Deep Vocational Education Strategy

Facing The Era Of Society 5.0

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Abstract

Era Society 5.0 is a term that refers to the development of society which is colored by the wider and deeper use of digital technology. In this era, vocational education has an important role in preparing individuals to face the challenges and opportunities presented by technological advances. By conducting a literature study on the Society 5.0 concept and the analysis process using SWOT analysis, the strategies that need to be carried out in vocational education in facing the Society 5.0 era include; Enhanced digital skills including understanding of software and hardware usage, data analysis, cybersecurity, and application development. Increased adaptation to rapid technological changes such as artificial intelligence, the Internet of Things (IoT), and Robotics. Increasing understanding of the social impacts of technological developments, including realizing the social implications, ethics, and responsibilities attached to the use of technology. Development of multidisciplinary collaboration capabilities, namely combining knowledge and skills so as to create innovative solutions to complex problems. Development of entrepreneurial skills so that they can become innovators and drivers of change in an increasingly digitally connected society

Key words: Society 5.0 Era 5.0, Vocational Education, Skills, Entrepreneurship, Digital

I. INTRODUCTION

The SDGs or Sustainable Development Goals are a set of goals that contain 17 goals and 169 targets which are global action plans used by UN member states to frame agendas and political policies for the next 15 years, which will be effective from 2016 to 2030. Sustainable Development Goals are things that have goals to eradicate poverty, reduce inequality and protect the environment aimed at everyone from policymakers, civil society, business, academics, and every individual.

In the Technical Guidebook for Developing Action Plans *for Sustainable Development Goals (TPB/SDGs, Bappenas)* that SDG 4 is "Ensuring inclusive, equitable and quality education, and promoting lifelong learning opportunities for all". By achieving SDG goal number 4, it is hoped that education will become the main engine for achieving sustainable development as a whole, reducing

poverty, increasing employment opportunities, and improving the quality of life for people around the world.

Education has an important role in the development of the *Society 5.0* era, namely to advance the quality of human resources. Era *Society 5.0* is a term that describes the era of digital transformation that we are currently experiencing. Technological developments and global economic transformation have changed the demands of the job market. The changing needs of the labor market in the *Society 5.0* era are marked by rapid changes in technology and digitization in various sectors. Vocational education in this regard is developing in response to the industry's need for a skilled and competent workforce in fields such as information technology, health, engineering, hospitality, and others.

Society 5.0 emphasizes the importance of digital skills in the world of work, therefore vocational education must be able to integrate learning digital skills into its curriculum. In addition, vocational education must also provide an understanding of the concepts of innovation and entrepreneurship as well as the skills needed to develop and implement new ideas. Vocational education can support students in developing creative, critical, and collaborative attitudes to respond to change and create innovative solutions in a constantly changing work environment.

According to ***Irjus Indrawan et al (2020)*** so far, vocational education has received less attention and has become the second choice when continuing education. In general, the development of vocational education in Indonesia can be said to have not been fully implemented. There is an imbalance between the ideals of vocational education and reality, which refers to the difference between the expectations or ideal goals of vocational education and the existing real situation. In fact, several vocational education institutions are lagging behind in providing curricula that are up-to-date and relevant to technological and industrial developments, so that graduates are not always ready to face the challenges of the world of work. Many vocational education institutions, especially in remote areas or with limited budgets, may not have access to adequate facilities and equipment for effective training. Some vocational education institutions have experienced difficulties recruiting and retaining qualified teaching staff due to a lack of incentives or low salaries. According to ***Wargijono Utomo (2021)***, the unemployment rate for vocational education graduates can still be high due to a lack of coordination between educational institutions and industry, as well as a lack of compatibility between the skills learned and the needs of the labor market. Some groups in society still face accessibility barriers, such as the high cost of education, lack of information about vocational education opportunities, or social stereotypes about certain types of work.

Based on the above problems, there is an imbalance between the ideals of vocational education and reality, one of the efforts that can be made is to understand the challenges and strategies of vocational

education in dealing with Society 5.0 by conducting a literature study on Society 5.0 and the analysis process using the SWOT analysis method is expected to find a strategy that can be used as a policy reference for the world of education in facing the challenges of Society 5.0.

THEORETICAL BASIS

2.1. *Sustainable Development Goals (SDGs)*

2.1.1 Definition of Sustainable Development Goals *(SDGs)*

According to ***Armida Salsiah Alisjahbana & Endah Murniningtyas (2018),*** The essence of sustainable development is the internalization of the impact of every social and economic action on the environment. This means that every social and economic activity needs to avoid/prevent or take into account its impact on environmental conditions so that the environment can continue to carry out its function to support life now and in the future.

The SDGs have "four pillars of sustainability", covering important aspects of sustainable development which include social, economic, and environmental. The four pillars are:

1. Sustainable Economy: Promote inclusive and sustainable economic growth, ensure decent employment opportunities, and promote innovation and sustainable consumption.
2. Social Sustainability: Improving the quality of life of society as a whole, reducing social and economic disparities, and increasing access to education, health, and other basic services for all people.
3. Sustainable Environment: Protect, restore, and maintain the sustainability of the earth's ecosystems, including conserving natural resources, reducing pollution, and dealing with climate change.
4. Sustainable Governance: Ensuring effective, inclusive, and accountable governance, and promoting public participation in decision-making related to sustainable development

2.1.2. Goals Sustainable Development Goals *(SDGs)*

The SDGs have goals designed to address various social, economic, and environmental problems facing the world today, as well as to improve the quality of human life as a whole. There are 17 SDGs goals that cover various aspects of human life and the environment, among others:

1. Zero Poverty: End poverty in all its forms and dimensions worldwide.
2. Zero Hunger: End hunger, achieve food security, improve nutrition, and support sustainable agriculture.
3. Good Health and Well-Being: Ensuring good health and promoting well-being for all people of all ages.
4. Quality Education: Ensure inclusive, equitable, and quality access to education for all.
5. Gender Equality: Achieve gender equality and empower all women and girls.
6. Clean Water and Sanitation: Ensure universal access to clean water and proper sanitation.

7. Renewable and Affordable Energy: Support universal access to affordable, reliable, sustainable, and modern energy.

8. Decent Work and Economic Growth: Achieve inclusive, sustainable economic growth and decent work for all.

9. Innovation and Infrastructure: Build resilient infrastructure, promote inclusive industrialization, and encourage innovation.

10. Reducing Inequalities: Reducing disparities between and within countries.

11. Sustainable Cities and Settlements: Make cities and human settlements inclusive, safe, resilient, and sustainable.

12. Sustainable Consumption and Production: Reducing negative environmental impacts from consumption and production.

13. Action on the Climate: Take urgent action to address climate change and its impacts.

14. Life Underwater: Conserving and sustainably using marine resources for sustainable development.

15. Life on Land: Preserving and sustainably managing terrestrial ecosystems, forests, and biodiversity.

16. Peace, Justice, and Strong Institutions: Promote peaceful, inclusive, and just societies and strengthen effective institutions.

17. Partnerships for the Goals: Enhance ways to implement sustainable development goals through strong and inclusive global partnerships.

By achieving these SDGs goals, it is hoped that the world can move towards sustainability, equity and justice for all people, while also preserving the natural environment for future generations.

2.1.3. Purpose Benefits *Sustainable Development Goals (SDGs)*

The benefits of the SDGs are very diverse and broad, including:

1. Reduce poverty: The SDGs aim to end poverty in all its forms and everywhere. By reducing the number of poor people, the quality of life and social welfare will increase.

2. Health and well-being: The SDGs emphasize efforts to improve the health and welfare of the community. These goals include access to quality health services and improvements in the prevention and treatment of disease.

3. Inclusive and quality education: The SDGs are committed to providing inclusive, equal and quality education for all people. With better education, a more knowledgeable and creative society will be created.

4. Gender equality: The SDGs fight for gender equality and women's empowerment. By achieving this goal, women will have better opportunities in various fields and in their lives.

5. Clean water and sanitation: The SDGs aim to provide universal access to clean water and proper sanitation. This will help reduce the risk of disease and improve people's quality of life.

6. Access to sustainable energy: The SDGs advocate for universal access to affordable, reliable, sustainable and modern energy. This will increase productivity and quality of life in areas that currently lack access to adequate energy.

7. Environmental protection: SDGs seek to protect ecosystems and maintain biodiversity. Protecting the environment will provide long-term benefits to life on Earth.

8. Inclusive economic growth: The SDGs aim to achieve inclusive and sustainable economic growth. This means comprehensive and equitable growth, so that no sector of society is left behind.

9. Global partnership for sustainable development: The SDGs encourage global cooperation and partnership in achieving its goals. Cooperation between countries, the private sector, and civil society organizations will accelerate the achievement of the SDGs.

2.1.4. Adoption of Sustainable Development Goals (SDGs) in Education

The adoption of Sustainable Development Goals (SDGs) in the world of education is an effort to encourage sustainable and inclusive educational development. The SDGs provide a broad and comprehensive framework for addressing challenges in the education sector and promoting universal access, equity, and high-quality of education.

According to Armida Salsiah Alisjahbana and Endah Murniningtyas (2018) Access and equity in education: SDG 4 emphasizes the importance of ensuring inclusive, equal and quality access for all people to education. To achieve this, the government and stakeholders in the education sector need to work together to eliminate barriers such as education costs, gender discrimination, and access gaps between urban and rural areas. They should also develop policies that support children with special needs, migrants and other vulnerable groups to obtain an equal education.

Quality education: SDG 4 also emphasizes the importance of improving the quality of education. This includes improving the quality of teachers and educational facilities, developing relevant curricula, and innovative learning approaches. Governments and educational institutions need to invest in teacher training and development, and ensure that curricula and teaching methods reflect sustainable values and future needs.

Education for sustainable development: The adoption of SDGs in education involves integrating education for sustainable development into the curriculum and school activities. This means teaching students about concepts such as environmental protection, peace, gender equality, human rights, and social responsibility. Education must prepare students to become global citizens who are aware and responsible for the sustainability of this planet.

In the Guidebook for *Building Partnerships (Bappenas 2021)* Partnership and Collaboration: SDG 17 highlights the importance of cross-sectoral partnerships and collaboration to achieve sustainable development goals. In the context of education, this means involving various stakeholders such as the

government, educational institutions, civil society organizations, the private sector, and the wider community. This collaboration can promote the exchange of knowledge, resources, and best practices to increase the quality and impact of education.

Research and innovation: Adoption of SDGs in education encourages research and innovation in efforts to improve sustainable education. Governments and educational institutions need to invest resources in research on continuing education and create space for new educational experiments and innovations. By adopting the SDGs in education, people can work together to achieve broad sustainable development goals and ensure that education becomes a powerful tool in creating a more sustainable, inclusive, and just world

2.2. Society 5.0

In the Discussion of Sulastri Harun (2021) Society 5.0 is a concept developed to describe a new stage in the development of human society that is influenced by technological advances and social transformation. This concept is still in the stages of exploration and growing understanding, and there is no clear agreement on its exact definition and characteristics. However, several thinkers and experts have come up with the idea of Society 5.0. One of the key concepts is that Society 5.0 will be characterized by a closer integration of people and technology, with a focus on higher social and human values.

Here are some backgrounds that may underlie the con:

1. Society 1.0: This era is marked by an agricultural-based society and centered on the local exchange of goods. Humans live in small groups with limited social interaction.

2. Society 2.0: The Industrial Revolution brought about major changes in society. Technological advances, such as the steam engine and mass production, led to urbanization and population growth of cities. Social interactions are becoming more complex, but technology is still separated from everyday life.

3. Society 3.0: Advances in information and communication technology (ICT) play an important role in connecting people around the world. The internet and social media are changing the way we communicate, work, and interact. This era is characterized by global connectivity and the rise of the digital economy.

4. Society 4.0: This era is defined by technological advances such as Artificial Intelligence (AI), big data, and the Internet of Things (IoT). Automation and digitization are creating major changes in industry and society. Human interaction with technology is deepening, but there is still a separation between the physical and digital worlds.

5. Society 5.0: This era is expected to see closer integration between humans and technology, where technology is not only a tool but also functions as a partner in everyday life. The focus will shift from efficiency and productivity to higher human values, such as empathy, creativity, collaboration,

6. and complex problem-solving. This era may involve the development of technologies such as augmented reality, virtual reality, more sophisticated robotics and brain-computer interfaces.

However, it is important to note that the concept of Era Society 5.0 is still at the stage of discussion and different interpretations. The definition and subsequent developments of Era Society 5.0 are still a topic of research and discussion among experts and thinkers.

2.3. Education in the Age of Society 5.0

One of the main pillars of Society 5.0 is education. In the context of education, Society 5.0 envisions a paradigm shift in the way learning and knowledge is imparted. Following are some aspects of education in the era of Society 5.0.

1. Inclusive and Lifelong Learning: Society 5.0 emphasizes the importance of providing inclusive education to people of all ages and backgrounds. It focuses on lifelong learning opportunities, enabling individuals to continuously acquire new skills and knowledge to adapt to the changing demands of the digital age.

2. Personalized Learning: Technology plays an important role in Society 5.0's educational approach. Personalized learning platforms and AI-based systems can analyze individual learning patterns and preferences, adapting educational content to suit the needs of each learner.

3. Blended Learning: Society 5.0 promotes a blended learning approach that combines traditional classroom teaching with online learning and digital resources. This integration allows for greater flexibility and accessibility in education.

4. STEAM Education: Science, Technology, Engineering, Arts, and Mathematics (STEAM) Education is increasingly important in Society 5.0. These areas are considered critical to driving innovation and addressing the complex challenges of the digital age.

5. Education for Sustainability and Social Good: Society 5.0 promotes education that emphasizes sustainability and social responsibility. This includes education on environmental issues, ethical use of technology, and global citizenship.

6. Emphasis on Soft Skills: While technology skills remain important, Society 5.0 recognizes the importance of soft skills such as critical thinking, creativity, adaptability, and emotional intelligence. These skills are seen as essential for success in a rapidly changing world.

7. Digital Literacy and Cybersecurity: Given the increasing reliance on technology, Society 5.0 emphasizes the importance of digital literacy and cybersecurity education to equip individuals with the skills necessary to safely navigate the digital landscape.

8. Collaborative Learning and Problem Solving: Society 5.0 encourages a collaborative learning environment, where students can work together to solve real-world problems and challenges. This approach aims to foster teamwork and a sense of community among learners.

2.4. Vocational Education

Vocational education or vocational education is a form of education that focuses on developing practical skills and theoretical understanding specific to a particular field of work or industry. The main objective of vocational education is to prepare students to be ready to enter the world of work with skills that are relevant and directly applicable.

According to Sarah & Talita Shafa Salsabila (2022) Vocational education has a close relationship with Society 5.0. Changing needs of the labor market: Society 5.0 is characterized by rapid changes in technology and digitization in various sectors. Vocational education must be responsive to the needs of this evolving labor market. Vocational education must ensure that students receive the relevant training and skills needed in this changing work environment. Society 5.0 emphasizes the importance of digital skills in the world of work. Vocational education must integrate digital skills learning into its curriculum, such as programming, data analysis, artificial intelligence, graphic design, and others. This will prepare learners with the skills necessary to contribute in a technology-driven work environment. Society 5.0 provides opportunities for rapid innovation and entrepreneurship. Vocational education should provide students with an understanding of the concepts of innovation and entrepreneurship as well as the skills necessary to develop and implement new ideas. Vocational education can support students in developing creative, critical and collaborative attitudes to respond to change and create innovative solutions in a constantly changing work environment. Society 5.0 emphasizes the importance of collaboration between education and industry. Vocational education must forge strong partnerships with relevant companies and industries to ensure that students receive training that is relevant to current industry needs. Through internships, co-op programs and other collaborations, students can gain practical experience and a deeper understanding of the real work environment. Society 5.0 also affects worker mobility. *According to Lili Marlinah (2019)* Technological changes and globalization create opportunities to work outside traditional geographical boundaries. Vocational education must prepare students with global mobility skills, such as the ability to adapt to different cultures, the ability to communicate in foreign languages, and an understanding of challenges and opportunities in a global work environment.

In order to face Society 5.0, vocational education must continue to develop a curriculum, teaching methods, and industry partnerships that are relevant. This will ensure that students gain the skills they need and are ready to face challenges and opportunities in a world of work that is impacted by digital transformation.

II. METHOD

In this research what is needed is literature literacy regarding concepts and knowledge that discusses Society 5.0 and SWOT analysis, it is also necessary to review the literature on Sustainable Development Goals, this is needed to find out the relationship between study materials.

The stages carried out in this research are

1. Identification of Problems & Formulation of Problems

2. Library Search/Literature Disbursement

3. Data Collection

4. Data Processing/Data Analysis

5. Delivery of Results

III. HASIL

4.1. Hubungan antara Society 5.0 dengan Sustainable Development Goals (SDGs)

Use of Technology for Sustainable Development Goals: Society 5.0 emphasizes the application of high technology to increase efficiency and productivity in various sectors, such as energy, health, transportation, and industry. By integrating this technology with the goals of the SDGs, it may be easier to achieve sustainable development goals in a more effective way

Inclusivity and Accessibility: One of the main principles of Society 5.0 is inclusivity, namely ensuring that the benefits of technology are accessible to all levels of society. This is in line with the aspirations of the SDGs which emphasize the importance of creating equal opportunities for all people without discrimination. By ensuring fair and equitable access to technology, it is more likely to increase well-being and reduce social inequalities

Innovative Solutions to Global Challenges: Society 5.0 seeks innovative solutions to complex problems facing the world today, such as climate change, rapid urbanization and health problems. This concept encourages the use of technology to create more effective and sustainable solutions in achieving the SDGs goals.

Use of Data for Decision Making: Society 5.0 relies heavily on the collection, analysis, and utilization of data. In the context of the SDGs, data obtained from this technology can be used to understand developments, monitor progress, and identify areas that require more attention to achieve sustainable development goals.

4.2. SWOT Analysis Results of the Vocational Education Strategy in Facing Society 5.0

SWOT analysis is a method used to evaluate the strengths, weaknesses, opportunities and threats of a strategy or plan. In the context of the Vocational Education Strategy facing Society 5.0, the following SWOT analysis can be considered:

Strength):

a. Focus on practical skills: Vocational education has the advantage of providing practical skills that are in line with the demands of Society 5.0 which tend to require a skilled and work-ready workforce.

b. ndustry connectivity: Vocational programs usually have close partnerships with industry, allowing students to gain first-hand insight into current needs and trends in the job market.

c. Program adaptability: Vocational education can be more responsive to changing market needs because it is more flexible in changing curricula and adapting training to technological and social developments.

*Weaknesses***:**

a. Social stigma: In some societies, vocational education is still considered less prestigious than academic education, so it is less attractive to potential students.

b. Limited scope of knowledge: Focus on practical expertise may limit the development of theoretical understanding and broader views.

c. Technological change: Vocational education must try to keep up with changing technologies to maintain their educational relevance and quality, however, it can also be a challenge as technology continues to evolve rapidly

*Opportunities***:**

a. Skilled labor demand: Society 5.0 will lead to a higher demand for skilled labor in various fields of technology, science, and industry.

b. Stronger industry partnerships: As Society 5.0 develops, employers will increasingly invest in collaboration with vocational education institutions to ensure that graduates have skills relevant to their needs.

c. Technology-based learning: Adoption of technology in vocational education can open up new opportunities for more interactive learning methods, such as simulation, augmented reality, and virtual reality

*Threats***:**

a. Automation and AI: Technological developments and automation can threaten the traditional jobs that are the focus of vocational education, so programs must stay abreast of trends and adapt curricula.

b. Competition with other education: In Society 5.0, there will be competition to attract students to many types of education, including online education and other programs that offer greater learning flexibility.

c. Lack of funds and resources: Vocational education requires investment in facilities, equipment, and skilled instructors. Lack of financial support can be an obstacle to expanding the program and improving the quality of education.

4.3. Vocational Education Strategy Facing Society 5.0

Based on the SWOT analysis, the strategies that can be used by vocational education in dealing with Society 5.0 include:

a. Enhanced digital skills: In Society 5.0, digital technologies are becoming an integral part of everyday life. Vocational education has an important role in improving students' digital skills. This includes understanding software and hardware usage, data analysis, cybersecurity, and application development. With strong digital skills, individuals will be better equipped to face the demands of jobs that are increasingly connected to technology.

b. Adaptation to technological changes: Vocational education needs to teach students to be able to adapt quickly to technological changes. Society 5.0 is marked by rapid technological advances, such as artificial intelligence, the Internet of Things (IoT), and robotics. Vocational education must provide knowledge and skills that are relevant to the latest technology and teach students to continue learning and keep abreast of changing technological developments

c. Understanding of social impacts: Vocational education in Society 5.0 must also encourage understanding of the social impacts of technological developments. Learners need to be aware of the social, ethical, and responsibility implications attached to using technology. They should be trained to consider aspects of sustainability, privacy and fairness in the context of the technology they use.

d. Multidisciplinary collaboration: Society 5.0 demands collaboration between different disciplines and sectors. Vocational education must prepare students to work collaboratively with professionals from various backgrounds. The ability to work in multidisciplinary teams will enable students to combine their knowledge and skills with others, thereby creating innovative solutions to complex problems.

e. Entrepreneurship development: Vocational education must also equip students with the entrepreneurial skills needed to face the challenges and opportunities in Society 5.0. They need to be trained in business idea development, risk management, creativity, leadership, and marketing skills. With these entrepreneurial skills, students can become innovators and drivers of change in an increasingly digitally connected society.

By understanding the SWOT above, parties involved in the vocational education strategy must take advantage of strengths and opportunities to overcome weaknesses and overcome existing threats. Flexibility, collaboration and adaptability will be key in responding to the demands of Society 5.0 and ensuring the success of future vocational education.

f. CONCLUSION

a. The reality of Society 5.0 leads to the achievement of the goals of the Sustainable Development Goals (SDGs)

b. The Vocational Education Strategy in dealing with Society 5.0 is to improve digital skills including understanding the use of software and hardware, data analysis, cyber security, and application development.

c. Increased adaptation to rapid technological changes such as artificial intelligence, Internet of Things (IoT), and Robotics.

d. Increasing understanding of the social impacts of technological developments, including realizing the social implications, ethics, and responsibilities attached to the use of technology.

e. Development of multidisciplinary collaboration capabilities, namely combining knowledge and skills so as to create innovative solutions to complex problems.

f. Development of entrepreneurial skills so that they can become innovators and drivers of change in an increasingly digitally connected society

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