

IN EDUCATIONAL OPPORTUNITIES AND CHALLENGES IN THE ERA OF REVOLUTION 4.0 IN IMPROVING THE NATION'S COMPETITIVENESS

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ABSTRACT

The competitiveness of the Indonesian nation in the eyes of the world is still low, this is because the quality of human resources is still low. To overcome the low quality of human resources, a very important role is the world of education. With the advent of the 4.0 revolution era, now is an opportunity as well as a challenge for the world of education to carry out reforms through government policies, curriculum improvements, improving the quality of educators and students' competencies, switching to digital literacy and preparing human resources who have an understanding of cultural values and character. who are solid in facing the world in the 4.0 revolution era. This study uses analysis from relevant journals and textbooks as well as expert views.

Keywords:

Opportunities and Challenges; Education; Revolution Era 4.0; Competitiveness

INTRODUCTION

The quality of education in Indonesia today compared to other countries is still classified as rendah, this is because the problem of education has not been completed to be solved, such as the unevenness of educators in remote areas, curriculum systems designed to follow the world of work, limited facilities and infrastructure to the budget of education funds that are not yet high compared to other nations. Dalam facing the era of revolution 4.0 that unfolds in front of the eyes today will be an opportunity as well as a challenge to do education reform (Robiatul Adawiyah et al., 2017). This education reform effort must continue to be pursued by all parties both from the government, stakeholders and all levels of society.

To achieve high economic growth and then will have the impact of giving birth to welfare for the community, the key is human resources (HR) that must be prepared properly through the world of education. So that the key to the high competitiveness of the nation lies in the high quality of human resources owned by the nation. (Amirudin, 2019). Facing the era of evolution 4.0, it takes a creative human being, ready to innovate and have a high spirit to continue to learn new things so as to give birth to productive ja workers to be able to answer the challenges of the times and ready to compete in the world of globalization today. The educational human resources must be available in all knowledge sectors must be able to adapt to technology to be applied in the world of work. (Nuryanta, 2015)

Quality education is an indicator of the high competitiveness of the nation. While quality education is caused by the implementation of quality education. Starting how to get good educational input, then process it with the quality of pendidik personnel who have pedagogical, professional, social and personality competencies plus technological knowledge so as to give birth to quality output as well. Quality output that is produced through the womb of the world of education is what is in vainto build the nation in all sectors of life such as industry, research, medicine, politics and culture.

In a study conducted by (Gamar et al., 2018) entitled "*Challenging the Indonesian Primary Education in Industrial Revolution 4.0 Era*" explained that the Industrial Revolution 4.0 is the latest change from the era of globalization that has existed before which is a change in transformation, elevation and integration. Education has achieved its strategic role in Indonesia's national development which will face the challenges of the changing times. Pembelajaran based on multi-intelligence as one of the learning strategies that are able to facilitate the potential of learners. In addition, the role of principals and teachers in the management of learning is needed to support the achievement of national education goals.

The development of science and technology (SCIENCE AND TECHNOLOGY) can affect development in all sectors of life including the education sector. The existence of the Industrial Revolution 4.0 is a manifestation of the rapid development of the informational society. (Komara, 2020)

Currently, education in Indonesia is faced with several critical problems. These problems are: (1) there is still a low equality in obtaining access to education; (2) low quality and relevance of education; and (3) weak management of education related to the absence of independence and scarcity of qualified knowledge and technology from academics.

So the problem of the nation that is still low competitiveness must be arranged ulang the existing education system, what else is faced with the era of revolution 4.0 where foreign workers can easily enter and Indonesian workers must also be ready to compete in the world globalization scene. So for the world of education make this as an opportunity to print learners who are ready to answer the challenges of the times.

METHOD

Metode analysts used by researchers in writing this study where the first step is all information and data obtained through relevant research studies and text sources are collected based on the formulation of problems made by researchers, then through content analysis can be seen the advantages and disadvantages that have not been studied in the study . Previously, the results of the analysis that have been corroborated with valid and accurate information are presented in the form of discussions and results and then presented last in the form of conclusions and suggestions. The main material is to use relevant literature studies either in national journals or additional insights in international journals. From the study of this journal and then related to the current conditions, this study was able to see how In Educational Opportunities and Challenges in the Era of Revolution 4.0 in Improving the Nation's Competitiveness

RESULTS AND DISCUSSION

Full human development that is ready to move in all sectors of life begins to build a solididikan system. Education must be felt by all levels of society. This awareness must exist in the community so that it is called to continue learning and finally be able to become a superior human being who is ready to contribute to building the nation and state (Risdianto, 2019).

The phenomenon that exists today in Indonesia is the quality of human resources born from quality education has not all been absorbed in the employment sector. While students who are in remote areas have not received quality education so that quality education has not been evenly distributed which results in quality human

resources not as much as in other countries.

In the world to see how the competitiveness of a nation compared to the nation in the world released by the Global Talent Competitiveness Index (GTCI). In 2020 GTCI looks at education, per capita income, information computer technology infrastructure, gender, environment, tolerance level, to political stability. Issued its release where Indonesia's competitiveness position is still low compared to others. In 2020, Indonesia was ranked 65th out of 132 countries in the world. Let's compare in 2019 where Indonesia was ranked 67th. In plain sight the ranking rose from 67 to 65 but this ranking is still included low so that it becomes a common homework for the Indonesian nation to continue to improve the quality of human resources that exist today.

Indonesia at the ASEAN level received skor 41.81 is still far above with Singapore with skor 78.48 in the first place followed by Malaysia with a score of 60.04 then ranked third with a value of 52.17 by Brunei Darussalam. After Indonesia was only followed by Thailand, Vietnam, Laos, and Kamboja.

Seeing the results of this GTCI, the Indonesian nation must rush to try and must improve especially since entering the era of revolution 4.0 with a much different challenge. The world of education that must begin to be tidied up because qualified humans are actually born from the womb of idikan. Then this task is not easy but there must be innovation in the future that must be taken as a policy that has an influence on increasing the competitiveness of the nation.

Let's see the first challenge is to reform education through a curriculum that will be applied to students and students in Indonesia. (Shamsuar & Reflianto, 2018), The four main principles of 21st century learning initiated by Jennifer Nichols can be explained and developed as follows:

1. *"Instruction should be student-centered"*

Development in the world of education, especially in the process of learning megajar switched from teacher-centered to student-centered. With a student-centered system, it will provide a stimulus for students to become active, creative human beings and have the courage to innovate and have sharp thinking power. With this system, learners are not passive listeners but are able to cultivate their thinking power to continue to develop by utilizing wide-open digital technology. With student-centered learning, not the teacher does not play a role at all, but instead where the teacher plays a role as a facilitator and guides students if there is something to be complained about in discussions of the phenomenon being discussed. With this system is able to provide opportunities for learners to develop interests and burn them so that they grow and continue to explore their interests and talents and have critical thinking power. Teachers must also be able to see how the learning style of their learners so that the guidance process will run as well as effective and students will be comfortable and feel good in the learning process so that it will give birth to the latest innovations that will contribute to science.

2. *"Education should be collaborative"*

In our lives as social beings who will definitely interact and need others. In the world of education today, it is expected that students can collaborate with other students with different backgrounds such as social status, culture, religion and other differences. This collaboration can play a role so that students can get more information, and then creative ideas arise in their task projects. This

collaboration will give birth to a sense of mutual respect, understanding others, getting banyak knowledge information and most importantly the work in theworkn education projects will be quickly completed. So it is the teacher who plays a role in arranging how to make the collaboration into a beautiful esme orkso that it is able to give birth to the results of student projects that are able to make new researches that benefit many people.

3. *"Learning should have context"*

The learning process in the classroom is not only limited to the knowledge of terroritis that must be memorized by students. But the knowledge will be more meaningfully applied with skills and practices so that for learners will be imprinted and make the learning process more interesting and enjoyable. Then the curriculum is also reformed how knowledge and leadership can link and match in the world of work that requires application skills that are ready to be absorbed in the world of work.

4. *"Schools should be integrated with society"*

In the world of education, it is also hoped that the knowledge that has been obtained in the education bench can be felt by the community so that how students can provide assistance to the community to the knowledge they have received. (Gobel et al., 2020) We can take examples such as creating community development projects by teaching children who drop out of school, making entrepreneurial projects that utilize local community resources so as to give birth to financial value for the community so as to improve the economy of the community.

The challenges of the Industrial Revolution 4.0 can be faced by managing changes in national basic education in the form of innovation and discovery. This can be realized through multiple-intelligence-based learning that accommodates the potential of learners with a set of intelligences and requires the support of principles and the role of teachers in the management of learning.

Furthermore, the challenge of this nation is by improving the quality of educators. The success of the quality of learners cannot be separated from how the role of a qualified educator and has superior competence. As the competence of educators that we understand at least has pedagogical, professional, social and personality com-interests, it must be added and must be projected to be able to answer the latest educational challenges that boil down to a superior generation figure who understands the concept of work, high skills and competence to technology needed by the world of work. It is the one that must be understood and mastered by an educator. (Robiatul Adawiyah et al., 2017), Let's see what competencies an educator should have in facing the challenges of the 4.0 revolution era in the world of education.

1. *"Educational Competence"*, the competence of educators in the teaching and learning process with a digitalization system so that it is interesting and learners will be encouraged to increase their knowledge.
2. *"Competence for Technological Commercialization"*, has the competence to direct students to apply their knowledge with fast technology-based entrepreneurship and globalization without being limited to the region.
3. *"Competence in Globalization"*, Able to understand learners that the world is without any more barriers but we must have the heights of culture and ethics that become the main benchmark in communicating with the crowd

4. *"Competence in Future Strategies"*, Educators must direct science not static but continue to dynamically follow the times then needed creativity and continue to innovate to make new things that can benefit many people.
5. *"Counselor Competence"*, the world of revolution 4.0 era makes students interact a lot with computer machines and do not stress to a lot of misinformation makes an educator able to become a counselor if students experience problems in their lives.
6. *"Transfer of value"*, An educator is not only an obligation to transfer knowledge but the main thing is to transfer value. With these efforts, students are able to strengthen values and characters because this is able to be a filter for students in receiving information flows in this era of globalization.

Although the teaching profession does not have a significant influence with the 4.0 industrial revolution, teachers must not be complacent with the existing conditions; teachers must continue to improve themselves so they can become teachers who can produce better quality human resources. Therefore, other than those described by Wilson (2019), other skills that teachers need to face of the Industry 4.0 era, are among others :

1. **Friendly with Technology** The world is changing and developing to a higher level, everyone will not be able to fight technology, so in order not to be crushed by it, teachers must have the willingness to learn continuously. Changes in the world by technological advances do not need to be a threat, but face positively, learn and adapt, and want to share with colleagues, both success and failure.
2. **Collaboration** The optimal results will be difficult to achieve if done individually without collaborating with others. Therefore, the teacher must have a strong willingness to collaborate and learn with and or from others. This skill is essential now and in the future. Doing so is not too tricky, because the world is already interconnected, so there is no reason not to collaborate with others.
3. **Creative and Taking Risks** Creativity is one of the skills needed in the Top 10 Skill 2020; creativity will produce a structure, approach, or method to solve authentic problems. Teachers need to model this creativity and undertaker how this creativity is integrated into their teaching. Educators also do not need to be too afraid of being wrong but always ready to face the risks that arise. Mistakes are things that are often faced when starting learning activities, and do not need to be obstacles to progress; errors must be corrected
4. **Have a good sense of Humor** A laughter and humor teacher is usually the teacher who is most often remembered by students. Laughter and humor can be essential skills to help in building relationships and relaxation in life. It will reduce stress and frustration while providing opportunities for others to see life from the other side
5. **Teaching Holistically** In various learning theories, we recognize individual and buzz-group learning. Moreover, lately, individual learning and learning preference is increasing. Therefore, the present teachers need to recognize students individually, including their families and the way they learn (know them in their entirety, including the obstacles they experience both personally and within their families)

The era of the industrial revolution 4.0 will have an impact on the role of education, especially the role of educators. If the role of educators still maintains as a presenter

of knowledge, then they will lose their role along with the development of technology and changes in learning methods. These conditions must be addressed by increasing the competence of educators who support knowledge for exploration and creation through self-learning. In the study (Lase, 2019) entitled "Education and Industrial Revolution 4.0" where the development of the current and future curriculum must complement students' abilities in the academic dimension, life skills, ability to live together and think critically and creatively.

The challenges in the world of revolution 4.0 strengthen students and educators with new literacy where not just sticking to old literacy in the form of reading, writing, and mathematics only. But in this digitalization period, this new literacy becomes a booster in matchmaking science so that it becomes the basic capital to take part in the community (Yusnaini & Slamet, 2019), there are three new literacy groups that must be owned:

1. "Data Literacy": Literacy that helps us get information by reading, making analysis, and then using data to get useful information (Big Data) in the digitalization world.
2. "Technological Literacy": Literacy of both hardware and software used in technology
3. "Human Literacy": Where to strengthen literacy to build communication and social knowledge in the world of digitalization

No less important challenge is in the world of education in facing industry 4.0 is an educational institution, family and educators make a program of strengthening the positive values of the nation's culture and strengthening karacter which eventually becomes a noble akhlaq learners. The application to the strengthening of value is:

1. Practice the creative intelligence of thinking children so that they are able to have the desire to know about something new. As a result, it will be aligned between learning and work applications.
2. Strong learners with a complete understanding of the culture of the noble nation so as to give birth to students who are able to become independent, resilient, responsible, disciplined, dynamic, confident, brave to challenges.
3. Education is not only learning in the classroom but every room and environment outside the classroom becomes a learning education area for learners.
4. Understanding value and knowledge has no meaning if it is not applied by exemplary examples for learners. Educate with transparency in terms of honesty, respect for others, discipline in all things

Education not only trains people with good knowledge and expertise but also trains people with good moral and physical qualities, effectively serving the socio-economic development associations of each country (Tangahu et al., 2021)

So by finding solutions and answering educational challenges in the era of evolution 4.0 both from changes in government policy, curriculum, quality of learners, quality of education, the power of digital literacy and strengthening the value and character of learners, it will be able to give birth to opportunities to get a generation that is ready to compete in the international arena.

CONCLUSION

The competitiveness of the Indonesian nation is low because it is caused by the low quality of human resources owned. So the main role of education is able to educate the nation's superior and qualified children. In the world of education we must make changes that are all creative and innovative in facing the world today in the era of evolution 4.0. Maka the role of all parties must be directly involved both in government policies in reducing the lack of education, the source of funds that are ready to be allocated to education, and then change the competence of students who are ready to be parachuted in the world of work, peran educators who continue to increase the quality of competence and Do not forget the strengthening of the values and character of students who must be strengthened in the world of globalization is in the power of technology then the younger generation can filter and choose useful digital literacy dalam support the specifications of their expertise. So with human resources that have been prepared to the maximum, it will be able to give birth to the golden generation of the Indonesian nation in 2045 so that it is ready to compete in the international world.

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