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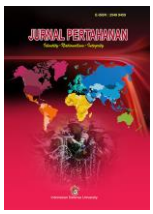

# CULTURE AS NATIONAL IDENTITY IN PREPARING YOUNG GENERATION FOR THE INDUSTRIAL REVOLUTION 4.0

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**Abstract**

Culture is a way to develop a life that has social elements that are comprehensive to form character. This study aims to examine that local wisdom is one of the national resilience to create further generations in the face of the industrial revolution 4.0 so that the nation's identity is maintained. The research method used is qualitative methods with interviews about the 4.0 industrial revolution, the research location is in Jakarta. Industrial revolution 4.0 is influenced by technological progress or changes. The results obtained by the younger generation prepare for a national identity that looks beautiful with the existing culture.

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## INTRODUCTION

Culture becomes an identity that shows differences between groups of people because culture determines communicative behavior. However, culture also develops and changes along with the ideas and ideals of the people in it as an intellectual effort to learn (Cohen & Cohen, 2019). An observable example of the cultural shift that occurred in Indonesia was when the Hindu-Buddhist religion was introduced and penetrated the daily lives of Indonesian people, where previously the people still adhered to the notions of dynamism and animism.

Then Islam began gradually enter and believed by most people to replace the Hindu-Buddhist religion. It was noted in some of these examples that when a new culture came, the old culture was not completely replaced, but acculturation occurred and remained in contact with and merged with the previous culture so that the existing culture became richer and more easily accepted by the community. As with Balinese Hinduism, although the values are not entirely the same in India, Islam in Yogyakarta was also brought by Sunan Kalijaga who still blends with Javanese-Hindu-Buddhist culture (Strite, 1992).

This is reinforced by the invention of the internet and technological developments which massively have an impact on various aspects, both economic, social, cultural, political, and others. The industrial revolution 4.0 was born, which included digital culture with flexibility in the industrial ecosystem as a point. Industrial revolution 4.0 is an industrial trend that combines automation technology with cyber technology. These include cyber-physical systems, the internet of things, cloud computing, and cognitive computing (Bottery, 2003). With intelligent technology that can be connected to various areas of human life, human lifestyle changes according to this pattern. Millennials are not immune from changes that are intensively utilizing technology and following digital flows. The challenge lies in data literacy, namely the ability to process and absorb information. In this era of industrial revolution 4.0, millennials are not only required to be smart but also have strong good characters. From the Japanese example, we can learn that the cultural shift due to globalization that gave birth to the industrial revolution 4.0 is unavoidable but can be balanced without losing our identity as the Indonesian nation in the way of our archipelago (Mohelska & Sokolova, 2018).

Therefore, culture plays an important role in producing certain forms of behavior. Some aspects of personality may be universally regulated, but this does not necessarily deny the possibility that other aspects of personality may be culturally unique. If we understand the relationship between culture and personality in a way that allows for the coexistence of universality, we can overcome the problem of how to conceptualize it.

The use of the steam engine in the production process in 1750-1850 led to the first industrial revolution in England and throughout the world. The impact that occurred at that time was the use of animal and human power which was replaced by manufacturing-based machines. The existence of this economic transition caused massive urbanization so that the population in the city swelled. At first, Indonesia was introduced to technological advances when relations between the Netherlands and England were getting better (Schumacher, Erol, & Sihn, 2016). The construction of land transportation routes facilitates the mobility of people and trade on the island of Java. The emergence of factories in big cities has encouraged agrarian and maritime communities to throw their lives into a new life in the city. With the increase in population in the city, the unemployed who need work also increases, in this case, many workers are paid low wages.

Cultural changes due to the penetration

of science and technology to meet human needs are the impact of the industrial revolution. Especially in this era of globalization, a country cannot isolate itself from other countries. Each country must be interconnected and dependent on other countries so that the influence caused by our inevitability can be accepted. Globalization which is dominated by advances in science and information technology has changed the pattern of relations between nations in various aspects and has made globalization a multidimensional phenomenon. Countries appear borderless, interdependent and interconnected from one country to another (Bottery, 2003). In globalization between the elements of one culture with another, there is mutual contact and influence (interaction), in the process of interaction, there will be problems regarding the cultural change.

In the current era of digitalization, there has been a fundamental change from technological evolution that targets gaps in human life. The invention of the internet in the early 90s became a major turning point and world history and had a tremendous impact, giving birth to the 4th industrial revolution. Germany as a country that has globalized the term Industry 4.0 has indirectly changed the face of the world's industry (Rajnai & Kocsis, 2018). The development of the digital world has now reached all aspects, both in terms of business, politics, economy, culture, entertainment, transportation, and so on. In terms of culture, nowadays in various countries digital culture has developed, where flexibility allows it to influence the media industry and users. The internet and all the products of digital culture that it produces will become digital artifacts that will later become a source of literature.

A dynamic and growing culture requires the right supporting technology, as well as digital archive storage. Community concern and government participation are needed in recording and archiving regional culture. This study aims to examine that local wisdom is one of the national resilience to create further generations in the face of the industrial revolution 4.0 so that the nation's identity is maintained.

## METHODS

This research was conducted with the qualitative method by depth interview and scrutinizes the secondary literature. The location of this research is Jakarta. Based on data that Jakarta is the capital city of Indonesia which is made more people from different cities in Indonesia came to this city and globalization has a bigger impact than other cities in Indonesia. For the depth interview, we asked one of the Peace and Conflict Resolution scholars from the University of Indonesia, Jakarta. We choose peace and conflict resolution students because they have sufficient knowledge to research related conflicts due to changes in people's mindsets and technology.

## RESULT AND DISCUSSION

### History of Cultural Harmonization

Culture is a comprehensive lifestyle. Culture is complex, abstract, and vast. Many aspects of culture determine communicative behavior. These socio-cultural elements are scattered and include many human social activities (Rosalina, 2018). This cultural change occurred as an intellectual endeavor to learn, either through the revival of ideas from ancient times or through new approaches to thinking.

In Japan, there was the Meiji Restoration which began in 1866–1869 which was a cultural revolution of ancient Japanese society towards Industry and at the same time changed the political order of the Shogunate back to the King of Japan. The cause of the Meiji Restoration was that Japan only realized how backward they were compared to the rest of the world after the arrival of United States Commodore Matthew C. Perry. Commodore Perry came to Japan to board

a super large ship equipped with weapons and technology far superior to Japan at that time. The word 'Meiji' means the power of enlightenment and the government at that time aimed to incorporate 'Western Progress' while maintaining traditional 'Eastern' values (Nakamura et al., 1996).

Currently, Japan is again making cultural changes due to cultural changes with Society 5.0 due to the demands of the times and technology. Society 5.0, according to the Cabinet Office of Japan, is defined as a human-centered society that balances economic progress with solving social problems through a system that deeply integrates cyberspace and physical space (Ministry of Foreign Affairs of Japan, 2019). Society 5.0 was proposed in the 5th Basic Science and Technology Plan as the future society that Japan should aspire to. This follows the stages of a hunting society (Society 1.0), an agricultural society (Society 2.0), an industrial society (Society 3.0), and an information society (Society 4.0). In the information society (Society 4.0), sharing knowledge and information across departments is not enough, and collaboration is difficult. Society 5.0 achieves a high level of convergence between virtual space (virtual space) and physical space (real space) (The Government of Japan, 2019).

**Culture as National Identity and State Defense Culture**

National identity is a marker or identity of a nation that can distinguish its characteristics from other nations because the hallmark of a nation lies in the concept of the nation itself. Etymologically, the term national identity comes from the words "identity" and "national". Identity comes from the word identity which means having a sign, characteristic, or identity attached to an individual, group, or something that distinguishes it from others. While national comes from a nation which means nation (Winarno, 2013). National origin comes from the nation itself or includes the nation itself, then Indonesian national identity is the identity that forms the nation, namely various ethnic groups, religions, Indonesian language, national culture, the archipelago, and the ideology of Pancasila. National identity is the totality of the appearance of a complete nation with the content of the community so that it can distinguish the Indonesian nation from other nations. Strengthening national identity is an effort that is very much needed because it is the root of the integrity of the life of the nation and state (Rahayu, 2007).

The fact is that in this era of globalization a country cannot isolate itself from other countries. Each country must be interconnected and dependent on other countries so that the influence caused by our inevitability can be accepted. Globalization which is dominated by advances in science and information technology has changed the pattern of relations between nations in various aspects and has made globalization a multidimensional phenomenon. Countries appear borderless, interdependent and interconnected from one country to another. In globalization between one cultural element and another, there is mutual contact and influence (interaction), in the process of this interaction problems will arise regarding the cultural change, the cultural dominance of developed countries over developing countries is getting stronger through the concept of free markets in global and regional scope, namely the weakening of their cultural values.

As an independent nation and state, Indonesia has an archipelago perspective. The Archipelago Insight is a national insight originating from Pancasila and based on the 1945 Constitution, namely the perspective and attitude of the Indonesian people towards themselves and their environment, by prioritizing national unity and regional unity in the implementation of social, national, and state life, one ideological unit, one

political unit, one economic unit, one socio-cultural unit, and one national security unit. The weakening of citizens' commitment to basic ideological, political, economic, and socio-cultural values will lead to the degradation and distortion of nationalism, which results in disruption and the weakening of national resilience.

National resilience can be seen as an alternative and a conception of national power. The conception of national strength rests on strength, especially military physical strength with power politics, while national resilience does not merely prioritize physical strength, but utilizes other strengths and powers (besides the military) that exist within a nation. National defense is essentially a conception in the regulation and implementation of prosperity and welfare as well as defense and security in the life of the nation. To be able to achieve national goals, a nation must have strength, ability, endurance, and tenacity. This is called national resilience (Ermaya, 2011). To realize national resilience in the face of globalization, defending the country as part of the instrument of mental revolution can strengthen national identity in the context of the nation (Indonesian citizens). The use of the term revolution by the President of the Republic of Indonesia Joko Widodo is not excessive because Indonesia needs a cultural breakthrough in carrying out a mental revolution, the President uses the Trisakti concept that Bung Karno once expressed in his 1963 speech: Indonesia is a politically sovereign Indonesia, an economically independent Indonesia and Indonesia with a cultural personality. President Joko Widodo's Mental Revolution is to further strengthen sovereignty, increase competitiveness and strengthen national unity, the elaboration of this program through 9 (nine) priority agendas of Nawa Cita.

**Industrial Revolution 4.0: Expectations and Challenges to Culture**

The Ministry of Industry in its book entitled “Making Indonesia 4.0” states that in facing the industrial revolution 4.0, Indonesia will build five regionally competitive manufacturing sectors, in which five sectors are food and beverages, textiles and clothing, automotive, chemical, electronic. These five sectors are very crucial in building the nation's economy. Therefore, there must be a ‘trigger’ that can be a platform to realize the five sectors that can be implemented optimally in Indonesia. This attractiveness factor will lead to the development of other factors as a series of culture as the nation's attraction, for example, food and beverage production, accommodation, transportation, and other factors that can support Indonesia's income and the five sectors that have been previously targeted by the Ministry of Finance depends on how the nation is prepared to face. When the identity of a nation has been firmly entrenched in all components of the nation's children, globalization will become a necessity that can lead to the glory of the nation. This phenomenon reinforces the assumption about the importance of the role of the young generation of Indonesia as a component of the nation to face the threat of ideological, political, economic, and socio-cultural sovereignty by shaping the character of Indonesia's young generation with a strong identity, integrity, and nationalism.

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economy. Therefore, there must be a 'trigger' that can be a platform to realize the five sectors that can be implemented optimally in Indonesia. In this case, the author gives a choice that what is appropriate and has the right to be a 'trigger' so that the five sectors can be optimized is culture. Why culture? It is because as a value system, culture can be very endemic, authentic, even original, which distinguishes one nation from another. In addition, because it is a characteristic of a nation, culture can be used as an attraction for a nation with other nations. This attractiveness factor will lead to the development of other factors as a series of culture as the nation's attraction, for example, food and beverage production, accommodation, transportation, and other factors that can support Indonesia's income and the five sectors that have been previously targeted by the Ministry of Finance.

Although in general, the concept of the industrial revolution 4.0 is to optimize the role of robots, digital devices, and other electronic devices, it does not mean that it is a threat to the development of cultural aspects in the industrial revolution era 4.0. Although it is generally acknowledged that the existence of the digitalization era, especially the initiation of the industrial revolution 4.0, can cause a domino effect where culture is rather easily marginalized, forgotten, and even considered unimportant. In addition, because culture as 'originality making' can only be made by humans, not by robots or other digital devices, it is very clear that culture is a very, very important factor and its sustainability will not be hampered by this conception. of the Industrial Revolution 4.0 (Lase, 2019).

**Young Generation and Identity as the Indonesian Nation**

The young generation is a period of transition from adolescence to young adulthood. Adolescence is a transitional period between childhood and adulthood, and they have not yet reached the stage of mental and social maturity, so they have to face conflicting emotional, psychological, and social pressures (Jain, Willander, Narayan, & Van Overstraeten, 2000). All the potential, personality, and conflicts that exist within him, making the younger generation a distinctive soul in the process of transitioning to adult humans. The tendency of the current generation of young people to think, behave, and lifestyle is instantaneous, hedonistic, and tends to lose their identity rooted in their culture.

The degradation of the quality of Indonesia's young generation is currently entering an alarming level, which is marked by a weakening of cultural identity and resilience. This weak cultural resilience is reflected in the weak ability to respond to the dynamics of change due to the demands of the times marked by the swift currents of global culture. National culture which is expected to be a catalyst in adopting universal noble values and at the same time as a filter against the entry of negative global culture, has not been able to function properly. Without an adaptive critical attitude, the adoption of a negative culture, such as consumptive, individualistic attitude, will process faster than the adoption of a positive-productive culture. The protracted multidimensional crisis has contributed to the weakening of the self-confidence and self-esteem of the younger generation, and the strengthening of dependence, even further fostering the apathy of the younger generation towards various problems of their nation. The younger generation is a generation that is ignorant of the realities that occur in society because they think it is not their duty and obligation to solve these problems. In addition, the problem of the younger generation is the depletion of the spirit of nationalism due to the weakness of the nation's ability to manage diversity (plurality) which is an objective characteristic of the Indonesian nation. In addition, Indonesian nationalism among

the younger generation has been eroded by the swift currents of globalization that have filled all dimensions of the lives of the younger generation.

Deviant behavior such as drug use, free sex, student brawls, crime, and others are very familiar with the younger generation, even they do it at a relatively young age. They adapt their urban culture in various ways such as lifestyle and behavior in dressing, hanging out, hanging out, music, consumption, and so much in the daily life of young people. It also spreads not only in the lives of young people in big cities but also in remote villages. Their behavior and lifestyle imitate and spread from various lives in the world, without them knowing the essence and meaning of what they do. All of this shows that good culture has not been internalized in their daily lives.

For this reason, it is necessary to build the character of the younger generation that follows cultural values. The existence of a nation is largely determined by its character. Only a nation that has a strong character can make itself a dignified nation and is respected by other nations. Therefore, becoming a nation of character is our desire.

**Strengthening Multicultural Education and National Identity in the Industrial Revolution Era 4.0**

In the era of the industrial revolution 4.0 as it is today, it has an impact on the development of various aspects of life in society, ranging from the economic, social, cultural, educational, and political fields. This is influenced by advances in science and technology used by humans. The current condition creates a pattern of dependence between fellow humans and the region because in the current era regional boundaries are no longer a barrier to interacting and exchanging cultures between people, groups, and regions.

Seeing these conditions as well as all the problems and challenges faced by the Indonesian people, especially in terms of education, requires education in Indonesia to continue to grow and be able to compete with other nations, where creative, innovative, and technology-oriented education is needed. One of the main problems of education in Indonesia in the era of the industrial revolution 4.0 is that multicultural education can solve various educational problems in Indonesia such as brawls, radicalism, discrimination, cultural stereotypes, tolerance, and crimes committed by school-age children. The direct impact of these problems is the erosion of national identity as the Indonesian nation.

One of the initial efforts or concepts in dealing with educational problems and challenges in Indonesia, the first is how to instill ethical values in school-age children or young Indonesians, several aspects that are considered important to pay attention to concerning ethical choices in the context of pluralism or the relationship between human. First, because the problem of social relations between human beings is an area of ethical study, namely how human attitudes treat other humans with different backgrounds. Second, from the ethical aspect itself, it emphasizes that ethics is very important because it is a solution to overcome various considerations, decisions, and moral certainty rationally and objectively about things that must be done in social situations in a good environment in the family, education and community environment.

In this case, ethics is the most important aspect, namely the realization of the younger generation who understand the concept of multicultural education, success in strengthening ethics is influenced by educational institutions, educators with their duties and responsibilities, and students with their duties and responsibilities. It is hoped that with the initial concept of ethical reform among the younger generation of Indonesia, the values of multicultural education can be well applied to minimize various educational problems in Indonesia and are

by the goals of multicultural education that emphasizes the philosophy of cultural pluralism into the education system. based on the principle of equality, mutual respect, and acceptance, and understanding and moral commitment to social justice which later can be used as the main value to be able to answer various horizontal and vertical conflicts in the world of education in that era. of the industrial revolution 4.0.

Multicultural education is very closely related to the identity of the Indonesian nation, how the application of multicultural education in life directly plays an important role in strengthening the identity of the Indonesian nation, a sense of love for the homeland, loyalty to the nation, namely the Indonesian nation. Strengthening national identity through multicultural education itself aims to create a young generation who has awareness of multicultural citizenship, as young Indonesians who are aware of the importance of national identity, equality, and human dignity, respecting diversity and diversity while still acknowledging and preserving national values. wisdom. local communities in the implementation of social, national, and state life, especially in the era of scientific and technological advancement of the industrial revolution 4.0. Through the cultivation of true multicultural education values, it is hoped that the young generation of Indonesia who is the nation's successor will be able to answer various educational challenges in the era of the industrial revolution 4.0. Forming a young generation that is creative, innovative, has character, has integrity, and upholds tolerance with the values of national identity as the Indonesian nation with all its cultural diversity.

**Reactualization and Conceptualization of Local Culture in Facing the Industrial Revolution 4.0**

Local wisdom or Local Wisdom is the result of certain people's intelligence in facing life's challenges that are obtained through life experience. This means that local wisdom is the result of the experience of certain communities that are not necessarily experienced by other communities. The values of local wisdom will be deeply rooted in the people who are part of the culture. Koentjaraningrat (1984) categorizes human culture as a forum for local wisdom for ideas, social activities, and artifacts.

The term industry 4.0 was officially born in Germany when the Hannover Fair was held in 2011 (Kagermann, Wahlster, & Helbig, 2013). The program is a German state development plan called the High-Tech Strategy 2020. This policy was chosen so that Germany is always at the forefront of manufacturing (Heng, 2014). In some countries, they also embody the concept of industry 4.0 by using different terms, such as Smart Industry, Smart Factory, Industrial Internet of Things, or Advanced Manufacturing (Prasetyo & Sutopo, 2018). Although the name is different in each country, the concept has the same goal, namely to increase the competitiveness of industries faced by the global market. Every country is competing to be a winner in the rapid development of digital technology. The wisest attitude in dealing with industrial technological advances 4.0 is to prepare and take advantage of existing opportunities. In this case, education is the starting point of preparation to produce human resources who are ready to pass the times. Re-actualization and contextualization activities are critical thinking activities. It creates and creates the power of past information to be presented to the present by taking into account the situation of time and place. Local wisdom which is rich in noble values can be mapped into several forms, including; local wisdom in the form of folklore, forms of proverbs, songs and games, forms of activities, and forms of customs. The roles and functions of local wisdom include; the preservation and preservation of human resources, the development of human resources, the

development of culture and science, as a source of trust, as a means to establish and build community integration, as an ethical and moral basis, and as a political function.

## CONCLUSIONS, RECOMMENDATION, AND LIMITATION

With our local wisdom, we adopt good values and replace our bad cultural values. Government support is needed to support the preparation of cultural change so that the community is ready to welcome the industrial revolution 4.0. We have to change our comfort zone mindset by making more use of the natural conditions around us and our strategic geographical position. Learn from other countries that do not have natural wealth like ours, but they can use it for better things.

Industrial revolution 4.0 is a phenomenon in today's society. Changes and technological advances are still possible to a point that has not been thought of by humans. The impact of technological developments needs to be addressed with optimism and a growth mindset, not a fixed mindset. Education is a system to equip and mobilize the younger generation to always be open but still master the filter of norms. Local wisdom as the character and personality of the community needs to be re-actualized and contextualized in the era of the industrial revolution 4.0. The strategy is to reread the wisdom of the past by understanding the context and meaning of the text in its day, then contextualizing it to the industrial era 4.0 and actualizing it again in everyday life. It serves to provide a moral and ethical spirit in technology.

## REFERENCES

Bottery, M. (2003). Globalization and the Educational Policy Context. In B. Davies & J. W. Burnham (Eds.), *Handbook of educational leadership and management* (pp. 155–164). London: Pearson.

Cohen, S. A., & Cohen, E. (2019). New Directions in the Sociology of Tourism. *Current Issues in Tourism*, *22*(2), 153–172. https://doi.org/10.1080/13683500.2017.1347151

Ermaya, S. (2011). *Hukum Dasar Geopolitik Dan Geostrategi : Dalam Kerangka Keutuhan NKRI*. Jakarta: Suara Bebas.

Heng, S. K. (2014). Speech by Mr. Heng Swee Keat, Minister for Education, at the MOE ExCEL Parent Support Group Conference 2014, at Suntec Convention Centre on 12 April 2014. Retrieved from moe.gov.sg website: http://www.moe.gov.sg/news/speeches/speech-by-mr-heng-swee-keat--minister-for-education--at-the-moe-excel-parent-support-group-conference-2014--at-suntec-convention-centre-on-12-april-2014

Jain, S. C., Willander, M., Narayan, J., & Van Overstraeten, R. (2000). III-nitrides: Growth, characterization, and properties. *Journal of Applied Physics*, *87*(3), 965–1006. https://doi.org/10.1063/1.371971

Kagermann, H., Wahlster, W., & Helbig, J. (2013). Securing the future of German manufacturing industry: Recommendations for Implementing the Strategic Initiative Industrie 4.0. In *Final Report of the Industrie 4.0 Working Group*.

Koentjaraningrat. (1984). *Kebudayaan Jawa*. Jakarta: Balai Pustaka.

Lase, D. (2019). Pendidikan di Era Revolusi Industri 4.0. *Jurnal Ilmiah Teologi, Pendidikan, Sains, Humaniora dan Kebudayaan*, *1*(1), 28–43.

Ministry of Foreign Affairs of Japan. (2019). Speech by Prime Minister Abe at the World Economic Forum Annual Meeting Toward a New Era of Hope-Driven Economy. Retrieved August 29, 2021, from mofa.go.jp

website: https://www.mofa.go.jp/ecm/ec/page4e_000973.html

Mohelska, H., & Sokolova, M. (2018). Management approaches for industry 4.0 – The organizational culture perspective. *Technological and Economic Development of Economy*, *24*(6), 2225–2240. https://doi.org/10.3846/tede.2018.6397

Nakamura, S., Senoh, M., Nagahama, S., Iwasa, N., Yamada, T., Matsushita, T., Sugimoto, Y. (1996). {InGaN}-Based Multi-Quantum-Well-Structure Laser Diodes. *Japanese Journal of Applied Physics*, *35*(Part 2, No. 1B), L74--L76. https://doi.org/10.1143/jjap.35.l74

Prasetyo, H., & Sutopo, W. (2018). Industri 4.0: Telaah Klasifikasi aspek dan arah perkembangan riset. *J@ti Undip: Jurnal Teknik Industri*, *13*(1), 17–26.

Rahayu, M. (2007). *Pendidikan kewarganegaraan: Perjuangan menghidupi jati diri bangsa*. Jakarta: Gramedia Widiasarana Indonesia.

Rajnai, Z., & Kocsis, I. (2018). Assessing industry 4.0 readiness of enterprises. *2018 IEEE 16th World Symposium on Applied Machine Intelligence and Informatics (SAMI)*, 000225–000230. IEEE. https://doi.org/10.1109/SAMI.2018.8324844

Rosalina, R. (2018). *Komunikasi antar Budaya dalam menjaga Harmonisasi Hubungan Antar Umat Beragama (Studi Deskriptif Kualitatif pada masyarakat kampung Kepaon Denpasar,Bali)*. UMM.

Schumacher, A., Erol, S., & Sihn, W. (2016). A Maturity Model for Assessing Industry 4.0 Readiness and Maturity of Manufacturing Enterprises. *Procedia CIRP*, *52*, 161–166. https://doi.org/10.1016/J.PROCIR.2016.07.040

Strite, S. (1992). GaN, AlN, and InN: A review. *Journal of Vacuum Science & Technology B: Microelectronics and Nanometer Structures*, *10*(4), 1237. https://doi.org/10.1116/1.585897

The Government of Japan. (2019). Technology. Retrieved August 29, 2021, from JapanGov website: https://www.japan.go.jp/technology/

Winarno, D. (2013). *Paradigma baru pendidikan kewarganegaraan : Panduan kuliah di perguruan tinggi* (3rd ed.). Jakarta: Sinar Grafika.