



A CIPP Evaluation of Project- Based Learning Implementation in Fashion Design Programs at Vocational High Schools in Majene Regency, Indonesia

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ABSTRACT

Purpose: This study evaluated the implementation of Project-Based Learning (PjBL) in Fashion Design Programs at vocational high schools in Majene Regency, Indonesia, using the Context, Input, Process, and Product (CIPP) evaluation model. The study addressed the limited availability of comprehensive evaluations of PjBL implementation in vocational education, particularly those examining contextual conditions, resource readiness, implementation processes, and learning outcomes simultaneously. **Methods:** This program evaluation employed a descriptive quantitative approach at three vocational high schools offering Fashion Design Programs in Majene Regency. The participants comprised 126 respondents, including three principals, three vice principals for curriculum, 21 vocational teachers, and 99 students selected through purposive sampling. Data were collected using four-point Likert-scale questionnaires supported by observations, semi-structured interviews, and documentation. The questionnaire was developed based on the CIPP framework and validated through expert judgment to ensure content relevance and clarity. Quantitative data were analyzed using descriptive statistics and percentage-based categories, while qualitative data were used to support the interpretation of the findings through triangulation. **Findings:** The evaluation indicated that the implementation of PjBL was categorized as Very Good across all CIPP components. The Context component obtained the highest evaluation result (98.3%), followed by Process (90.1%), Input (88.4%), and Product (82.5%). The findings showed that PjBL implementation was supported by curriculum alignment, school policies, and institutional commitment. However, practical facilities, industry collaboration, and the quality of student products were identified as aspects requiring further improvement. **Research Implications:** The findings demonstrate the applicability of the CIPP model as a comprehensive framework for evaluating PjBL implementation in vocational education. The results also provide evidence-based recommendations for strengthening school-industry partnerships, improving practice facilities, and refining project implementation to support continuous quality improvement in vocational education. **Originality:** This study provides a comprehensive CIPP-based evaluation of PjBL implementation in Fashion Design Programs across three vocational high schools in Majene Regency, offering empirical evidence to support program evaluation and decision-making in vocational education



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INTRODUCTION

Vocational education plays a strategic role in preparing a skilled, adaptable, and industry-ready workforce capable of responding to rapid technological advancement, digital transformation, and evolving labor market demands. Consequently, graduates of Vocational High Schools are expected not only to demonstrate technical proficiency but also to possess essential twenty-first-century competencies, including critical thinking, communication, collaboration,

creativity, and problem-solving skills. Meeting these expectations requires a shift from teacher-centered instruction toward authentic learning approaches that engage students in solving real-world problems and producing meaningful learning outcomes. Among the various instructional approaches, Project-Based Learning (PjBL) has been widely recognized as an appropriate pedagogical model for vocational education because it enables students to acquire knowledge and practical skills through authentic projects while fostering collaboration, communication, creativity, and reflective learning (Guo et al., 2020). In vocational education, Project-Based Learning (PjBL) enables students to integrate knowledge, technical skills, and professional attitudes through authentic projects that simulate industry-oriented practices. In Fashion Design Programs, these projects involve industry-oriented activities that allow students to apply occupational standards in realistic learning contexts (Chen & Yang, 2019). Beyond developing technical competencies, PjBL also supports the development of communication, collaboration, creativity, and responsibility, which are recognized as essential twenty-first-century competencies (Almulla, 2020). In Indonesia, the implementation of the *Kurikulum Merdeka* further encourages the adoption of student-centered, contextual, and project-based learning approaches to strengthen the alignment between vocational education and workforce demands. Although previous studies have demonstrated the educational value of Project-Based Learning (Markula & Aksela, 2022), its successful implementation depends on several contextual factors. These include teacher preparedness, adequate learning facilities, institutional support, and collaboration with business and industry. Because these factors interact throughout the implementation process, comprehensive evaluation is necessary to determine whether PjBL is implemented as intended and supports the achievement of vocational learning objectives.

Despite the recognised educational benefits of Project-Based Learning (PjBL), its successful implementation depends on the readiness of vocational education to provide authentic learning experiences that closely reflect real industry-oriented conditions. Arfandi et al. (2024) emphasise that vocational learning should be designed to maximise students' direct engagement with real-world experiences as an essential strategy for preparing graduates for employment. Previous studies have consistently reported that the successful implementation of Project-Based Learning (PjBL) is influenced by multiple factors, including teacher readiness, the availability of practical learning facilities, institutional support, and collaboration with business and industry partners (Ridwan Misbahudin & Asmaul, 2022). Despite these supporting factors, the open unemployment rate among graduates of Indonesian Vocational High Schools (SMKs) remains relatively high, indicating that vocational education continues to face challenges in preparing graduates whose competencies meet industry expectations. According to the latest data released by Statistics Indonesia (BPS), graduates of Vocational High Schools continue to record the highest Open Unemployment Rate (OUR) among all educational levels, reaching 7.74% in February 2026. This condition indicates that vocational education still faces substantial challenges in preparing graduates whose competencies align with labour market demands, highlighting the importance of improving the quality of learning implementation within vocational schools. Previous research has predominantly examined the effects of PjBL on students' academic achievement, technical competence, critical thinking, creativity, and collaboration. However, these studies have largely emphasized learning outcomes rather than evaluating how PjBL is implemented across the contextual, resource, process, and product dimensions that determine its successful implementation. Furthermore, comprehensive evaluations applying the Context, Input, Process, and Product (CIPP) model to assess PjBL implementation in Fashion Design Programs at vocational high schools remain limited. This gap highlights the need for a comprehensive evaluation of PjBL implementation. Such an evaluation should examine not only learning outcomes but also the contextual conditions, institutional readiness, implementation processes, and learning products that collectively shape implementation quality in vocational education. Unlike previous studies that primarily examined the effects of Project-Based Learning (PjBL) on students' learning outcomes, this study focuses on evaluating the implementation of PjBL using the Context, Input, Process, and Product (CIPP) evaluation model across three vocational high schools offering Fashion Design Programs in Majene Regency, Indonesia. By simultaneously examining contextual conditions, resource readiness, implementation processes, and learning products, this study provides a more comprehensive understanding of how PjBL is implemented in vocational education.

The findings are expected to provide empirical evidence to support decision-making and continuous quality improvement in vocational education, particularly in strengthening project-based learning practices that are aligned with industry needs. Therefore, this study aims to evaluate the implementation of Project-Based Learning (PjBL) in Fashion Design Programs at vocational high schools in Majene Regency using the Context, Input, Process, and Product (CIPP) evaluation model. Specifically, the study assesses the contextual relevance of PjBL implementation, the readiness of supporting resources, the quality of the implementation process, and the resulting learning outcomes to provide comprehensive evidence for improving vocational education practices.

METHOD

This study employed a descriptive quantitative program evaluation approach using the Context, Input, Process, and Product (CIPP) evaluation model developed by Stufflebeam. The CIPP model was selected because it provides a systematic framework for evaluating educational programs by examining four complementary dimensions: context, input, process, and product. Through these dimensions, the model enables a comprehensive assessment of program implementation, identifies strengths and weaknesses, and provides evidence to support continuous program improvement (Stufflebeam, 2000). The study was conducted at three public vocational high schools offering Fashion Design Programs in Majene Regency, Indonesia, namely UPTD SMKN 1 Majene, UPTD SMKN 4 Majene, and UPTD SMKN 7 Majene. A total of 126 respondents participated in the study, consisting of three principals, three vice principals for curriculum, 21 vocational teachers, and 99 students. Participants were selected using purposive sampling because they were directly involved in planning, implementing, supervising, or participating in Project-Based Learning (PjBL), enabling them to provide information relevant to the objectives of this evaluation.

Table 1. Distribution of Participants

Respondent	UPTD SMKN 1	UPTD SMKN 4	UPTD SMKN 7	Total
Principal	1	1	1	3
Vice Principal for Curriculum	1	1	1	3
Vocational Teachers	11	5	5	21
Students	35	22	42	99
Total	48	29	49	126

Source: Research data, 2026

Data were collected using questionnaires, classroom observations, semi-structured interviews, and documentation. The questionnaire served as the primary instrument and was developed according to the four components of the CIPP evaluation model. A four-point Likert scale was employed for all questionnaire items, with response categories of 4 = Strongly Agree, 3 = Agree, 2 = Disagree, and 1 = Strongly Disagree (Mulyatiningsih, 2012). Separate questionnaires were developed for different respondent groups to ensure that each CIPP component was assessed by participants with relevant roles and responsibilities.

Table 2: Instrument Matrix Based on the CIPP Evaluation Model

CIPP Component	Respondent	Focus of Measurement	Number of Item
Context	Principal and Vice Principal	Curriculum relevance, school policy, institutional support	15
Input	Principal and Vice Principal	Managerial support and institutional readiness	5
	Vocational Teachers	Teacher readiness, learning resources, facilities, industry collaboration	15
Process	Vocational Teachers	Planning, implementation, monitoring, and assessment of PjBL	10
	Students	Student engagement and participation during project implementation	5
Product	Students	Learning outcomes and quality of project products	10

Source : Developed by the authors based on the CIPP evaluation framework, 2025

The Context component consisted of 15 items completed by school principals and vice principals for curriculum to evaluate curriculum alignment, school policies, and institutional commitment to PjBL implementation. The Input component included 5 items completed by school principals and vice principals to assess managerial support and institutional readiness, and 15 items completed by vocational teachers to evaluate teacher readiness, instructional planning, learning resources, practical facilities, and collaboration with business and industry. The Process component comprised 10 items completed by vocational teachers to assess instructional implementation and project management, and 5 items completed by students to evaluate their engagement and participation during project activities. The Product component consisted of 10 items completed by students to assess learning outcomes and the quality of project products.

The questionnaire was developed based on the CIPP evaluation indicators and validated through expert judgment involving two experts in vocational education and educational evaluation. The validation process confirmed the relevance, clarity, and representativeness of each item. Because this study focused on content validity through expert review, statistical reliability analysis was not conducted. Accordingly, the findings should be interpreted within the scope of this descriptive program evaluation.

Observations were undertaken during Project-Based Learning activities to examine classroom implementation, student participation, teacher instructional practices, and the utilization of learning facilities. Semi-structured interviews with school principals, vice principals for curriculum, and vocational teachers were conducted to obtain complementary information regarding school policies, institutional support, implementation challenges, and strategies for improving PjBL. Documentation, including curriculum documents, teaching modules, lesson plans, assessment records, project reports, photographs of learning activities, and students' project products, was collected to support and verify the findings. Quantitative data were analyzed using descriptive statistical techniques. Percentage scores for each evaluation component were calculated using the following formula:

$$\text{Percentage} = \frac{\text{Total Score Obtained}}{\text{Maximum Possible Score}} \times 100$$

Where PPP represents the percentage score, the obtained score refers to the total score recorded for each indicator or component, and the maximum possible score refers to the highest score obtainable based on the number of items and respondents. The percentage scores were subsequently interpreted using four evaluation categories: Very Good (80–100%), Good (62–79%), Fair (50–61%), and Poor (≤50%). Qualitative findings obtained from observations, interviews, and documentation were integrated with quantitative results through method triangulation to strengthen the credibility of the evaluation and provide a more comprehensive understanding of PjBL implementation across the participating schools. Prior to data collection, permission was obtained from the participating schools. All respondents participated voluntarily after receiving information regarding the purpose of the study, and the confidentiality of participants' identities and institutional data was maintained throughout the research process.

RESULTS

Context Evaluation

The Context evaluation was based on responses from six school leaders, consisting of three principals and three vice principals for curriculum across the three participating vocational high schools. The results of the evaluation of the “Context” component indicate that the implementation of Project-Based Learning (PjBL) in the Fashion Design Programs at three vocational high schools (SMK) in Majene Regency already has a very strong foundation. The assessment focused on three key indicators: the extent to which the PjBL approach aligns with the needs of the business and industrial sectors; the extent to which the method is compatible with the Merdeka Curriculum; and the extent to which this approach aligns with the schools’ vision, mission, and objectives.

Table 3. Evaluation Results for the Context Component

School	Relevance to Industry (%)	Curriculum Alignment (%)	Alignment with The School’s Vision and Mission (%)	Average (%)	Category
UPTD SMKN 1 Majene	100.0	95.0	100.0	98.3	Very Good
UPTD SMKN 4 Majene	90.0	100.0	100.0	96.7	Very Good
UPTD SMKN 7 Majene	100.0	100.0	100.0	100.0	Very Good
Overall	96.7	98.3	100.0	98.3	Very Good

Source: Processed research data, 2026

These results indicate that the implementation of PjBL is supported by school policies, the curriculum, and a learning approach that aligns with the needs of the workforce. All indicators fall into the “Very Good” category, with an average score of 98.3%.

Input Evaluation

The Input Component assesses the readiness of the various resources needed to implement project-based learning. This includes teacher competencies, the curriculum used, available instructional materials, practical facilities, support from the school. The Input evaluation combined responses from six school leaders and 21 vocational teachers.

Table 4. Evaluation Results for the Input Component

School	Teacher Competence (%)	Curriculum and Modules (%)	Practical Resources (%)	Management Support (%)	Average (%)	Category
UPTD SMKN 1 Majene	97.0	90.0	75.0	100.0	90.5	Very Good
UPTD SMKN 4 Majene	92.0	90.0	75.0	95.0	88.0	Very Good
UPTD SMKN 7 Majene	92.0	90.0	75.0	90.0	86.8	Very Good
Overall	93.6	90.0	75.0	95.0	88.4	Very Good

Source: Processed research data, 2026

Overall, the Input component falls into the “very good” category, although the indicators for practical training facilities and industry-academia collaboration scored lower than the other indicators

Process Evaluation

The Process evaluation was based on responses from 21 vocational teachers and 99 students. The Process component shows that the PjBL syntax structure was consistently applied throughout the entire process from problem identification, project planning, and practical training to monitoring and evaluating project outcomes

Table 5. Evaluation Result for the Process Component

School	PjBL Syntax (%)	Student Participation (%)	Average (%)	Category
UPTD SMKN 1 Majene	86.0	100.0	93.0	Very Good
UPTD SMKN 4 Majene	90.0	95.0	92.5	Very Good
UPTD SMKN 7 Majene	80.0	90.0	85.0	Very Good
Overall	85.3	95.0	90.1	Very Good

Source: Processed research data, 2026

These results indicate that project-based learning has been implemented in accordance with the PjBL stages, in which students are actively involved in every stage of the learning process

Product Evaluation

The Product evaluation was derived from responses provided by 99 students. The product component received a “very good” rating, although it had a lower average score compared to the other CIPP components.

Table 6. Evaluation Result for the Product Component

School	Quality of Project Products (%)	Student Learning Outcomes (%)	Average (%)	Category
UPTD SMKN 1 Majene	80.0	80.0	80.0	Very Good
UPTD SMKN 4 Majene	90.0	85.0	87.5	Very Good
UPTD SMKN 7 Majene	80.0	80.0	80.0	Very Good
Overall	83.0	82.0	82.5	Very Good

Source: Processed research data, 2026

Table 7. Summary of the CIPP evaluation results.

CIPP Componen	Average Percentage (%)	Category
Context	98.3	Very Good
Input	88.4	Very Good
Process	90.1	Very Good
Product	82.5	Very Good

Source: Processed research data, 2026

Among the four CIPP components, Context achieved the highest score (98.3%), indicating strong alignment of Project-Based Learning (PjBL) with institutional policies, the Merdeka Curriculum, and industry needs. Interviews confirmed that PjBL had been integrated into school policies, although the extent of industry collaboration differed among schools. The Input component scored 88.4%, reflecting adequate teacher readiness, curriculum support, and managerial commitment. However, limitations in practical resources, workshop maintenance, block scheduling, and sustained industry involvement remain areas requiring improvement. The Process component obtained 90.1%,

indicating that teachers generally implemented the essential stages of PjBL and that students actively participated in project activities. Nevertheless, classroom observations and interviews identified challenges related to instructional time and project scheduling. The Product component received the lowest score (82.5%), although it remained within the Very Good category. The findings indicate that students successfully completed curriculum-based fashion projects, supported by questionnaire, interview, and documentation data. However, project outcomes were influenced by resource availability and industry collaboration; therefore, these results should be interpreted as evidence of program implementation rather than proof of PjBL effectiveness in improving student competencies

The results presented above demonstrate that the implementation of Project-Based Learning generally met the evaluation criteria across the Context, Input, Process, and Product components. However, the variation observed among individual indicators and participating schools suggests that successful implementation is influenced not only by institutional policies but also by the availability of supporting resources, instructional practices, and collaboration with industry partners. Therefore, the following discussion interprets these findings in relation to the CIPP evaluation model, Project-Based Learning theory, and previous empirical studies in vocational education to explain the significance of the identified strengths and implementation challenges

DISCUSSION

A. The implementation of Project-Based Learning is supported by appropriate vocational education policies, but still requires strengthened collaboration with industry

The findings indicate that Project-Based Learning (PjBL) was implemented within a highly supportive institutional context across the three participating vocational schools. The high Context score (98.3%) demonstrates that PjBL was well aligned with the Merdeka Curriculum, school vision and mission, and vocational education policies aimed at strengthening the relevance of learning to the needs of the business and industrial sectors (DUDI). Interviews with school leaders further confirmed that PjBL had become an integral part of the schools' instructional strategy rather than merely fulfilling curriculum requirements. These findings suggest that institutional commitment provided a favourable foundation for implementing project-based learning across the participating schools.

From the perspective of the CIPP evaluation model, the Context component examines whether a program is implemented within an environment that supports its objectives (Stufflebeam, 2000). The present findings indicate that the participating schools adopted PjBL based on their intention to improve the alignment between vocational learning and industry-oriented competencies. This interpretation is consistent with Billett (2020), who argues that effective vocational education depends on the integration of curriculum, authentic learning experiences, and industry expectations.

The findings also reflect the principle of *learning by doing* proposed by Dewey, whereby meaningful learning occurs through authentic experience. In the Fashion Design Programs, project activities enabled students to experience the complete production process, including designing, pattern making, garment construction, and finishing. Consequently, school policies that support authentic project work provide an important foundation for implementing vocational learning that resembles professional practice.

The results are consistent with previous studies reporting that successful PjBL implementation depends on supportive school leadership, curriculum flexibility, and institutional commitment to project-based instruction (Fitri et al., 2025). However, the present study extends previous research by showing that strong policy support alone is insufficient to ensure optimal implementation. Although the Context component achieved the highest evaluation score, interviews and observations identified an important implementation gap. Collaboration with industry was still largely limited to student internships, industrial visits, curriculum synchronisation, and competency assessments. Industry representatives were only occasionally involved in project planning, mentoring, or evaluating students' work. As a result, some learning projects had not yet fully reflected authentic production practices within the fashion industry. This finding explains why strong institutional support did not always translate into equally strong implementation at the operational level. The comparison across schools also demonstrates differences in the quality of industry collaboration. While all three schools showed strong curriculum alignment and institutional commitment, the intensity of partnerships with industry varied depending on the availability of local partners, school networks, and financial support. These variations indicate that successful PjBL implementation is influenced not only by educational policies but also by the strength and sustainability of school industry partnerships.

These findings support the concept of *link and match*, which positions industry as an active partner in vocational education rather than merely a recipient of graduates. Consistent with Nasution et al. (2022) and Wulandari et al. (2025), the results suggest that stronger collaboration with industry can improve the relevance of vocational learning. The present study further contributes to the application of the CIPP model by demonstrating that, in vocational

education, the Context component should include not only policy alignment and curriculum relevance but also the quality of school–industry partnerships as a strategic element of the implementation environment. From a practical perspective, the findings suggest that vocational schools should strengthen collaboration with industry beyond internship program. Greater involvement of industry in co-designing projects, mentoring students during production, developing project modules, and participating in project assessment would increase the authenticity of project activities and strengthen the implementation of the *link and match* policy. Therefore, the Context component should be viewed not only as a measure of institutional readiness but also as a strategic factor influencing the sustainability and quality of Project-Based Learning implementation in vocational education

B. The Readiness of Resources Is the Foundation for Implementing Project-Based Learning, but It Does Not Yet Fully Reflect the Industrial Ecosystem

The successful implementation of Project-Based Learning (PjBL) depends on the interaction of institutional policies, leadership, teacher competence, resource availability, and collaborative learning environments rather than on instructional practice alone. These interconnected elements collectively shape the quality of project implementation and student learning outcomes (González et al., 2026)

The Input component achieved a Very Good classification (88.4%), indicating that the participating schools possessed generally adequate internal resources to support PjBL implementation. Teacher readiness, curriculum flexibility, instructional planning, and managerial support emerged as the strongest aspects. Interviews further revealed that teachers had participated in competency certification, industry internships, and professional development programs, providing a favourable institutional foundation for project-based instruction. Consistent with previous studies, these elements should be viewed as complementary implementation resources rather than isolated factors

The findings indicate that strong internal readiness contributed substantially to successful PjBL implementation. Teacher readiness, curriculum planning, instructional materials, and managerial support created conditions that enabled teachers to organise project activities systematically and facilitate students throughout the learning process. This interpretation is consistent with studies identifying competency-based planning, teacher preparedness, curriculum support, and school leadership as essential factors for successful PjBL implementation (Jajat Sudrajat & Asep Budi Tauhid, 2026; Sadaruddin et al., 2025; Awaliyah, 2026); Artantyo et al., 2026). However, adequate internal readiness alone was insufficient to ensure optimal implementation because practical facilities and collaboration with industry remained limited. Consequently, resource readiness should be interpreted not only in terms of internal school capacity but also in relation to the ability to provide authentic industry-oriented learning experiences.

Within the CIPP framework, the Input component evaluates whether available resources and implementation strategies are sufficient to achieve program objectives. The present findings suggest that the schools had established favourable internal conditions for implementing PjBL. This interpretation is consistent with previous studies highlighting teacher competence, curriculum flexibility, leadership, and instructional planning as essential prerequisites for successful project-based learning (Almulla, 2020). Nevertheless, classroom observations and interviews revealed continuing shortages of practical materials, workshop equipment, and industry involvement. Although students successfully completed fashion projects, several learning activities did not fully reflect industrial production systems, particularly regarding workflow, quality control, and current technological practices. These findings suggest that available resources supported project implementation but had not yet created a fully authentic industry-based learning ecosystem

This interpretation is consistent with Prosser's principle that vocational education is most effective when learning environments closely resemble the industry-oriented. Gessler & Peters (2020) argue that vocational learning should integrate schools, industry, technology, and professional practice into a coherent learning ecosystem. The comparison across the three participating schools further illustrates this issue. Although all schools achieved a Very Good Input classification, differences remained in facilities, access to industry partners, and the continuity of collaboration. These findings are consistent with Judijanto et al. (2024) who identified logistical barriers, resource limitations, and mismatched expectations as persistent challenges in school–industry partnerships. Therefore, the availability of practical laboratories, production equipment, digital technologies, and industry practitioners should be regarded as integral components of vocational learning rather than merely supporting facilities.

The findings also extend the application of the CIPP model in vocational education. While Input evaluation traditionally focuses on human resources, facilities, budgets, and instructional materials, this study suggests that the quality of the industry based learning ecosystem should also be considered a strategic indicator. From a practical perspective, vocational schools should modernise workshop facilities, strengthen teaching factory programs, expand teacher internships in industry, and involve industry practitioners as co designers, mentors, and assessors of learning

projects. These efforts would enhance the authenticity of Project-Based Learning while strengthening the implementation of the link and match policy

C. The Quality of the Learning Process Reflects the Internalization of the Project-Based Learning Framework in Vocational Education

The findings indicate that the Process component achieved a Very Good classification (90.1%), demonstrating that Project- Based Learning (PjBL) was generally implemented according to its essential instructional stages across the three participating vocational schools. Questionnaire results, supported by classroom observations and interviews, showed that teachers consistently facilitated project planning, monitored students' progress, and guided project completion rather than relying on teacher-centred instruction. Students actively participated in collaborative project activities, including planning, designing, producing, and evaluating fashion products, reflecting the learner-centred characteristics of PjBL. In the Fashion Vocational Education program, PjBL created a student-centered learning environment in which learners actively engaged in structured practical projects that reflected authentic industry-oriented practices. This approach enabled students to plan, execute, and present their projects while developing creativity, collaboration, problem-solving abilities, and technical competencies relevant to the standards of the fashion industry (Zakaria et al., 2025). These findings suggest that the participating schools had successfully integrated the fundamental principles of Project-Based Learning into classroom practice. Rather than functioning as passive recipients of knowledge, students were encouraged to construct their understanding through authentic project experiences, while teachers assumed the role of facilitators who supported collaboration and problem-solving throughout the learning process. This interpretation is consistent with constructivist learning principles and previous studies reporting that PjBL promotes active participation and collaborative learning in vocational education (Nafiatunnisa & Wahyuningsih, 2025)

The quality of Project- Based Learning (PjBL) implementation is not determined solely by the execution of each stage of the learning syntax, but also by the extent to which the learning process fosters collaboration, reflection, problem solving, the use of technology, and the active involvement of students in producing meaningful learning products or artifacts (Markula & Aksela, 2022). This interpretation is consistent with the findings of Suryani & Irmayanti, (2025), who argue that Project-Based Learning creates meaningful learning experiences by engaging students in investigation, collaboration, independent learning, and the application of knowledge through authentic projects. Their study further demonstrates that well-designed PjBL activities encourage students to actively participate throughout the project cycle while connecting theoretical understanding with practical applications. Therefore, the high Process scores obtained in the present study indicate that most learning activities had already reflected the essential characteristics of Project- Based Learning, although variations remained among schools regarding the consistency of implementation.

Although all three schools achieved a Very Good classification, differences were observed in the quality of implementation. UPTD SMKN 1 Majene obtained the highest Process score, reflecting more consistent implementation of PjBL and higher student engagement during classroom activities. In contrast, UPTD SMKN 7 Majene recorded a lower score, which was supported by interview findings describing constraints related to instructional time, project scheduling, and the incomplete implementation of block scheduling. These variations indicate that the quality of the learning process is influenced not only by teachers' understanding of PjBL but also by organisational conditions that affect the continuity of project implementation. Project- Based Learning (PjBL) should be supported by strong partnerships with industry, engage students in solving authentic real world problems through project-based activities, and adopt an interdisciplinary approach that fosters essential competencies, including teamwork, problem solving, and adaptability (Naseer et al., 2025). The practical implication of these findings is the need for schools to maintain consistency in the application of PjBL syntax while strengthening the integration of projects with real world industry challenges, so that the learning process becomes more contextual and more closely aligned with industry-oriented learning objectives. Classroom observations further revealed that students actively collaborated in completing fashion projects and demonstrated increasing responsibility during practical activities. However, teachers also reported that some student groups required additional guidance when developing design ideas and completing projects within the allocated time. These findings indicate that, although the instructional process reflected the characteristics of Project-Based Learning, time management and project organisation remain important challenges for sustaining authentic vocational learning.

Within the CIPP framework, the Process component evaluates how well a program is implemented in practice (Stufflebeam, 2000). The present findings suggest that evaluating PjBL in vocational education should extend beyond assessing compliance with instructional procedures. Equally important is determining whether the learning process

creates authentic experiences that resemble professional practice, encourages active student participation, and supports meaningful collaboration. This interpretation is consistent with [Markula & Aksela, \(2022\)](#) who emphasise that the quality of project-based learning depends not only on the implementation of instructional stages but also on the learning experiences generated throughout the project. The findings also contribute to the application of the CIPP model in vocational education by demonstrating that student engagement, collaborative learning, and the authenticity of project experiences should be considered important indicators of Process evaluation. These dimensions provide a more comprehensive understanding of implementation quality than evaluating procedural compliance alone. From a practical perspective, the findings suggest that schools should maintain consistent implementation of the PjBL instructional stages while strengthening project management practices through improved scheduling, greater integration of authentic industry problems, and closer collaboration with industry practitioners. Such improvements would enhance the contextual nature of vocational learning and further strengthen the implementation of Project-Based Learning within the Fashion Design Programs.

D. Project-Based Learning Outcomes Demonstrate Achievement of Learning Objectives but Require Stronger Industry Relevance

The findings indicate that the Product component achieved a Very Good classification (82.5%), suggesting that students successfully completed project outputs consistent with the learning objectives of the Fashion Design Programs. Questionnaire responses, supported by documentation of students' fashion products and interviews with school representatives, showed that students were able to complete authentic project tasks covering the major stages of garment production, including fashion design, pattern making, sewing, and finishing. These findings indicate that Project-Based Learning provided opportunities for students to demonstrate vocational competencies through authentic project activities within the school learning environment. In the present study, the findings indicate that PjBL supported the achievement of the expected learning outcomes established by the participating schools. However, these results should be interpreted as evidence of program implementation rather than as proof that PjBL directly improves students' competencies or employability. The Product evaluation reflects the extent to which students completed curriculum-based project activities and produced learning outputs aligned with the objectives of vocational education.

Although all three schools achieved a Very Good classification, differences were observed in the quality of project outcomes. UPTD SMKN 4 Majene obtained the highest Product score, whereas UPTD SMKN 1 Majene and UPTD SMKN 7 Majene recorded relatively lower scores. Interviews and documentation suggest that these differences were associated with variations in practical resources, learning facilities, and opportunities for collaboration with industry. Interview and documentation data suggest that the higher Product score at UPTD SMKN 4 Majene was associated with broader access to vocational support programs and industry-related learning opportunities.

The findings showed that students successfully produced fashion products that met the schools' assessment criteria. However, several project outputs did not yet fully meet industrial expectations regarding production efficiency, design innovation, quality control, and industry-oriented standards. Observations indicated that project activities were primarily organised to achieve curriculum objectives, while the involvement of industry practitioners in project supervision and assessment remained limited. Consequently, the authenticity of students' production experiences varied across schools. These findings are consistent with previous studies emphasising that vocational learning outcomes should be evaluated not only through students' technical performance but also through their ability to demonstrate competencies in authentic industry-oriented contexts ([Sayekti et al., 2024](#); [Succi & Canovi, 2020](#)). However, the present study extends this perspective by showing that, within vocational education, the quality of learning products is closely associated with the availability of industry-oriented learning environments. Thus, achieving curriculum objectives alone is insufficient to ensure that project outputs fully reflect professional standards.

The study also contributes to the application of the CIPP model in vocational education. While Product evaluation is commonly interpreted as measuring learning outcomes, the present findings indicate that vocational education requires a broader perspective that considers the industry relevance of learning outputs. Accordingly, Product evaluation should encompass not only students' completion of project tasks but also the extent to which those products represent authentic professional practice and respond to industry-oriented expectations. From a practical perspective, the findings suggest that vocational schools should strengthen product assessment by incorporating industry standards throughout project implementation. This may include involving industry practitioners as external assessors, applying industry-based quality control procedures, and designing projects that respond to current market demands. Such initiatives would improve the authenticity of project outcomes while strengthening the alignment between vocational learning and the needs of the fashion industry.

Overall, this study extends the application of the CIPP evaluation model by demonstrating that effective evaluation of Project-Based Learning in vocational education should integrate institutional readiness, implementation quality, authentic learning experiences, and industry relevance as interconnected dimensions rather than independent evaluation components.

CONCLUSION

This study evaluated the implementation of Project-Based Learning (PjBL) in the Fashion Design Programs of three vocational high schools in Majene Regency using the Context, Input, Process, and Product (CIPP) evaluation model. Overall, the implementation of PjBL was classified as Very Good across all four evaluation components. The Context component achieved the highest score (98.3%), indicating strong alignment with school policies, the Merdeka Curriculum, and vocational education objectives. The Process (90.1%) and Input (88.4%) components also demonstrated favourable implementation, although limitations remained in practical resources, industry collaboration, and scheduling. The Product component obtained the lowest score (82.5%), indicating that while students successfully completed curriculum-based fashion projects, further efforts are needed to strengthen product quality and alignment with industry standards. These findings should be interpreted as evidence of the implementation of PjBL within the evaluated schools rather than evidence of its effectiveness or causal impact on student competencies.

This study has several limitations. The evaluation was conducted only in three vocational high schools offering Fashion Design Programs in Majene Regency and focused on the implementation of PjBL using the CIPP model. Therefore, the findings are not intended to be generalized to other vocational schools, study programs, or educational contexts without further investigation.

Based on the evaluation findings, vocational schools are encouraged to strengthen collaboration with business and industry partners, improve practice facilities that reflect current industrial standards, increase teachers' professional development through industry engagement, and involve industry practitioners more actively in project planning, mentoring, and assessment. These improvements are expected to support the continuous refinement of Project-Based Learning implementation in vocational education. Future research may expand the evaluation to other vocational programs, regions, or educational settings and incorporate additional stakeholder perspectives, such as industry partners and graduates, to provide a broader understanding of Project-Based Learning implementation in vocational education.

REFERENCES

- 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>
- Arfandi, A., Maryam Bidasari Syaib, S., & Nur, H. (2024). Eksplorasi Kesiapan Kerja Siswa Sekolah Menengah Kejuruan Berasrama. *Jurnal Ilmiah Edutic: Pendidikan Dan Informatika*, 11(1), 101–116. <https://doi.org/10.21107/edutic.v11i1.27362>
- Artantyo, B., Wicaksono, Moch. P., Dzikri, M. S. E. D., Rafi, M. N., Rizki, F. A., Jamihadi, A., & Habibi, M. W. (2026). Tren Penelitian Project- Based Learning Pendidikan SMK dan Implikasinya Terhadap Kesiapan Kerja Lulusan: Kajian Literatur. *Vocational: Jurnal Inovasi Pendidikan Kejuruan*, 6(3), 268–279. <https://doi.org/10.51878/vocational.v6i3.10923>
- Awaliyah, M. (2026). *Indonesian language teachers' perceptions of project-based learning (PjBL) implementation*. <https://journal.uny.ac.id/index.php>
- Billett, S. (2020). Perspectives on enhancing the standing of vocational education and the occupations it serves. In *Journal of Vocational Education and Training* (Vol. 72, Number 2, pp. 161–169). Routledge. <https://doi.org/10.1080/13636820.2020.1749483>
- Chen, C.-H., & Yang, Y.-C. (2019). Revisiting the effects of project-based learning on students' academic achievement: A meta-analysis investigating moderators. *Educational Research Review*, 26, 71–81. <https://doi.org/https://doi.org/10.1016/j.edurev.2018.11.001>
- Fitri, H. M., Khaerunnisa, P., Setiawan, E., & Wardoyo, S. (2025). Peningkatan Keterampilan Pra-Vokasional Siswa SMK melalui Project-Based Learning (PjBL): Studi Literatur. *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)*, 5(1), 307–318.
- Gessler, M., & Peters, S. (2020). Competency-based education and training in Namibia: Educational transfer as imitation. In *Comparative Vocational Education Research* (pp. 113–130). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-29924-8_7
-

- González, Á., Pino-Yancovic, M., & Correa, F. (2026). Project-based learning in Chilean vocational secondary schools: the role of collaboration and collective agency for successful implementation. *Journal of Vocational Education & Training*, 78(2), 227–243. <https://doi.org/10.1080/13636820.2025.2507586>
- Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. *International Journal of Educational Research*, 102. <https://doi.org/10.1016/j.ijer.2020.101586>
- Jajat Sudrajat, & Asep Budi Tauhid. (2026). Optimalisasi Project-Based Learning dalam Pendidikan Vokasi Berbasis Manajemen Pendidikan. *Jurnal Ilmiah Pendidikan Kebudayaan Dan Agama*, 4(2), 137–144. <https://doi.org/10.59024/jipa.v4i2.1706>
- Judijanto, L., Mayasari, N., Heristyo Endro Baruno, Y., & Rusdi, M. (2024). Analisis Pengaruh Kemitraan Sekolah-Industri dan Program Magang terhadap Keterampilan Kerja dan Kesiapan Karier Siswa SMK di Jawa Tengah. In *Jurnal Multidisiplin West Science* (Vol. 03, Number 03).
- Markula, A., & Aksela, M. (2022). The key characteristics of project-based learning: how teachers implement projects in K-12 science education. *Disciplinary and Interdisciplinary Science Education Research*, 4(1). <https://doi.org/10.1186/s43031-021-00042-x>
- Mulyatiningsih, E. (2012). Metodologi Penelitian Terapan. *Yogyakarta: Alfabeta*.
- Nafiatunnisa, A., & Wahyuningsih, E. (2025). Penerapan Model Project- Based Learning (PjBL) dalam Pembelajaran Praktik Tata Busana untuk Meningkatkan Kreatifitas Peserta Didik. *Jurnal Inovasi Strategi Dan Model Pembelajaran*, 5(4). <https://jurnalp4i.com/index.php/strategi>
- Naseer, F., Tariq, R., Alshahrani, H. M., Alruwais, N., & Al-Wesabi, F. N. (2025). Project- Based Learning framework integrating industry collaboration to enhance student future readiness in higher education. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-10385-4>
- Nasution, F., Pohan, A. E., Nugroho, T., Raffi, A., & Mery, S. (2022). Manajemen Implementasi Program Link and Match di SMK Negeri 1 Batam Management of Link and Match Program Implementation at Vocational High School 1 Batam. *Cahaya Pendidikan*, 8(2), 74–87.
- Ridwan Misbahudin, A., & Asmaul, R. (2022). Agus Ridwan Misbahudin dan Rina Asmaul : Upaya Meminimalkan Gap Antara Kompetensi Lulusan SMK dengan Tuntutan Dunia Industri. *Jurnal Teknik UNIPA*. <http://nwlink.com/~donclark/hrd/aho>
- Sadaruddin, Syamsuardi, Hasmawaty, & Usman. (2025). Planning, Implementation, and Evaluation of Project-Based Learning for Early Childhood in Indonesia: A Descriptive Qualitative Study. *JGA*, 10(2), 243–278. <https://doi.org/10.14421/jga.2025.102.05>
- Sayekti, Y. D., Yoto, Y., & Widiyanti, W. (2024). Analisis Keterampilan Kerja Alumni SMK Tata Busana pada Industri Fashion di Malang. *Ideguru: Jurnal Karya Ilmiah Guru*, 10(1), 700–705. <https://doi.org/10.51169/ideguru.v10i1.1661>
- Stufflebeam, D. L. (2000). The CIPP model for evaluation. In *Evaluation models: Viewpoints on educational and human services evaluation* (pp. 279–317). Springer.
- Succi, C., & Canovi, M. (2020). Soft skills to enhance graduate employability: comparing students and employers' perceptions. *Studies in Higher Education*, 45(9), 1834–1847. <https://doi.org/10.1080/03075079.2019.1585420>
- Suryani, H., & Irmayanti, I. (2025). *Development of a Project-Based Learning (PjBL) Module for Fashion Upcycling and Zero Waste in the D3 Fashion Design Program* (pp. 193–204). Atlantis Press.com. https://doi.org/10.2991/978-94-6463-908-7_16
- Wulandari, H. T., Susanto, H., Muhibbin, A., & Susilo, A. (2025). Evaluasi Pendidikan Vokasi di Era Revolusi Industri 4.0 dan Society 5.0. *Paedagogie*, 20(2), 231–240. <https://doi.org/10.31603/paedagogie.v20i2.15010>
- Zakaria, M. H., Zainuddin, N., & Aris, A. (2025). Project- Based Learning in Fashion Education : A Review of Pedagogical Approaches, Trends, and Future Direction. *International Journal of Education, Psychology and Counseling*, 10(59), 1139–1145. <https://doi.org/10.35631/ijepc.1059084>

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AUTHOR CONTRIBUTION STATEMENT

HY contributed to the conceptualization of the research, the development of the research design, data collection, data analysis and interpretation, the preparation of the initial draft of the manuscript, and the revision of the article. HS contributed to the development of the research concept, the validation of the methodology, the supervision of the research implementation, the interpretation of the results, and the critical review and refinement of the manuscript's content. AA contributed to the validation of the research design, academic supervision, interpretation of research results, refinement of the analysis and discussion, and the final review and revision of the manuscript. All authors have read, approved, and are responsible for the final published version of the manuscript

AI DISCLOSURE STATEMENT

The author used ChatGPT (OpenAI) during the drafting of this manuscript to help refine sentence structure, improve the quality of academic language, edit grammar, and refine the scientific writing style. After using this tool, the author has thoroughly reviewed, verified, and edited the entire content of the manuscript in accordance with the results of the research conducted. All research data, analyses, interpretations of results, conclusions, and scientific content in this article are the sole responsibility of the author.

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