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ENTREPRENEURSHIP EDUCATION LEARNING ORIENTED TO DEVELOP ENTREPRENEURIAL CREATIVITYSHI HIGH SCHOOL STUDENTS BASED ON PROJECT BASED LEARNING

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Keywords

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ABSTRACT

Learning entrepreneurship education for creative children of Gen Z age in high school as a step to prepare them to become entrepreneurship through entrepreneurship education learning activities. Emphasis on entrepreneurial education for creative children on handicraft products. The aim of this research is to explore how entrepreneurship education can enhance creativity and entrepreneurial skills among creative Generation Z students in high school, focusing on the development of craft products that meet community needs. The research approach is oriented to the philosophy of phenomenology with qualitative methods. The research sample used purposive sampling. Inductive data collection techniques: (1) interviews (2) observation and (3) documentation. Research data analysis: (1) data reduction, (2) data display, (3) (4) verification. Data sources include: (1) primary data and (2) secondary data. The primary data are grade XI students, and secondary data: teachers, principals and school administrative staff. The phenomena of the research explain that learning occurs in teacher-student dialogue and there is a transformation of changes in student learning, such as: students are able to make creative products, collaborative learning between students, group learning, independent, critical thinking, focusing on problem solving, making creative products in the form of crafts according to the needs of the community. The Project-based Learning model contributes to the development of entrepreneurial creativity in student entrepreneurship education learning.

INTRODUCTION

In the 21st century, every country, including Indonesia, is faced with a wave of globalization. One of the impacts of globalization is the increasingly rapid and uncertain economic competition across nations (Satria, et al., 2023). As a result, job competition becomes more intense, while the availability of jobs remains limited. This condition demands students—particularly those studying in high school (*SMA*)—to think creatively and innovatively about entrepreneurship (Mardasthi, et al., 2011) in order to become entrepreneurs. Entrepreneurship is a discipline that studies a person's values, abilities, and behaviors in facing life's challenges and seizing opportunities despite various risks (Fornos, et al., 2023). It is not reserved only for those with innate talent, but can also be developed through positive thinking, courage, willpower, initiative, and a mindset focused not merely on seeking jobs, but on creating business opportunities. Interest in entrepreneurship is thus increasingly nurtured (Dede, et al., 2019).

Creative school children, such as high school students from Generation Z (*Gen Z*), engage in *Entrepreneurship Education* (*Pendidikan Kewirausahaan* or *PKWU*) as a means of developing their creative potential and preparing for entrepreneurship. However, in practice, many obstacles remain. For example, research shows that the number of entrepreneurs in Indonesia is still low, and the quality remains unreliable, which underlines the urgency of entrepreneurship today (Augustian, 2023). The Central Statistics Agency (*BPS*) recorded that as of August 2021, the number of unemployed adolescents in Indonesia reached 9.1 million (Harie, 2022). The increasing unemployment rate among *Gen Z*—especially high school graduates—is partly due to curricula that emphasize academics while providing limited vocational skills. This results in high school graduates being less prepared to work compared to *Vocational High School* (*SMK*) graduates, whose learning is more skills-oriented (Marbun & Prastawa, 2023; Susilawati, 2023). Meanwhile, the youngest and newest generation entering the workforce is *Gen Z* (Putra, 2016).

Gen Z, especially high school students, face significant challenges in securing jobs after graduation, particularly for those who do not continue to college. They must compete with *SMK* graduates, who have an 85% employment absorption rate within just three months of graduating (Augustin, 2023). Through *PKWU*, young people—especially *Gen Z*—can develop the skills to confront increasingly complex social, economic, and unemployment issues (Setiawan, 2023). However, *PKWU*, which emphasizes employability skills (Jamriati, et al., 2018), is often still taught using the *Sit, Listen, Note, Memorize* (*Duduk, Dengar, Hafal, Catat* or *DDHC*) method (Ramudianto, 2015). To cultivate entrepreneurial capabilities among high school students, curriculum development must align with 21st-century education—emphasizing critical thinking, collaboration, communication, and creativity (Thurenell, 2020). Moreover, understanding the learning characteristics of *Gen Z* is crucial. According to Juhez, et al. (2016) and Wibawanto (2018), *Gen Z* refers to those born between 1995–2010; further opinions include current junior and senior high school students (Setiawan, 2023).

This generation's learning styles include: (1) sequential—absorbing material logically; (2) sensing—preferring practical, real-life information; (3) visual—learning with diagrams and *schemas*; and (4) reliance on visual media such as smartphones, internet, and *BlackBerry* (Aristin, 2016). Additionally, *Gen Z* possesses strong creative and innovative potential, which, if properly managed, can yield competitive advantages. They are also capable of multitasking (Rakhman, 2019). The characteristics of *Gen Z* require *PKWU* teachers to shift from being the sole source of knowledge to facilitators of student-centered, active learning (Faqihuddin, 2017). One model that encourages

active, creative, and problem-solving learning is *Project-Based Learning* (*PBL*), which—as Tang (2022) noted—positions students as active learners and problem solvers.

Adherents of humanistic psychology—such as Fromm, Maslow, Roger, and Rokeach—are optimistic that everyone has creative potential. In fact, children are often more creative than adults, but creativity is heavily influenced by environmental factors (Marton Bloomberg, 2023). Regarding creativity, Maclin, et al. (2018) and Asori (2019) explain that many forms of creativity exist within individuals, though they often go unrecognized. One of the Greek classical philosophers who emphasized creativity was Plato, who believed all humans have creative potential (Alexyuk, 2019), and that education is essential for developing it. This optimistic perspective supports the idea that latent creative potential in students can be developed through proper education. Social institutions, especially education, play a key role in this process—from elementary to higher education levels.

Formal education institutions—structured in terms of curriculum and learning—offer opportunities to apply various learning approaches to foster student creativity. These approaches can cultivate students into innovative entrepreneurs capable of producing creative products and marketing them within schools and the community. Implementing entrepreneurship education is crucial in the 21st century to develop productive human resources who can reduce national dependence on natural resources (Ministry of Education and Culture, 2014).

Creative development among *Gen Z* is highly promising. Research shows that 44% of *Gen Z* values hard work and face-to-face teamwork (Kim, et al., 2020). Born into a world of abundant technology, *Gen Z* tends to be flexible, smart, creative, and globally minded (Rastati, 2018). Their learning requires creativity and meaningful engagement (Menendez, et al., 2020). A teaching approach that promotes creativity is entrepreneurship education, which fosters group collaboration, creative thinking, and practical skills training (Ministry of Education and Culture, 2018). Developing entrepreneurial creativity in high school students of *Gen Z* is essential to preparing a future generation of innovative entrepreneurs. This is especially important given Indonesia's low human resource quality, which requires improvement in students' knowledge and skills (Aripin & Suryaningsih, 2022; Seminar, 2023). *PKWU* learning for *Gen Z* should emphasize practical, creative handicraft production as a form of training, coaching, and preparation to become professional and innovative entrepreneurs.

Although previous studies have addressed entrepreneurship education and creativity in high school students, gaps remain regarding its application for *Gen Z*, particularly in promoting creative entrepreneurship. Mardasthi, et al. (2011) highlighted the importance of entrepreneurship education for youth but did not address the unique needs and challenges of teaching *Gen Z* in relation to vocational skills. Setiawan (2023) discussed the employment barriers faced by *Gen Z* high schoolers but did not examine how practical, project-based education could enhance their creativity and entrepreneurial capabilities. This study addresses those gaps by using a *Project-Based Learning* (*PBL*) approach to strengthen creative entrepreneurship in high school students, particularly through the development of handicraft products—highly relevant to *Gen Z*'s entrepreneurial context.

The objective of this study is to explore how entrepreneurial creativity can be developed among high school students of *Generation Z* through entrepreneurship education, focusing on handicraft product creation. The benefits of this research include improving students' entrepreneurial competencies, supporting experiential learning, and enhancing their readiness to join the workforce or build their own businesses. This research contributes to the broader field of entrepreneurship

education by offering a model for fostering creativity and innovation in high school learners—preparing them to meet the demands of the 21st-century economy.

METHODS

The research approach is oriented towards the philosophy of *phenomenology*. This school of philosophy explains that "*phenomenology is the study of lived experiences and the way we understand those experiences to develop a worldview*" (Marshall & Rossman, 2016). This means that *phenomenology* is the study of various experiences encountered by individuals, enabling a broader understanding of their life experiences—cognitively, culturally, and in relation to the norms and traditions that shape their environment—as a lens to view the social world (*worldview*). This approach aims to describe the actual conditions of *PKWU* learning in high schools, both inside and outside the classroom. The *phenomenological* approach is closely linked to qualitative research methods (Borg, et al., 2003; Denzin & Lincoln, 2009), which emphasize how individuals construct their real social reality. Social reality, in this context, includes educational situations studied through qualitative methods (Borg, et al., 2003).

Data collection techniques were conducted inductively through: (1) interviews, (2) observation, and (3) documentation (Creswell, 1994; Nasution, 2018). Data analysis was carried out using the following stages: (1) data reduction, (2) data display, (3) inference, and (4) verification (McMillan & Schumacher, 2018; Nasution, 2018). Data sources consisted of: (1) *primary data* and (2) *secondary data*. The *primary data* were obtained from Grade XI students, while *secondary data* included information from teachers, principals, and school administrative staff. The main focus of interpreting the meaning and social context of *PKWU* learning is oriented toward the development of entrepreneurship creativity based on *Project-Based Learning* (*PBL*). The research participants consisted of researchers, teachers, students, and *PKWU* subject instructors.

RESULTS

The research situation of PKWU Education at the research site includes: (1) Jatiwangi Majalengka High School, (2) Cilimus Kuningan High School, (3) 4 Cirebon City High School and (4) Krangkeng Indramayu High School. The results of the study showed: (1) the curriculum in high school is academically oriented, (2) PKWU learning is taught by teachers who are not in their field, (3) PKWU learning facilities are not optimal, (4) PKWU practice financing is charged to students. The procedure before the research was carried out, the researcher communicated with the principal and PKWU teachers. Communication in the form of PKWU teaching modules includes: learning objectives, media, methods, approaches, subject matter, learning processes and determination of student learning outcomes. The modules for each high school are different: the Jatiwangi High School module is made of wood and bamboo, the Cilimus High School module is made of rattan. Module of SMA 4 Cirebon processed vegetables. Module of Krangkeng High School Processed Marine Products. The differences in this teaching module are adjusted to the demands of the cultural needs of the local community.

To find out the PKWU learning activities, the researcher monitored all high schools in turn and according to the rules that prevailed in the school. Based on the results of observation of learning phenomena in all schools, it shows that all teachers and students are active, creative, innovative and really do learning. In addition to focusing on modules, they also modified learning beyond the modules made by the researcher. Learning activities that process plant products, especially SMA 4

Cirebon and those that process processed seafood, the students first observe the market to choose materials that are seen as clean and of high quality.

Based on the results of interviews with all high school teachers, PKWU learning activities are carried out in a planned manner, and use the street vendor approach method that is modified according to the learning situation. In relation to this PBL model, Tan (2022) provides a step:" .... *curriculum diversification .... problem solving, collaboration leaners, communication are emphasize through the use of PBL approaches. It would be overly repetitive if in every course students have no spend a large amount of time doing peer and group presentation. The key is to use PBL strategically and align the approach with desired educational outcome.*". That is, the key to PKWU's success is to diversify the curriculum (curriculum development according to student learning needs), student-based learning as a problem solver, collaboration, communication, and peer group learning to achieve educational outcomes. Supporting Tan's above argument that PBL according to Kinrsler & Gamble (2021) "people to work together in team, as they work toward agreed upon by all." The results of observation in all high schools during PKWU learning are that all students are active, creative, enthusiastic, responsible and master the procedure for completing work according to the teaching module. These phenomena are based on the term Bloom (2001) according to the development steps of the learning domain: cognitive, affective and psychomotor. Students master the learning steps according to the module as cognitive competency development. Affective competence of responsible students and enthusiasm to do tasks according to the module. While the psychomotor competencies of students are skilled in completing the work of making products. The following is an illustration of one of the creative products of high school students in the form of crafts as follows.

Figure 1. illustration

Based on the illustration above, the completion of PKWU tasks emphasizes non-individual learning, with the cooperation of all students through the implementation of the Project Based Learning (PBL) learning model. The advantages of this model are (1) students engage in independent study to solve problems outside of the teacher's guidance, (2) learn to solve problems and demands in daily life and (3) learn not to be teacher-centered, but active and creative students (Hosman, 2014; Vong, 2017). The PBL model appears to be an independent learning orientation for students to complete tasks (problem solving), prioritize cooperation (cooperative learning) and the role of teachers only as facilitators of student learning. In addition, when a work is finished by a team consisting of several students, they demonstrate it in front of the class for the teacher to assess. This behavior is a form of learning social constructivism, that success is obtained through social interaction, not done individually and competitively as behaviorists do (Orenstein & Hunkins, 2018). The importance of PKWU learning prioritizes social interaction, Vygotsky explained that social interaction is a fundamental aspect of successful cognitive and intellectual growth. Vygotsky places

great emphasis on dialogue and other interaction between the learner and another (Pichard & Woodlard, 2020).

According to Vygostky, the fundamental of a person's learning success is determined by "interaction" with others, not on the basis of learning to isolate oneself from others (alone). Interaction involves the communication relationship: teacher and student, interaction between teachers, students and teaching materials and includes interaction with the learning environment both in and out of the classroom or both intracurricular and extracurricular activities. PBL always prioritizes group learning and completing project tasks to make creative products such as crafts is carried out collaboratively. Collaboration-oriented learning as an indicator of learning in the 21st century. The benefits of learning collaboration are all jobs or tasks that are difficult and require labor, large costs, done in collaboration are easy to complete. For example, students during the completion of the task of making creative products, the success achieved is not on an individual basis, but all students are actively involved in working together. The orientation of the PBL model is an activity to produce something that is beneficial for students and others (Syawalia, 2023). The following is a picture of the Learning Based model as follows.

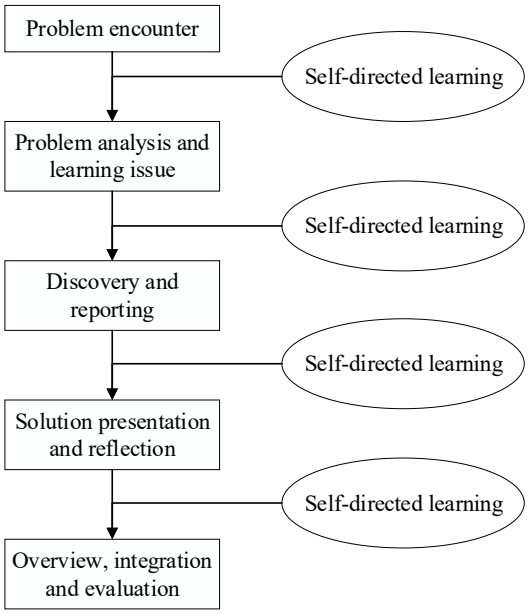

Figure 2. Learning Based model

Based on the image above, Tan (2022) explained as follows:

Problem encounter

- Problem statement
- Problem scenario and analysis

Problem analysis and learning issues

- Identification of learning issues and formulation
- Preparation of self-directed learning and peer teaching

Discovery and reporting

- Report on self-directed learning
- Peer teaching

Preparation of solution presentation

- Group preparation

Solution presentation and refection

- Group presentation of findings

Overview of learning theories

- Q and A
- Evaluation

This model prioritizes problem solving. Problems found on the basis of analysis and identification results. Problem solving based on the results of observations that occur in the field (discovery). For example, issues related to topics (PKWU materials) that will be worked on collaboratively. Before the topic (PKWU material) as a creative product material, it is first discussed and presented (peer teaching) so that the material meets the standards of creative products. During the presentation, students and teachers reflect, brainstorm, exchange ideas or ideas as critical thinking and creativity. This activity makes it possible to produce creative products to develop Gen Z's entrepreneurial creativity. The evaluation is not to specify in the form of grades, but to evaluate the implementation activities of the PBL model from the initial stage to the final stage so that the development of Gen Z entrepreneurship creativity based on entrepreneurship education learning is achieved. In connection with the PBL learning model above, the values of creativity that are folded include: (1) students are able to solve problems and be covered by learning, (2) students are able to think in detail about an idea (elaboration ability), (3) students express opinions and are not shy, (4) students are able to create new products (creativity of product), (5) students are able to give ideas and proposals to a problem, (Sofyan, 2023: McNeil, 2021).

Thus, based on the illustration above, that project-based learning management, it can be concluded that there are steps to be worked on, including essential questions (topics to be worked on) according to actual issues, making planning, scheduling, monitoring progress, making projects, assessing projects, evaluating and manifesting the creation of creative product exhibitions carried out by students at school. The advantages of the PBL model include the following: (1) increasing motivation to learn in groups, (2) increasing non-individual problem solving, fostering and developing togetherness, (3) increasing collaboration, (4) improving the management of 6 M resources, namely: Man (human), Money (money), Material (material), Machine (equipment), Method (how it works), and Market (Nyaliman, 2020; Ministry of Education and Culture, 2018). Disadvantages of the PBL model: (1) it takes a lot of time to solve problems and produce products, (2) it requires sufficient costs, (3) it requires teachers who are skilled and willing to learn, (4) it requires adequate facilities, equipment and materials, (5) it is not suitable for students who give up easily. (6) difficulty involving all students in group work (Sani, 2021).

CONCLUSION

All fields of science taught in high school exert different degrees of pressure to develop students' creative potential. The field of *Entrepreneurship Education* (*PKWU*) exerts a comprehensive influence, particularly in fostering creativity through the production of creative products—especially handicrafts—that align with the social needs of both local and interlocal communities. The creative products made by students at the research site serve as empirical evidence that students are capable of designing and producing handicraft items with various innovations,

resulting in original creative works. The primary emphasis of this field of study is to prepare students for the world of work and entrepreneurship in the future.

After receiving *entrepreneurship education*, students are able to produce a variety of creative works, equipping them with the confidence to face competition in the job market. The application of the *Project-Based Learning* (*PBL*) model has proven effective in yielding tangible outcomes. Learning implementation is not limited to theoretical comprehension; rather, students are able to apply the knowledge gained in class to develop real-world skills through the creation of functional products.

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