

Effective School Management in Industrial Revolution Era 4.0

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ABSTRACT

The industrial revolution 4.0 era was marked by continually occurring changes and would positively impact education developments. This article seeks to provide information on the importance of effective school management. The Industrial Revolution 4.0 provides opportunities and, at the same time, is a challenge for education providers to serve the millennial generation. They have individualistic, creative, innovative characters because they master information technology with high literacy, so they want to gain freedom of opinion and be creative - to express themselves and not be governed. It is a big ambition for success, but full of comfort, behaving in an instant, confident, optimistic, critical, and positive thinking. Therefore, schools must provide professional educators, presenting up to date teaching materials and fun learning. Simultaneously, the education staff is qualified incomplete administration, library and laboratory governance, facilities and infrastructure that meet standards. A reputable school has links with partner schools, inside and outside the country. The purpose of this paper explains the importance of effective school management in the era of the Industrial Revolution 4.0. The research method used was library research by gathering information to answer the research problem through books, scientific articles, and journals with a qualitative approach. This study's findings are that effective school management in the industrial era 4.0 is a school that has implemented advanced technology-based services by providing human resources with sound capabilities in the technology. In the management of schools in era 4.0, schools must implement technology-based services with human resources who have good capabilities in the technology.

Keywords: *school, management, practical, industrial revolution era 4.0.*

1. INTRODUCTION

In this fast-paced era, knowledge is easily gained quickly. Changes occur in all lines (industry, trade, services, technology, etc.) and school institutions. Schools must be able to adjust to the situation. School management plays an essential role in making schools progress and dynamic in all aspects of education. For the main diban gun is schooling conditions capable of responding to the Industrial Revolution's challenges 4.0. School management plays an essential role in preparing young people to face the future with confidence and build it with goals and responsibilities. New challenges facing schools are increasingly complex. Technological sophistication can no longer wait for 'the slow'.

The need for change, from narrow nationalism to universalism, from ethnic and cultural prejudice to tolerance, understanding and pluralism, from autocracy to democracy in its various manifestations, and from a technologically divided world in which high

technology is the right of a handful of people to a united world in a unified world technologist, placing a heavy responsibility on the shoulders of school managers who participate in shaping the character and brain of millennial generation. Change continues to occur and will always continue to impact the development of the school world. There needs to be an increase in the ability of schools to face increasing competition and challenges. To maintain and improve sustainable competitive advantage (SCA), it is the key to success to exist and grow and continue to create a position of imbalance (*disequilibrium*) with its competitors.

2. LITERATURE REVIEW

The education process that can prepare human resources with thinking skills has become a global necessity in the 21st century and the 4.0 revolution era. The presence of quality human resources determines the success of a nation's development. To manage

school performance as a whole in a productive, effective and efficient manner, a qualified figure is needed in managing the school. The principal has an essential role in determining educational success. The school principal is responsible for creating a conducive learning environment so that all levels he leads and all students studying in them are motivated to learn and increase their potential optimally. The headmaster also tries to prevent social problems such as student-student brawls, drug abuse and free sex from affecting his school environment. Based on the RI Minister of Education and Culture Decree Number: 0296 / u / 2003, a school principal is no longer a structural official with a particular echelon. The principal is 'only' a teacher who is given the additional task of managing the education unit based on his competence. Whereas determining the qualifications and competencies of a school principal is Minister of Education Regulation Number 13 of 2007 concerning Principal/Madrasah Standards on April 17, 2008.

Therefore the government needs to immediately address these changes appropriately by developing strategies that can improve the education system to prepare human resources capable of adapting to the future. The Indonesian government needs to immediately improve school principals' competency so that they are professional in carrying out their duties and responsibilities.

3. METHOD

This research was conducted at the *Universitas Kristen Indonesia*, with the research method used was library research. It was done from July to September 2019. The research is the key instrument of this research, and the researcher collected the data of this research which is needed to answer the problem in this research by examining the theories related to the problem under study, sourced from books, national and international articles in the form of proceedings and journals, documents and other sources, then the data is gathering and analyzed descriptively.

4. DISCUSSION

The principal's leadership directly influences the improvement of the quality of the surrounding community and nationally. In several countries, to become a headmaster, one must undergo a minimum of 300 hours of training; even in Singapore, the principal must attend 16 months of training. In the United States, a person becomes the principal, must graduate from specialized training institutions, and after taking office, he is monitored to improve the quality of education. As

the sole responsibility of the school, the principal must understand the education process comprehensively.

Hecklau, et al (2016) state that there are four categories of competencies that graduates need to have to compete in the 4.0 industrial revolution era. These categories are 1) technical competency, 2) methodological competence, 3) social competence, and 4) personal competence. For methodology, competencies include high-level skills that include creativity - entrepreneurial thinking - problem-solving - decision-making - analytic skills - to research - efficiency orientation. At the manager level, a principal is required to have more intellectual abilities, while the ranks below are more related to technical matters. The intellectual abilities consist of: (1) Cognitive intelligence, which includes the ability to understand complex ideas, the ability to adapt to the environment, and learn from experience; (2) Information processing, namely cognitive efforts that involve a combination, integration and use of complex information; (3) Practical intelligence, i.e. adapting in solving everyday life problems practically.

According to UNESCO, 21st century skills include: a) creativity and Innovation; b) the ability to think critically and solve problems; c) communication and Collaboration; d) social and cross-cultural skills; and e) mastery of information. Life and careers in the 21st century require the ability to: 1) be flexible and adaptive, 2) take the initiative and be independent, 3) have skills and culture, 4) be productive and accountable, and 5) have leadership and responsibility.

To build quality schools, various requirements are needed. Regulations needed following the development of schooling in Indonesia. Serious commitment from education officials and teachers, school principals, supervisors, parents, and students to work together synergistically to work the best they can with honest and wise attitudes. In the era of 4.0 must be fulfilled functions of management development (*Management Development*), which is service to individuals' development. In the future, a variety of possible *settings for* education and thought should be made into an informative environment in preparing human life to shape the mentality of running a lifelong educational process.

Various factors determine the success of a school. Excellent and right management, commitment from all elements involved in school management. A strong commitment to collectively realize the vision and mission of the school. Schools are more flexible in managing the institution. The approach of professionalism, preferably on red tape, the school management is more decentralized. Change schools are more driven by self-motivated schools of the

orchestrated from outside the school, regulating education more simply. The centre's role shifted from control to influencing and directing to facilitating, from avoiding risk to managing risk, prioritizing *teamwork*, sharing information to all school members, prioritizing empowerment, and flatter organizational structure so that it is more efficient.

Efficiency can be classified into two, namely internal efficiency and external efficiency. Internal efficiency refers to the relationship between school *output* (achievement of learning achievement) and *inputs* (resources) used to process/produce school *output*. The internal efficiency of a school is usually measured by cost-effectiveness. Each cost-effectiveness always requires two things: the economic assessment to measure the cost of inputs (*input*) and the assessment of learning outcomes (student achievement, length of study, and dropout rate). For example, if the cost is the same, but the National Examination score this year was better than the National Examination score last year, it can be said that this year the school concerned is more internally efficient than last year.

External efficiency is the relationship between the costs used to produce graduates and the cumulative benefits (individual, social, economic, and non-economic) obtained after a long period outside of school. Cost-benefit analysis is the primary tool for measuring external efficiency. For example, there are two schools. 'X' and 'Y' high schools use the same fees every year. However, 'X' high school graduates get a higher salary than 'Y' high school graduates after they work. Therefore it can be said that Senior High School 'X' is more externally efficient than Senior High School 'Y'.

In addition to being effective and efficient, the headmaster must have capable managerial skills. With his skills, he can provide direction, guidance, mobilize and encourage all school personnel to work as optimally as possible to achieve school goals. When he is in front, he must be made an example (*ing ngarso sung tulodo*); when in the middle, among his coworkers, he must be able to move and motivate (*ing madyo mangun karso*); and when he is behind his colleagues, he must be able to encourage (*tut wuri handayani*), as taught by Ki Hajar Dewantoro (Father of National Education, the first Minister of Education of the Republic of Indonesia).

Hersey and Blanchard (1993), translating skills is what a person or group brings to a specific task or activity, whereas according to Spencer (1993), skill is the ability to perform specific physical or mental tasks. While Robbins (1994) believes that managers are individuals who achieve goals through others,

managers make decisions, allocate resources, and direct others' activities to achieve goals. Yukl (1994) states that skill is defined as a term that effectively refers to a person's ability to exhibit various types of cognitive or behavioural activities.

Another case with Stoner *et al.* (1996) is that managers are defined as responsible for directing businesses that aim to help the organization achieve its goals. Prewitt (1998) argues that the principal can do as a manager to understand a series of strategic and holistic issues related to teaching. Patton (1999) defines skills as the ability to motivate others. Long before these experts speak their mind, Lewis (1983) Angela's right that ten skills are necessary for every manager. To become a skilled manager, one needs to understand (1) organization and efficiency, (2) be able to work with basic understandings, (3) understand the operation of the school system, (4) be able to work with people, (5) solve difficulties, (6) conceptual skills, (7) professional knowledge, (8) community advisors, (9) selling and marketing skills, and (10) supportive abilities.

In addition to expert opinions from abroad, Wahjosumidjo (2001) stated: the principal is a manager, carrying out eight kinds of manager functions, namely: (1) working with and through other people (*work with and through other people*), (2) responsible and accountable (*responsible and accountable*), (3) with limited time and resources, the principal must be able to face various problems (*managers balance competing goals and set priorities*), (4) the principal must think analytically and conceptually (*must think analytically and conceptually*), (5) as a mediator (*mediators*), (6) as a politician (*politicians*), (7) a diplomat, (8) serves as hard decision-makers (*the make difficult, decisions*). Based on a theoretical study of managerial skills as described above, the red thread can be drawn that managerial skills are one's ability to carry out tasks to achieve goals through others, which is reflected in the ability to use methods, foster motivation, and analyze the situation in educational institutions.

Managerial skills in the industrial revolution era 4.0 must be accompanied by HOTS (*Higher Order Thinking Skills*) Based learning. Appropriate learning to foster or enhance higher-order thinking skills, namely by developing creativity, learning critical thinking and making decisions, learning to solve problems, to produce graduates who are creative and able to think critically. Effective school management must prepare students and all citizens to learn to compete or compete in the millennium era and the industrial revolution 4.0. Prepare human resources who have thinking skills, have the competencies needed in the 21st century, and answer global needs.

A person who can think critically must be able to reason and make interpretations, while creative thinking is related to developing added value or new products that did not exist before. The use of various sources of information in managing schools and managing learning needs to be applied effectively. The problem-solving skills are closely related to analysis and evaluation, so HOTS is needed to solve current problems. While Anderson and Krathwohl will declare the ability to think creatively in the revision of Bloom's taxonomy as the highest cognitive level.

The importance of high-level thinking skills for school managers in the era of the industrial revolution 4.0 because it provides a significant influence on society. Electronic devices' culture and lifestyle are greatly influenced by electronic devices that make access to information swift, which can be done anywhere, anytime and by anyone. Information that is wholly open and widely available can be utilized for various needs. Society in the 21st century realizes the importance of filtering various information intelligently and critically, especially for school managers as business people must respond to changes quickly and effectively. They were armed with flexible intellectual skills, able to analyze and integrate (synthesis) various information to solve the problems faced.

5. CONCLUSION

How to manage schools in the 4.0 era is far different from conventional ways of managing schools. A 'sure' strategy is needed to be able to continue to exist in this fast-paced era. The words effective and efficient must be internalized in the hearts of every school citizen. For this reason: a) the figure of a manager who can answer all challenges in the field of Information technology (IT) and has high literacy, as well as qualified in the cognitive, affective and psychomotor domains; d) the figure must be optimistic, confident, critical and *positive thinking*, and have interpersonal skills; c) the figure in question is a *challenging and smart worker*; d) the figure must be able to provide superior Human Resources (HR), Resources and Learning Media that are always *up to date*, as well as supporting and adequate Facilities and Infrastructure; dan e) the figure must be able to create a conducive work atmosphere, build solid *teamwork* and a vast network.

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