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AXIOLOGICAL VIEW OF CHEMO-ENTREPRENEURSHIP IN SUPPORTING THE PANCASILA STUDENT PROFILE

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Abstract: *High unemployment of secondary school graduates is a significant challenge the Indonesian government faces. One solution that can be done to overcome this problem is through learning chemistry with an entrepreneurial approach (Chemo-Entrepreneurship). The chemo-entrepreneurship approach supports achieving the Pancasila student profile in the independent curriculum. The analysis focuses on an axiological view of chemistry learning with a chemo-entrepreneurship approach in high school regarding ethical and aesthetic values. This research is qualitative research using a literature study or literature review method. Data collection techniques were carried out by collecting some literature from books, the internet, and related journal articles. The chemo-entrepreneurship approach makes the chemistry students learn valuable through making a product. Products can be designed so that they have selling power. These skills are handy for graduates entering society to create jobs, thereby reducing the unemployed. Learning projects with a Chemo-entrepreneurship approach support the achievement of Pencasila student profiles.*

INTRODUCTION

The development of technology and information in the Industrial Revolution 4.0 era experienced rapid growth. Industrial Revolution 4.0 combines information and communication technology in the industrial sector. The effects of the Industrial Revolution 4.0 have caused changes in various fields (Purba et al., 2021). Many activities have changed and provide convenience for users because they are faster and easier to access. The existence of the Industrial Revolution 4.0 also raises pros and cons in society. Some people believe that the progress of the industrial revolution could threaten aspects of employment (Adha et al., 2020). Manual production processes using human hands have shifted to machine-power production processes (Alam et al., 2019). Several jobs are starting to be replaced by machine workers, such as parking attendants, bank tellers, cashiers, letter carriers, and travel agents. The existence of machines that carry out and manage work automatically, quickly, efficiently, and with cheaper operational costs are the main factors for capital owners to switch to

machine power. This event caused the lost generation phenomenon, which was characterized by the creation of technological unemployment. This incident caused massive layoffs and unstoppable future unemployment.

High school graduates currently dominate unemployment in Indonesia. Based on data from the Central Statistics Agency for 2023, vocational school graduates are in first place with a percentage of 9.42%, and high school graduates are in second place with a percentage of 8.57% of the total unemployed of 7.99 million people. Therefore, students must receive proper education to keep pace with technological developments (Maghfiroh & Sholeh, 2022). Educational institutions must balance the education system with current developments and technology (Yamin & Syahrir, 2020). One of the policies in the education sector to prepare students and graduates who excel in facing social and cultural changes, the world of work, and rapid technological advances is the implementation of the Independent Curriculum (Kemendikbudristek, 2022a).

An independent curriculum is a curriculum concept that requires students to be more independent (Manalu et al., 2022). This curriculum gives students the freedom to access knowledge in both formal and non-formal education to develop (Zahra, 2023). This freedom to learn means that students can study anywhere and anytime and seek knowledge of their interests without obstacles and limitations (Oktavia, 2023). Teachers and students can freely explore knowledge, attitudes, and skills from the environment (Daga, 2021). In this curriculum, teachers are required to be more creative, create a comfortable learning atmosphere, and be able to arouse students' enthusiasm for learning (Yusuf & Arfiansyah, 2021). Based on facts in the field, teachers still have difficulty determining appropriate project-based learning in the independent curriculum (Zulaiha et al., 2022).

Implementing project-based learning in the independent curriculum aims to support student character following the Pancasila student profile. The Pancasila student profile is a reference in all policies and reforms to the Indonesian education system, especially learning and assessment (Kemendikbudristek, 2022). The Pancasila student profile is expected to produce graduates with character and competence per Pancasila values (Sulistiyaningrum & Fathurrahman, 2023). The Pancasila student profile consists of 6 dimensions, namely: 1) Faith, devotion to God Almighty, and noble character; 2) Global Diversity; 3) Working together; 4) Creative; 5) Independent, and 6) Critical Reasoning. The Pancasila student profile can be implemented in educational units through school culture, intracurricular activities, projects to strengthen the Pancasila student profile, and extracurricular activities. However, most teachers still have not implemented the Pancasila student profile project in learning (Ardianti & Amalia, 2022).

The project to strengthen the Pancasila student profile is a series of activities to form the dimensions of the Pancasila student profile with a specific theme. Implementing projects requires students to be able to design, make decisions, solve problems, carry out investigations, and provide opportunities for students to work independently or in groups (Kurniawan & Wijanarko, 2023). The project to strengthen the Pancasila student profile provides opportunities for students to learn informally, in flexible forms of learning, more active and interactive learning activities, and also to be directly involved in the surrounding environment to strengthen various potentials (Afriatmei et al., 2023). One of the themes in the project to strengthen the profile of Pancasila students is entrepreneurship.

Entrepreneurship can be introduced to students in the learning process. Learning with an entrepreneurial approach can be used as an alternative to making the learning process more meaningful and enjoyable to increase students' interest, achievement, and entrepreneurial spirit (Alifah & Sutirna, 2020; Ayub et al., 2023). One entrepreneurship-based learning approach that can be carried out in high school is chemistry learning with an entrepreneurial approach or Chemo-Entrepreneurship (CEP). The CEP approach is an innovative learning approach that emphasizes the learning process linked to natural objects so that students can process materials into products that are useful and have economic value and foster students' interest and enthusiasm for entrepreneurship (Andrean et al., 2019; Arieska & Kamaludin, 2018). CEP-based learning can make chemistry learning more interesting, fun, and meaningful, allowing students to optimize their potential in producing a product (Ismulyati & Ikhwani, 2018; Safriani & Lazulva, 2021). Apart from that, CEP-based learning can also increase students' motivation, conceptual understanding, learning outcomes, and critical thinking abilities (Andriani et al., 2017; Dewi & Mashami, 2019; Katamsih et al., 2016).

Learning chemistry with an entrepreneurial approach is one application of the Pancasila student profile project, which has efficacy and benefits for students, so it is exciting to study in depth through an axiological perspective regarding ethical and aesthetic values.

RESEARCH METHOD

This research is qualitative research using a literature study or literature review method. The data collection technique was collected by collecting literature from books, the internet, and journal articles related to axiology and chemistry learning based on chemo-entrepreneurship. This study describes an axiological review of chemistry learning with an entrepreneurial approach (chemo-entrepreneurship) in the Pancasila student profile.

RESULTS AND DISCUSSION

Axiological Review

Philosophy is the most essential part of human thought and is often called the mother of all sciences. Philosophy is defined as a process of asking questions about the nature of nature and trying to answer them using reason. This philosophy has a vital role, so humans will always need it. One branch of knowledge in philosophy is axiology. Axiology is a term that comes from the Greek words axios and logos. Axiology is a branch of philosophy that studies values or is often called the theory of values. Discussions in axiology also concern valuable knowledge. According to Suriasumantri (2009), axiology is a theory of value related to the usefulness of the knowledge obtained. Axiology relates to the use or benefits of knowledge. Axiology discusses the goals of science and how humans use this knowledge to overcome the problems they face in life. So, this axiology concerns the nature of the benefits found in science. Axiology discusses knowledge's utility value because knowledge must follow ethical and aesthetic values. Ethical values show moral values and human behavior by considering good and bad. Aesthetic values relate to the study of beauty and artistic values. Discussions in axiology more often examine good and bad, right and wrong, and the ways and purposes of using science or knowledge.

Science can be said to have use value if it provides benefits and convenience for human survival. This is important because branches of science that do not have axiological value will

tend to become threats that can endanger human survival. Axiology also shows the rules that must be considered in applying science.

Learning Chemistry With an Entrepreneurial Approach (Chemo-Entrepreneurship)

Entrepreneurship is creating innovative and creative products and assuming the risks and rewards of starting a new business. Entrepreneurs are people who innovate differently from others and have their characteristics. Innovation, creativity, strong skills, and personality will achieve entrepreneurial success. This shows that having an entrepreneurial spirit is essential. Based on the Central Statistics Agency (BPS), it shows that the open unemployment rate as of February 2023 for secondary education graduates, namely vocational school graduates, is in first place with a percentage of 9.42%, and high school students are in second place with a percentage of 8.57% of the total unemployed of 7.99 million people. This data shows that high school graduates still have much unemployment.

One effort to reduce unemployment among high school graduates is to equip students with life skills to face global competition and challenges in everyday life. Entrepreneurship is one of the life skills that can improve students' quality of life (Tohani, 2015). The application of entrepreneurship in education can produce graduates who are not just waiting for work but can create new jobs to reduce the existing unemployment rate. A student who has an entrepreneurial spirit is a student who has entrepreneurial values such as innovation, creativity, critical thinking, communication, independence, and a work ethic. However, most students are less interested in entrepreneurship. The main reasons for low interest in entrepreneurship are uncertainty of success, high risk of failure, and uncertain income. Therefore, to improve the entrepreneurial spirit, it is necessary to have entrepreneurship-based learning in schools.

Entrepreneurship-based learning transfers knowledge, changes mindsets, and corrects entrepreneurship attitudes (Hidayat et al., 2018). This learning can form independent students with the competencies and skills they have. Therefore, entrepreneurship-based learning can foster students' entrepreneurial spirit or spirit to face challenges in this global era. This entrepreneurship-based learning allows students to have knowledge and entrepreneurial spirit. This learning can be realized by using an entrepreneurial approach in relevant subjects, one of which is chemistry learning.

One chemistry learning approach that can attract students' interest in studying chemistry material and increase students' entrepreneurial spirit is Chemo-Entrepreneurship (CEP). The CEP approach is a learning innovation emphasizing the learning process linked to real objects so students can process the materials into valuable products. The contextual learning approach is learning that links material to the surrounding environment in order to connect the knowledge or material obtained with its application in everyday life. Therefore, implementing CEP in learning can create a more active and enjoyable learning atmosphere. CEP can make learning less boring and allow students to maximize their potential in producing a product. The CEP approach is expected to equip students to be more creative, have a strong entrepreneurial interest, and produce economic value products. Based on the reality on the ground, not all students who graduate from high school continue their studies at university so that students can create their employment opportunities. This phenomenon can reduce unemployment among high school graduates (Rahmawanna et al., 2016)

An Axiological View of the Chemo-Entrepreneurship (CEP) Approach

Axiology is a branch of philosophy that studies values related to the usefulness of knowledge. Science must make a significant contribution to humans and improve human welfare. The number of unemployed graduates of upper secondary education is still relatively high. One alternative solution to reduce unemployment is through entrepreneurship skills. Therefore, there is a need for entrepreneurship-based learning in schools.

This entrepreneurship-based learning can be realized by using an entrepreneurial approach in relevant subjects, one of which is chemistry learning. An entrepreneurial approach to learning chemistry can attract students' interest in studying chemical material and increase their entrepreneurial spirit. Students' entrepreneurial spirit can be shown by several indicators, such as curiosity, frequently asking questions, being able to solve problems, and having interesting ideas. This approach is carried out by providing opportunities for students to understand chemical concepts, chemical processes, natural phenomena, and factors that influence chemical processes so that students can draw meaningful conclusions. This meaningful conclusion can be a helpful product with economic value.

One application of chemistry learning that uses a chemo-entrepreneurship approach is the topic of colligative properties of solutions. Material on the colligative properties of solutions includes the concepts of boiling point elevation, freezing point depression, and osmotic pressure. CEP in solution colligative materials takes the form of (a) increasing the boiling point by making fruit syrup, (b) lowering the freezing point by making ice cream, and (c) osmotic pressure by making salted eggs (Ni'mah & Kamaludin, 2023). The resulting product is then packaged well so that it has selling value. CEP can also be applied to other chemical materials adapted to the material's characteristics and applications in everyday life.

Entrepreneurship is one of the project's themes to strengthen the profile of Pancasila students. These projects aim to maintain the noble values and morals of the nation, readiness to become a world citizen, the realization of social justice, and the achievement of 21st-century competencies. Implementing chemistry learning using the CEP approach in high schools can support the achievement of the Pancasila profile. The profile of Pancasila students supported through chemistry learning with the CEP approach is creative, independent, and critical reasoning.

Axiology relates to the use or benefits of science. Axiology discusses the purpose of science itself and how humans use this knowledge. Learning chemistry using the CEP approach provides many benefits for students. Some of the benefits of the CEP approach for students include: 1) students understand chemistry material better; 2) learning is more meaningful because the material studied is directly applied in the form of concrete products; 3) maximizing students' skills in the field of entrepreneurship; 4) increase creativity and be able to produce new products that have economic value; and 5) forming students' life skills in facing global competition. Therefore, implementing chemistry learning with a CEP approach that complies with the rules will provide many positive benefits to students. In terms of ethical values, students can apply chemical knowledge to make products that have marketable value so that they are helpful to themselves. Applying misused chemistry and not following ethical values can cause adverse events or effects. Aesthetically, good product packaging can increase people's attraction to the product. Therefore, if high school graduates

have innovation in making products that have marketable value, they can open their businesses, thereby reducing the number of unemployed graduates.

CONCLUSIONS

Unemployment among high school graduates ranks highest in Indonesia. One alternative to overcome this problem is learning chemistry with an entrepreneurial approach (chemo-entrepreneurship). Ethically, the chemo-entrepreneurship approach allows students to study the material and make products that have marketable value so that the chemistry they learn can be helpful. Aesthetically, the resulting product can be designed creatively and attractively to increase selling power. Therefore, students can open employment opportunities after completing their education, thereby reducing the number of unemployed.

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