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IMPLEMENTATION OF ENTREPRENEURSHIP EDUCATION DEVELOPING CREATIVE THINKING OF GRADE XI VOCATIONAL STUDENTS THROUGH CREATIVE PROJECTS

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ABSTRACT

Entrepreneurship education in Vocational High Schools (SMK) plays a strategic role in preparing students for work and entrepreneurship through the development of creative thinking skills. However, students' low creative thinking skills lead to a lack of innovation, passivity, and low competitiveness. This study aims to describe the implementation of entrepreneurship education in the Creative Project and Entrepreneurship subject in developing students' creative thinking skills. The study used a qualitative descriptive approach implemented at SMK Negeri 1 Jember. The research participants consisted of one Creative Project and Entrepreneurship subject teacher and four grade XI Industrial students. Data collection techniques were carried out through interviews, observation, and documentation. Data analysis was carried out through the stages of data reduction, data presentation, and conclusion drawing, while data validity was obtained through source triangulation. The results of the study indicate that the implementation of entrepreneurship education in the business opportunity material has been carried out according to the learning process standards which include the planning, implementation, and assessment stages. Students' creative thinking skills develop through four aspects, namely fluency, flexibility, originality, and elaboration. The conclusion of this study indicates that Creative Project and Entrepreneurship learning plays a positive role in developing creative thinking skills in vocational high school students. This research contribution provides conceptual and practical reinforcement for the development of entrepreneurship education as a means of enhancing creative thinking skills in the context of vocational education.

Keywords: creative project and entrepreneurship; creative thinking skills; entrepreneurship education; vocational students

ABSTRAK

Pendidikan kewirausahaan SMK memiliki peran strategis dalam menyiapkan peserta didik agar siap bekerja maupun berwirausaha melalui pengembangan kemampuan berpikir kreatif. Namun, rendahnya kemampuan berpikir kreatif siswa menyebabkan kurangnya inovasi, sikap pasif, serta rendahnya daya saing. Penelitian ini bertujuan untuk mendeskripsikan implementasi pendidikan kewirausahaan pada mata pelajaran Projek Kreatif dan Kewirausahaan dalam membentuk kemampuan berpikir kreatif siswa. Penelitian menggunakan pendekatan deskriptif kualitatif yang dilaksanakan di SMK Negeri 1 Jember. Partisipan penelitian terdiri atas satu guru mata pelajaran Projek Kreatif dan Kewirausahaan serta empat siswa kelas XI Industri. Teknik pengumpulan data dilakukan melalui wawancara, observasi, dan dokumentasi. Analisis data dilakukan melalui tahapan reduksi data, penyajian data, dan penarikan kesimpulan, sedangkan keabsahan data diperoleh melalui triangulasi sumber. Hasil penelitian menunjukkan bahwa implementasi pendidikan kewirausahaan pada materi peluang usaha telah dilaksanakan sesuai standar proses pembelajaran yang meliputi tahap perencanaan, pelaksanaan, dan penilaian. Kemampuan berpikir kreatif siswa berkembang melalui empat aspek, yaitu kelancaran, keluwesan, orisinalitas, dan elaborasi. Simpulan penelitian ini menunjukkan bahwa pembelajaran Projek Kreatif dan Kewirausahaan berperan positif dalam membentuk kemampuan berpikir kreatif siswa SMK. Kontribusi penelitian ini memberikan penguatan secara konseptual dan praktis terhadap pengembangan pendidikan kewirausahaan sebagai sarana peningkatan kemampuan berpikir kreatif dalam konteks pendidikan vokasi.

Kata Kunci: *kemampuan berpikir kreatif; pendidikan kewirausahaan; projek kreatif dan kewirausahaan*

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INTRODUCTION

Entrepreneurship education is a crucial component of the Vocational High School (SMK) education system. This aligns with the goal of SMKs, which is to produce graduates who are not only work-ready but also capable of creating jobs independently (Wahjusaputri, 2023). Facing economic dynamics and intense market competition, SMK graduates are required not only to master technical skills but also to possess creative and innovative thinking skills in responding to the challenges of the business world. Entrepreneurship education serves as a means to foster an entrepreneurial mindset through practice-based learning, which promotes independence, creativity, risk-taking, and adaptability to change.

Recent studies emphasize that entrepreneurship education has become increasingly urgent in vocational high schools due to rapid economic changes, digital transformation, and intense labor market competition. Research consistently shows that vocational graduates are no longer expected to rely solely on technical skills; instead, they must demonstrate creative thinking, innovation, adaptability, and entrepreneurial problem-solving abilities to remain competitive in the workforces (Purnamasari et al., 2024; Febnesia et al., 2023; Putra et al., 2025). Consequently, entrepreneurship education is viewed as a strategic educational instrument to prepare students not only as job seekers but also as job creators.

Empirical evidence from recent journals (2021–2025) indicates that Project-Based Learning (PjBL) is one of the most effective pedagogical approaches for entrepreneurship education, as it allows students to engage in real-world projects that simulate authentic business processes. Studies conducted in vocational education contexts demonstrate that PjBL enhances students' creative thinking skills by encouraging idea generation, experimentation, collaboration, and reflection (Suyono et al., 2025; Herlambang et al., 2024; Febrianti et al., 2023; Hariyanto, 2023). However, these studies largely focus on measuring outcomes quantitatively and provide limited insight into how creative thinking develops throughout the learning process.

Moreover, recent literature highlights that creative thinking is a multidimensional construct consisting of fluency, flexibility, originality, and elaboration. While several studies report improvements in fluency and flexibility through entrepreneurship-based projects, fewer studies examine originality and elaboration in depth, particularly in vocational settings (Hersy et al., 2023). This gap suggests a lack of comprehensive understanding regarding how entrepreneurship education nurtures all dimensions of creative thinking through structured learning stages.

Another critical urgency lies in the limited number of studies that specifically investigate the implementation of entrepreneurship education within formal curriculum frameworks, such as the Creative Project and Entrepreneurship subject mandated by national education policies. Existing research often overlooks how planning, implementation, and assessment stages—aligned with official process standards contribute to students' creative thinking development in authentic classroom settings. Furthermore, studies focusing on Digital Business or industrial vocational programs remain scarce, despite the growing relevance of these fields in the digital economy.

Therefore, this study is urgent because it addresses these gaps by providing a contextual, process-oriented analysis of entrepreneurship education implementation through creative projects among Grade XI vocational students. By examining creative thinking development across all four indicators within real entrepreneurial practices, this research contributes essential insights for improving entrepreneurship learning design, strengthening vocational education relevance, and supporting policy-driven curriculum implementation.

As a form of policy implementation, the Creative Projects and Entrepreneurship subject is a compulsory subject taught in SMKs to instill entrepreneurial values (Kepmendikbudristekdikti, 2022). Through this learning, students not only learn entrepreneurial theory but also train to develop

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and implement creative ideas in real-world projects, thereby strengthening entrepreneurial competencies practically and contextually. This learning utilizes the Project-Based Learning (PjBL) approach, which emphasizes experiential learning, where students learn directly through activities of designing, implementing, and evaluating business projects.

The implementation of the Creative and Entrepreneurship Project learning refers to the Minister of Education, Culture, Research, and Technology Regulation Number 16 of 2022 concerning Learning Process Standards, which consists of three stages: planning, implementation, and assessment (Kemendikbud, 2022). In the planning stage, teachers develop teaching modules containing learning objectives, learning activities, and assessments. In the implementation stage, teachers act as facilitators to create an interactive and collaborative learning environment. Meanwhile, the assessment stage is comprehensive, encompassing evaluation of student work and reflection on the learning process as a basis for improvement. In practice, this learning provides students with space to explore ideas, express their creativity, and develop entrepreneurial potential.

One of the important competencies developed in entrepreneurship learning is creative thinking skills (Sucipto, 2025). This ability enables students to generate new ideas, solve problems, and create products or services that have high sales value and competitiveness. Guilford (1967) stated that creative thinking skills consist of four aspects: fluency, flexibility, originality, and elaboration. These four indicators are used to measure the extent to which students can actualize ideas in the entrepreneurial projects they work on. A supportive learning environment and the role of teachers greatly influence the development of these skills (Rahmaniah, 2023). Well-honed creative thinking skills will increase students' readiness to face the challenges and dynamics of the ever-evolving world of work and business. Conversely, the lack of development of creative thinking skills in learning can hinder students' potential, causing them to become passive, less innovative, and less competitive.

At SMK Negeri 1 Jember, specifically in the 11th - grade Industrial Digital Business program, the implementation of Creative Projects and Entrepreneurship learning, based on Project-Based Learning, has been introduced through direct practice, such as a mini bazaar. In this activity, students are tasked with designing and marketing products resulting from their business ideas. This activity encourages students to identify business opportunities in their surroundings, design effective business strategies, and develop innovative and marketable products. Research by Sari et al. (2019) demonstrates that the PjBL model is effective in enhancing students' creative thinking skills through project-based learning activities. However, this research remains general and has not specifically examined the implementation of PjBL in the context of entrepreneurship education within the industrial class of the Digital Business major. In addition, the aspects of creative thinking abilities studied only include fluent thinking, flexible thinking, and original thinking, without paying attention to the aspect of idea detail (elaboration) as an important part of the ability to develop ideas in detail and concretely.

This research has novelty in several aspects. First, it focuses on the implementation of project-based learning in entrepreneurship education within the Creative Project and Entrepreneurship subject in the 11th grade of the Digital Business expertise program of SMK Negeri 1 Jember. Second, this research employs a comprehensive approach to assessing students' creative thinking skills, based on four indicators from Guilford (1967), namely fluency, flexibility, originality, and elaboration. Third, the contextual approach in direct observation of students' entrepreneurial practice activities provides a real picture of the effectiveness of project-based learning in developing creativity. The purpose of this research is to describe the implementation of entrepreneurship education in the Creative Project and Entrepreneurship subject, focusing on shaping students'

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creative thinking skills through the material of business opportunities, for the 11th – grade students at SMK Negeri 1 Jember.

RESEARCH METHODS

This study employs a qualitative descriptive approach to obtain an in-depth understanding of the implementation of entrepreneurship education in shaping students' creative thinking skills within the Creative Project and Entrepreneurship subject. The research location was determined using a purposive area technique, with SMK Negeri 1 Jember selected as the research site due to its implementation of the Creative Project and Entrepreneurship subject in accordance with the Merdeka Curriculum and its emphasis on project-based entrepreneurial learning.

The selection of research participants was conducted using purposive sampling based on specific considerations. Teachers were selected because they are directly involved in planning, implementing, and assessing entrepreneurship learning activities. Meanwhile, class XI Industrial students were chosen because they had actively participated in the Creative Project and Entrepreneurship subject and were considered capable of providing relevant information related to the development of creative thinking skills. These considerations ensured that the selected participants possessed sufficient experience and understanding to provide rich and meaningful data aligned with the research objectives.

Data collection techniques included interviews, observations, and document review. Interviews were conducted to obtain in-depth information regarding teachers' perspectives on the implementation of entrepreneurship education, learning strategies, and assessment of students' creative thinking skills, as well as students' experiences during the learning process. Observations were used to collect data on the actual implementation of learning activities in the classroom, including student engagement, creativity, and interaction during project-based learning. Document review was carried out to obtain supporting data such as lesson plans, teaching materials, assessment instruments, and student project outputs related to entrepreneurship learning.

Data analysis employed the Miles and Huberman model, which consists of three stages: data reduction, data display, and drawing conclusions or verification. The validity of the data was ensured through source triangulation by comparing information obtained from interviews, observations, and documents to ensure consistency and credibility of the research findings.

RESULTS AND DISCUSSION

Creative Project and Entrepreneurship Learning at SMK Negeri 1 Jember is implemented by the Minister of Education and Culture Regulation Number 16 of 2022 concerning Process Standards, which encompasses the planning, implementation, and assessment stages of learning. Therefore, it can develop students' thinking skills through four aspects: fluency, flexibility, originality, and elaboration.

Learning Planning

Learning planning for the Creative Project and Entrepreneurship subject, focusing on business opportunities in class XI Industry, is carried out by teachers through the compilation of teaching modules that include learning objectives, activities, and assessments. Teachers apply a relevant Project-Based Learning (PjBL) model to support the development of students' creative thinking skills. In this learning experience, students are assigned to analyze business opportunities at school and design product ideas based on the results of the analysis. In line with Setianingrum's opinion (2022), the Project-Based Learning model encourages students to identify business opportunities based on their respective expertise competencies and produce creative and innovative

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product ideas. There are six PjBL stages implemented in two meetings with a time allocation of 5 JP (5 X 40 minutes) each. In the first meeting, three initial stages are carried out, namely: (1) basic questions, (2) designing product planning, and (3) preparing a schedule. In the second meeting, the teacher continues the following three stages, namely (4) monitoring the activity and development of the project, (5) testing the results, and (6) evaluating the learning experience.

The teacher develops learning objectives that include students' understanding of business opportunities for goods/services, analysis of factors contributing to business success and failure, and the creation of creative and innovative business opportunities. The material taught is taken from a combination of two books: the Creative Project and Entrepreneurship book and the Creative Product and Entrepreneurship Module book. The material taught includes the definition of business opportunities, business opportunity analysis, business opportunity preparation, the purpose of business opportunity analysis, factors causing entrepreneurial success and failure, sources of business opportunities, and approaches to business opportunity analysis. The design of student assignments and teacher assessments is presented in the Table 1.

Table 1. Assignment and Assessment Plan for Meetings 1

Meeting 1			
Number	Stages of activity	Teacher activities	Student activities
1.	Group division	The teacher divides the students into six groups evenly, placing at least one active student or one with good abilities in each group.	Students form groups by joining with students whom the teacher has appointed as group coordinators.
2.	Observation of the school environment	The teacher gives students assignments to analyze business opportunities based on the conditions and needs of the school environment.	Students observe the school environment to identify needs or problems that can be turned into business opportunities.
3.	Product/ Business Planning	- The teacher guides the discussion process in compiling product ideas. - Conducting process assessments in the form of: ➢ Student involvement in developing product plans. ➢ Evaluation of the resulting product ideas.	- Students prepare product plans based on the results of environmental analysis. - Conduct product idea discussions with groups and teachers.

Table 2. Assignment and Assessment Plan for Meetings 2

Meeting 2			
Number	Stages of activity	Teacher activities	Student activities
4.	Mini Bazaar Practice	- The teacher designs a mini bazaar practical activity. - The teacher guides the production and sales process. - The teacher assesses the process:	- Students carry out mini-bazaar practice. - Students prepare the necessary tools and materials and produce product

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	➢ Group collaboration in product creation. - Results evaluation: ➢ Product taste. ➢ Sales results obtained	according to the planning results. - Selling products to make a profit.

This Table 2. illustrates that entrepreneurship education is implemented through a project-based learning approach divided into two sessions. In Session 1, the focus of learning is on idea generation and business planning. The activity begins with heterogeneous group division to encourage collaboration and complementarity of skills among students. Next, students observe the school environment to identify business potential and opportunities based on real needs around them. The results of these observations are then used as the basis for developing product plans or business plans, accompanied by a discussion process and initial assessment by the teacher of student involvement and the quality of the product ideas produced.

In Meeting 2, learning focuses on the implementation and evaluation of the business through a mini bazaar practice. The teacher acts as a facilitator who guides the production and sales process and assesses group cooperation and creativity in producing products. Meanwhile, students apply the plans they have developed by producing and selling products directly. The evaluation of learning outcomes not only assesses the taste of the product and sales results but also emphasizes the students' real experiences in the entrepreneurial process.

Implementation of Learning

The Creative Project and Entrepreneurship subject on business opportunities in class XI Industry was implemented according to the planning in the teaching module. In the first meeting, the teacher opened the lesson with a greeting, a prayer, and a check of student attendance. The core activities consisted of three stages: basic questions, designing a project plan, and preparing a schedule. In the basic questions stage, the teacher asked questions to encourage students to think creatively in identifying business opportunities at school and finding solutions to problems. Students demonstrated fluency by providing various answers in response to questions posed by the teacher. This aligns with research by Tohiroh et al. (2020), which stated that the PjBL model trains students in searching for data through systematic problem-solving, thereby encouraging the development of students' fluency aspects in creative thinking.

Next, the teacher delivered material covering the definition of business opportunities, business opportunity analysis, business opportunity preparation, the objectives of business opportunity analysis, factors contributing to entrepreneurial success and failure, and approaches to analyzing business opportunities. The teacher evenly divided groups of six students, placing active students in each group, while the students themselves selected the remaining members. However, one group intentionally included less active students to encourage them to collaborate and participate in project activities.

During the product design and planning stage, students analyzed business opportunities at school and discussed the design of the product they were to created. This process encouraged students to explore, thus generating new and different ideas. The teacher gave students freedom and did not impose any limitations on product selection, thus encouraging them to be more creative in developing product ideas. In line with Setianingrum (2022), learning that is not confined to a classroom provides students with the freedom to engage in activities freely, thus generating new environments and ideas.

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The teacher guided the discussion and assessed each group's product designs. The agreed-upon products would be produced and sold in a mini-bazaar workshop. During the scheduling stage, the teacher and students agreed that product planning should be completed in this meeting. At the same time, the implementation of the mini-bazaar project would take place in the next meeting. The lesson concluded with students summarizing the learning they had received. Furthermore, the teacher provided information about the mini-bazaar workshop to be conducted in the next meeting.

In the second meeting, the teacher continued with the three Project-Based Learning (PjBL) syntax: monitoring the project's activity and progress, testing the results, and evaluating the learning experience. The activity began with the teacher greeting and checking student attendance. Afterward, the teacher provided a briefing on the technical aspects of the mini-bazaar workshop. Students began preparing tools and materials, as well as the location for making and selling the products. The production process was carried out independently by each group, while the teacher circulated to observe and assess student activity, collaboration, and any challenges encountered during the activity.

The finished products were sold to the entire school community. Promotion was conducted beforehand through social media. During this activity, teachers tested the results by purchasing the students' products and evaluating their taste. Students also compiled a report that included calculations of capital, raw materials, product quantity, selling price, and sales revenue. This report served as the basis for the teacher's assessment of the results, based on whether a profit or loss was realized.

During the evaluation phase of the learning experience, teachers should guide students in presenting project results, providing feedback and reflection, and drawing conclusions. Presenting sales reports is crucial for teachers to understand the profits and losses of each group. However, time constraints prevented this phase from being implemented as scheduled, with only groups experiencing losses being conducted at the next meeting. Consequently, students missed the opportunity to fully understand the learning process and outcomes. This finding aligns with research by Sari et al. (2019), which revealed that time constraints frequently hinder the preparation and presentation of project reports, leading to suboptimal student understanding of the process and outcomes. The Decree of the Minister of Education, Culture, Research, Technology, and Higher Education (Kepmendikbudristekdikti, 2022) also emphasizes the importance of evaluation in determining learning effectiveness and serving as a basis for designing improvements and developing student competencies. Therefore, effective time management and planning are essential for the optimal implementation of all learning phases.

Learning Assessment

Learning assessment aims to determine students' level of achievement in understanding the material and developing creative thinking skills, particularly in the context of business planning and implementation. The assessment refers to the assessment rubric in the teaching module, which includes assessing the process and results of the business projects undertaken by students. In the first meeting, the teacher assesses the learning process, particularly at the project planning and design stage. This assessment is conducted by observing students' engagement in group discussions and product planning, including their ability to express creative ideas related to the product to be developed.

In the second meeting, process assessment is conducted by monitoring the project's activity and progress. The teacher assesses students' collaboration in the production process and their responsibility for the tools, materials, and facilities used. Furthermore, learning outcomes are assessed at the testing stage, namely by assessing the taste of the resulting product. In the project

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experience evaluation stage, the teacher assesses the financial reports prepared by students, reviewing the profits or losses generated from the mini bazaar practice activity. The teacher also conducts a reflection with groups that did not achieve the expected results as part of the learning evaluation, while also determining corrective measures for the next meeting.

Thus, the assessment conducted by the teacher includes both process and outcome assessments. Process assessments are conducted when students design ideas and create products during a mini-bazaar practice. Meanwhile, outcome assessments are conducted on the resulting products and financial reports, reviewing the resulting profits and losses. This aligns with research by Zulaidah, R., & Widodo (2020), which states that process assessments aim to measure students' abilities during the production process, while outcome assessments are conducted to determine whether the resulting product meets the required criteria or fails to do so.

Creative Thinking Skills

Creative thinking is an individual's ability to generate new and different ideas that are useful for solving problems, developing products, or creating business opportunities. According to Guilford (1967), creative thinking encompasses four key aspects: fluency, flexibility, originality, and elaboration.

a. Fluency

Fluency of thought refers to a student's ability to generate numerous ideas in a short period. This can be seen in their ability to provide a variety of answers, express their ideas fluently, and be sensitive to mistakes. This aspect was evident in the first meeting, particularly when students were able to provide multiple answers to the teacher's fundamental questions. Meanwhile, in the project planning stage, students discussed ideas with group members and generated two to three product ideas. They then held discussions with the teacher to select the best idea, which was implemented in a mini-bazaar.

Each group generated a different product idea. Group 1 had three ideas: tahu huha, jigor, and purple sweet potato balls. They chose tahu huha because it was considered unique and not yet available in the school environment. Group 2 also developed three ideas: tahu kocek, sempol, and sausage noodles. They chose tahu kocek. Group 3 proposed two ideas: meatballs with firecrackers and grilled meatballs, and decided to make meatballs with firecrackers. Group 4 had three ideas: tela-tela, sempol, and pempek. They chose tela-tela. Group 5 proposed cimol bojot, batagor, and gabin fla susu. They chose to make cimol bojot. Meanwhile, group 6 proposed two ideas: es lumpur (moss ice) and magic water, and chose es lumpur (moss ice).

On average, groups generated two to three product ideas during the business planning stage. Groups 1, 2, 4, and 5 demonstrated the best fluency, successfully developing three product ideas. This demonstrates that students can find various ideas or answers and consider more than one option when solving a problem. This aligns with the opinion of Rahmawati et al. (2024), who stated that the fluency aspect is evident in students' ability to generate numerous alternatives, ideas, and answer questions quickly. Meanwhile, groups 3 and 6 only generated two product ideas. The small number of ideas generated was due to a lack of student involvement in the discussion, which hindered students' fluency. Therefore, discussion strategies are needed that involve open-ended questions to encourage student participation, provide constructive feedback, and the role of teachers in creating a supportive learning atmosphere (Humairoh, 2022).

b. Flexibility

Flexibility of thought refers to a student's ability to propose various solutions or approaches to a problem by applying different concepts and spontaneously adapting their thinking. This aspect was

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evident in the second meeting when students created products for a mini-bazaar practice. Each group faced obstacles that hampered the production process, but they were able to overcome them.

Group 1, making tahu huha (tofu), encountered difficulties connecting the gas to the stove. The stove wouldn't light for a long time, slowing down the cooking process. After taking turns trying, they finally got the stove lit. Group 2, selling tahu kocek (tofu pocket), encountered difficulties finding tofu. They searched all morning and found it at Tanjung Market. Group 3, making meatballs (meat balls) with mercon (spicy meatballs), encountered difficulties mixing the seasoning as they used their creation. They tried several times until they found the right recipe. Group 4, making tela-tela (fried sweet potato fritters), encountered difficulties because they used too little cooking oil, resulting in a soft texture. They quickly added more cooking oil to the pan, resulting in a crispier texture. Group 5, making cimol bojot (spicy meatballs), encountered difficulties frying, as the cimol exploded when added to the hot oil. So, they tried another method: soaking the cimol mixture in cold oil and then frying it over low heat. Meanwhile, group 6, which was making es lumpur (moss ice), encountered a shortage of milk, necessitating an additional purchase and an initial capital invesment.

Overall, group 5 demonstrated the greatest flexibility, finding a different technique for frying cimol to prevent it from exploding. This success reflects the students' ability to adapt to unexpected situations and find solutions to problems encountered during the project. Through this experience, students not only learned from their mistakes but also trained themselves to think adaptively and seek alternative solutions. This aligns with Meyanti et al.'s (2023) argument that real-world experiences provide individuals with the opportunity to learn from failure, face challenges head-on, and develop a deeper understanding of the business world.

c. Originality

Originality refers to students' ability to generate new, original ideas. This ability is reflected in their ability to generate new ideas that others haven't thought of, question old methods and then devise new ones, and think differently from others. This aspect was evident during the first meeting, particularly when designing the product plan, and during the second meeting when students created products for the mini-bazaar.

In designing and creating products for the mini bazaar, group 1 came up with a unique idea, namely "tahu huha". This product differs from the usual stuffed tofu, as it contains pieces of meatballs and sausages seasoned with spicy ingredients. The name "tahu huha" was chosen to describe the spicy sensation. This product is still rarely found, especially at SMK Negeri 1 Jember. Although inspired by social media, students managed to innovate it into an interesting product. Group 2 created "tahu kocek" with varying levels of spiciness and the addition of cabbage. However, this product does not exhibit uniqueness because it is already widely available in the market. Group 3 created "pentol mercon," a unique spice mix that combines cayenne pepper and local chilies, resulting in a distinctive taste. Group 4 created "tela-tela" with sprinkled seasoning; however, this product lacks uniqueness because the seasoning is not varied. Group 5 created "cimol bojot"; however, this product lacks uniqueness due to the absence of innovation in its ingredients and presentation. Group 6 created "es lumut" from shaved grass jelly and jelly; however, this product lacks uniqueness as it is already widely available in the market.

Most 11th-grade Industrial students are unable to generate unique product ideas. They tend to choose common ideas for fear of loss. Fear of failure and lack of self-confidence leads students to imitate existing ideas without further exploration. In line with Juliansyah's (2024) opinion, fear of failure and low self-confidence can hinder students' creativity in exploring new ideas, thus limiting their ability to think originally. Therefore, a supportive and punishment-free learning environment is needed to encourage students to think creatively. However, group 1 succeeded in creating a fairly

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innovative product, namely "tahu huha". The uniqueness of this product lies in the filling, which differs from the usual stuffed tofu, consisting of pieces of sausage and meatballs seasoned with spicy flavors. Although the idea is not entirely new, their creativity in modifying the filling has successfully created its appeal. This learning enables students to think outside the box, seek innovative solutions, and create added value, thereby establishing a competitive advantage and fostering business growth (Meyanti et al., 2023).

d. Elaboration

Elaboration is a student's ability to elaborate on ideas. This ability is evident in their efforts to find deeper meaning in problem solutions through systematic steps, thus strengthening their ideas. This aspect was evident in the first meeting, specifically during the product planning stage. Students were asked to present ideas resulting from group discussions. However, most students were unable to explain their ideas in detail, requiring the teacher to ask follow-up questions to clarify the product plan.

In the second meeting, specifically during the product sales stage, students tended to be less detailed in explaining their products. When asked by consumers, they only mentioned the product name, while providing price information only when specifically asked. This indicates that almost all groups lacked elaboration skills. Therefore, the teacher's role is crucial in eliciting further information through questions that encourage students to explain their ideas and products clearly and in detail. This finding aligns with research by Qomariyah et al. (2021), which suggests that students struggle to elaborate ideas in detail. Therefore, teacher guidance is necessary so that students cannot only express their opinions but also convey their ideas clearly and systematically.

This study provides both theoretical and practical contributions to the field of entrepreneurship education, particularly within the context of vocational education at SMK. From a theoretical perspective, this research strengthens the empirical evidence that the implementation of Creative Project and Entrepreneurship learning aligned with the Regulation of the Minister of Education and Culture Number 16 of 2022 concerning Process Standards can effectively foster students' creative thinking skills. By explicitly mapping the learning process—planning, implementation, and assessment—onto the four dimensions of creative thinking (fluency, flexibility, originality, and elaboration), this study enriches the conceptual understanding of how entrepreneurship education functions as a vehicle for creative thinking development in vocational settings.

Furthermore, this research contributes to the literature by providing an in-depth qualitative description of the Project-Based Learning (PjBL) model applied in the Creative Project and Entrepreneurship subject. Unlike previous studies that predominantly focus on measuring outcomes quantitatively, this study highlights the learning process, student experiences, and contextual challenges encountered during project implementation, particularly in mini-bazaar activities. This process-oriented perspective offers a more comprehensive understanding of how creative thinking skills are formed and constrained in real classroom practices.

This process-oriented contribution as same as Weng et al., (2022) demonstrate that creative and entrepreneurial competencies are constructed through iterative engagement, reflection, and real-world problem solving rather than as direct instructional outcomes. Similarly, Saptono et al., (2021) show that experiential entrepreneurship activities significantly influence students' entrepreneurial self-efficacy, underscoring the pedagogical value of authentic projects such as mini-bazaar activities. Moreover, reviews of Scopus-indexed literature on PjBL in entrepreneurship education indicate that most studies prioritize outcome measurement, while processual dynamics and contextual constraints remain underexplored. By focusing on students' experiences, instructional processes, and implementation challenges, this study addresses this gap and provides

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deeper insight into how creative thinking skills are developed and constrained in real classroom practice.

From a practical standpoint, the findings have significant implications for teachers, schools, and policymakers. The study demonstrates that project-based entrepreneurship learning encourages students to generate multiple ideas (fluency), adapt to real-world challenges (flexibility), create innovative product variations (originality), and attempt to develop business plans and product explanations (elaboration). However, the findings also reveal limitations, particularly in the aspects of originality and elaboration, which were influenced by students' fear of failure, limited confidence, and insufficient time for reflection and evaluation. These insights highlight the need for teachers to create a supportive learning environment, provide structured guidance, and allocate sufficient time for reflection to maximize learning outcomes.

The impact of this study lies in its potential to inform the improvement of entrepreneurship learning design in SMKs. By emphasizing experiential learning through real business practices, such as mini-bazaar activities, this research supports the development of students who are not only work-ready but also capable of entrepreneurial problem-solving and creative decision-making. Ultimately, this study contributes to the advancement of entrepreneurship education as a strategic approach to strengthening creative thinking skills and entrepreneurial competencies among vocational high school students.

CONCLUSION AND SUGGESTIONS

The implementation of entrepreneurship education in the Creative Project and Entrepreneurship subject was carried out by the learning process standards, including planning, implementation, and assessment. The learning implementation was carried out according to the six stages of the Project-Based Learning (PjBL) model, but only five of the stages were implemented due to time constraints, so the evaluation stage of the learning experience could not be carried out. The implementation of the five PjBL syntaxes successfully instilled entrepreneurial values such as independence, courage to take risks, cooperation, and responsibility. These values became provisions for students to face the world of work and create business opportunities independently. However, the failure to implement the evaluation stage resulted in less than optimal student reflection on the learning process and results, and did not receive feedback from teachers, thereby reducing the effectiveness of learning. Therefore, good time management and planning are essential for all stages of learning to be implemented optimally.

Students' creative thinking skills were demonstrated through four aspects: fluency, flexibility, originality, and elaboration. In terms of fluency, four groups were able to generate three product ideas. In terms of flexibility, group 5 demonstrated the greatest flexibility in problem-solving with diverse approaches. In terms of originality, group 1 demonstrated a high level of originality, producing a unique product. However, in terms of elaboration, all groups still had difficulty explaining their ideas in detail, necessitating the teacher's role in encouraging students to develop their ideas more deeply.

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REFERENCE

Febnesia, H., Iman, A., & Supriyatna, D. (2023). The Influence Of Project Based Learning (Pjbl) For Students Creative Thinking Ability Of Twelfth Grade At Yabhinka Welding Techniques Vocational High School In Cilegon. *Journal Neosantara Hybrid Learning*, *1*(2), 173–187. https://doi.org/10.55849/jnhl.v1i2.244

Febrianti, R., A, Y., Putra, R. P., & Phongdala, P. (2023). Implementation of project-based learning for improve students' critical thinking skills in creative product and entrepreneurship subjects. *Jurnal Pendidikan Teknologi Kejuruan*, *6*(4), 240–247. https://doi.org/10.24036/jptk.v6i4.34523

Guilford, J. P. (1967). *The Nature of Human Intelligence*. New York St.Louis San Francisco Toronto London Sydney. https://gwern.net/doc/iq/1967-guilford-thenatureofhumanintelligence.pdf

Hariyanto, V. L. (2023). *Project-Based Learning at Vocational Schools : A Case Study of the Implementation of Entrepreneurship Learning Model*. *16*(3), 283–306. https://e-iji.net/ats/index.php/pub/article/view/81

Herlambang, A. D., Aditya Rachmadi, M. A., & Prima Zulvarina. (2024). Vocational High School Students' Creative Thinking Skills Comparison Between Project-Based Learning and Problem-Based Learning Instructional Process in Software Development Subjects. *Journal of Information Technology and Computer Science*, *9*(3), 236–249. https://doi.org/10.25126/jitecs.93490

Hersy, V., Saputri, L., & Syauqi, K. (2023). *Implementation of project- based learning to explore students 'creativity, innovation, and creative thinking ability*. *8*(1), 1–11. https://doi.org/10.21831/dinamika.v8i1.60351

Humairoh, F. (2022). Mengoptimalkan Pembelajaran Melalui Diskusi Kelompok : Strategi dan Manfaatnya. *Pendidikan Bahasa dan Sastra Indonesia, Universitas Riau*, 3. https://ideas.repec.org/p/osf/osfxxx/gax5n.html

Juliansyah, A. (2024). *Pengantar Bisnis Dasar-Dasar Kewirausahaan*. Penerbit Samudra Biru https://books.google.co.id/books/about/BUKU_AJAR_PENGANTAR_BISNIS_Dasar_Dasar_K.html?id=KW0nEQAAQBAJ&redir_esc=y

Kemendikbud. (2022). Peraturan Menteri Pendidikan Kebudayaan Riset dan Teknologi Tentang Standar Proses Pada Pendidikan Usia Dini, Jenjang Pendidikan Dasar dan Jenjang Pendidikan Menengah. *Peraturan Menteri Pendidikan Dan Kebudayaan Republik Indonesia Nomor 16 Tahun 2022 Tentang Standar Proses Pendidikan Dasar Dan Menengah*. https://peraturan.bpk.go.id/Details/224238/permendikbudriset-no-16-tahun-2022

Kepmendikbudristekdikti. (2022). Pedoman penerapan kurikulum dalam rangka pemulihan pembelajaran. *Menpendikbudristek*, 1–112.

Meyanti, I. G. A. S., Sutajaya, I. M., & Sudiarta, I. G. P. (2023). *Minat Dan Kompetensi Wirausaha*. Bisma: *Jurnal Manajemen, 9*(3), 292–299. https://doi.org/10.23887/bjm.v9i3.63536

Purnamasari, A. Y., Rustaman, N., Purwianingsih, W., & Lestari, W. (2024). Implementation of project based learning containing esd to improve students' creative thinking skills. *JPPI (Jurnal Penelitian Pendidikan Indonesia)*, *10*(4), 110–117. https://doi.org/10.29210/020244321

Putra, R. A., Rahmawati, Y., & Halim, A. (2025). *Project-Based Learning in the Progress of Deep*. *14*(1), 474–484. https://doi.org/10.36526/sosioedukasi.v14i1.5428

Qomariyah, D. N., Subekti, H., Surabaya, U. N., & Kreatif, B. (2021). Analisis Kemampuan Berpikir

Kreatif

Studi Eksplorasi Siswa Di Smpn 62 Surabaya. *Pensa E-Jurnal : Pendidikan Sains*, *9*(2), 242–246. https://doi.org/10.26740/pensa.v9i2.38250

Rahmaniah, et al. (2023). *Berpikir Kritis dan Kreatif. Teori dan Implementasi Praktis dalam Pembelajaran.* Publica Indonesia Utama. https://books.google.co.id/books?id=klvoEAAAQBAJ&printsec=frontcover#v=onepage&q&f=false

Rahmawati, R., Sujaya, K., & Yusup, I. (2024). *Transformasi Pembelajaran Kewirausahaan : Mengasah Kreativitas Siswa melalui Project Based Learning*. *4*(3). https://doi.org/10.14421/njpi.2024.v4i3-3

Saptono, A., Wibowo, A., Widyastuti, U., Narmaditya, B. S., & Yanto, H. (2021). Entrepreneurial self-efficacy among elementary students: the role of entrepreneurship education. *Heliyon*, *7*(9), e07995. https://doi.org/10.1016/j.heliyon.2021.e07995

Sari, S. P., Manzilatusifa, U., & Handoko, S. (2019). Penerapan Model Project Based Learning (PjBL) untuk Meningkatkan Kemampuan Berfikir Kreatif Peserta Didik. *Jurnal Pendidikan dan Pembelajaran Ekonomi Akuntansi*, *5*(2), 119–131. https://jurnal.fkip.unla.ac.id/index.php/jp2ea/article/view/329/309

Setianingrum. (2022). Penerapan Model Project Based Learning Pada Pelajaran Produk Kreatif dan Kewirausahaan Sebagai Upaya Meningkatkan Minat Berwirausaha Peserta Didik. *SALIMIYA: Jurnal Studi Ilmu Keagamaan Islam*, *3*(4), 2721–7078. https://doi.org/10.58401/salimiya.v3i4.855

Sucipto, S. (2025). Membangun jiwa kewirausahaan siswa sejak dini: Pentingnya pendidikan kewirausahaan dalam membentuk karakter siswa. *Jurnal Pendidikan Ekonomi (JURKAMI)*, *10*(1). https://doi.org/10.31932/jpe.v10i1.3690

Suyono, S., Tukiran, T., & Yuliaturosida, E. (2025). Exploring Project-Based Learning for Enhancing Creative Thinking in High Schools: A Bibliometric Analysis and Literature Review. *Educational Process: International Journal*, *18*. https://doi.org/10.22521/edupij.2025.17.480

Tohiroh, N. A., Isnawati, I., & Dewi, S. K. (2020). Keefektifan LKPD bioteknologi konvensional berbasis ecopreneurship untuk melatihkan berpikir kreatif dan inovatif siswa kelas XII melalui metode pembelajaran PJBL. *Berkala Ilmiah Pendidikan Biologi (BioEdu)*, *9*(1), 115-123. https://ejournal.unesa.ac.id/index.php/bioedu/article/view/32319

Wahjusaputri, et al. (2023). *Program SMK Pusat Keunggulan Cenre Of Excellence Pada Pendidikan Menengah Vokasi*. CV. Bintang Semesta Media.

Weng, X., Chiu, T. K. F., & Tsang, C. C. (2022). Promoting student creativity and entrepreneurship through real-world problem-based maker education. *Thinking Skills and Creativity*, *45*(January), 101046. https://doi.org/10.1016/j.tsc.2022.101046

Zulaidah, R., & Widodo, J. (2020). Penanaman Sikap Kewirausahaan Melalui Praktik Kejuruan Produk Kreatif dan Kewirausahaan. *Economic Education Analysis Journal*, *9*(2), 456-472. https://doi.org/10.15294/eeaj.v9i2.39268