Proceedings Series of Educational Studies
Proceedings of the International Seminar Universitas Negeri Malang Indonesia – Universiti Malaya Malaysia
Building a Culture of Professional Learning Communities in Asia
Kota Malang, 26 September 2024
Aula FIP Gedung D3 Fakultas Ilmu Pendidikan Universitas Negeri Malang

Challenges and Opportunities Towards Quality Education in Indonesia and Malaysia

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Abstract: Quality education is considered an essential component for the progress of a nation. However, both countries face various obstacles, including the quality of teaching staff, infrastructure disparities, and differences in access to education between urban and rural areas. On the other hand, opportunities that exist through innovative policies, the application of technology in the learning process, and international collaboration can be utilized to improve the quality of education. This research applies a qualitative approach with literature analysis to assess educational policies and their impact on student learning outcomes. The findings show that although the challenges faced are significant, strategic steps can be taken to address these issues and improve the quality of education in both countries. By taking advantage of existing opportunities, it is hoped that Indonesia and Malaysia can build an education system that is more inclusive and relevant to global needs.

Keywords: Quality Education, Challenges and Opportunities, Education Policy.

Introduction

Quality education is a crucial element in the progress of a nation, especially in facing the challenges of globalization and industrial revolution 4.0. In Indonesia and Malaysia, education not only functions as a tool to convey knowledge, but also has an important role in preparing the younger generation to be able to face challenges that exist at the international level. However, both countries still face various obstacles that hinder the achievement of quality education, including differences in the quality of teaching staff, unequal access to education, and inadequate infrastructure.

In Indonesia, the government has introduced the Merdeka Belajar initiative, which aims to increase flexibility and innovation in the education system. This program gives schools the opportunity to design curriculum and teaching methods according to student needs. However, the implementation of this program faces various challenges, especially in rural areas. In these locations, limited resources, lack of training for teachers, and minimal facilities often hinder the quality of education received by students.

Meanwhile, Malaysia has launched the Malaysian Education Development Plan 2013-2025 as an effort to strengthen mastery of STEM (Science, Technology, Engineering and Mathematics) and digital skills among students. Despite the positive steps taken, gaps in access to quality education remain a significant problem, especially in less developed areas. In these areas, inadequate educational facilities and resources result in less than optimal learning outcomes for students.

In this context, a number of important questions arise that need to be answered. What are the challenges faced by Indonesia and Malaysia in efforts to improve the quality of education? How are the educational policies implemented in the two

countries adapting to the demands brought about by the industrial revolution 4.0? Apart from that, what opportunities can be exploited to improve the quality of education in both countries? These questions are crucial so that appropriate strategies can be formulated to overcome existing challenges.

By considering this background, the aim of this research becomes clearer. First, this research aims to analyze the challenges faced by Indonesia and Malaysia in efforts to improve the quality of education. Understanding the various existing obstacles is expected to help in finding appropriate and effective solutions. Second, this research also aims to evaluate the education policies implemented in the two countries and how these policies can adapt to the demands generated by the industrial revolution 4.0. This is very important to ensure that the curriculum and teaching methods remain relevant to current developments.

Third, this research will focus on identifying existing opportunities to improve the quality of education, either through policy innovation, use of technology, or international cooperation. By taking advantage of existing opportunities, it is hoped that both countries can build an education system that is more inclusive and relevant to global needs. This includes increasing access to technology in learning, which is becoming increasingly important in today's digital era.

By analyzing and evaluating these aspects, it is hoped that this research can make a significant contribution to efforts to improve the quality of education in Indonesia and Malaysia. This will not only help both countries to be better prepared to face growing global challenges, but also contribute to the creation of a future generation capable of competing on the international stage. Efforts to create an education system that is inclusive and relevant to the needs of the times is an important step towards a better future for future generations.

Overall, quality education is the foundation for the progress of a nation and is the key to overcoming the global challenges faced today. In the context of Indonesia and Malaysia, focusing on improving the quality of teaching staff, investing in educational infrastructure, and adapting the curriculum to industry needs are strategic steps that need to be taken to achieve these goals. By taking advantage of existing opportunities and adapting to global demands, it is hoped that both countries can create a better and more relevant education system for future generations.

Method

This research uses a qualitative descriptive method with a literature study approach. The aim is to evaluate the challenges and opportunities for improving the quality of education in Indonesia and Malaysia through analysis of educational policies in force in both countries.

This research applies a literature study approach, which collects data from various sources such as books, scientific articles, journals and relevant policy reports. The focus is on education policy, education management, and adaptation to the industrial revolution 4.0.

This research uses secondary data obtained from Indonesian and Malaysian education policy documents, scientific articles, books and other research reports.This data is related to the quality of teaching staff, infrastructure, and the use of technology in education. Data was collected through systematic literature searches from trusted sources. The literature reviewed includes journal articles, books, and relevant education policy reports in the last five years.

Data analysis was carried out descriptively using a content analysis approach.

This analysis aims to identify patterns, differences and strategies in the education policies of the two countries. The results of this analysis provide an overview of the challenges and opportunities faced in improving the quality of education.

Results and Discussion

Teacher quality plays a crucial role in determining the quality of education in a country. In Indonesia, although the government has launched a number of training programs to improve the skills of teaching staff, there are still significant differences in teacher qualifications, especially between urban and rural areas. Supriyadi (2020) revealed that the lack of access to training in remote areas contributes to the low quality of teaching, which has a negative impact on students' academic development. Many teachers in rural areas do not have the opportunity to receive quality training, so they tend to rely on less effective teaching methods. This situation has the potential to hamper student learning outcomes, making efforts to increase access to training and professional development for teachers in remote areas very important.

Apart from the quality of teaching, educational infrastructure is a significant challenge in Indonesia. The Ministry of Education and Culture (2021) reports that more than 30% of schools in rural areas do not have internet access. This lack of access prevents students from studying independently and exploring various sources of information on the internet. In the current educational context, internet access should be an integral part of the learning process, not just an addition. In addition, physical infrastructure such as classrooms, laboratories and adequate learning facilities is still lacking, especially in remote areas. Arifin (2021) highlights that the lack of educational resources, including books and other learning aids, also hinders this effective teaching and learning process. Therefore, it is important for the government to invest in educational infrastructure so that the learning process becomes more interactive and enjoyable, thereby having a positive impact on student understanding.

Inequality in access to education between urban and rural areas in Indonesia is an urgent problem that needs to be addressed immediately. The Central Bureau of Statistics (2022) report shows that students in urban areas often have better access to quality educational facilities, teacher training and adequate educational resources. This condition creates significant inequalities in learning outcomes between students from the two regions. In urban areas, schools are generally better equipped with facilities such as laboratories, libraries, and access to

technology, whereas many schools in rural areas still experience a serious lack of resources. These inequalities not only impact students' academic performance but also impact the development of their social and emotional skills. Therefore, it is important for the government to formulate policies that can reduce this gap and ensure that all students, regardless of their location, have equal access to quality education.

Apart from access challenges, the education curriculum in Indonesia also faces serious problems regarding its relevance to global needs. Rahman (2021) notes that many current curricula still focus on memorizing information without paying enough attention to developing critical thinking skills and creativity. In the era of globalization and industrial revolution 4.0, these skills have become very important to compete in the global market. Irrelevant curriculum can hinder students' ability to think critically and solve problems, which in turn can limit their potential in facing future challenges. Therefore, it is important to update the curriculum regularly so that it remains relevant to current developments and industry needs. Involving various stakeholders, including teachers, parents and the industrial sector in curriculum evaluation is also very necessary to ensure that the education implemented can produce graduates who are ready to face global challenges.

With these steps, it is hoped that education in Indonesia can become better and more relevant, thereby providing significant benefits for future generations. Focusing on improving the quality of teaching staff, investing in educational infrastructure, and appropriate curriculum updates will create an education system that is inclusive and responsive to the needs of the times. Through these efforts, Indonesia can not only improve the quality of education within the country, but also prepare the younger generation to compete at the international level, which will ultimately encourage the progress of the nation as a whole.

In Malaysia, one of the big challenges in the education sector is the separation between the national and international curriculum. This fragmentation can create confusion for students, teachers, and parents, and causea mismatch in achieving overall educational goals (Kaur & Singh, 2019). When students are exposed to different curricula, they often struggle to adjust todifferent learning methods and expectations, especially when moving from one system to another. This can result in difficulties in continuing education to a higher level, where educational institutions may prefer one particular curriculum. Thus, this fragmented education system not only affects the teaching and learning process, but can also have a significant impact on students' futures. The economic disparities that exist in Malaysia greatly influence unequal access to education. Students who come from economically disadvantaged backgrounds often face various obstacles that prevent them from getting aquality education. Many of them do not have adequate access to educational facilities and resources needed to support an effective learning process(Mahmood et al., 2020).

In addition, factors such as transportation costs,education costs and daily necessities often become a heavy burden fordisadvantaged families, so they are forced to stop their education or choose schools of lower quality. This condition exacerbates the cycle of poverty, where young people do not receive a good education, which in turn reduces their opportunities in the future. Therefore, more supportive policies are needed for students from

disadvantaged backgrounds, such as scholarships, educational assistance, and increasing access to quality educational facilities.

Malaysia is trying to align its curriculum with the demands of Industry 4.0, but this process is often slow and requires support from various sectors. In an era of ever-developing technology, education must be able to prepare students to face the ever-changing world of work (Nordin, 2020). However, the current curriculum is not fully integrated with the skills needed in industry, such as digital skills and problem solving abilities. Therefore, these changes require collaboration between governments, educational institutions and the industrial sector to ensure that curricula cover skills that are relevant and can be applied in practice. In addition, teachers also need to receive adequate training to be able to teach these skills effectively. Without sufficient support, efforts to update the curriculum will not produce the expected results.

Mastery of STEM (Science, Technology, Engineering and Mathematics) in Malaysia also faces its own challenges. Although the government has launched various initiatives to improve skills in STEM fields, the results obtained are still far from satisfactory (Rahman et al., 2021). One of the main problems is students' low interest in STEM fields. This can be caused by a lack of understanding of the relevance of STEM in everyday life and the career prospects it offers. To increase student interest, more innovative approaches in STEM teaching need to be implemented, including the use of more engaging and contextual learning methods. The involvement of the industrial sector in education can also contribute to increasing the appeal of STEM, giving students direct insight into the real-world application of these skills. Therefore, more coordinated and sustained efforts are needed to ensure that students are not only taught STEM skills, but also motivated to pursue careers in these fields.

The Freedom of Learning policy implemented by the Indonesian government is an important strategic step to improve the quality of education in this country. This policy gives schools the freedom to develop a curriculum that is tailored to local needs and the potential of students in each region (Damayanti & Kusuma, 2021). With this freedom, schools have the opportunity to consider the social, cultural and economic context in their area when preparing teaching materials. This approach allows students to learn in a way that is more relevant and directly related to their environment, which is expected to increase motivation and interest in learning. The Merdeka Belajar policy also encourages innovation in teaching methods, where teachers are encouraged to look for and apply creative methods in delivering lesson material.

The development of educational technology, or edtech, plays an important role in improving the quality of learning in Indonesia. The use of this technology provides wider access to various sources of educational material and enriches interactions between teachers and students (Prasetyo, 2020). For example, online learning platforms allow students to access a variety of learning resources, including videos, articles and interactive modules, which can be studied anytime and anywhere. In addition, technology also supports a more collaborative learning approach, where students can collaborate on online projects and share ideas with each other more easily. This use of technology in education not only helps students learn in a more flexible way, but also prepares them to face challenges in an increasingly complex and competitive digital world.

Collaboration with international educational institutions provides various benefits for developing the quality of education in Indonesia. Through this

collaboration, educational institutions can exchange knowledge and best practices which are very important for improving the quality of education (Halim & Ibrahim, 2020). By establishing relationships with universities or educational institutions abroad, teachers and lecturers have the opportunity to take part in training, seminars and exchange programs that can broaden their horizons and skills. In addition, students also get the opportunity to be involved in student exchange programs, which provide them with a more varied learning experience and a better understanding of the culture and education system in other countries. This international collaboration not only has a positive impact on improving the quality of education, but also strengthens the global network that can support the development of education in Indonesia more broadly.

One very important step to improve the quality of education is to focus attention on increasing teacher competency. This effort is carried out through training and certification programs designed to provide teachers with the latest knowledge and skills in teaching (Sari, 2021). By participating in training programs, teachers can learn innovative teaching methods, effective classroom management strategies, and how to utilize technology in the teaching and learning process. Certification also functions as an indicator that teachers have met certain standards in their profession, which in turn can increase public confidence in the quality of the education provided. This increase in teacher competency is expected to have a positive impact on the teaching and learning process in the classroom, so that students gain a better and more meaningful learning experience.

The positive impact of the Merdeka Belajar policy is seen in efforts to make learning more inclusive and accessible to all students. By giving schools autonomy, it is hoped that they can respond to the specific needs of diverse students. This policy provides space for creativity and innovation, so that schools can create programs that are more relevant to the local context. On the other hand, although this policy promises many benefits, challenges in its implementation still exist, especially in terms of teacher readiness and available resources.

Educational technology serves as an effective tool to overcome the challenges faced in education. By utilizing edtech, the learning process can be changed to be more interactive and interesting. This not only increases student engagement but also allows for more personalized learning. Through various digital platforms, students can learn in a way that suits their respective learning styles, which can ultimately improve learning outcomes. However, the application of technology in education also requires attention to the existing digital divide, so that all students, regardless of economic background, can make maximum use of technology.

Collaboration with international educational institutions provides valuable opportunities for the development of education in Indonesia. The exchange of

knowledge and best practices not only improves the quality of teaching but also enriches the student learning experience. International programs often bring new perspectives that can be applied in local contexts. By learning from education systems that have been successful in other countries, Indonesia can adopt practices that have proven effective and adapt them to local conditions.

Increasing teacher competency through training and certification is one of the main keys to ensuring that students receive quality education. Continuous training helps teachers stay updated with the latest developments in teaching methodology and technology. In addition, certification can increase a teacher's credibility in the eyes of students and parents, thereby creating a more positive learning environment. This effort is also in line with government policy to improve the quality of education in Indonesia as a whole.

The education transformation policy introduced through the Malaysian Education Development Plan 2013-2025 serves as a strategic framework for improving the quality of education in the country. The main aim of this policy is to improve student learning outcomes and ensure that the education provided is relevant to the needs of the current labor market (Ministry of Education Malaysia, 2021). In a global era that continues to develop, the education system must be able to produce graduates who not only master academic knowledge, but also have the practical skills needed in the world of work. Therefore, it is important for education to be responsive to economic changes and rapid technological advances.

One of the main focuses of this policy is improving the quality of teaching and learning. The government encourages educational institutions to implement more innovative and effective teaching methods. This approach is expected to bridge the gap between formal education and industry needs, so that graduates have relevant skills and are ready to apply. In addition, this policy emphasizes the importance of competency-based learning, where students are invited to be actively involved in the learning process, developing the skills needed to face real-world challenges.

As part of its education transformation policy, Malaysia is committed to strengthening education in STEM (Science, Technology, Engineering and Mathematics) fields and 21st century skills. This focus becomes very important amidst rapid technological advances (Nordin, 2020). STEM education aims to help students understand complex scientific and technical concepts, and prepare them to face global challenges. In this context, Malaysia has launched various initiatives to increase students' interest in STEM fields, including holding competitions and training programs for teachers so that they can teach with more interesting and effective methods.

In addition, 21st century skills are also a major concern in this policy. These skills include the ability to communicate, collaborate, think critically, and innovate. In the ever-changing world of work, the ability to work together in teams and think critically becomes very important. By equipping students with these skills, Malaysia aims to create a generation of young people who are not only ready to face challenges at the local level but also able to compete in the global market.

Digitalization of education in Malaysia is also an integral part of this transformation policy. Efforts to improve educational infrastructure aim to ensure more equitable access to education in all regions, including remote areas (Mahmood et al., 2020). The digitalization process includes the provision of information and communication technology that supports modern teaching methods, as well as training for teachers to utilize technology in the learning process. This is crucial for reducing the education gap that exists between urban and rural areas.

Through digitalization, it is hoped that students from various backgrounds can access equal educational resources, regardless of their geographic location. Thus, all students have the opportunity to learn in a more interactive and engaging way, utilizing digital tools that help them understand difficult concepts. In addition, digitalization also creates opportunities for the development of online learning platforms that allow students to study outside formal school hours, giving them the opportunity to expand their knowledge independently.

Collaboration between educational institutions and the private sector is an important element in the development of education in Malaysia. This collaboration can provide additional resources and increase the relevance of the curriculum being taught (Kaur & Singh, 2019). Through partnerships with industry, educational institutions can gain insight into the skills requirements needed in the job market, so that the designed curriculum can be more appropriate and practical to be applied in real contexts.

This collaboration also offers opportunities for students to gain practical experience through internship programs, which is very beneficial in preparing them to enter the world of work. In addition, support from the private sector in the form of funding, facilities and other educational resources also contributes to improving the quality of education. By combining resources and knowledge from the education and industry sectors, Malaysia seeks to create an education ecosystem that is more holistic and relevant to current developments, so that students can be prepared for a better future.

With these various initiatives, Malaysia hopes to create an education system that is not only of high quality but also able to compete at the international level, so that it can meet increasingly complex global demands.

Conclusion

Quality education is the key to a country's progress, and Indonesia and Malaysia face various challenges and opportunities in efforts to improve the quality of education. Key challenges include teacher quality, lack of infrastructure, and differences in access to education between urban and rural areas, which have a negative impact on student learning outcomes. Many remote areas lack adequate facilities, hindering the learning process. However, there are opportunities to improve education through innovative government policies, use of technology, and international collaboration. To achieve progress, the government should prioritize teacher training and certification, especially in less developed areas, as well as increase investment in education infrastructure and internet access. In addition, it is important to update the curriculum regularly so that it remains relevant to the needs of industry 4.0, so as to develop students' critical thinkingskills and creativity. With these steps, it is hoped that the quality of education in both countries can improve significantly.

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