has great potential to improve the skills of vocational high school students so that they are better prepared to enter the world of work. Hu et al. (2023) emphasizes that close cooperation between schools and industry can help students gain more relevant experience and improve their skills in accordance with the needs of the job market. One of the main opportunities that can be developed is to expand partnerships with vocational high schools so that the curriculum is more in line with industry. In addition, rapid developments in the fields of digital marketing and social media are also opening up space for students to learn online marketing strategies and data analysis as skills that are in high demand in today's digital era. However, there are challenges that need to be overcome in order for this program to run optimally. Asiati et al. (2022) noted that the gap between the theory taught in school and the skills needed in the world of work is one of the main obstacles to the effectiveness of the WBL program. In addition, dynamic changes in education policy can affect the implementation of WBL, while budget and resource constraints can also hamper its development (Bolli et al., 2021). With an EFAS score of 3.23, the opportunities in this program are still more dominant than the challenges, but the right strategies are needed, such as increasing industrial cooperation, regular curriculum renewal, and the application of more applicable learning methods to ensure highly competitive graduates (Yuan & Mengmeng, 2023).

### 3.3 Calculation of Weights and Scores in the IFAS and EFAS Matrices

The Project-Based Experiential Training (PBET) program at PT Kreasi Ngalam Media has been proven effective in improving students' practical skills in journalism and digital business. According to Parmawati et al. (2020), the success of PBET is reflected in the IFAS score of 3.31, which shows the dominance of internal strengths in providing direct learning experiences in accordance with industry needs. However, as explained in their research, there are several obstacles that still need to be improved, such as difficulties in connecting theory with practice, limited internship time, and the lack of resources and facilities that can support more optimal learning. Externally, Azizah (2017) emphasizes that the EFAS score of 3.23 indicates a great opportunity for PBET to develop further, especially through strengthening collaboration with industry, utilizing digital marketing trends, and developing a more structured internship system. On the other hand, changes in education policy and increasing job competition are challenges that need to be anticipated in order for PBET to remain relevant (Henri et al., 2017). By addressing internal weaknesses and strategically managing external threats, PBET can further improve students' readiness to face the world of work. The quantitative SWOT matrix strategy combination table is created based on the SO, ST, WO, and WT strategies with total scores for each strategy, reflecting a quantitative approach in SWOT analysis as shown in Table 3.

**Table 3.** Combination of Quantitative SWOT Matrix Strategies

| EFAS/IFAS | Strength (S) | Weakness (W) |
|---|---|---|
| Opportunities (O) | S-O Strategy: Leverage strengths to capitalize on opportunities. (Total Score: 3.54) | W-O Strategy: Utilize opportunities to minimize weaknesses. (Total Score: 2.15) |
| Threats (T) | S-T Strategy: Use strengths to overcome threats. (Total Score: 3.84) | W-T Strategy: Minimize weaknesses and avoid threats. (Total Score: 2.45) |

### 3.4 Discussion of Integration of Findings Based on SWOT Analysis

The results of the IFAS and EFAS analysis in the implementation of Project-Based Experiential Training (PBET) at PT Kreasi Ngalam Media show that this program has great potential to grow by utilizing internal strengths and external opportunities. With an IFAS score of 3.31, it can be seen that PBET has strong internal factors, such as the support of industry mentors and the ability of students to produce quality content. According to Candana & M. Afuan (2020), the involvement of industry mentors in project-based training programs greatly influences the improvement of participants' skills. In addition, Sutrisna & Barliana (2019) emphasizes that students' ability to produce content that meets industry standards can increase their readiness to face the competitive world of work. On the other hand, the EFAS score of 3.23 indicates that PBET has many opportunities to be exploited, especially in terms of collaboration with industry and the use of ever-evolving digital technology. Ma'anam et al. (2020) explain that close cooperation between educational institutions and industry can improve the relevance of training programs to the needs of the job market. In addition, research by Arora et al. (2024) highlights that the use of artificial intelligence and data analytics can be used to improve the effectiveness of data-driven evaluation and learning.

Although PBET has great potential, there are several challenges that must be overcome in order for this program to run optimally. Changes in education policy are one of the factors that can affect the sustainability of the program, as stated by Latif et al. (2024), who note that a dynamic education system demands flexibility in curriculum management. In addition, fierce competition in the world of work is also a threat that needs to be anticipated, as explained by Widiyawati et al. (2024) and Prasetya et al. (2025) that vocational education graduates must have superior skills to be able to compete globally. Therefore, PT Kreasi Ngalam Media needs to implement strategies based on collaboration, innovation, and technological adaptation. Chusniyah et al. (2023) emphasized that strengthening cooperation with industry, especially in curriculum development, can improve the relevance of training to market needs. In addition, Azevedo & Carvalho (2024) emphasized that the utilization of technologies such as artificial intelligence, virtual reality (VR), and augmented reality (AR) can improve students' learning experiences in an interactive and applicative manner. Sarmasági (2021) also adds that flexibility in the curriculum is very important in dealing with industry dynamics. With the right strategy, PT Kreasi Ngalam Media can optimize PBET as a superior training program, which not only improves participants' competencies, but also helps them be better prepared to face the challenges of an increasingly competitive work environment. The Table 4 below summarizes the key findings from the SWOT analysis conducted.

**Table 4.** Results of the IFAS and EFAS SWOT Matrix Analysis

| SWOT Aspect | Description |
|---|---|
| Strengths | The advantages possessed by PT Kreasi Ngalam Media, such as high-quality teaching, adequate facilities, and direct engagement with the digital industry, demonstrate that PBET has a strong foundation for further development. This is reinforced by data from program managers stating that industry involvement in learning greatly supports students' readiness. |
| Weaknesses | Several weaknesses have been identified, particularly regarding the lack of technical training and limited practical facilities. Observations show that although PBET operates effectively, these limitations and lack of training prevent some students from maximizing practical learning. |

| SWOT Aspect | Description |
|---|---|
| Opportunities | Policies supporting project-based education in the development of the digital business industry provide significant opportunities for PT Kreasi Ngalam Media to expand the PBET program. These opportunities are strongly backed by findings from industry partners noting graduates with practical skills. |
| Threats | Rapid changes in industry trends and competition pose threats to implementing the project-based learning model. Data shows that some competitors are also leveraging similar methods, increasing pressure on the sustainability and innovation of PBET. |

The results of the SWOT analysis obtained from the IFAS and EFAS matrices can be summarized in the following table, which reflects the strengths, weaknesses, opportunities, and threats faced by PT Kreasi Ngalam Media in the implementation of Project-Based Experiential Training (PBET), as shown in Table 5.

**Table 5.** IFAS and EFAS Score Results

| IFAS | | EFAS | |
|---|---|---|---|
| **Category** | **Total Score** | **Category** | **Total Score** |
| Strengths (S) | 2.21 | Opportunities (O) | 2.16 |
| Weaknesses (W) | 1.1 | Threats (T) | 1.07 |
| Total Difference | 1.11 | Total Difference | 1.09 |

Based on the analysis, there is a difference in the total IFAS of 1.11 and EFAS of 1.09, which shows that the internal strengths and external opportunities of PT Kreasi Ngalam Media are more dominant than the weaknesses and threats faced. According to Benzaghta et al. (2021), SWOT analysis can help organizations identify their strategic position and determine the right steps to increase competitiveness. In this context, the application of the Project-Based Experiential Training (PBET) model can be an effective strategy to improve the quality of education and the readiness of students to enter the world of work. The PBET model allows students to learn through direct experience with real projects, as explained by Rahman et al. (2024), that project-based learning methods provide better results in the development of practical skills. In addition, the visualization of SWOT analysis results can provide a clearer picture of the strengths and opportunities that can be utilized for company growth, so that the strategy taken is more in line with the internal and external conditions faced.

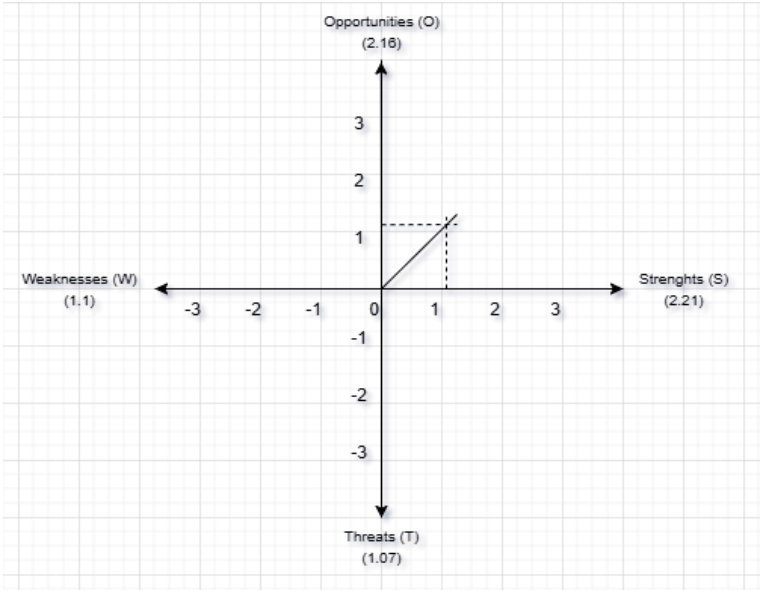


**Figure 2.** Cartesian SWOT Diagram

Based on the SWOT analysis, which shows the position of the Field Work Practice Program (PKL) in the Strengths-Opportunities (SO) quadrant, the SWOT analysis shows that this program has internal strengths that can be utilized to seize external opportunities. According to Mustofa et al. (2021), strengthening the relationship between the world of education and industry can improve students' readiness to face the world of work. One of the main strategies is to strengthen collaboration with industry, where the involvement of mentors from the business world has been proven effective in improving students' practical abilities Sutiman et al. (2022). In addition, the use of digital technology, such as digital marketing, creative content production, and mastery of industry software, is increasingly relevant as the digital industry develops (Shodiq & Sutiman, 2022). With the involvement of industry mentors, students not only gain theory but also hands-on experience in producing marketable work. Adapting the PKL curriculum to industry needs, as suggested by Prastyaningtyas et al. (2023), can be done by training students in simple data analysis, professional communication, and mastery of the latest technology. If this strategy is optimally implemented, the PKL program will not only be an ordinary internship, but also a forum to equip students with practical skills and high competitiveness, both in the world of work and in building their own business in the future. The following Table 6 summarizes the reasons why this position is increasingly relevant.

**Table 6.** Strengths-Opportunities Position (SO)

| Internal Strengths | Description of Strength | External Opportunities | Description of Opportunity |
|---|---|---|---|
| Close Relationship Between Education and Industry Needs | The internship program at PT Kreasi Ngalam Media provides students with the opportunity to acquire practical skills relevant to the industry, particularly in the fields of media and digital business. | Growth of the Digital and Social Media Industry | The rapidly growing media and digital business industry offers significant opportunities for students to gain practical skills relevant to the industry, especially in digital content creation. |

| Internal Strengths | Description of Strength | External Opportunities | Description of Opportunity |
|---|---|---|---|
| Involvement of Industry Mentors | Industry mentors provide direct guidance and support to students during the internship program, helping them address workplace challenges. | Digital Transformation in Education | Governments and educational institutions are increasingly encouraging the use of digital technology in learning, opening further opportunities for collaboration between schools and industries. |

Based on the position in the Strengths-Opportunities (SO) quadrant, the strategy that can be applied is to utilize the internal strengths that already exist, such as cooperation between the world of education and industry, to take advantage of the opportunities that exist in the world of digital business and media. In other words, educational institutions can use the good relationships that have been established with companies to expand opportunities for students in developing skills that meet the needs of the digital industry. This can be done through internship programs, special training, or joint projects that connect theory with real practice in the world of work. The proposed strategic steps can be summarized in the following Table 7.

**Table 7.** Strengths-Opportunities Strategy (SO)

| Strategi Strengths-Opportunities (SO) |
|---|
| Strengthen and expand industry partnerships to enable more vocational school students to gain internship experience in various media and digital business companies. |
| Align the curriculum with the latest trends in the digital industry, including teaching about SEO, digital data analytics, and social media-based content. |
| Optimize the use of technology and digital platforms in internship programs, not only to provide practical skills but also to prepare students to meet the needs of the industry. |

By implementing these strategic steps, PT Kreasi Ngalam Media can utilize its internal advantages to seize existing opportunities, thus improving the quality of education and students' readiness to face the world of work. This can be achieved by strengthening industry-based training programs, increasing collaboration with companies, and developing interactive and innovative learning technologies. With this approach, students not only acquire theory, but also practical experience relevant to the needs of the job market. As a result, graduates become more competitive, have appropriate skills, and are ready to face challenges in the professional world.

### 3.5 Strategic Recommendations Based on SWOT Analysis

Based on the results of the SWOT analysis that has been carried out, the following is a table that summarizes the recommended strategic steps to improve the effectiveness of implementing the Project-Based Education and Training (PBET) learning strategy in the Field Work Practice (PKL) program at PT Kreasi Ngalam Media. These steps are categorized based on four SWOT quadrants, namely strategies that utilize strengths to seize opportunities (SO Strategy), strategies that overcome weaknesses by utilizing opportunities (WO Strategy), strategies that use strengths to face threats (ST Strategy), and strategies that aim to minimize weaknesses and avoid threats (WT Strategy). The following is a breakdown of the strategies that can be implemented, as shown in Table 8.

**Table 8.** SWOT Matrix Strategy Combination

| SWOT Strategy | Strategy Description | Recommendations |
|---|---|---|
| SO (Strengths-Opportunities) | Leverage internal strengths to optimize external opportunities. | • Strengthen collaboration with industry.<br>• Develop an adaptive curriculum aligned with digital technology trends. |
| ST (Strengths-Threats) | Leverage internal strengths to address external threats. | • Flexibility in teaching methods and curriculum adjustments.<br>• Provide training for industry mentors to stay updated with technological developments. |
| WO (Weaknesses-Opportunities) | Utilize external opportunities to address internal weaknesses. | • Enhance students' digital skills.<br>• Facilitate internships on various digital platforms. |
| WT (Weaknesses-Threats) | Address internal weaknesses to avoid external threats. | • Improve the digital learning system.<br>• Collaborate with digital technology platforms for certification and training. |

The application of Project-Based Education and Training (PBET) in the Field Work Practice (PKL) program in Vocational High Schools (SMK) has been proven to have a positive impact on the development of students' practical skills, especially in the fields of journalism and digital business. According to Santoso & Nurkhin (2022), this project-based approach allows students to not only understand theory in the classroom, but also to apply it directly in real work situations. Students involved in WBL in the field of journalism, for example, learn to make news, manage digital content, and understand media marketing strategies, which are important skills in the modern industry. In the context of digital business, experience in market analysis and digital platform management is also a significant added value for students (Ulandari & Sujana, 2023). A study by Iskandar et al. (2021) also supports this finding, showing that PBET not only improves technical skills, but also trains critical thinking and problem solving skills that are crucial for students' job readiness in the digital age. Furthermore, Utomo (2021) emphasized that the more optimal implementation of PBET further increases students' readiness to face increasingly tight job competition. Thus, PBET is not only a learning method, but also an effective strategy in building students' professional competencies to be more ready to face the current industrial challenges.

## 4. CONCLUSION AND SUGGESTIONS

The application of Project-Based Education and Training (PBET) in Field Work Practices (PKL) at PT Kreasi Ngalam Media has proven effective in improving students' skills in journalism and digital business by connecting industry theory and practice and strengthening communication, problem solving, and collaboration skills that are crucial in the modern workplace. Based on the SWOT analysis, PBET has the strength to improve students' technical skills and provide authentic industry experience with the support of professional mentors, as well as having the opportunity to expand industry partnerships, align the curriculum with digital

trends, and increase the use of technology in learning as shown in the IFAS (3.31) and EFAS (3.23) results which place PBET in the Strengths-Opportunities (SO) quadrant. However, there are weaknesses in linking theory to practice due to the limited time of PKL and access to technological resources, while the main threats come from rapid changes in the digital industry that demand continuous adaptation and a gap between the skills acquired and the demands of the industry. The implications of these findings for education policy and industry practice include the need to strengthen industry-based curricula, strategic partnerships with the professional sector, optimization of technology utilization, and continuous evaluation and development to ensure the sustainability and effectiveness of PBET in VET. Strategic recommendations that can be implemented include expanding models of industrial partnerships, increasing the duration and flexibility of vocational courses, utilizing digital technology in learning, and establishing industry-based evaluation systems to ensure that vocational education and training is able to create graduates who are more competitive and ready to face the challenges of the ever-evolving digital industry.

## REFERENCES


Abdel-Basset, M., Mohamed, M., & Smarandache, F. (2018). An Extension of Neutrosophic AHP–SWOT Analysis for Strategic Planning and Decision-Making. *Symmetry*, *10*(4), 116. https://doi.org/10.3390/sym10040116

Almulla, M. A. (2020). The Effectiveness of the Project-Based Learning (PBL) Approach as a Way to Engage Students in Learning. *Sage Open*, *10*(3). https://doi.org/10.1177/2158244020938702

Apsari, Y., Mulyani, E. R., & Lisdawati, I. (2019). Students' Attitudes Toward Implementation Of Project Based Learning. *Journal Of Educational Experts (JEE)*, *2*(2), 123. https://doi.org/10.30740/jee.v2i2p123-128

Arora, S., Thota, S. R., & Gupta, S. (2024). Artificial Intelligence-Driven Big Data Analytics for Business Intelligence in SaaS Products. *2024 First International Conference on Pioneering Developments in Computer Science & Digital Technologies (IC2SDT)*, 164–169. https://doi.org/10.1109/IC2SDT62152.2024.10696409

Arya, F. S., Harjono, H. S., & Kamarudin. (2023). Description of Implementation of the Project-Based Learning Model in the Practical Activity of Writing Text of "Observation Result Reports" For Class VII Junior High School Students. *Asian Journal of Education and Social Studies*, *49*(4), 317–325. https://doi.org/10.9734/ajess/2023/v49i41210

Asiati, D. I., Mahrom, Y., Sari, E. P., Khan, M. A., & Opoku, O. A. (2022). Partnership Model in School Entrepreneurship Development. *Journal of Management Studies and Development*, *1*(02), 112–125. https://doi.org/10.56741/jmsd.v1i02.107

Astarina, S., Barliana, M. S., & Permana, D. C. (2020). Implementation Of Project-Based Learning Method To Increase Transferable Skills Of Vocational High School Students. *IOP Conference Series: Materials Science and Engineering*, *830*(2), 022065. https://doi.org/10.1088/1757-899X/830/2/022065

Astuti, I. I., & Stiawati, T. (2023). Kebijakan Making Indonesia 4.0 Dalam Upaya Meningkatkan Kualitas Sumber Daya Manusia (SDM) yang Kompeten. *Jurnal Ilmiah Manajemen Muhammadiyah Aceh*, *13*(2), 118–126. https://doi.org/10.37598/jimma.v13i2.1864

Azevedo, M. J., & Carvalho, A. A. A. (2024). Learning with virtual reality (VR) and augmented reality (AR). In *International Conference on Lifelong Education and Leadership for All (ICLEL 2023)* (pp. 118–127). ICLEL. https://doi.org/10.2991/978-94-6463-380-1_11

Azizah, A. (2017). Tourism Development and Strategy for Increasing Numbers of Visitors in Kediri. *Journal of Indonesian Tourism and Development Studies*, *5*(2), 131–136. https://doi.org/10.21776/ub.jitode.2017.005.02.09

Balandin, D., Kuzenkov, O., & Egamov, A. (2023a). Project-based learning in training IT-personnel for the digital economy. *E3S Web of Conferences*, *380*, 01035. https://doi.org/10.1051/e3sconf/202338001035

Balandin, D., Kuzenkov, O., & Egamov, A. (2023b). Project-based learning in training IT-personnel for the digital economy. *E3S Web of Conferences*, *380*(1), 01035–01046. https://doi.org/10.1051/e3sconf/202338001035

Bell, S. (2010). Project-Based Learning for the 21st Century: Skills for the Future. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *83*(2), 39–43. https://doi.org/10.1080/00098650903505415

Benzaghta, M. A., Elwalda, A., Mousa, M., Erkan, I., & Rahman, M. (2021). SWOT analysis applications: An integrative literature review. *Journal of Global Business Insights*, *6*(1), 55–73. https://doi.org/10.5038/2640-6489.6.1.1148

Berková, K., Krpálek, P., & Krpálková Krelová, K. (2019). Future economic professionals: development of practical skills and competencies in higher education from the point of view of international employers. *Economic Annals-XXI*, *176*(3–4), 91–98. https://doi.org/10.21003/ea.V176-09

Bolli, T., Oswald-Egg, M. E., & Rageth, L. (2021). Meet the need – the role of vocational education and training for the youth labour market. *Kyklos*, *74*(3), 321–348. https://doi.org/10.1111/kykl.12269

Bondie, R. S., Dahnke, C., & Zusho, A. (2019). How Does Changing "One-Size-Fits-All" to Differentiated Instruction Affect Teaching? *Review of Research in Education*, *43*(1), 336–362. https://doi.org/10.3102/0091732X18821130

Büyüközkan, G., & Ilıcak, Ö. (2019). Integrated SWOT analysis with multiple preference relations. *Kybernetes*, *48*(3), 451–470. https://doi.org/10.1108/K-12-2017-0512

Candana, D. M., & M. Afuan. (2020). Analisis Strategi Pemasaran Cafe Dapoer Enha Sago Kabupaten Pesisir Selatan Menggunakan Matriks Swot Dan Qspm. *Jurnal Manajemen Pendidikan Dan Ilmu SosiaL*, *1*(1), 151–162. https://doi.org/10.38035/jmpis.v1i1.252

Chueh, H.-E., & Kao, C.-Y. (2024). Exploring the impact of integrating problem based learning and agile in the classroom on enhancing professional competence. *Heliyon*, *10*(3), 24887. https://doi.org/10.1016/j.heliyon.2024.e24887

Chusniyah, A., Ariyanto Akhmad, R., & Ramadhan Putra P, H. (2023). Strategic Planning for Education Quality Improvement Based on SWOT Analysis: A Case Study. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, *9*(02), 199–210. https://doi.org/10.32678/tarbawi.v9i02.8366

Devi, W. S. G. R., Pringgandinie, D. R., Yulina, H., & Hadiansah, D. (2022). SWOT Analysis as a Competitive Strategy at Primkop Kartika Ardagusema Cimahi City, West Java, Indonesia. *International Journal of Science, Technology & Management*, *3*(1), 134–143. https://doi.org/10.46729/ijstm.v3i1.451

Evenddy, S. S., Gailea, N., & Syafrizal, S. (2023). Exploring the Benefits and Challenges of Project-Based Learning in Higher Education. *PPSDP International Journal of Education*, *2*(2), 458–469. https://doi.org/10.59175/pijed.v2i2.148

Gutgarts, R. (2020). Practical aspects of project-based learning in the study of the discipline "Developing information systems." *Business Informatics*, *14*(1), 51–61. https://doi.org/10.17323/2587-814X.2020.1.51.61

Hein, A.-E., Vrijens, B., & Hiligsmann, M. (2020). A Digital Innovation for the Personalized Management of Adherence: Analysis of Strengths, Weaknesses, Opportunities, and Threats. *Frontiers in Medical Technology*, *2*(1), 1–5. https://doi.org/10.3389/fmedt.2020.604183

Hu, B., Zheng, J., & Liu, Y. (2023). The Benefits and Mode of Enterprise Participation in School-enterprise Cooperation in Vocational Education. *International Journal of Education and Humanities*, *8*(2), 68–71. https://doi.org/10.54097/ijeh.v8i2.7592

Iskandar, N., Mustaji, Jannah, M., & Wicaksono, S. R. (2021). The Problem Based Learning in Enhancing Students' Critical Thinking for Reading Skills in English Teaching at Vocational

School. *IJORER : International Journal of Recent Educational Research*, *2*(2), 237–249. https://doi.org/10.46245/ijorer.v2i2.93

Isnani, T. (2023). Implementation of Project-Based Learning Approach in Improving Critical Thinking Skills of Elementary School Students. *Jurnal Ar Ro'is Mandalika (Armada)*, *3*(1), 47–55. https://doi.org/10.59613/armada.v3i1.2844

Jaya, N. A., Ruslan, & Purnamawati. (2023). Pengaruh Minat Kerja dan Praktik Pengalaman Lapangan Terhadap Kesiapan Kerja Mahasiswa. *Information Technology Education Journal*, *2*(3), 33–40. https://doi.org/10.59562/intec.v2i3.391

Kaharuddin, K., Iskandar, I., Ansurlawarlin, A., Zahar, Muh. N. A., & Nuramal, N. (2022). Study Of Learning Opportunities And Challenges Based On Digital Pandemic Era. *Aksiologi : Jurnal Pendidikan Dan Ilmu Sosial*, *3*(1), 51–64. https://doi.org/10.47134/aksiologi.v3i1.131

Khanh Quan, N. H., Singh, H., Thuy Khanh, T. H., & Rajagopal, P. (2023). A SWOT Analysis With A Digital Transformation: A Case Study For Hospitals In The Pharmaceutical Supply Chain. *Journal of Informatics and Web Engineering*, *2*(1), 38–48. https://doi.org/10.33093/jiwe.2023.2.1.4

Lamichhane, Y. R. (2024). A silver lining or digital divide? Systematic review of literature on online learning during Covid-19 in Nepal. *E-Learning and Digital Media*, *21*(4), 367–386. https://doi.org/10.1177/20427530231160890

Latif, M. S., Nuzula, J. F., & Marno, M. (2024). Curriculum Updates and Their Impact on School Management Practices. *Muróbbî: Jurnal Ilmu Pendidikan*, *8*(2), 164–178. https://doi.org/10.52431/murobbi.v8i2.2795

Lestari, T. A., & Mariah, S. (2018). Strategi Pengembangan Sistem Informasi Akademik Dalam Upaya Peningkatan Mutu Pendidikan. *Kelola: Jurnal Manajemen Pendidikan*, *5*(1), 15–23. https://doi.org/10.24246/j.jk.2018.v5.i1.p15-23

Lian, R., Cai, W., Chen, K., Shen, H., Gao, X., Xu, B., & Jiang, L. (2021). Linking Mentoring and Job Search Behavior: A Moderated Mediation Model. *Sage Open*, *11*(4), 1–12. https://doi.org/10.1177/21582440211067235

Long, Y. (2023). How the Features of Educational Video and Influencer Impact the Digital Consumer Engagement. *Proceedings of the 2023 4th International Conference on Education, Knowledge and Information Management (ICEKIM 2023)*, 693–701. https://doi.org/10.2991/978-94-6463-172-2_73

Mampuru, M. P., Mokoena, B. A., & Isabirye, A. K. (2024). Training and development impact on job satisfaction, loyalty and retention among academics. *SA Journal of Human Resource Management*, *22*, 1–10. https://doi.org/10.4102/sajhrm.v22i0.2420

Merliana, N. P. E., Widyantara, I. M. O., Wirastuti, N. M. A. E. D., Saputra, K. O., & Widyanto, I. P. (2025). Analisa SWOT-AHP untuk Penentuan Strategi Pembelajaran Proyek dalam Pengembangan Pendidikan Karakter pada Sekolah Menengah Atas di Kabupaten Kapuas. *Cetta: Jurnal Ilmu Pendidikan*, *8*(1), 99–119. https://doi.org/10.37329/cetta.v8i1.3771

Mustamin, K., Wahdah, W., Intiardy, D., Jumrah, A. M., & Pattiasina, P. J. (2024). The Impact of Project-Based Learning on Students' Collaboration Skills in Secondary Schools. *International Journal of Educational Research Excellence (IJERE)*, *3*(2), 992–998. https://doi.org/10.55299/ijere.v3i2.740

Mustofa, K., Aris Ichwanto, M., Anwar, Moh. K., Dai Weifen, Asryan Ani, Putro, S., Yoto, & Widiyanti. (2021). Internship For Profesional Career: Learning From Vocational High School 1 Kademangan Blitar East Java. *MANAGERIA: Jurnal Manajemen Pendidikan Islam*, *6*(2), 141–154. https://doi.org/10.14421/manageria.2021.62-09

Nur Fakhira, H., & Darusman, Y. (2022). Model Operasional Pelatihan Pada Balai Latihan Kerja Tasikmalaya dalam Menyiapkan Tenaga Kerja Profesional. *Lifelong Education Journal*, *2*(2), 138–143. https://doi.org/10.59935/lej.v2i2.126

Ohara, M. R. (2023). The Role of Social Media in Educational Communication Management. *Journal of Contemporary Administration and Management (ADMAN)*, *1*(2), 70–76. https://doi.org/10.61100/adman.v1i2.25

Paramitha, I. S., Limbong, M., & R. Simbolon, B. (2024). Implementasi Praktik Kerja Lapangan Guna Meningkatkan Mutu Lulusan Dan Kesiapan Kerja. *Edukatif: Jurnal Ilmu Pendidikan*, *6*(1), 813–822. https://doi.org/10.31004/edukatif.v6i1.6393

Parmawati, R., Pangestuti, E., Wike, W., & Hardyansah, R. (2020). Development and Sustainable Tourism Strategies in Red Islands Beach, Banyuwangi Regency. *Journal of Indonesian Tourism and Development Studies*, *8*(3), 174–180. https://doi.org/10.21776/ub.jitode.2020.008.03.07

Pradanti, P., & Muqtada, Moh. R. (2023). Students' perceptions on learning, motivation, and performance through project-based learning: undergraduate students' case. *PYTHAGORAS: Jurnal Program Studi Pendidikan Matematika*, *12*(1), 16–26. https://doi.org/10.33373/pythagoras.v12i1.5011

Prasetya, L. A., Herwanto, H. W., & Yoto, Y. (2024). Development of Learning Modules for Electric Power Plant Machinery for Class XI Phase F of Electric Power Plant Engineering Expertise Program in Vocational Schools. *IJECA (International Journal of Education and Curriculum Application)*, *7*(3), 279. https://doi.org/10.31764/ijeca.v7i3.26218

Prasetya, L. A., Widiyawati, I., Rofiudin, A., Haq, S. T. N., Hendranawan, R. S., Permataningtyas, A., & Ichwanto, M. A. (2025). The use of CLO3D application in vocational school fashion expertise program: Innovations, challenges and recommendations. *Journal of Research in Instructional*, *5*(1), 287–299. https://doi.org/10.30862/jri.v5i1.550

Prastyaningtyas, E. W., Sutrisno, S., Soeprajitno, E. D., Ausat, A. M. A., Ausat, A. M. A., & Suherlan, S. (2023). Analysing the Role of Mentors in Entrepreneurship Education: Effective Support and Assistance. *Journal on Education*, *5*(4), 14571–14577. https://doi.org/10.31004/joe.v5i4.2511

Rahman, N., Sutoyo, S., & Lutfi, A. (2024). Validity of PBEST Learning Model: An Innovative Learning to Improve Creative Thinking Skill and Entrepreneurial Science Thinking. *Journal of Curriculum and Teaching*, *13*(1), 195. https://doi.org/10.5430/jct.v13n1p195

Ramadhan, N. G., Hadi, S., & Mariana, R. R. (2021). Implementasi Praktik Kerja Industri Melalui Jalinan Kerjasama Antara Sekolah dengan Industri. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, *6*(4), 658. https://doi.org/10.17977/jptpp.v6i4.14736

Rasyid, M. Al, & Khoirunnisa, F. (2021). The Effect Of Project-Based Learning On Collaboration Skills Of High School Students. *Jurnal Pendidikan Sains (JPS)*, *9*(1), 113. https://doi.org/10.26714/jps.9.1.2021.113-119

Ratten, V., & Jones, P. (2021). Covid-19 and entrepreneurship education: Implications for advancing research and practice. *The International Journal of Management Education*, *19*(1), 100432. https://doi.org/10.1016/j.ijme.2020.100432

Rohman, M., Marji, Sudjimat, D. A., & Sugandi, R. M. (2022). Dukungan Keluarga dan Kesiapan Kerja di Kalangan Siswa SMK di Indonesia: Efek Mediasi dari Wawasan Dunia Kerja. *Jurnal Pendidikan Teknik Mesin Undiksha*, *10*(1), 1–9. https://doi.org/10.23887/jptm.v10i1.43409

Rongmin, L., & Fah, B. C. Y. (2024). Rethinking Education and Training: Creating High-Quality Employment Opportunities for Vocational Students. *Advances in Vocational and Technical Education*, *6*(2), 90–95. https://doi.org/10.23977/avte.2024.060214

Rozan, A. D., Syahri, B., Prasetya, F., Fortuna, A., Samala, A. D., & Rawas, S. (2024). The impact of project-based learning on 21st century skill development of vocational engineering students: A systematic literature review. *Journal of Engineering Researcher and Lecturer*, *3*(3), 189–212. https://doi.org/10.58712/jerel.v3i3.168

Şahin, M. (2021). Social Media in the Eye of Parents. *Education Quarterly Reviews*, *4*(3), 169–183. https://doi.org/10.31014/aior.1993.04.03.328

Santos, J. M., & Horta, H. (2018). The research agenda setting of higher education researchers. *Higher Education*, *76*(4), 649–668. https://doi.org/10.1007/s10734-018-0230-9

Santoso, J. T. B., & Nurkhin, A. (2022). Student Digipreneur: The Role of Peer Team-Based Learning and Project-Based Learning. *Dinamika Pendidikan*, *17*(2), 215–226. https://doi.org/10.15294/dp.v17i2.39902

Sarmasági, P. G. (2021). SWOT Assessment Usage in School Talent Management. *Central-European Journal of New Technologies in Research, Education and Practice*, *3*(2), 42–60. https://doi.org/10.36427/CEJNTREP.3.2.1355

Satya Zulhijah, M. P., Hamid Halin, & Endah Dewi Purnamasari. (2024). Pengaruh Lingkungan Keluarga Dan Praktik Kerja Lapangan Dalam Kesiapan Kerja Siswa-Siswi Perhotelan SMK Negeri 3 Palembang. *JEMSI (Jurnal Ekonomi, Manajemen, Dan Akuntansi)*, *10*(2), 1339–1349. https://doi.org/10.35870/jemsi.v10i2.2313

Sciberras, C. (2019). Applying a SWOT analysis to inform educational provision of learners on the autism spectrum. *Advances in Autism*, *5*(4), 226–230. https://doi.org/10.1108/AIA-03-2018-0011

Serkina, Y., Novikova, Z., & Sukhorukih, A. (2022). Digitalization Processes vs. Traditional Ones: Ethical and Environmental Aspects. *Ethics in Science and Environmental Politics*, *22*, 57–68. https://doi.org/10.3354/esep00202

Setiawan, A. A., Sudi, M., Matradewi, N. K. W., Muslim, A., Saefudin, A., & Saddhono, K. (2024). Ideological Contestation in Social Media: a Content Analysis of the Promotion of Islamic Education Institutions. *Al-Hayat: Journal of Islamic Education*, *8*(1), 72. https://doi.org/10.35723/ajie.v8i1.445

Setiawan, R., Sutedi, A., & Hidayat, T. (2022). Sistem Informasi Geografis Pengelolaan Praktek Kerja Lapangan di Sekolah Menengah Kejuruan Berbasis Web. *Jurnal Algoritma*, *19*(1), 88–99. https://doi.org/10.33364/algoritma/v.19-1.1006

Shodiq, & Sutiman. (2022). Readiness of Internships Program During The Covid-19 Pandemic: Students, School, and Industry Perspective. *Jurnal Pendidikan Dan Pengajaran*, *55*(3), 614–627. https://doi.org/10.23887/jpp.v55i3.52766

Siitonen, M., Uotila, P., Uskali, T., Varsaluoma, J., & Välisalo, T. (2019). A Pilot Study on Developing Newsgames in Collaboration between Journalism and Computer Science Students. *Nordicom Review*, *40*(2), 143–155. https://doi.org/10.2478/nor-2019-0038

Siti Salamah, I., Chandra Wiguna, A., Taufiqul Hakim, R., Putri A. L. Fajar, R., & Prihantini. (2024). Analisis Penerapan Standar Penilaian pada Sekolah Penyelenggara Kurikulum Merdeka. *Dirasah : Jurnal Studi Ilmu Dan Manajemen Pendidikan Islam*, *7*(1), 230–240. https://doi.org/10.58401/dirasah.v7i1.1089

Skliarova, I. (2021). Project-Based Learning and Evaluation in an Online Digital Design Course. *Electronics*, *10*(6), 646. https://doi.org/10.3390/electronics10060646

Sudarsono, B., Tentama, F., Mulasari, S. A., Sukesi, T. W., Sulistyawati, S., Ghozali, F. A., Yuliansyah, H., Nafiati, L., & Sofyan, H. (2022). Development of Integrated Project-based (PjBL-T) model to improve work readiness of vocational high school students. *Jurnal Pendidikan Vokasi*, *12*(3), 222–235. https://doi.org/10.21831/jpv.v12i3.53158

Suryandoko, W. (2023). Development Of A Project Based Online Learning Model To Improve The Skills And Abilities Of Actors For Students. *PEDAGOGIK: Jurnal Pendidikan*, *10*(1), 101–116. https://doi.org/10.33650/pjp.v10i1.5522

Sutiman, S., Sofyan, H., Arifin, Z., Nurtanto, M., & Mutohhari, F. (2022). Industry and Education Practitioners' Perceptions Regarding the Implementation of Work-Based Learning through Industrial Internship (WBL-II). *International Journal of Information and Education Technology*, *12*(10), 1090–1097. https://doi.org/10.18178/ijiet.2022.12.10.1725

Sutrisna, D., & Barliana, M. S. (2019). Readiness of Vocational School Students to Facing Global Competition. *Proceedings of the 5th UPI International Conference on Technical and Vocational Education and Training (ICTVET 2018)*, 550–556. https://doi.org/10.2991/ictvet-18.2019.124

Tegeh, I. M., Agustini, K., & Sulastri, I. A. (2023). Collaborative Project Based Blended Learning on Resilience and Student Learning Outcomes. *Journal of Education Technology*, *7*(4), 698–706. https://doi.org/10.23887/jet.v7i4.60417

Ulandari, N. K. Y., & Sujana, I. W. (2023). The Use of Project-Based Digital Comics on Social Science Content to Improve Learning Outcomes Students of 5th Grade Elementary School Students.

*Journal for Lesson and Learning Studies*, *5*(3), 457–468. https://doi.org/10.23887/jlls.v5i3.57208

Utomo, E. P. (2021). Pengembangan Komik Digital Berbasis Problem Based Instruction Pada Materi Kelangkaan Dan Kebutuhan Manusia. *Soedirman Economics Education Journal*, *3*(1), 53. https://doi.org/10.32424/seej.v3i1.4064

Wibowo, S. E., Saptono, B., Hastomo, A., Herwin, & Ardiansyah, A. R. (2023). The Challenges of Implementing the Independent Curriculum in Indonesian Language Learning in Elementary School High Classes. *Jurnal Ilmiah Sekolah Dasar*, *7*(3), 536–545. https://doi.org/10.23887/jisd.v7i3.59167

Widiyawati, I., Prasetya, L. A., Permataningtyas, A., Nurhadi, D., Hidayati, N., & Ichwanto, M. A. (2024). Application of Clo3d Technology in Fashion Vocational Education in Vocational Schools: A Systematic Literature Review. *IJECA (International Journal of Education and Curriculum Application)*, *7*(3), 268. https://doi.org/10.31764/ijeca.v7i3.26216

Xu, E., Wang, W., & Wang, Q. (2023). The effectiveness of collaborative problem solving in promoting students' critical thinking: A meta-analysis based on empirical literature. *Humanities and Social Sciences Communications*, *10*(1), 16. https://doi.org/10.1057/s41599-023-01508-1

Yuan, W., & Mengmeng. (2023). Research on the psychological path to enhance social recognition of vocational education. *Applied & Educational Psychology*, *4*(11), 25–31. https://doi.org/10.23977/appep.2023.041105

Yulastri, A., Ganefri, G., Ferdian, F., & Elfizon, E. (2023). Analyzing the Impact of Project-Based Learning on Student Entrepreneurship Readiness: A Structural Equation Modeling and Statistical Analysis in Higher Education. *JOIV : International Journal on Informatics Visualization*, *7*(4), 2427. https://doi.org/10.62527/joiv.7.4.2457