Migration Letters

Volume: 20, No: 7, pp. 212-226

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online) www.migrationletters.com

Era 4.0 Educational Leadership Model to Support National Defence

Hikmat Zakky Almubaroq¹

Abstract

This study analyzes the 4.0 era educational leadership model to support national resilience. The method used is the 4D model developed by Thiagarajan, Semmel (1974) which consists of 4 main stages, namely: Define, Design, Develop, and Disseminate. In the educational leadership model, the research subjects were school principals from the Jakarta, Bandung and Jogjakarta areas as many as 48 people in a workshop held at the Pondok Karya Foundation, the Alqomariah Islamic boarding school, Gununghlu District, West Bandung Regency. The results showed that the educational leadership model in the 4.0 era to support national resilience needed to be formulated into a model called the HEBAT leadership model, namely Heartily: A genuine love for the world of education, Educated: Holistic thinking integral, comprehensive, Equipped with 3L (data literacy, technology literacy and HR literacy), Brave: Courage to defend the country based on nationalism, Author: Ability to write, design educational scenarios, Tolerant: Having Pancasila Intelligence (the essence of Pancasila is Tolerance).

Keywords: Educational Leadership Era 4.0, National Resilience, 4D Model.

INTRODUCTION

Globalization is one of the factors that continues to erode the national and cultural values of the Indonesian people. The norms of the Indonesian nation have been assimilated with the culture and values of other countries, the impact is felt the most by the younger generations. The rapid growth of information technology in this era of globalization is also the biggest factor in the fading of national values. This development can lead to indifference and apathy in Indonesian society towards development and progress, as well as the unity and integrity of Indonesia as a nation and state (Arokiasamy et al., 2016).

The global challenge in the era of the industrial revolution 4.0 is the interaction between cultures, this can have a positive influence but can also have a negative influence, such as the waning sense of nationalism and defending the country among young people because they feel they are citizens of the world and not citizens of a country. This affects the respect for cultural and language values, the values of social solidarity, kinship, love for the motherland, as well as various behaviors that are inconsistent with the values, norms and views of the Indonesian people. Including the value of the nation's ideology. This condition is indicated, among other things, by the appearance of symptoms of a decreasing quality of using the Indonesian language, a decrease in love for domestic products, and a decrease in tolerance and tolerance in society, giving rise to the potential for disputes and conflicts between citizens (Oberer & Erkollar, 2018). Global phenomena

_

 $^{^{\}rm 1}$ Indonesia Defence University, Indonesia, zakkyauri
94@gmail.com

have implications for national issues, because globalization, especially cultural globalization (cultural globalization) apart from creating homogenization, also produces new understandings about culture, nationality, self-view, what must be done as citizens, how citizens are involved, and many other aspects. from social life (Bogotch et al., 2017). The process of globalization can weaken or undermine forms of a nation's cultural identity.

The decline of national values in the life of society, nation and state. This has an impact on reducing Indonesia's national resilience in the field of ideology. Increasing issues of SARA, social conflict, and decreasing tolerance and democratic principles are indicators of declining national resilience in the field of ideology (Fitriyah & Suliyadi, 2018). According to the results of measuring the level of national resilience in one gatra, namely the ideological gatra in 2018 which was carried out by the National Resilience Measurement Laboratory (Labkurtannas RI) in Lemhannas RI. Labkurtannas RI has received an international award in July 2018 as an agency that has creatively utilized Geographic Information System (GIS) technology in order to improve the quality of life of the community. The measurement of the level of national resilience carried out by Labkurtannas RI uses 108 variables, 821 indicators and 2,506 parameters, with the color that appears to represent the level of national resilience. The position of Gatra Ideology is still in a less formidable position. The main cause is the vulnerability to the resilience of tolerance variables between community groups, equal rights in social life, social solidarity, equality and kinship (Guzmán et al., 2020).

There are five important elements that have a less formidable position, namely Geography, Natural Resources, Ideology, Politics, and Socio-Cultural. Based on the ranking, it turns out that the Ideology Gatra (IKN = 2.06) is in the lowest ranking, followed by the Socio-Cultural Gatra (IKN = 2.17), Politics (IKN = 2.43), Geography (IKN = 2.56) and Sources of Natural Wealth (IKN = 2.58) (Labkurtannas data 2018). From the results of the assessment and evaluation conducted by Lemhannas as one of the institutions responsible for Indonesia's national security, it can be concluded that Indonesia's national security is still weak. Based on this analysis, national resilience is weakened due to the challenges of the 4.0 revolution era.

The Industrial Revolution 4.0 is often referred to as the Disruptive Innovation Era or abbreviated as the Disruption Era. It is termed disruptive because of the shift in business models from the analog era to the digital era with digital innovations that make things easier. Disruption era which means disruption or chaos (Jedaman et al., 2018). Forcing changes in the organizational aspects of education such as management services, leadership, technology, infrastructure, curriculum, human resources, financing, education relations with the community, and other technical aspects. Disruption itself means a change that is fundamental, basic, to the roots so that the impact is also very broad and deep. Lately we have been very disturbed by this term. A term that is very busy in the 21st century because many daily practices have changed with the presence of technology that has replaced the role of humans massively (Kariyadi & Suprapto, 2017).

Disruption is innovative disruption (innovative disruption), as Christensen (in Raman & Rathakrishnan, 2019) stated. This innovative disturbance can also be said as a disturbance from innovation or innovation that disrupts and threatens the existence of an institution that already existed. This is a new business effort out of difficulties and limitations by creating an innovation that is different from the innovations that are being carried out by other institutions.

These challenges are a challenge for educational leaders, especially school principals, in carrying out disruptive era-based school governance. Therefore, managing education for educational leaders in Indonesia requires special expertise and requires an authentic and distinctive educational leadership model, namely an educational leadership model that cannot be compared and applied in any country in the world. This educational leadership

model must be able to manage at least three basic abilities that must be possessed by educational leaders to be able to manage and take part in product of knowledge contests in the international world. First, data literacy, namely the ability to read analysis, and use information (Big Data) in the digital world. Second, technological literacy, namely the ability to understand how machines work, technology applications (Coding, Artificial Intelligence, Engineering, Principles, and Cyber-Security), and biotechnology. Third, HR literacy which includes the ability to understand humanity, effective communication, creativity and design (Sunarsi et al., 2020).

This is in line with the preliminary study conducted by researchers through interviews with educational leaders, especially school principals. they explained some of the challenges faced by educational leaders in facing the 4.0 revolution era, including: Utilization of digital technology in the learning process known as a cyber system (cyber system) must be able to make the learning process take place continuously without space limits and without time limits, Availability of educational infrastructure technology-based that is not yet qualified, schools must be able to create and implement a curriculum that can produce quality graduates who are able to compete with development demands. Improving the quality of educators is a priority so that they are able to adapt to the challenges of the Revolution 4.0 era, especially information and communication technology (ICT) literacy, this must done so that the teacher is not left behind by students. Information and communication technology literacy is the basis that must be mastered in order to be able to produce students who are ready to compete in facing the industrial revolution 4.0 (Tri et al., 2021).

Most of these challenges are problems and challenges that arise in learning activities and the teacher's role as an important actor in teaching and learning activities. The different learning in education in the 4.0 era is mostly ICT-based education. Seddiky and Ara (2015) revealed that ICT helps world-class educational processes. The application of egovernance in the education sector has encouraged innovation (Gunal, 2019).

The biggest challenge also arises for the school principal as the top leader who is responsible for school management activities. The management required in the 4.0 revolution era is certainly different from usual. In the 4.0 era, management activities place more emphasis on electronic technological literacy or often referred to as emanagement. E-management in the field of education has not been found specifically in research in Indonesia or in international articles (Oztemel & Gursev, 2020). Emanagement in this concept is taken from the concept of E-Government which has four dimensions in relation to governmental functions and activities, namely: E-Services (sending information electronically/online), E-Management (using ICT to improve management and communication in internal or external government structures), E-Democracy (using ICT to gain citizen participation in democratic activities), and E-Commerce (online transactions of needs and servicesa) (Summers et al., 2019). Heeks suggested that the focus of E-Government is e-administration, or in the terminology of this research, e-management, e-services and e-society. Thus, e-management is an effort to organize schools using ICT to make it more effective, efficient and accountable with clear references.

E-management is an ICT application that is mutually integrated between each element in a school system, namely curriculum, students, educators and education staff, infrastructure, finance, school partnerships with the community (Dung et al., 2021). E-management is designed to further optimize services and improve quality and maintain it in the long term by using the power of information communication technology (ICT). Leitch and Davis (2001) information system is "a system within an organization that meets the needs of daily transaction processing, supports operations, is managerial and strategic activities of an organization and provides certain external parties with the necessary reports. The Information System has physical components such as: 1)

Computer hardware, 2) Computer software, 3) Databases, 4) Procedures, 5) Personnel for operations management (HR).

Research on e-management is aimed at the issue of system efficiency and effectiveness and accountability, such as research conducted by Nair, Markauskaite, Diaz and Tozina (in Khalifa, 2020). However, the efficiency, effectiveness and accountability of implementing school governance shows the quality that is presented in its substance. This is at least obtained from a measure of the effectiveness of school management, namely the achievement of educational outcomes according to the targets set.

Research conducted by Gunawan, A., Wahdan, MA, Herik, HJV den, Kornarius, YP, & Walle, BV de. (in Martin, 2018) proved that, E-management allows organizational governance to be supported by up-to-date and continuous information, can be monitored at any time, and managers get early warning if abnormalities are found. Thus management can know the performance of the organization effectively and efficiently (Tapio et al., 2019). Another advantage of e-management is that it can reduce error times, save time and money, improve service quality, increase economic competition, and improve. In the search for the author, several previous studies were found relating to educational leadership and education in the era of the industrial revolution 4.0 but have not been found that link this to national security (Dos Santos & Benneworth, 2019). Based on the background above, the author tries to examine and analyze a good Educational Leadership model to create an Education System that can answer future challenges and can contribute to increasing Indonesia's national resilience in the 4.0 era. then this research the researchers formulated with the title Educational Leadership Model Era 4.0 to Support National Resilience (Purwanto & Sulaiman, 2023).

METHOD

Research design

The method used in this study is the Research and Development (R&D) method using the 4-D model development. The 4-D (Four D) development model is a learning device development model. This model was developed by Thiagarajan, Semmel, and Semmel (in Reschovsky & Saiontz-Martinez, 2018). The 4D development model consists of 4 main stages, namely: Define, Design, Develop and Disseminate. This method and model were chosen because it aims to produce a model of Educational Leadership in the 4.0 era that supports national resilience.

As revealed by Sugiyono, research and development methods (Research and Development) are research methods used to produce certain products and test the effectiveness of these products. The research design used in this research is the 4-D model development research design (Four D Models) according to Thiagarajani. This includes 4 stages, namely the stages of defining, designing, developing and disseminating (Bibby & Dehe, 2018).

Data collection

In describing the Era 4.0 Educational Leadership Model to Support National Resilience, the data collection used was through observation through questionnaires, documentation studies, workshops and in-depth interviews.

In this Research and Development data collection is also carried out with a qualitative approach which must use objective truth. Therefore, the validity of the data in a qualitative research is very important. Through the validity of the data, the credibility of qualitative research can be achieved. The validity of the data in this study was carried out by triangulation. Triangulation is a technique for checking the validity of data that utilizes something other than the data for checking purposes or as a comparison of the data (Subarjo, 2018).

Data processing

After the data is considered perfect, the researcher performs data processing, namely checking the correctness of the data, compiling the data, carrying out the coding, classifying the data, correcting unclear interview answers. This stage is done to facilitate the analysis phase. After the data in the form of transcripts from interviews and observations, as well as pictures, photographs, subject diaries and so on were considered complete and perfect, the researcher conducted data analysis (Rachmawati & Kim, 2022). In essence, data analysis is an activity to give meaning or make sense of data by arranging, sorting, grouping, coding or marking, and categorizing it into parts based on certain groupings so that a finding is obtained from the formulation of the problem proposed.

RESULTS AND DISCUSSION

Research Findings

An overview of educational leadership in the 4.0 era which can support national resilience

Educational Leadership Era 4.0 is leadership that has soft skills and leaders who have characteristics of ways of thinking with critical power and reasoning using common sense, and being able to relate well between people. While educational leaders mean leaders who are able to provide motivation and can facilitate every education stakeholder, especially students. (Exp. Lemhannas. 1)

Leadership in the 4.0 era is a person's ability to lead and is also required to master all technology with the most modern system. (KS1. KBB)

Educational leadership in the 4.0 era is a leader in educational institutions who are able to keep up with technological developments, leaders who must have the skills to influence, encourage, guide other people in these institutions for the implementation of education and teaching in these institutions. (KS2. KBB)

Based on the interview results above, it can be concluded that educational leadership in the 4.0 era is the ability of a leader to manage, deal with and maximize all existing resources in the 4.0 era with all the skills and abilities demanded in that era and have openness to new things in the future. Leadership has an important role in changing an organization, era 4.0 is an era where there are many disruptions, which means there are many shifts or changes, both in terms of technology-based systems or even the mindset and habits of humans.

Researchers classify educational leadership in the 4.0 era through 2 dimensions which are translated into several indicators. Where leadership is able to face challenges in the 4.0 era and can become future leaders Ronda, D. (2019): Future Leaders and challenges of the 4.0 era. Future Leaders or future leaders can be described in several indicators, namely 4CS Casing, Communicating, Competences, Contribution and Sample. (Satori & Komariah, 2015) While the challenges of the 4.0 era are classified into several indicators, namely data literacy, technology literacy and human resource literacy. An overview of educational leadership in the 4.0 era can be seen in the following figure:

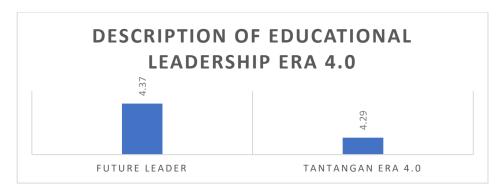


Figure 1. Description of Educational Leadership Era 4.0

Source: Statistical Data Analysis by Researchers

Based on the graph above, it can be seen that the variables of national resilience are translated into 2 dimensions, namely future leaders and challenges of the 4.0 era. Where both can be measured and the achievement is 4.37 for the future leader dimension this shows that the achievement of the 4CS indicators Casing, Communicating, Competences, Contribution and Sample. A more detailed description of each indicator from the two dimensions will be explained in the following graph:



Figure 2. Description of Future Leader Indicators in Educational Leadership Era 4.0

Source: Statistical Data Analysis by Researchers

In the graph above, it can be seen by calculating through the WMS to see the trend rate in a condition, namely educational leadership in the 4.0 era based on this future leader dimension, it can be seen that the average achievement of future leader indicators in era 4.0 leadership can be measured based on 5 indicators, namely 4CS (Casing, Communicating, Competences, Contribution and Sample).

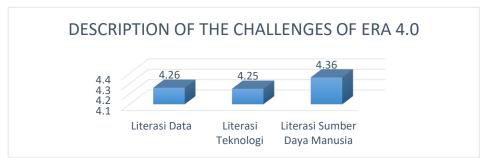


Figure 3. Description of Era 4.0 Challenge Indicators in Education Leadership Era 4.0

In order to be able to measure the achievement of the challenges of the 4.0 era, there are several indicators that serve as benchmarks, namely 1) data literacy; 2) technological literacy; 3) human resource literacy.

Overview of Indonesia's National Resilience in Era 4.0

Astagatra can be described in several indicators, namely trigata (geography, natural wealth, population) and pancagata (ideology, politics, economy, socio-culture, and defense and security). Meanwhile, national insight is classified into several indicators, namely respect for human dignity and worth as creatures of God Almighty; A joint determination to live a free, united and united national life; Love for homeland and nation; Democracy or popular sovereignty; Social solidarity; Just-prosperous society.



Figure 4. Calculation Results Questionnaire Description of Indonesia's National Resilience

Based on the graph above, it can be seen that the variables of national resilience are translated into 2 dimensions, namely astagatra and national insight. Where both can be measured and the achievement is 4.36 for the astagatra dimension.

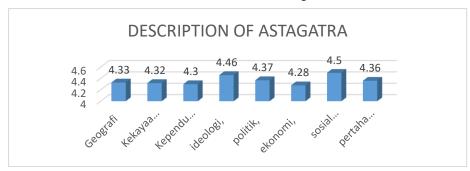


Figure 5. Description of National Resilience based on Astagatra

Astagatra namely Gatra which means elements and Asta which means eight, what is meant by Astagatra Indonesian National Defense are the elements or aspects that support the national security of the Indonesian state which consist of eight aspects in total with three aspects of natural life and five aspects of social life.

A leadership model in the 4.0 era that can support national resilience

In making a model of educational leadership to support national resilience, researchers took 4 stages, namely define, design, develop, and dissimination.

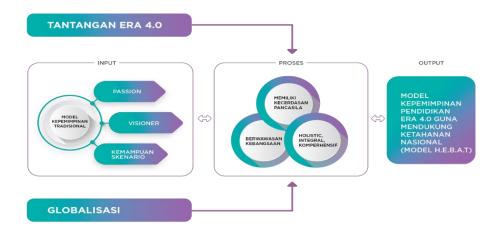


Figure 6. Design of the Era 4.0 Educational Leadership Model to Build National Resilience

Based on the presentation and sharing of concepts in educational leadership, especially educational leadership in the 4.0 era, the following is a design model for the 4.0 era educational leadership designed and developed based on the results of research analysis

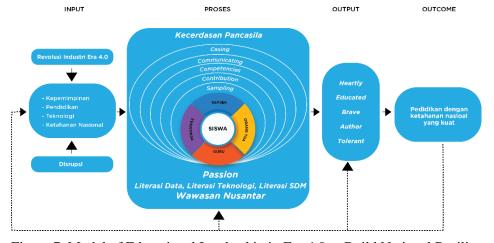


Figure 7. Model of Educational Leadership in Era 4.0 to Build National Resilience

Source: Model Design by Researchers

In this study, only limited dissemination was carried out, namely by disseminating and promoting the final product of the 4.0 era Educational Leadership model which supports limited national resilience to school principals, teachers and stakeholders of educational foundations in the cities of West Bandung, Jakarta and Yogyakarta which are gathered at one training workshop location. in West Bandung Regency which can be proven by documentation such as the following:



Figure 8. Documentation of the Dissemination of the Era 4.0 Educational Leadership Model to Build National Resilience

In addition to the activities above, the final stage of the dissemination of researchers is through scientific publications in the International Journal of Public Sector Performance Management. With the title "The Role Education Leadership to Support National Resilience: An Overview of Era 4.0.

The Role of the 4.0 era Educational Leadership Model in Supporting National Resilience

After measuring the role of the HEBAT model indicator in educational leadership in the 4.0 era, the next step is to measure the role of the HEBAT model as a leadership model in the 4.0 era for national security. This measurement is made by researchers in stating how important the role of the HEBAT model is in national security by providing choices with a Likert scale of 1-5 (not important-very important). The results of these measurements can be seen in the following table:

Table 1. The Role of the Era 4.0 Leadership Model (HEBAT) in supporting Indonesia's National resilience

Indicator/ Size	Very unimportant	Not important	Quite important	Important	Very important
Heartily	8.9%	1.8%	5.8%	23.7%	59.8%
Educated	8.9%	0.9%	5.4%	22.8%	62.1%
brave	7.2%	1.4%	6.8%	23.5%	61.1%
Author	7.4%	2.3%	13.9%	22.2%	54.2%
tolerant	6.9%	2.3%	6.0%	29.4%	55.5%

Based on the table above, it can be concluded that the average role of the leadership model with the five indicators has a very important role with an average score of above 50%. However, judging from each indicator, Educated has a very important role with the highest score of 62.1% compared to the other four indicators. Meanwhile, the Author indicator with the score of 54.2% gave the lowest role.

Discussion

Overview of Era 4.0 Leadership in Supporting National Resilience

Leadership is very important in organizations to be able to promote a culture of innovation. As a result, leaders have an important role to play in the paradigm shift towards Industry 4.0) and require far-reaching strategic decision-making at all levels of the organization. In this context, future leaders must be more responsive to understand the patterns and signals shown by network data (Choi et al., 2022). They must foresee the joint direction of various agents in areas of constant growth, change and opportunity. These leaders need to cultivate connected organizations and networks to understand knowledge networks and organizational network learning.

Leadership that is able to face challenges in the 4.0 era and can become future leaders Future Leaders and challenges of the 4.0 era. Future Leaders or future leaders can be described in several indicators, namely 4CS Casing, Communicating, Competences, Contribution and Sample (Sarwandi et al., 2019). While the challenges of the 4.0 era are classified into several indicators, namely data literacy, technology literacy and human resource literacy.

An educational leader in the 4.0 era must have good Casing/Performance. Casing is small but the first to be reckoned with. Furthermore, communication is the key of a leader, where the leader must be able to appear in front of many people and be able to communicate something both internally and externally to the organization. In a company or organization a leader is a communicator between colleagues and subordinates in a company, because as a leader you must be able to communicate properly and correctly

with your subordinates. A leader must be able to influence his subordinates to make changes in realizing the company's vision and mission and achieving company goals (Carayannis & Morawska-Jancelewicz, 2022).

An overview of Indonesia's national resilience in the 4.0 era

In essence, National Resilience is a condition as well as a conception of national development in achieving the goals and ideals of the nation. As a condition, National Resilience is a dynamic condition of the nation that contains the resilience and tenacity and the ability of the nation to develop national strength in facing all kinds and forms of threats, challenges, obstacles and disturbances both coming from within and outside, which threaten and endanger integrity, identity and survival of the nation and state. As a condition, National Resilience is a condition of national life that must be realized and fostered early, continuously, integrated and synergistically (Rozi et al., 2021).

Friedland explains that at the national level, resilience is the ability of people to survive difficulties and crises in various fields by implementing changes and adaptations without destroying core values and institutions or characteristics of society. However, the level of national resilience can be seen in two different ways, on the one hand national resilience reveals the ability of the people to withstand difficulties with the cultural values of society. On the other hand, such resilience might be reflected in readjusting and adapting in new and innovative ways, such as behavioral adaptations that help close the gap between current tensions and societal needs and capabilities (AlMaadeed & Ponnamma, 2020).

In today's modern world, changes will always occur along with the development of human reasoning and curiosity. Technological developments will be increasingly massive and touch into all aspects of human life. In line with these technological developments, has extensively reviewed and discussed the digital revolution, the communications revolution, and the singularity of technology. Furthermore, it is said that the world has entered the third wave, where humans are already in the information age.

In responding to technological developments in the era of the industrial revolution 4.0, a leadership figure is needed who is able to bring about changes in people's lives both in the economic, political, socio-cultural and defense and security fields. In line with these changes, Scharmer (2021) said that currently leaders must have an open mind, an open heart, and an open will. An open mind in the sense of a willingness to acknowledge and accept the existence of different opinions and points of view. Then the heart is open (open heart) in the sense of a willingness to meet everyone with empathy and put yourself in the perspective of other people and share their feelings. Leaders must open their minds and feelings towards the increasingly rapid technological developments and anticipate through innovation and technological creations that are said to have a large influence on the progress of a nation and a country. Then they have the determination to design their own technology and use it themselves to stem the invasion of technology from outside.

The understanding of geostrategy and national resilience in this study concerns the realization of the ideals of the proclamation, as stated in the Preamble to the 1945 Constitution, namely protecting the entire Indonesian nation and all of Indonesia's bloodshed, advancing public welfare, educating the nation's life, and participating in carrying out world order (Peceny et al., 2019). The integrity of the Unitary State of the Republic of Indonesia is based on a national/archipelagic perspective which, according to Sinaga has 6 dimensions of basic values of national insight that are embodied in national unity and integrity, namely: First, respect for human dignity and worth as creatures of God Almighty . Second, a shared determination to live a free, independent and united national life. Third, love for the motherland and nation. Fourth, democracy and people's sovereignty. Fifth, social solidarity. Sixth, a just and prosperous society (Sood et al., 2022).

Indonesia has a specific perspective in viewing geopolitical dynamics through the Archipelagic Outlook which implies "the perspective of the Indonesian people about themselves and their environment by taking advantage of geographical conditions and constellations by creating responsibility, motivation and stimulation for all Indonesian people to achieve national goals". The national goal referred to in this context is to protect the entire Indonesian nation and all of Indonesia's bloodshed, promote public welfare, educate the nation's life, and participate in carrying out world order based on freedom, eternal peace and social justice (Răducu & Stănculescu, 2021).

On the one hand, the use of Artificial Intelligence (AI) in Industry 4.0 can increase efficiency and productivity for a group of people who are already exposed to the internet. However, on the other hand, there are still a large number of world citizens who still do not have internet access. Thus, AI can actually create inequality that has never existed before. In fact, AI is said to be able to trigger strategic antagonism between the United States (US) and China – two countries that are prominent in the use of AI – as the nuclear issue became a symbol of the Cold War in the past (Caldera et al., 2021).

A leadership model in the 4.0 era that can support national resilience

The 4.0 era educational leadership model to support national resilience was in principle developed by referring to the comprehensive concept of educational leadership in the 4.0 era which was then analyzed and used as the basis for developing this educational leadership model. In order to realize a leadership that is able to support national resilience, especially in the 4.0 era which is full of challenges and globalization without borders, educational leadership is needed that is able to become a driving force for school members so that they are able to understand and have national astagatra and insight as aspects and indicators in realizing National defence.

This model is in line with Otto Scharmer's U theory (in Liboni et al., 2019) which emphasizes the process of a journey towards a direction that supports the process of a journey of change that starts from the release of the old ego towards something better consciously, with an open mind, having a complete relationship with education stakeholders, have strong intentions, integrate themselves proactively rather than reactively in line with the goals that are aspired together.

The model developed by researchers is the 4.0 era educational leadership model to support national resilience which is called the HEBAT model (Heartily, Educated, Brave, Author, and Tolerant). The HEBAT educational leadership model is designed to contain and accommodate all aspects/indicators of leadership that meet the characteristics of the 4.0 era implemented by educational leaders and are based on the values of national resilience.

Educated, holistic, holistic thinking, comprehensive. Equipped with 3L (Data Literacy, Technology Literacy and HR Literacy). According to Morris (1990) the basic materials needed so that someone is able to build thoughts and then determine one's thinking model are images and concepts, then these concepts are formulated in the form of words or language. There are eight principles for leaders to be motivated to make changes with an understanding of the change process, one of which is "knowledge is power". So educated leaders emphasize the very important role of science in human life, both individually and socially.

Morality is an asset in the process of self-development. When morality has been contained within, a person will be responsible for all his activities for himself, for others, and most importantly, for the almighty God. Morality has become a universal problem, both in developed and traditional societies, because moral damage to someone will disturb the peace of others (Neta & AMBIYAR, 2021).

The Role of the Leadership Model in the 4.0 Era in Supporting National Resilience

The HEBAT model in educational leadership in the 4.0 era developed by researchers has indicators that are very closely related to supporting national resilience. Where national resilience can be built up strongly if all citizens/communities are heartily towards the work they have/do in accordance with their respective professions. Thus, the community will be able to work with maximum efficiency. Maximum work results in each work sector will certainly have an impact on building strong national resilience. Working earnestly is also a manifestation of every community consciously building the resilience of their nation through the profession they are currently working on. Seriousness in work is a value of attitude, behavior and character of a person in leading an organization and plays an important role in national security. passion (passion/enthusiasm) to do the best.

An educational leader must have the courage to face the challenges of the 4.0 era, which is full of competition, so that an educational dreamer has absolute courage. This courage is needed by an educational leader to bring and determine the direction of his organization going forward. The courage to defend the country that is based on knowledge of national insights will have a positive impact because all actions that will be taken will not be taken immediately but are directed and controlled so that they will greatly impact the country's national resilience (Sarwandi et al., 2019). The role of Brave (courage to defend the country based on national insight) in national security is the courage to foster a sense of having a big soul and patriotism to maintain the survival of the nation and state. Although in its implementation there will be many challenges and obstacles. Dare to make decisions and dare to face risks amidst the turmoil of the vuca signs of the times (Votality, Uncertainty, Complexity, Ambiguity) (Rozi et al., 2021).

Pancasila as the basis of the state and the nation's way of life plays an important role in being able to filter new values that can damage the existence of the noble values of the Indonesian nation and can endanger national security. Tolerance is very necessary because Indonesia is a rich nation that has many "differences" which if interpreted positively can foster a greater sense of love for the nation. Tolerance for the differences that we encounter in our daily lives will create mutual respect for one another and it will be much easier to work together to achieve our national resilience goals with this spirit of mutual cooperation. Lack of tolerance or glorification of certain groups or groups is one of the biggest sources of division and creates negative turmoil in the life of the nation and state (AlMaadeed & Ponnamma, 2020).

CONCLUSION

A new educational leadership model that supports the national resilience system in the field of education, as proposed by the author, takes the idea of a transformational and authentic leadership model that originates from the thought that the industrial revolution 4.0 is moving so fast, knowledge is needed, education-centered product of knowledge. In practice, leadership in data literacy education, technology and HR literacy is needed. Educational leadership in the 4.0 era in the era of disruption. Not only the disruption of technology, but also the disruption of data and human resources. The ever-evolving technology is an unavoidable development, but now this development causes disruption. These developments can have a positive or negative impact. In relation to the 4.0 era, technological disruption needs to be addressed.

Educational leadership in the 4.0 era is the ability of a leader to manage, deal with and maximize all existing resources in the 4.0 era with all the skills and abilities demanded in that era and have openness to new things in the future. Educational leadership in the 4.0 era can also be called future leadership followed by technological developments. Leaders must have skills in influencing, encouraging, guiding, directing, and mobilizing others who have something to do with the implementation and development of education and teaching in the era of the industrial revolution 4.0.

The importance of having a clear model of how educational leadership is appropriate and meets the challenges of the 21st century in the 4.0 era and can support national resilience is something that has received support from many parties, especially among education leaders and national resilience. Along with the development of the era, where information technology breaks down boundaries both in terms of zones, ideology and the perspective of the nation's generation is something that is inevitable. The role of an educator, especially an educational leader, is extremely necessary. The leadership model offered by the author tries to be presented as an alternative to educational leadership that can be chosen by authorized stakeholders, where the strength is to be able to continue to love the nation, to know the noble values of Pancasila which are applied in character education consciously carried out in the world of education, without the need to impress like dogma, it is hoped that it can be assessed as a phase and a model that can be applied throughout Indonesia.

The Era 4.0 educational leadership model called the HEBAT model (Heartily, Educated, Brave, Author, Tolerant) is a model developed based on the 4CS future leadership theory (Casing, Communicating, Competences, Contribution, Sample). The values contained in the 4CS are embedded in the meanings contained in the HEBAT Model. The HEBAT educational leadership model is designed to contain and accommodate all aspects/indicators of leadership that meet the characteristics of the 4.0 era implemented by educational leaders and are based on the values of national resilience.

The role of the 4.0 era educational leadership model (HEBAT model) is the answer to the challenges of the 4.0 revolution era. not only challenges in the form of action but also values that are contained and need to be developed in maintaining national resilience by practicing Pancasila values contained in the terms of the HEBAT model developed by researchers. National resilience is at the forefront of the behavior resulting from individual decision making which has been processed through the process of creating educated people with a hearty touch. Without being brave, an educational leader in Era 4.0 will not be able to optimally actualize himself in fighting for and upholding truth & justice within the framework of building a much better world civilization even though he is educated and has a hearty nature. Brave is a drive for self-actualization for the nation and state.

References

- AlMaadeed, M. A. A., & Ponnamma, D. (2020). Role of research and higher education on industry 4.0, material science as an example. 2020 IEEE International Conference on Informatics, IoT, and Enabling Technologies (ICIoT), 435–439.
- Arokiasamy, A. R. A., Abdullah, A. G. K., @ Shaari, M. Z. A., & Ismail, A. (2016). Transformational Leadership of School Principals and Organizational Health of Primary School Teachers in Malaysia. Procedia Social and Behavioral Sciences, 229(2), 151–157. https://doi.org/10.1016/j.sbspro.2016.07.124
- Bibby, L., & Dehe, B. (2018). Defining and assessing industry 4.0 maturity levels case of the defence sector. Production Planning & Control, 29(12), 1030–1043. https://doi.org/10.1080/09537287.2018.1503355
- Bogotch, I., Schoorman, D., & Reyes-Guerra, D. (2017). Forging the Needed Dialogue Between Educational Leadership and Curriculum Inquiry: Placing Social Justice, Democracy, and Multicultural Perspectives into Practice. In Bridging Educational Leadership, Curriculum Theory and Didaktik: Non-affirmative Theory of Education (pp. 283–307). Springer International Publishing. https://doi.org/10.1007/978-3-319-58650-2_8
- Caldera, S., Mostafa, S., Desha, C., & Mohamed, S. (2021). Exploring the Role of Digital Infrastructure Asset Management Tools for Resilient Linear Infrastructure Outcomes in Cities and Towns: A Systematic Literature Review. Sustainability, 13(21), 11965. https://doi.org/10.3390/su132111965

- Carayannis, E. G., & Morawska-Jancelewicz, J. (2022). The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. Journal of the Knowledge Economy, 13(4), 3445–3471. https://doi.org/10.1007/s13132-021-00854-2
- Choi, T., Kumar, S., Yue, X., & Chan, H. (2022). Disruptive Technologies and Operations Management in the Industry 4.0 Era and Beyond. Production and Operations Management, 31(1), 9–31. https://doi.org/10.1111/poms.13622
- Dos Santos, E. F., & Benneworth, P. (2019). Makerspace for skills development in the industry 4.0 era. Brazilian Journal of Operations & Production Management, 16(2), 303–315. https://doi.org/10.14488/BJOPM.2019.v16.n2.a11
- Dung, N. T., Tri, N. M., & Minh, L. N. (2021). Digital transformation meets national development requirements. Linguistics and Culture Review, 5(S2), 892–905. https://doi.org/10.21744/lingcure.v5nS2.1536
- Ersoy, M. (2021). An IDEA for design pedagogy: Devising instructional design in higher education 4.0. Design and Technology Education: An International Journal, 26(1), 118–136. https://ariadnestaging.lboro.ac.uk/DATE/article/view/2842
- Fitriyah, N., & Suliyadi, A. (2018). Membangun Kompetensi Pemimpin Dalam Mengelola Organisasi Publik: Strategi Dan Aplikasi. MADANI Jurnal Politik Dan Sosial Kemasyarakatan, 10(1), 79–91. https://doi.org/https://doi.org/10.52166/madani.v10i1.941
- Gunal, M. M. (2019). Simulation for Industry 4.0. In M. M. Gunal (Ed.), Past, Present, and Future. Springer. Springer International Publishing. https://doi.org/10.1007/978-3-030-04137-3
- Guzmán, V. E., Muschard, B., Gerolamo, M., Kohl, H., & Rozenfeld, H. (2020). Characteristics and Skills of Leadership in the Context of Industry 4.0. Procedia Manufacturing, 43, 543–550. https://doi.org/10.1016/j.promfg.2020.02.167
- Jedaman, P., Buaraphan, K., Pimdee, P., Yuenyong, C., Sukkamart, A., & Suksup, C. (2018). Analysis of sustainable leadership for science learning management in the 21st Century under education THAILAND 4.0 framework. AIP Conference Proceedings, 1923(1), 030062. https://doi.org/10.1063/1.5019553
- Kariyadi, D., & Suprapto, W. (2017). Membangun Kepemimpinan Berbasis Nilai-Nilai Pancasila Dalam Perspektif Masyarakat Multikultural. Citizenship Jurnal Pancasila Dan Kewarganegaraan, 5(2), 86. https://doi.org/10.25273/citizenship.v5i2.1560
- Khalifa, M. (2020). Culturally responsive school leadership. Harvard Education Press.
- Liboni, L. B., Cezarino, L. O., Jabbour, C. J. C., Oliveira, B. G., & Stefanelli, N. O. (2019). Smart industry and the pathways to HRM 4.0: implications for SCM. Supply Chain Management: An International Journal, 24(1), 124–146. https://doi.org/10.1108/SCM-03-2018-0150
- Martin, M. E. (2018). Qualities of Instructional Leadership Among Principals in High-Performing Christian Schools. Journal of Research on Christian Education, 27(2), 157–182. https://doi.org/10.1080/10656219.2018.1500501
- Neta, F., & AMBIYAR, D. I. (2021). Development Of Industry Recommendation Project-Based Learning Model On Vocational Higher Education. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(12), 4764–4775.
- Oberer, B., & Erkollar, A. (2018). Leadership 4.0: Digital leaders in the age of industry 4.0. International Journal of Organizational Leadership. https://doi.org/https://ssrn.com/abstract=3337644
- Oztemel, E., & Gursev, S. (2020). Literature review of Industry 4.0 and related technologies. Journal of Intelligent Manufacturing, 31(1), 127–182. https://doi.org/10.1007/s10845-018-1433-8
- Peceny, U. S., Urbančič, J., Mokorel, S., Kuralt, V., & Ilijaš, T. (2019). Tourism 4.0: challenges in marketing a paradigm shift. In Consumer behavior and marketing. IntechOpen.
- Purwanto, A., & Sulaiman, A. (2023). The Role of Transformational and Transactional Leadership on Job Satisfaction of Millennial Teachers: A CB-SEM AMOS Analysis. UJoST-Universal

- Journal of Science and Technology, 2(2), 1–8. https://doi.org/10.11111/ujost.v2i2.114
- Rachmawati, T. S. N., & Kim, S. (2022). Unmanned Aerial Vehicles (UAV) Integration with Digital Technologies toward Construction 4.0: A Systematic Literature Review. Sustainability, 14(9), 5708. https://doi.org/10.3390/su14095708
- Răducu, C.-M., & Stănculescu, E. (2021). Adaptability to Online Teaching during Covid-19 Pandemic: A Multiple Mediation Analysis Based on Kolb's Theory. International Journal of Environmental Research and Public Health, 18(15), 8032. https://doi.org/10.3390/ijerph18158032
- Raman, A., & Rathakrishnan, M. (2019). Redesigning higher education initiatives for Industry 4.0. IGI Global.
- Reschovsky, J. D., & Saiontz-Martinez, C. B. (2018). Malpractice claim fears and the costs of treating Medicare patients: a new approach to estimating the costs of defensive medicine. Health Services Research, 53(3), 1498–1516.
- Rozi, F., Prawijaya, S., & Ratno, S. (2021). Development of Interactive E-Modules Based on Google Docs in Basic Concepts of Biology Curriculum MBKM UNIMED FIP PGSD Study Program. 6th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2021), 850–856. https://doi.org/10.2991/assehr.k.211110.193
- Sarwandi, S., Giatman, M., Sukardi, S., & Irfan, D. (2019). Developing mobile-based project-based learning module for project management courses in vocational education. Jurnal Pendidikan Vokasi, 9(2), 207–216. https://doi.org/10.21831/jpv.v9i2.25947
- Sood, S. K., Rawat, K. S., & Kumar, D. (2022). A visual review of artificial intelligence and Industry 4.0 in healthcare. Computers and Electrical Engineering, 101, 107948. https://doi.org/10.1016/j.compeleceng.2022.107948
- Subarjo, A. H. (2018). Utilization of QR-Code in Citizenship Education. Prosiding Seminar Nasional Teknologi Informasi Dan Kedirgantaraan: Transformasi Teknologi Untuk Mendukung Ketahanan Nasional.
- Summers, S. M., Nagy, C. J., April, M. D., Kuiper, B. W., Rodriguez, R. G., & Jones, W. S. (2019). The Prevalence of Faculty Physician Burnout in Military Graduate Medical Education Training Programs: A Cross-Sectional Study of Academic Physicians in the United States Department of Defense. Military Medicine, 184(9–10), e522–e530. https://doi.org/10.1093/milmed/usz055
- Sunarsi, D., Rohaeni, N., Wulansari, R., Andriani, J., Muslimat, A., Rialmi, Z., Kustini, E., Kristianti, L. S., Rostikawati, D., & Effendy, A. A. (2020). Effect of e-leadership style, organizational commitment and service quality towards indonesian school performance. Syst. Rev. Pharm, 11, 472–481.
- Tapio, J. L., Raisa, S. A., & Niina, L. (2019). Finnish principals: Leadership training and views on distributed leadership. Educational Research and Reviews, 14(10), 340–348. https://doi.org/10.5897/ERR2018.3637
- Tri, N. M., Hoang, P. D., & Dung, N. T. (2021). Impact of the industrial revolution 4.0 on higher education in Vietnam: challenges and opportunities. Linguistics and Culture Review, 5(S3), 1–15. https://doi.org/10.21744/lingcure.v5nS3.1350