The Industrial Revolution 4.0 and Society 5.0 to Where We Go

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ABSTRACT

This article seeks to tell the challenges and opportunities of the industrial revolution 4.0 by restoring the social aspects of humanity from the core points of Society 5.0, especially in education. A successful higher education organization must be able to predict change so that it can deal with environmental changes, especially rapid changes that are followed by rapid resolution of the problems that follow. This change is known as the Industrial Revolution 4.0 which has changed the way humans face the world, even changing reality itself. This is followed by Society 5.0 which requires wisdom in all fields, based on the strength and flexibility of the philosophy of life adopted and carried out by the community.

Keywords: Industrial Revolution 4.0, Change, Society 5.0.

1. INTRODUCTION

The concussion of the coronavirus has an impact on the delays of all existing activity agendas, both at school and in universities such as student assignments in community service cannot be done because it minimizes meetings nearby and follows the government's appeal to avoid crowds, so all planned activities are planned. must be delayed indefinitely.

The 'fourth industrial revolution is marked by the emergence of smart factories where cyber-physical systems monitor physical processes and communicate with each other and humans in real-time [1]. The fourth-generation industrial revolution (or the Industrial Revolution 4.0) fundamentally needs to be addressed by various countries, including Indonesia. This attitude is related to its existence and sustainability in universal engagement which must draw up mental and competitive skills over others. The line way to assemble technique is to have good behavior (behavioral attitude), improve self-competence, and have a literacy spirit. The provision of self-preparation can be passed through the path of education (long-life education) and self-concept through the experience of collaborating across generations/cross disciplines (experience is the best teacher).

By the industrial revolution 4.0 with various implementations, the educational paradigm has been changed [2], [3], [4], [5]. Technology comes from scientific creativity, which in turn adds to scientific references with further modifications and technological creations. The diversity between effort by individuals and work by machines is the side of the ambiguity that arises The fourth industrial revolution is marked by the growth of advanced manufacturing, a diffuse digital transition, and smart factories. This industrial revolution is driving 'man to machine', 'machine to man', and 'machine to machine communication and integration[1].

But according to [6], the technology improvement guideline to realize Industry 4.0 is still not focused. There are six steps from the procedure that we recommend for the improvement of an individual Industrie 4.0 roadmap [6]: (1) Task Force Setup; (2) Digitalization Assessment; (3) Focus Definition; (4) Use Case Idea Generation; (5) Use Case Impact Estimation; (6) Use Case Selection.

The aspects that make up the development of technology have not been separated and the emphasis on the role of humans in carrying out technological development is easily interchangeable with the role of machines. For example, robots that can move objects are often seen as intelligent artificial machines, and society does not see the full human behind the artificial intelligence: conceptualizing, compiling the algorithm steps, even running tools such as computers or remote controls.

Threatens to the existence of universities/schools are the continuation of RI 4.0. Buildings that are generally square are limited by walls and roofs are increasingly inappropriate and unnecessary. Ways of teaching and learning are changing, as are the content being taught and the roles of lecturers and students[1]. The increasing use of the internet and artificial intelligence (AI) is shifting the role of classrooms and offices.

1.1. Industrial Revolution 4.0 to Society 5.0

Japanese Prime Minister Shinzo Abe On 23 January 2019, delivered a speech entitled "Toward a New Era of "Hope-Driven Economy" at the World Economic Forum. In the speech, the vision of a future society called Society 5.0 was conveyed. Shinzo Abe stated that in Society 5.0 it is data that connects and drives all aspects of life, no longer capital. Society 5.0 for the Japanese Government is a vision that is oriented towards optimizing technological innovation to contribute to the improvement of the life of the global community. Various contemporary social problems today and in the future require technological innovation as a solution. Furthermore, Japan is also trying to prove that economic development can continue to occur amid social problems such as an aging society (increasing the number of elderly people and decreasing birth rates) through the implementation of Society 5.0. In 2019, Society 5.0 will be the main concern of 4 countries: Indonesia, Malaysia, India, and America, especially regarding good business relations [7].

Society 5.0 is one of the efforts to implement sustainable development that Japan intends to promote to other countries. The latest ICT innovations present in the industry and everyday life will shape new values and services. This will provide comfort and sustainability for the community. Japan believes in Society 5.0 can be realized because the vast data collected by IoT will be processed into new AI and will reach all levels of society. The connectedness of these ICT innovations will provide solutions for a better human life. In addition, Japan stated that Society 5.0 would change the world in several fields, namely health services, mobility, infrastructure, and financial technology. The orientation of Society 5.0 which optimizes ICT innovation for these various fields will help in dealing with and solving problems that exist in society. So that it can realize a better community economy by improving productivity and creating new markets [8].

Educational institutions must formulate strategic policies: increasing institutional accreditation, fields of study, curriculum, resources, and cyber university development, as well as innovation, research, and development. A successful organization understands the factors that exist and then predicts change so that it can take superiority of modification in the circumstances in which it operates. The change in question is a rapid change followed by a quick solution to the problems that follow. As stated by Slusarczyk [9], the Industrial Revolution 4.0 has advanced the way communities face the world, even changing reality itself.

Industry 4.0 is illustrated as a science-based resourceful industrial habitat where the products that are made are personalized through intelligent processes, mechanisms, and procedures. The 4th industrial revolution is based on Cyber-Physical Systems that will monitor, analyze and automate business processes, transforming production and logistics processes into intelligent factory-built environments where big data capabilities, cloud services, and intelligent predictive decision support tools are used to increase productivity and efficiency [10].

Quoting Zhong [11] in his article on nytimes.com "The Coronavirus Exposes Education's Digital Divide", countries in the world are facing an epidemic that causes schools to have to organize online learning. In China, many parents who cannot afford digital devices to support online learning also have limited signals in some rural areas. Internet fees are also very expensive outside major cities. What's interesting is that China has a magic mantra: stop classes but don't stop learning.

Hoskins [12] stated that distance learning is not an easy thing for students. This learning must be supported by appropriate classroom design and delivery methods so that online learning (e-learning or otherwise) can encourage students to reflect on their beliefs. Online learning also needs to ensure a safe environment to discuss different perspectives and also guide them to explore, validate and expand new perspectives and support them to develop new roles.

Access is the keyword for optimal online learning. Hasan & Bao [13] say that open distance learning increases educational access opportunities due to the availability of online materials. However, this condition is strongly influenced by various variables such as age, computer and internet access, and the digital divide. Facilitating adequate access, for example, is one of the most fundamental in supporting the smooth running of open distance learning.

2. RESEARCH METHOD

In this policy research, the following points need to be an important initial understanding. The author takes the recommendations related to the exploration of the following things as an epilogue to the final conclusion.

1. Public understanding of policies, where do they get information about policies, and what their opinions are about policies that have been implemented.

2. Policy input components consist of: targets, implementers, supporting devices/resources, etc. Questions that can be explored from inputs include suitability of input criteria, availability of inputs, input capacity, input control, etc.

3. The process component includes how the policy is implemented, what deviations occur during the implementation of the policy, the supporting factors and obstacles to the implementation of the policy.

4. Components of results that have been achieved. In looking at the results, researchers can ask questions about: (a) whether the results are/not by the purpose of developing the rule; (b) what are the effects after the implementation of the policy; (c) whether the implementation of the policy is efficient and effective; (d) how is the sustainability of policy implementation in the future.

This is an employment interpretative of the implementation of the receptive assessment portrait. This interpretation engraving for making policy decisions uses more qualitative data. rational, antecedent, transaction, and outcome are four important aspects of Responsive evaluation. Rationale describes the thoughtful environment and basic goals of a program. Antecedents, transactions, and outcomes are equivalent to inputs, mechanisms, and outputs. The data are arranged in an information and perception model. the investigation lineup can collect judgments from customers of the assessment decisions. The data description is classified into intent (expected destination) and observed state. Judgmental statements are classified as conditions that meet quality standards and special judgments on program elements. Table 1 shows the performance interrelation of the investigation bunch in expressing the phases of investigations.

3. RESULT AND DISCUSSION

Education is the most powerful instrument of social change. Education can transform society by providing opportunities and experiences through which the individual can cultivate himself for adjustment with the emerging needs and philosophy of the changing society

The big social problem today is Industrial Revolution 4.0 followed by Society 5.0 which drives the wheels of progress in almost all fields by emphasizing the important role of machines as an alternative - even shifting - the role of humans. The problem is, education as an important instrument in adapting this transformative process has also changed along with Industrial Revolution 4.0 (as "technology change") and (as "social change"). So, humans as agents of change behind this education, do not have to rotate

their mindset to follow this change. Humans are the main focus or "anchor" [14].

Table 1. Research Stage

Analysis Stage	Information
1. Gather input material in the form of new key concepts from various important sources. 2. Analysis regarding the preparation of policy implementation in the fight against Covid-19 related to the studies of human assets, existing facilities, and infrastructure. 3. Formulate projective policies by considering data sources.	The research team developed key concepts based on the latest scientific information.
Design Stage	
1. Designing developments in different important conditions that are ahead of guideline recommendations. 2. Renew data and check resources. 3. Develop a program map referring to the previous stage.	The research team designed and analyzed data collection as needed.
Development Stage	
1. Displaying the results of data analysis 2. Implementation Matrix	The research team formulated the recommended policy.
Publication and Reporting Stage.	
1. Write an article to the International Journal of Production Research. 2. Make a paper presented 3. Writing a draft of the book "THE INDUSTRIAL REVOLUTION 4.0 AND SOCIETY 5.0: TO WHERE WE GO" 4. Final reporting.	The stage of how research can produce good outcomes.

In the context of existential resilience to face Industrial Revolution 4.0 and S.I 5.0, a complete understanding and role of self can be obtained from religion and equipped with a self-philosophy that can cohesively color the environment. Religion is a basic guide that can radiate enlightenment and existential freedom, especially from a unified concept of value, while self-philosophy is a holistic view of oneself and the world that can be used as a counterweight to various values that arise from continuous social transformation with unlimited scientific possibilities. It can be important supporting readings about the significance of religion and philosophy of life in navigating the era of the industrial revolution 4.0 and social industry 5.0.

4. CONCLUSION

The flexible and widespread interpretation of the role of religion and philosophy of life is one of the requirements for open-mindedness as well as personal toughness in navigating the current industrial revolution. Evangelic Protestantism in Piggin's writings and Christianity in Schwobel's writings can be used in other religions in the world today: Islam, Judaism, Hinduism, or Buddhism and other beliefs.

Education is a transformational process that is available today, from regular to electronic learning experiences, social media, and other means that allow a person to experience the educational process in-depth and broadly. Religion and philosophy need to enter the variety of educational technology with the right concept and implementation.

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