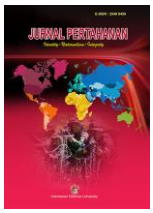
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THE ROLE OF THE AGILE LEADERSHIP MODEL AS A COMPETITIVE ADVANTAGE FOR THE FUTURE LEADER IN THE ERA OF GLOBALIZATION AND INDUSTRIAL REVOLUTION 4.0

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Abstract

The world development has entered the Globalization and Industrial Revolution 4.0 era. People are required to have new literacy skills for facing some changes in their life. The new literacy skills are data literacy, technological literacy, and human literacy, as a basic capital for taking part in social life. One of the abilities that need to be owned and has an important role in an individual's competitive advantage is the ability to lead the society. One way to develop this capability is through the application of agile leadership models. This leadership model can create a figure of leader who is calm, adaptable, innovative, always learning from experience and give feedback, helpful, smart to see opportunities, adaptive, agile, open-minded and have a high ambiguity acceptance while still maintaining the productivity and achievement of the company's main goals at the same time. The agile leadership model should be considered to be applied in the Industrial Revolution 4.0 era because the fast-changing world requires a figure of leader who is calm, adaptable, innovative, always learning from experience and give feedback and motivate to help others and think for next generation.

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INTRODUCTION

Globalization and industrial revolution 4.0 are an era that emphasizes the use and development of technology on a massive scale in various sectors of human life. This era is also known as the Digital Revolution-era or the era of Technology Disruption (Kagerman, 2013). The industrial revolution 4.0 has fundamentally changed human life. It is different from the previous stage of the industrial revolution era. Now, the 4th generation industrial revolution has a wider scale, scope, and complexity. The advancement in new technologies area that integrates the physical, digital and biological worlds has influenced all disciplines, economies, industry, and government (Schwab, 2017).

The fourth industrial revolution offers and gives some opportunities for improving many aspects of human's better life. Generally, the effect in the economic sector of the 4th revolution industry can raise the average income in the world; improve the quality of people's lives, as well (Tjandrawinata, 2016). He also said that in the health sector the effect of the 4th revolution industry will offer the chance for the developing of new drugs for the diseases which are can reduce the human date rate. On the other side, it is also affected in the education sector. The development of technology and also the easiest way for spreading information is treating and disruption for the education system.

This Industrial Revolution Era has the potential to empower every individual and society in the world. This condition arises as a result of the creation of new opportunities in economic, social and personal development. However, the 4.0 Industrial Revolution can also cause various kinds of threats. Especially, when someone does not want to develop and cannot adapt to the various changing in this era.

Based on the results of research from McKinsey in 2016 (Suwardana, 2018) that the impact of digital technology development in the 4.0 industrial revolution era in the next five (5) years there will be 52.6 million types of jobs will disappear from the earth. The results of this study give the message that every person who still wants to have self-existence in global competition must prepare mentally and skills which has a competitive advantage. The implications of the industrial revolution are like two currencies. One side has a positive value for work productivity and the efficiency of the production process. On the other side, the competition of the larger number of competitors will increase the number of jobless. Instead, it will become a serious social problem for the pillar of stability a country's politics or economy.

For awareness and accepting the change as a necessity of life must be followed by preparing and readiness to face these changes by developing self and increasing self-competency through the synergy of the industrial revolution 4.0 with the mental revolution.

Nowadays, people in the Industrial Revolution 4.0 era could not survive if they only live on the basic old literacy capital ways, they are reading, writing and mathematics ability. However, a human must be able to master three main literacy competencies, namely:

1. Data Literacy: the ability to read, analyze, and use information (big data) in the digital world.
2. Technology literacy: the ability to understand the workings of machines and technology applications (coding/programming, artificial intelligence, and engineering principles).
3. Human literacy: ability to communicate, collaborate, think critically, creatively and innovatively.

The human literacy ability is the skills of an individual to lead, teamwork, cultural agility, and entrepreneurship. Based on the description, one of the human competitive in the Industrial Revolution 4.0 era is leadership skills. Mulyasa (Mulyasa, 2004) stated that leadership is defined as an activity to influence people against the achievement of organizational goals. While leadership according to Hasibuan

(Hasibuan, 2010) is the way a leader influences the behavior of subordinates, so they want to work together and work productively to achieve organizational goals. In a study conducted by Pramesti and Dedi (Paramesti, 2018) about millennial leadership, the result of their research found that in the millennial era, the current (modern) ideal model of leadership is needed to be able to adapt for facing the era's developments. This is because in the millennial era every part of human life has been affected by modernization for development to the new configuration.

The research that conducted by the author has similarity with the previous research, it is about leadership theory in the current time but in this research focus to the role of specific leadership model in the 4.0 industrial revolution era. In this context, one of the leadership models that are appropriate to be applied by leaders in this era is the agile leadership model.

The agile leadership model is a model of leadership that has characteristics of fast, responsive, decisions maker, risk-taker, dealing with crises, and leading. The figure of an agile leader will be very adaptive in dealing with everything that happens in their environment and society. The agile leader appropriate to apply in the industrial revolution 4.0 era.

Based on the explanation above the authors consider that is needed a study to answer the question of how is the role of the agile leadership model as a competitive advantage for the future leader in the era of globalization and industrial revolution 4.0. Therefore, this article will examine about the role of the agile leadership model as a competitive advantage for the future leader in globalization and the industrial revolution 4.0 era.

THEORETICAL FRAMEWORK

Globalization and Industrial Revolution 4.0

The concept of globalization is a term that has a relationship with increasing interconnectedness and dependence between nations and between people throughout the world through trade, investment, travel, popular culture, and other forms of interaction so that the borders of a country become increasingly narrow. The era of globalization is marked by the rapid development of science and technology that easier to maintain activities ranging from education, economy, development and so on, so that the boundaries between regions and countries that were originally large, become smaller due to the development of technology and science (Febryanto, 2017).

In the beginning, the concept of the Industrial Revolution 4.0 was released by the Germany government to promote computerization of manufacturing in their country. German Chancellor Angela Merkel (Merkel, 2014) believes that Industry 4.0 is a comprehensive transformation effort from all aspects of production in the industry through the merger of digital and internet technology with conventional industries. Meanwhile, according to Kagermann (Kagermann, Wahlster, & Helbig, 2013), the Industrial Revolution 4.0 is an integration of the Cyber-Physical System (CPS) and the Internet of Things (IoT), and the Internet of Services (IoS) into industrial processes including manufacturing and logistics and other processes. According to Lee (Lee, 2008), this merging process can be realized through integration between physical and computational processes (a combination of computer and network technology). Furthermore, Hermann (Hermann, Pentek, & Otto, 2016) added that Industry 4.0 is a term to refer to a set of technology and value chain organizations in the form of a smart factory which is a modular factory that implements CPS, IoT and IoS technologies in monitoring the physical process of production then displays it virtually and decentralizes decision making.

According to Hassim (2016) in Mahardi (Mahardi, D., dan Taher, 2018), the Industrial Revolution 4.0 is marked by the emergence of supercomputers, smart

robots, unmanned vehicles, cloud computing, big data systems, genetic engineering and neurotechnology development (optimize functions of human brains). The sectors are influenced by new technological advances include (1) artificial intelligence robots, (2) Nanotechnology, (3) biotechnology, and (4) quantum computer, (5) blockchain (such as bitcoin), (6) internet of things, and (7) 3D printers.

The Industrial Revolution development stage shown in Figure 1.

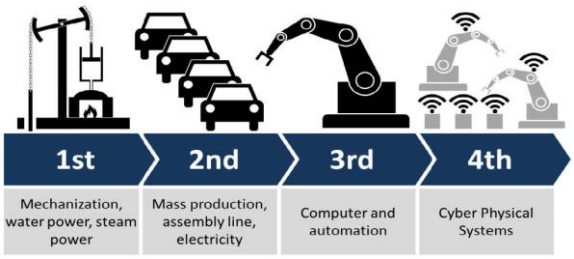


Figure 1: Development of the World Industry starting from the First, Second, Third to the Fourth Industrial Revolution
Source: Agustina, 2017

According to Schwab (Schwab, 2017), a famous economist from Germany also the Founder and Executive Chair of the World Economic Forum (WEF) who introduced the concept of the Industrial Revolution 4.0 in his book entitled "The Fourth Industrial Revolution", explains that the world has experienced four industrial revolutions. The first industrial revolution or Industrial Revolution 1.0 was marked by the invention of a steam engine to support production engines, trains, and sailing ships. Various work equipment that originally depended on human and animal
power was later replaced by steam engine power. The impact, production can be multiplied and distributed to various regions more massively. However, this industrial revolution also had a negative impact in the form of mass unemployment.

Furthermore, the Industrial Revolution 2.0 was marked by the discovery of the concept of electrical energy and the concept of division of labor to produce large quantities of products in the early 19th century. The emergence of electrical energy prompted scientists to find various other technologies such as lights, telegraph machines, and conveyor technology. The development of this industrial technology continues until it reaches the stage of the Industrial Revolution 3.0 which is marked by the birth of information technology and production processes that can be controlled automatically in the early 20th century. In this era, industrial machinery is no longer controlled by manpower but uses a Programmable Logic Controller (PLC) or computer-based automation system. As a result, production costs are becoming increasingly cheap. Information technology is also increasingly advanced including camera technology that is integrated with mobile phones and the development of the creative industry in the music world with the discovery of digital music.

Finally, the last stage of the industrial revolution is the birth of digital technology which has a massive impact on human life. The latest industrial revolution or the Industrial Revolution 4.0 is encouraging people to implement automation systems in all production activities. The increasingly massive internet technology not only connects millions of people around the world but has also become the basis for online trade. In the transportation area, it develops into online transportation businesses such as Gojek, Uber, and Grab. It shows the integration of human activities with information technology development. Nowadays business also develops in that ways, online market places grow quickly. In Indonesia online markets that being favorite such as Bukalapak, Tokopedia, Olx, Shopee, Lazada, etc. It shows that the development of the Industrial Revolution 4.0 affected the trade and economic sectors. Furthermore, the development of autonomous vehicle technology, drones, social media applications, biotechnology, and nanotechnology has also increasingly confirmed that the world and human life have fundamentally changed due to the emergence of the 4.0 Industrial Revolution

era.

Hermann et al (Hermann et al., 2016) added that there were four design principles in the Industrial Revolution 4.0 era, they are:

1. Interconnection: the ability of machines, devices, sensors, and humans to connect and communicate with each other through the Internet of Things (IoT) or the Internet of People (IoP). This principle requires collaboration, standards, and safety in its implementation.
2. Information Transparency: the ability of information systems to create virtual copies of the physical world by enriching digital models with sensor data including data analysis and information provision.
3. Technical Assistance, which is includes: (a) the ability of the assistance system to support people by consciously combining and evaluating information to make appropriate decisions and solve urgent problems in a short period of time; and (b) the ability of the system to support humans by performing various tasks that are unpleasant, too tiring, or insecure. Both of these abilities include virtual and physical assistance.
4. Decentralized Decisions: the ability of virtual physical systems to make their own decisions and carry out tasks as effectively and efficiently as possible.

Simply stated, the four principles of the Industrial Revolution 4.0 above can be described in Figure 2.

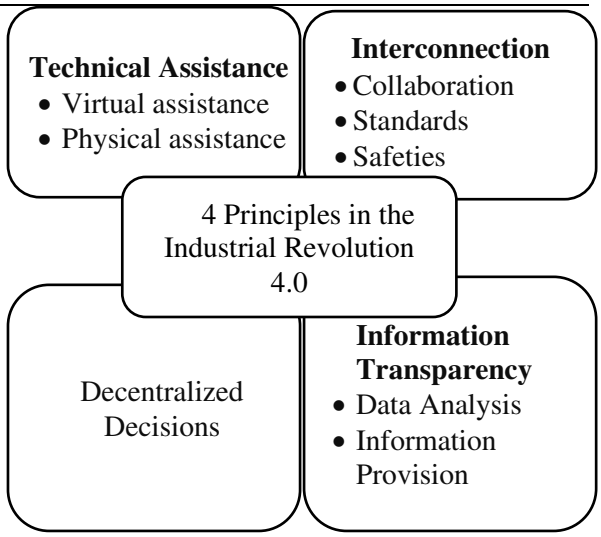


Figure 2: Four Basic Principles of the Industrial Revolution 4.0
Source: Hermann et al., 2016

Agile Leadership

The agile leadership model is a model of leadership that has characteristics of fast, responsive, decisions maker, risk-taker, dealing with crises, and leading. The figure of an agile leader will be very adaptive in dealing with everything happens in their environment and society. The agile leader appropriate to apply in the industrial revolution 4.0 era. The leader focuses on how to maximize productivity and teamwork, despite all the changes faced.

Agile leadership requires an individual who has six main characteristics, they are: calm, adaptable, innovative, always learning from experience and give feedback, and not hesitate to help build others. The first characteristic of an agile leader is calm and adaptability to change, pressure, and crisis. The agile leader must be able to remain calm in all situations so they can automatically calm his subordinates who are also under the same work pressure. This calm attitude will also help the agile leader in adapting so they can make the right decision in responding to all situations. Also, agile leadership requires leaders to have innovation in finding solutions to deal with changes, crises, and pressures that can come at any time. Agile leaders are leaders who are full of innovation. So when there is a change, the agile leader will not only stand stuck and let the company or its organization be rolled up in the flow of changes.

A further characteristic of agile leaders is to always learn from experience and give feedback. Experience is the best teacher for a leader, but a leader also should not be fixated on his own experiences and thoughts. A leader needs to gather feedback from people around him for consideration.

Furthermore, another characteristic of agile leaders is that they do not hesitate to help build others. This includes the ability to motivate and inspire the people they lead.

Competitive Advantage

Competitive Advantage is an advantage over competitors obtained by offering greater value to consumers than competitors' bids (Kotler, 2008). According to David (David, 2006), competitive advantage can be described as a situation where when a company can do something and other companies cannot, or have something that is desired by its competitors. Competitive advantage has two main characteristics they are durability and imitability. Durability is the resistance of the company's core competencies from obsolescence, while imitability is the durability of the company's core competencies from competitors who want to emulate the product being produced (Hunger, 2004).

To achieve an ideal and sustainable competitive advantage, a company must be able to adapt to the trends and changes in the company's external environment continuously, both through increasing the ability, competence, and internal resources of the company to get the maximum benefit from the products produced (David, 2006).

RESEARCH METHODS

This article used a qualitative research method with a systematic review approach of Indonesian literature which is relevant to the research topic. According to Camey (2002), a systematic review approach is a literature study approach that aims to identify, collect, critically assess and synthesize the results of previous studies that are relevant to a particular topic. The results of this synthesis are used specifically to describe and discuss the problems examined in this article. This systematic review process began by searching for relevant literature with a discussion of the role of agile leadership in the Industrial Revolution 4.0 era.

The search started by searching books and journals online through a search engine, they are Researchgate, Google and Google Scholar. The search results show 28 sources are consisting of books, journals, websites that discuss the agile leadership model and the Industrial Revolution 4.0 era.

After collecting data that was found from some sources, the next stage is the data analysis process. The data was analyzed by using qualitative data analysis technique. The model data analysis that used in this research is the interactive model data analysis. The process of interactive model data analysis included condensation, display, and drawing the conclusion/verification. (Miles, Huberman, & Saldaña, 2014).

Furthermore, data is performed to determine the data sources that are truly relevant to the research topic. Based on the results of data reduction, obtained 8 books, 7 research journals, 1 thesis and 6 websites that are relevant to the research topic. All sources have been used as references in writing this article.

RESULTS AND DISCUSSION

Globalization and the Industrial Revolution 4.0 have many fundamental changes in human life. Both of these eras contribute to the latest technologies, automation, digitalization and creating standardization in several sectors of human life. To overcome the fundamental changes in the structure of life, humans need to develop a capability that can be a competitive advantage for facing the competition with technology and machinery that have gradually shifted the position of humans in the industrial world.

One of the abilities that humans can develop for facing significant developments in the Globalization and the Industrial Revolution 4.0 era is leadership ability. Based on studies conducted by Harvard, the Carnegie Foundation, and the Stanford Research Center, there will be a shift in the concept of leadership in the current digital era into the future. In 2020 estimated that

the characteristics of leaders needed in the industrial world are the leader who has skills such as complex problem solving, critical thinking, creativity, people management, coordination, emotional intelligence, judgment and decision making, service orientation, negotiation, and cognitive flexibility (Syahadah, 2018). Leadership is one type of skill in people management so that a leader who masters the right leadership model is needed by all industrial companies for facing some changes in the Globalization and Industrial Revolution 4.0 era.

In this context, one of the leadership models that are appropriate to develop the characteristics of leaders needed in industry 4.0 is the agile leadership model. The agile leadership model which is a model of leadership that has characteristic of fast, responsive, decisions maker, risk-taker, dealing with crises, and leading. Those explain that the leader can make decisions quickly. The reason is by faster-moving it possible to catch many opportunities and decreasing some problems could appear.

The figure of an agile leader will be very adaptive in dealing with everything happens in their environment and society. The agile leader appropriate to apply in the industrial revolution 4.0 era. The leader focuses on how to maximize productivity and teamwork, despite all the changes faced. This explains that a leader who can unite the team and give clear direction is a very important part.

This is because the agile leadership model always strives to create leaders who are having the characteristic of responsive in making decisions, dealing with crises, and leading. But it also seeks to create a leader who is adaptive, innovative, and flexible in doing a job. On the other hand, agile leaders are expected to continue to develop while still prioritizing productivity and achievement of company goals. So that agile leaders can be described as intelligent leaders who see opportunities, are quick to adapt, and are agile in facilitating change. According to Jamil Azzaini, agile leaders are leaders who are open-minded and have ambiguity acceptance, which is willing to accept obscurity. This ambiguity could mean unclear future business prospects, unclear company management systems, or unclear product manuals issued by the company. This will then be simplified, improved, and refined by an agile leader to accommodate change (Irendy, 2017).

In the fourth industrial revolution era that made everything modernized the role of agile leadership model is very important, because the leader's basic character of the agile leadership model is appropriate to be applied in the terminal condition of the 4.0 industrial revolution era, considering all aspects of life that are centered on the four principles of progress including technical assistants, interconnection, decentralized Decision, and transparency information.

CONCLUSIONS, RECOMMENDATION, AND LIMITATION

Globalization and the Industrial Revolution 4.0 have many fundamental changes in human life as a result of the development of information and communication technology, as well as rapid and drastic science. So we need a character of Human Resources who can face all forms of change in the globalization and industrial revolution era. One of the required characters is in the agile leadership model. This leadership model should be considered to be applied in the Industrial Revolution 4.0 era because the fast-changing world requires a figure of leader who is calm, adaptable, innovative, always learning from experience and give feedback and motivate to help others and think for next generation. On the other hand, the agile leadership model can create intelligent leaders who can see opportunities, quick to adapt, fast in facilitating change, open-minded and have high ambiguity acceptance. Besides, agile leaders can also continue to grow while still maintaining the productivity and achievement of the company's main goals at the same time.

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