SCHOOL ORGANIZATION EFFECTIVE CONCEPT IN THE INDUSTRIAL REVOLUTION 4.0 ERA

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ABSTRACT

The purpose of this study is to explain (1) educational opportunities and challenges in the industrial revolution era 4.0, (2) the concept of effective school organization, (3) the characteristics of effective school organization, (4) efforts to make schools effective, (5) effective leadership of school organizations in the industrial revolution era 4.0, (6) effective school organization management systems, (7) school technological innovation in the industrial revolution 4.0 era, and (8) the potential for effective schools in the future. This research uses the literature research method which is the method obtained from research by reading, researching and studying national books and articles that are relevant to the concept of effective school organization in the industrial revolution era 4.0. Based on the results of the literature study found an explanation of the challenges and education in the era of the industrial revolution 4.0, the concept of effective school organization, the characteristics of effective school organizations, the struggle to make schools effective, organizational leadership in the industrial revolution era 4.0, effective school organization management systems, school technology innovation in the era of the industrial revolution 4.0, and the potential for effective schools in the future.

Keywords: Organization, Effective School, Industrial Revolution 4.0

ABSTRAK

Tujuan penelitian ini yakni untuk mengetahui (1) tantangan dan peluang pendidikan pada masa revolusi industri 4.0, (2) konsep organisasi sekolah efektif, (3) karakteristik organisasi sekolah efektif, (4) upaya untuk menjadikan sekolah efektif, (5) kepemimpinan efektif organisasi sekolah pada masa revolusi industri 4.0, (6) sistem manajemen organisasi sekolah efektif, (7) inovasi teknologi sekolah pada masa revolusi industri 4.0, dan (8) potensi sekolah efektif di masa depan. Penelitian ini menggunakan metode kajian literatur yaitu metode memperoleh informasi penelitian dengan cara membaca, mempelajari dan mengkaji buku dan artikel nasional maupun internasional yang relevan dengan konsep organisasi sekolah efektif pada masa revolusi industri 4.0. Berdasarkan hasil studi literatur ditemukan penjelasan mengenai peluang dan tantangan pendidikan di era revolusi industri 4.0, konsep organisasi sekolah efektif, karakteristik organisasi sekolah efektif, upaya untuk menjadikan sekolah efektif, kepemimpinan efektif organisasi sekolah pada masa revolusi industri 4.0, sistem manajemen organisasi sekolah efektif, inovasi teknologi sekolah pada masa revolusi industri 4.0, dan potensi sekolah efektif di masa depan.

Kata Kunci: Pengorganisasian Pendidikan, Sekolah Efektif, Revolusi Industri 4.0

INTRODUCTION

The digital (modern) revolution and the era of technological disruption or also known as the era of changing from old technology to new ones are other terms for industry 4.0. It is called the digital revolution because at the time of the proliferation of computers, namely the change from manual to modern recording, namely recording to be automatic in all fields (Wallner and Wagner, 2016). Touted as the era of technological disruption due to automation and connectivity in a field, Industry 4.0 will also make a movement, namely in the industrial world and job competition so that it is not linear. One of the unique characteristics of industry 4.0 is the application of artificial intelligence (Ghufron, 2018).

In order to face the era of the industrial revolution 4.0, education is needed that can form a creative, innovative, and competitive generation (Mustaghfiroh et al., 2020; Sultoni et al., 2020). One of these can be achieved by optimizing the use of technology as an educational aid which is expected to be able to produce output that can follow or change the times for the better (Dubey, 2016). Without exception, Indonesia also needs to improve the quality of graduates according to the world of work and the demands of digital technology (Darmaji et al., 2020; Lase, 2019). Through education 4.0, it is a response to the needs of the 4.0 industrial revolution where humans and technology are aligned to create new opportunities creatively and innovatively.

Changes in this era cannot be avoided by anyone so that adequate preparation of human resources (HR) is needed to be ready to adjust and be able to compete on a global scale (Benešová and Tupa, 2017; Ubaidillah et al., 2020). Improving the quality of human resources through education from primary and secondary education to higher education is the key to being able to keep up with the development of the Industrial Revolution 4.0 (Hecklau et al., 2016). Education 4.0 is a response to the needs of the 4.0 industrial revolution where humans and technology are aligned to create new, more creative and innovative opportunities. In the world of education, advances in digital technology make it easier for educational elements, both teachers / lecturers and students from elementary to

tertiary education, to carry out the learning process. The purpose of this research is to describe educational opportunities and challenges, concepts, characteristics, and an effective school organization system in the era of the industrial revolution 4.0.

METHOD

The method used in this research is literature review. This type of research also contains several ideas or theories that are firmly related to each other and are supported by data from library sources (Ulfatin, 2014). Sources of literature here are used as study material which can be in the form of scientific research journals, dissertations, theses, theses, scientific research reports, textbooks that can be accounted for, papers, seminar reports or conclusions, notes / recordings of scientific discussions, official published writings. government and other institutions, and to obtain such data or material requires carefulness, diligence and diligence in finding data, both primary and secondary data sources (Harahap, 2014). The literature review starts from the most recent library sources, namely the results of research related to the concept and implementation of Effective Schools in the era of the Industrial Revolution 4.0. To save time, it can be reviewed or viewed from the summary section of the library sources first. Researchers in conducting reference searches, identifying authenticity and quality of literature, and compiling a reference list assisted with the software "citation & reference manager" Mendeley desktop (Arifin et al., 2020). With this activity, information will be obtained in accordance with the research topic quickly.

RESULT AND DISCUSSION

Opportunities and Challenges of Education in the Industrial Revolution 4.0 Era

Globalization is a real challenge to the education system. Today's society experiences a new phenomenon, where the development of science and technology dominates the entire order of social life. Alvin Toffler (Kholis, 2015) formulating three waves of world civilization, namely: (1) agricultural revolution as the first wave with the domination of an agrarian society; (2) industrial revolution as the second wave with the domination of industrial society; and (3) information

revolution as the third wave is often called post-industrial civilization by promoting alternative technology, communication and information that brings information society.

Towards the end of the 20th century, communication and information technology has been evident and has grown rapidly in the 21st century. Items that characterize information and communication technology include the internet and satellite tv, cellular phones and the like. With the existence of modern information technology it makes it easier for people to get the latest information in any field from wherever they come from and makes it easier for people to communicate with each other wherever that person is at a relatively cheaper cost and faster time, via E-mail, WWW, Chart, and the like. In the global era, information owners are said to have a high bargaining position and dominate the world. The 21st century workforce must have intellectual intelligence (IQ), emotional intelligence (EI), spiritual intelligence (SI), technological intelligence (TI), and environmental intelligence (EnI). When the imperative of globalization and its aftermath has taken place and humans are unable to keep up with it, a humanitarian crisis or dehumanization or a crisis of human values cannot be avoided.

The value crisis relates to the attitude of assessing an act of good and bad, appropriate and inappropriate, right and wrong and others concerning individualistic and social ethical behavior (Irianto, 2017). The value crisis is evident in setbacks and weaknesses, alienation, corruption, thuggery, ambiguity and loss of self-meaning, as well as the weakening of human relations, etc. The value crisis also occurs in the concept of the meaning of a good life. Society begins to change its views on how to live properly in the fields of politics, economy, social, society and its implications for individual life.

School Organization Effective Concept

In the context of management, the meaning of effective school itself is a school that achieves the goals and objectives that have been set. Although the main consideration in determining an effective school is student academic achievement, community participation and teacher satisfaction are also criteria for effective

schools (Juharyanto et al., 2020). Effective schools are schools that organize and utilize all resources to ensure that all students learn the essential curriculum regardless of the student's own background. More thoroughly, an effective school can be defined as a school that has the ability to carry out its functions optimally, both economic functions, socio-human functions, political functions, cultural functions and educational functions. Botha (2010) explained that an effective school is a school that can identify strategies or stages to improve school effectiveness through the characteristics contained in the school.

Thus, as intended, the characteristics of an effective school also vary widely, with varying numbers. National Education Assocation (NEA, 2013) provides guidelines for measuring effective schools with three dimensions and indicators. The input dimension includes finances, personnel, facilities, equipment, materials, policies and regulations, and student backgrounds. The process dimension includes curriculum and learning, policy implementation, various educational opportunities, parental involvement, and leadership. The outcome dimensions include academic success, graduation, attitude, class stay and dropout, school safety, discipline, and the rate of continuing learning. But this is not the only way to measure effective schooling.

Effective Schools Characteristics

According to Lawrence W. Lezotte (Kholis, 2015), an American education researcher, found seven main things that have a positive correlation with effective schools, namely: (1) instructional leadership; (2) clear vision and mission; (3) safe and orderly environment; (4) have high expectations; (5) there is supervision of student development; (6) there is a good relationship between the school and the guardian of students; and (7) make the best use of time. Everard et al. (2004) based on the results of his research, he stated that in developing school management, the center of attention was that the school should receive support in the school development process and put more emphasis on training outside of school. So that each school gets a report on its characteristics and shows how each school can develop the school effectively and efficiently.

Thus, a school can be called an effective school if it has high effectiveness characteristics, namely: a positive school climate, a school planning process that involves all school members, high expectations of academic achievement, effective monitoring of student progress, teacher effectiveness, instructional leadership. oriented towards academic achievement, active participation of parents in school activities, as well as opportunities, responsibilities, and high student participation in schools, rewards and incentives in schools that are based on success, good order and discipline in schools, and implementation clear curriculum (Adha et al., 2019; Arifin et al., 2018; Satria et al., 2019).

Effective Leadership of School Organizations in the Industrial Revolution Era 4.0

According to Kouzes and Posner (Kholis, 2015) suggests five criteria for successful organizational leaders, namely: (1) challenging the process, namely by looking for opportunities, experimentation and taking risks; (2) building a vision; (3) strengthen cooperation and strengthen others; (4) set an example and plan for victory; and (5) recognize individual contributions, and celebrate successes.

A leader who has high quality will succeed well in playing the three main roles, if he is able to communicate with subordinates, be creative, and be able to make decisions in the interest of the organization in achieving the specified goals (Sari, 2019). A high-quality leader will do well in playing three main roles, namely if he is able to communicate with subordinates, be creative, and is able to make decisions for the benefit of the organization in achieving the specified goals. While, Walumbwa et al. (2010) explained Self-awareness refers to the extent leaders understand their own strengths, weaknesses, and motives, as well as recognizing how others view their leadership. Leaders with high self-awareness behavior are seen to use both self-knowledge and reflected self-image to enhance their effectiveness as a leader. Self-awareness refers to the degree to which leaders understand their own strengths, weaknesses and motives, as well as acknowledge how others perceive their leadership. Educational approach requires changes in the school climate and leadership role (Blevins et al., 2014). Leaders with high self-

awareness behaviors appear to use self-knowledge and self-image to increase their effectiveness as leaders (Bafadal et al., 2019; Maisyaroh et al., 2020).

Morrison (2012) identify eight characteristics of effective school principals in leading educational institutions, namely: (1) Principals have hopes and are ambitious for the success of their students; (2) showing weakness is not a barrier to success; (3) focus on improving the quality of learning through professional development of staff; (4) Capable of assessing and monitoring student progress; (5) very inclusive, high respect for the development of each student; (6) developing students by providing learning opportunities; (7) strengthen cooperation with parents, businesses and the community to support student learning; and (8) readiness and thoroughness in conducting self-evaluation and data analysis with strategies for progress.

Effective School Organization Management System

Handy and Heckscher (Kholis, 2015) offers a post-bureaucratic organizational system in school management, namely: (1) the organization emphasizes cooperation among members involved in the organization; (2) organizations need adaptive people and people who view the world of organizations and professions more globally, not narrow specialists; (3) the organization is jointly owned, educational organizations do not only belong to those in the hierarchy or status; and (4) the organization is of the view that staff are stakeholders, not employees or workers. The efforts to change the system simply by changing the leadership do not work, self-organization cannot be mandated-it emerges spontaneously and of its own accord. The new system is internally restructured, and significantly, works because it relies on human relations, distributed leadership, servant leadership by headteacher and team-based approaches, together with appropriate support mechanisms (Morrison, 2012). According to Ibrohim (2016) The focus of management is based on the educational institutions concerned by emphasizing actual organizational development procedures and effective use of time, centered on clear and measurable results and goals, all members have high commitment and expectations of the organization.

Setiawan (2016) states in the concept of modern education management emphasizes that the effectiveness of school management is greatly influenced and determined by the ability of managers to make quality decisions by implementing quality measures as well. Therefore, the most important demand in the field of school management is the need for professional school managers and leaders who can utilize the potential resources that exist in school organizations effectively and efficiently in order to improve organizational performance (Adha et al., 2019; Arifin et al., 2020; Juharyanto et al., 2020).

School Technology Innovation in the Industrial Revolution 4.0 Era

According to Fisk (Lase, 2019) about education trends 4.0, one of which is the presence of learning activities at different times and places, which are supported by (online) learning technology. While, Collins and Halverson (2010) states that learning of technology services began appearing in all aspects of education and schools do not participate in development. Some of the following simple ways or innovations that can be integrated into the learning process in schools, namely:

1. Flipped Classroom

Flipped classroom is a learning model using a system of providing material through video. The concept of flipped classroom includes active learning, student involvement, and podcasting (audio recording). In a flipped classroom, the material is first given through learning videos that students must watch in their respective homes. On the other hand, class learning sessions are used for group discussions and doing assignments. Here, the teacher acts as a supervisor or guide.

2. Integrating Social Media

There are many ways to integrate social media into the classroom. By integrating social media, students can choose mastery of material through various digital tools such as blogging, Facebook, Skype, YouTube or other video conferencing. Classmates have the option of continuing to share knowledge and interact with each other well beyond the hours spent in class and online discussions can be even more interesting.

3. Khan Academy

Khan Academy is a free website where students can access thousands of video tutorials, along with interactive hands-on exercises, in almost any subject. It is a good site to use in the classroom for students who need to improve or add grades. The teacher has the option to create a class account and the teacher can monitor the progress of each student by accessing data on completed exercises. From this data it will be known which areas of strength or strength as well as problematic areas of the student.

4. Moodle

Moodle is a course management system that gives teachers the option to send assignments, lectures, videos, and more. Students can interact with each other via discussion forums, private messages, and chat rooms. Students have the ability to upload completed assignments by attaching files. Grades are added to the class book on the same site and students can also view feedback provided by the teacher. Moodle can be used in addition to face-to-face meetings.

5. Schoology

Schoology is a social networking service and virtual learning environment for schools and higher education institutions that allows users to shape, organize and share academic content.

Therefore, teachers have an important role in shaping student character. Teachers are expected not only to transfer knowledge but also to develop attitudes and spirituality so that a balance will be created between intellectual competence and attitude and spiritual competence.

The Potential of Effective Schools in the Future

Effective schools are schools that have a level of consistency between the results achieved and the plans and targets that are set in advance. Effective schools are schools that have good, transparent and accountable management that are able to strengthen all school components to achieve school goals effectively. According to Shahroom and Hussin (2018) In the future there will be many changes in the way of teaching and learning such as teaching content, the role of the teacher and students. Therefore, the logic of the education system must be changed from the

system in accordance with the learner into the learner that is appropriate to the system. So that the implementation of effective schools in the future will have the potential, even though it will face challenges in an era where globalization is growing.

According to Anrig (2013) five things that can be done to create an effective school in the future : five things which will be done to make an effective school within the future: (1) a coherent educational guidance device, (2) an effective approach to assembling skilled capacity, (3) robust parent-community ties, (4) a student-centered learning climate, and (5) an interaction of educational and "inclusive-facilitative" leadership. While, Kholis (2015) describes some strategic steps that can be taken by schools to make schools effective in facing the globalization era in the future, namely: (1) having a clear vision and mission, (2) having an effective education program and curriculum, (3) implementing a learning system active and creative, (4) effective leadership, (5) having qualified staff, and (6) having a good management system.

CONCLUSION

Opportunities and Challenges of Education in the Era of the Industrial Revolution 4.0 are inseparable from globalization. Globalization has also led to liberalization in various fields of life, including in the fields of economy, politics, arts, education, and even religion. In responding to the current era, education actors really need to leave education that still uses an industrial society style system to get to an information society and to juxtapose knowledge and spirituality. Effective schools are schools that organize and utilize all resources to ensure that all students learn the essential curriculum. Effective school must be in accordance with the characteristics of his research and thinking as well. So that there are several kinds of organizational characteristics that are effective from various experts. Meanwhile, the way to make schools more effective is to empower the school's resources more. To realize effective leadership, school organizations need to think about digital leadership which will give birth to leaders who have the competence

to collaborate, are able to build networks, are honest and transparent, like to try new things, are reliable, solution and independent in action. Meanwhile, an effective organizational management system can be implemented with a new organizational system, namely post-bureaucracy. School technology innovation in education 4.0, one of which is the presence of learning activities at different times and places, which are supported by (online) learning technology. There are five things that are done to make schools effective in the future, namely coherent learning guidelines, an effective system to increase the professional capacity of teachers, strong parent-school relationships, student-centered learning, and strong leadership.

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