Improving the Quality of Education Through Teacher Competency Development: A Comparative Study in Indonesia and Malaysia

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Sections Info	ABSTRACT
	*Objective: This study aims to conduct a comparative analysis of teacher competency development policies in both Indonesia and Malaysia and identify challenges and supporting factors for their implementation. **Method:** The method used is a literature review, analyzing policy documents, scientific journals, and official reports. **Results:** The results indicate that Indonesia emphasizes a decentralized approach through the Merdeka Belajar program and teacher certification, but still faces challenges in access to training and quality equity. Meanwhile, Malaysia implements a centralized approach through the Institut Pendidikan Guru (IPG) and the Program Pembangunan Profesional Berterusan (CPD), with systematic support for technology integration. Both countries face similar challenges, such as infrastructure limitations in remote areas. **Novelty:** This study recommends strengthening regional cooperation, exchanging best practices, and increasing policy flexibility to address local needs.*

INTRODUCTION

Education is a key pillar in developing quality human resources [1]. In today's era of globalization, education plays a strategic role in facing the world's increasingly complex and dynamic challenges. The education system in Malaysia has undergone various transformations to meet the needs of national development and ensure competitiveness at the global level. The education system in Malaysia encompasses several primary levels, starting with preschool education for children aged 4 to 6 years. This level provides a foundation for cognitive, social, emotional, and physical development before formal education. Lower secondary education involves students aged 7 to 12, divided into Stage I (Years 1-3) and Stage II (Years 4-6). The primary focus is mastering the basics of reading, writing, and arithmetic (3M), as well as character development and moral values. After primary education, students continue their studies at the secondary level, which includes Lower Secondary (Grades 1-3) and Upper Secondary (Grades 4-5). Students can choose streams such as science, literature, technical, or vocational based on their interests and achievements. After the Malaysian Certificate of Education (SPM), students can continue their post-secondary education through Grade 6, matriculation, diploma, or other pre-university programs, as preparation for entering higher education or the workforce. Each level of education is designed to ensure the holistic development of students, which is in line with the National Education

Philosophy, which emphasizes balanced intellectual, spiritual, emotional, and physical development.

Teachers, as the spearhead of the learning process, play a central role in determining the success of education [2]. They are not only required to master the subject matter, but also to be able to transfer moral and cultural values to their students. Teacher competencies encompass pedagogical, professional, social, and personal aspects and are key to creating practical and relevant learning processes [3].However, despite the significant role of teachers, teacher competency development still faces various challenges, especially in developing countries such as Indonesia and Malaysia. These challenges include gaps in access to training, lack of technological support, and minimal ongoing evaluation of education policies.

Indonesia and Malaysia, countries with similar historical and cultural backgrounds, have implemented different education policies in teacher competency development. In Indonesia, teacher training programs have been implemented through Education and Training (Diklat) mechanisms, certification, and innovative programs such as Merdeka Belajar [4]. These programs aim to improve teacher quality to respond to the learning needs of the 21st century [5]. However, the implementation of these programs is often hindered by administrative and bureaucratic issues. Meanwhile, Malaysia integrates teacher competency development through higher education institutions such as the Institut Pendidikan Guru (IPG) and continuous professional development programs [6]. Malaysia also emphasizes the importance of technology-based learning and international collaboration. Despite their different approaches, both countries face similar challenges, such as budget constraints, limited access to quality training, and educational disparities between urban and rural areas [7].

Various education policies focus on improving education quality through teacher competency development [8]. However, the implementation of these policies has not always been smooth. In Indonesia, policies such as teacher certification are expected to improve teacher competency and welfare. However, in reality, many teachers feel that the training is irrelevant to their field needs. Many teachers in remote areas feel that they do not have adequate access to training [9]. Although teacher training programs have been systematically designed in Malaysia, challenges remain, particularly in ensuring that training reaches all areas, including remote areas. These limitations indicate that education policies often do not fully reflect the real needs.

In this context, several important questions need to be answered. How do policies and the implementation of teacher competency development programs differ in Indonesia and Malaysia? How do these policies impact the quality of education in each country? What factors support and hinder teacher competency development? Answering these questions is an important step in understanding how the two countries can learn from each other and improve the effectiveness of their education policies. This understanding is important for policymakers, academics, and practitioners focused on improving education quality.

This study aims to analyze teacher competency development policies in Indonesia and Malaysia in a comparative manner. This analysis includes identifying each country's successes, challenges, and supporting and hindering factors. By understanding this, this study is expected to provide strategic recommendations to improve the effectiveness of teacher competency development programs, particularly in efforts to improve the quality of education in both countries. In addition, this study also aims to provide new insights into how education policies can be adapted to local needs while adopting best practices from other countries.

Most previous studies have discussed teacher competency development in a particular country. For example, several studies in Indonesia have focused on the evaluation of teacher certification programs, while research in Malaysia has chiefly discussed the effectiveness of IPG in producing quality teachers. However, studies comparing Indonesia and Malaysia are still minimal. In addition, many studies only focus on policy outcomes without delving into the implementation aspects and real challenges faced in the field. Therefore, this study seeks to fill this gap by providing a more in-depth and relevant comparative analysis. This analysis is also expected to reference other countries facing similar challenges in teacher competency development.

Teacher competency development is related to improving teaching skills and adapting teachers to changing times [10]. In Indonesia, the concept of Merdeka Belajar (Freedom to Learn) has become a new foundation for building a flexible and adaptive education paradigm [11]. However, this requires teachers who are not only competent but also possess critical thinking and innovative skills [12].Many teachers find this challenge quite daunting due to the limitations of training that focuses on developing 21st-century skills. In Malaysia, professional development and competency improvement for teachers are fundamental aspects in achieving educational excellence in schools under the Malaysian Ministry of Education (KPM) [13]. In Malaysia, policymakers believe that the key to effective school reform is to involve teachers professionally in efforts to improve student learning [14]. In addition, teacher professional development programs such as courses, seminars, and workshops are important for improving teacher competence in teaching and learning. These programs help teachers continuously update their knowledge and skills and meet current demands in education. Teacher competence development in Malaysia plays an important role in ensuring high-quality education.

This study employed a comparative approach using literature review to contribute meaningfully to the discourse on education, particularly in the context of teacher competency development. The research was conducted by reviewing relevant literature, policy documents, reports, and previous studies on teacher competency development in Indonesia and Malaysia. With this method, this study provides new insights into education policies in both countries and offers practical recommendations that can be applied to improve the quality of education more broadly [15]. The findings of this study can serve as a reference for policymakers, education practitioners, and other researchers to continue innovating in their efforts to create a better education system.

Quality education can only be achieved if teachers, leading learning actors, receive adequate support. Teacher competency development must be a top priority in every education agenda at the national level and within regional and international cooperation frameworks. Thus, efforts to improve the quality of education through teacher competency development can have a significant impact, not only for the current generation but also for the future. This improvement is a long-term investment that will determine the direction of societal and national development.

RESEARCH METHOD

This study uses a literature review or literature study as its main approach. This method was chosen to gain an in-depth understanding of teacher competency development policies in Indonesia and Malaysia, which are the focus of this study. A literature study allows researchers to collect, analyze, and synthesize information from various relevant sources, including books, academic journals, policy documents, official reports, and previous research results [16].

The first step in implementing this literature review method is to identify relevant literature on the research topic. The selected literature includes education policy documents in Indonesia and Malaysia, such as teacher certification policies in Indonesia and teacher training programs at the Institute of Teacher Education (IPG) in Malaysia. In addition, previous studies discussing the effectiveness of teacher competency development programs in both countries are also integrated to provide a more comprehensive picture.

After the relevant literature was identified, the next stage was a critical analysis of its content. The analysis is conducted by comparing teacher competency development policies and their implementation in both countries. In this stage, the researcher looks for similarities, differences, and challenges faced by each country in developing teacher competencies. This analysis also includes identifying supporting and inhibiting factors that influence the effectiveness of these policies [17].

The next stage is the synthesis of the information that has been analyzed. The synthesis is carried out to compile the main findings of this study, which include the successes and challenges in teacher competency development in Indonesia and Malaysia. These findings are then used as a basis for formulating strategic recommendations that can be applied to improve the quality of education in both countries.

This literature review method also involves evaluating the validity and reliability of the sources used. The researcher ensures that the sources used have high credibility and strong relevance to the research topic [17]. To support the validity of the findings, the researcher also compares information from various sources to avoid bias and ensure that the analysis is well-founded.

The literature review method in this study offers advantages in terms of efficiency and broad coverage of information. However, the researcher is also aware of its limitations, namely the lack of empirical data obtained directly from the field. Therefore, this study's findings are more descriptive and analytical, aiming to provide an overview

of teacher competency development in Indonesia and Malaysia. The results of this study are expected to serve as a foundation for further research involving empirical data to strengthen the existing findings.

Using a literature review method, this study contributes to the discourse on education by providing an in-depth comparative analysis of teacher competency development policies in Indonesia and Malaysia. This approach provides new insights into the challenges and successes of education policies in both countries and offers practical recommendations that can be implemented to improve education quality sustainably.

RESULTS AND DISCUSSION
A.   Teacher Competency Development in Indonesia

Teacher competency development in Indonesia is a national priority realized through various strategic programs. The teacher certification program, for example, is designed to improve the professionalism and welfare of teachers [18]. Teachers can carry out their duties with better competency standards through certification. However, significant challenges still plague its implementation, such as limited access to training in remote areas and the lack of equitable training quality [19]. As a result, many teachers have not been able to take full advantage of this program. In addition, the certification process is often considered too bureaucratic and time-consuming. Many teachers find it challenging to meet the complex administrative requirements.

On the other hand, the evaluation of the certification program still lacks transparency, making it difficult to measure its actual impact on improving the quality of education [20].The government must reform the certification system to make it more efficient and effective. Local governments also need support to ensure this program is accessible to all teachers, including those in remote areas. Thus, the main objective of certification is to improve teacher competence, which can be achieved evenly [21].

In addition to certification, the government has also initiated various training and workshops to improve teachers' pedagogical skills [22]. These training programs cover innovative teaching methods, the use of technology in the classroom, and effective classroom management. Unfortunately, some teachers feel that their workload is too heavy, preventing them from participating in the training optimally. This has led to a competency gap between teachers in urban and rural areas. Teachers in urban areas have easier access to training due to better facilities and infrastructure.

Meanwhile, teachers in rural areas are often constrained by distance and inadequate training facilities [23].In addition, the training materials provided are often not tailored to the needs of teachers in certain areas. The government needs to design more contextual and appropriate training for local conditions. Teachers' active participation in designing training materials also needs to be increased. Thus, training can be more relevant and beneficial for all teachers, without exception [24].

Another strategic step is the implementation of the Merdeka Belajar (Freedom to Learn) policy, which allows teachers to design learning based on student needs and local

conditions [24]. Teachers are encouraged to develop their creativity through project-based or thematic learning approaches. However, the effectiveness of this policy requires more systematic support, such as improving educational infrastructure and providing ongoing training [25]. Many teachers struggle to implement the Merdeka Belajar concept due to a lack of understanding and clear guidelines [26]. In addition, the flexible curriculum often confuses teachers in determining learning priorities. The government must provide specialized training on effectively implementing Merdeka Belajar [27]. Support from school principals and education supervisors is also crucial to ensure the smooth implementation of this policy. As a result, teachers can feel more confident in developing innovative teaching methods that align with students' needs.

Technological support in teacher development is also a key focus. The government has begun integrating digital technology into teacher training through e-learning platforms and educational applications [28].Teachers can utilize the Ministry of Religious Affairs' Pintar Website, which provides various learning resources and online training for madrasah teachers. Another platform that teachers can use outside the Ministry of Religious Affairs is Info GTK. This is an innovative solution for teachers to develop themselves independently. This platform provides training modules, instructional videos, and discussion communities that can be accessed anytime and anywhere. However, the implementation of this technology has not been evenly distributed, especially in remote areas with limited internet access. Therefore, more inclusive policies are needed so that all teachers can benefit from them. In addition, many teachers are still technologically illiterate and need special training to use digital devices [29].The government must provide basic technology training for teachers unfamiliar with digital devices. Internet infrastructure also needs to be improved, especially in remote areas. This will enable all teachers to access digital learning resources easily. In addition, e-learning content needs to be tailored to the needs of teachers and students in various regions. With adequate technological support, Indonesia's education quality will improve significantly.

Another challenge is frequent curriculum changes, which force teachers to adapt constantly. Many teachers lack clear guidance in implementing the new curriculum [30]. In addition, the lack of guidance from the authorities makes it difficult for many teachers to integrate the curriculum with their teaching methods. Frequent curriculum changes also cause teachers to feel confused and exhausted [31]. The government needs to provide more intensive training whenever there are curriculum changes. In addition, there needs to be a support team ready to assist teachers in implementing the new curriculum. Evaluations of curriculum implementation also need to be conducted regularly to ensure that the curriculum is effective. This will enable teachers to be better prepared and more confident in facing curriculum changes [32].In addition, there needs to be better communication between the government and teachers regarding curriculum changes' reasons for and objectives. This will enable teachers to understand better and support these changes.

In facing these challenges, collaboration between the government, educational institutions, and the teacher community is vital. One successful example is the formation of teacher working groups (KKG) at the local level, which allows teachers to share experiences and practical solutions in facing daily challenges [21]. With this collaborative approach, teacher competency development can be more effective and sustainable. In addition to KKG, the government can facilitate online discussion forums for teachers to share knowledge. Collaboration with universities and research institutions can also help develop higher-quality training materials. In addition, there needs to be a mentoring program that connects senior teachers with young teachers to share experiences. Thus, teachers can learn from each other and develop their competencies together. Furthermore, there needs to be incentives for teachers to participate actively in these collaborative activities. Thus, the quality of education in Indonesia can continue to improve and be evenly distributed across all regions.

B. Teacher Competency Development in Malaysia

Through the Teacher Professionalism Division (BPG), KPM is responsible for designing and implementing teacher professionalism development programs. The Master Plan for Teacher Professionalism Development (PIPPK) published by the Malaysian Ministry of Education is a comprehensive guide for improving teacher professionalism in Malaysia. This document emphasizes the importance of developing teacher competencies through continuous training, providing clear career paths, and integrated assessment to ensure high-quality teaching [33].The PIPPK also outlines strategies to strengthen the role of teachers in addressing current and future educational challenges. Furthermore, the PIPPK emphasizes the need to strengthen collaboration between educational institutions, training agencies, and other stakeholders to improve teacher quality. This holistic approach aims to ensure that teachers in Malaysia not only possess up-to-date knowledge and skills but can also apply them effectively in the classroom, which aligns with the nation's educational aspirations.

In addition, the continuous development of professionalism among teachers is reinforced through various initiatives implemented by KPM. Among these are In-Service Training, which provides courses and workshops to enhance teachers' skills and knowledge in specific areas. The Professional Learning Community (PLC) program also encourages teachers to share best practices and collaborate to improve teaching quality. Furthermore, the use of technology is promoted to integrate digital elements into teaching, thereby enhancing the effectiveness of student learning. All these efforts highlight the KPM's commitment to strengthening teacher competence as a strategic step toward improving the quality of national education.

Malaysia has a structured approach to teacher competency development through the Institute of Teacher Education (IPG), which is regulated under the Education Act 1996 and the Malaysian Education Development Plan (MEDP) 2013-2025. The IPG is responsible for providing pre-service training that covers pedagogical theory, technology mastery, and practical experience in the field [33]. This training is designed by the Malaysian Teacher Standards (MTS), which sets out the core competencies of teachers in

knowledge, pedagogy, and professional values. Every prospective Teacher must complete a diploma or degree program at the IPG for 1-2 years before being appointed as a permanent teacher. Additionally, the IPG uses digital platforms such as the Learning Management System (LMS) to facilitate technology-based learning. Regulations such as the Guidelines for Teacher Training by the Malaysian Ministry of Education (KPM) ensure that the IPG curriculum is regularly updated to meet contemporary needs [34]. For example, modules on inclusive education and educational technology are now mandatory. School internship programs are also regulated through the Education Regulations (Training) 2012 to ensure teachers have adequate practical experience. With this approach, IPG has succeeded in producing teachers ready to face modern classroom dynamics.

Continuing Professional Development (CPD) programs in Malaysia are mandated through KPM Circular No. 3/2020, which requires teachers to participate in at least seven training days per year. CPD ensures teachers remain proficient in pedagogical innovations, such as STEM approaches, project-based learning (PBL), and digital technology. Platforms like FrogVLE (Virtual Learning Environment) and DELIMa (Digital Educational Learning Initiative Malaysia) are used to provide flexible online training modules [35].CPD training is also integrated with the Malaysian Teacher Competency Framework (TF-MQF) to ensure alignment with national standards. Teachers in remote areas are provided with incentives such as transportation assistance and access to the Knowledge Sharing Program through webinars supported by KPM. Additionally, the 2021 CPD Implementation Guidelines emphasize the importance of school-based training, such as classroom management for new teachers or authentic assessment techniques. Training evaluations are conducted through the Teacher Information System (SIG) for monitoring.

The Malaysian government integrates technology into teacher development through the Digital Education Development Plan (2021-2025) and the JENDELA Initiative to expand internet access in remote areas. Platforms like DELIMa and Google Classroom are used for online teacher training, including interactive modules and learning simulations. The Teacher- -Caring Online System (SGPO) also provides resources such as video tutorials and digital question banks. During the COVID-19 pandemic, KPM launched the Digital Teacher Program to train teachers using tools such as Microsoft Teams and Quizizz, in line with the KPM 2020 Hybrid Learning Guidelines [36].However, challenges such as the digital divide in Sabah and Sarawak are being addressed through the Internet for All (UNIFI for Education) project, implemented in collaboration with the Ministry of Communications. The Communications and Multimedia Act 1998 also promotes providing high-speed internet infrastructure in schools. Teachers are encouraged to utilize the Malaysia Open Source Learning (MOSL) platform to collaborate on creating creative teaching materials.

The COVID-19 pandemic has accelerated digital transformation in Malaysia through the National Education Recovery Plan (PPPN) 2021-2025. KPM is training teachers to use Microsoft 365 Education and Zoom for Education by the 2020 Circular on

Teaching and Learning at Home (PdPR). This training is mandatory under KPM Directive No. 2/2020 to ensure the continuity of learning. Teachers are also directed to use the KPM Official Portal and YouTube EduwebTV to access digital curriculum content. Additionally, the Malaysian-style PMM (Platform Merdeka Mengajar) platform, such as the Online Teacher System (SGO), enables teachers to share Daily Lesson Plans (RPH) and creative materials [37].

The Rural Education Development Plan under the 2023 Budget addresses infrastructure gaps between urban and rural areas. Projects like the First Digital Schools in Sabah and Sarawak provide teachers with laptops and 4G routers. KPM also partners with telecom companies like CelcomDigi for the Free Internet for Rural Schools program. The Education Act 1996 requires the government to provide all schools with basic facilities like electricity and clean water. To ensure equitable training, the KPM has launched Mobile Training Units (MTUs) that visit remote schools with mobile training facilities [38].Teachers in rural areas are also given priority in the Technology Competency Enhancement Scholarship Program (BPKT) to participate in digital certification courses.

C. Examples of Higher Education Collaboration in Teacher Development

Malaysia systematically develops teacher competencies through the Institute of Teacher Education (IPG), which manages 27 training campuses nationwide. IPG provides five years of pre-service training that combines pedagogical theory, technology mastery, and field practice in partner schools. The curriculum is based on the 1996 Education Act and the Malaysia Education Blueprint 2013-2025, which aims to improve the quality of 500,000 teachers as a key pillar of education reform. In Indonesia, teacher competency development is facilitated by the Institute for the Development and Empowerment of School Principals and Supervisors (LPPKSPS), which collaborates with universities such as the Indonesian University of Education (UPI) and Yogyakarta State University (UNY) in education management and learning technology training programs.

Malaysia is actively adopting educational technology through the 2021-2025 Education Digitalization Initiative. Platforms such as Frog VLE and Google Classroom are integrated into the IPG curriculum. The Malaysian Ministry of Education (KPM) launched the Hybrid Teacher Training Program to support teachers in remote areas, combining online training using the MyGuru app and offline training at community centers. In Indonesia, similar programs are being implemented through collaboration between the Ministry of Education, Culture, Research, and Technology and the Merdeka Belajar Kampus Merdeka (MBKM) platform. Universities such as the Open University (UT) and Malang State University (UM) have conducted online training using a Learning Management System (LMS) for thousands of teachers, particularly during the COVID-19 pandemic.

Malaysia also emphasizes developing soft skills in the IPG curriculum, including Effective Communication and Conflict Resolution. Soft skills development for teachers is carried out through the In-Service Teacher Professional Education Program (PPG), which includes training modules on communication and classroom management. Universities

such as the State University of Jakarta (UNJ) and the State University of Semarang (UNNES) play an active role in developing the training curriculum. Collaboration with international organizations such as UNICEF and Save the Children has also introduced social-emotional learning modules for elementary school teachers to reduce student stress levels and improve teacher-student relationships.

D.   Comparison Between Indonesia and Malaysia

Indonesia has adopted a decentralized approach to teacher competency development through policies such as Merdeka Belajar [38]. This decentralization allows regions to design training programs according to local contexts, such as in Papua, which focuses on basic literacy. However, a study by Björk reveals that decentralization often leads to fragmentation due to varying capacities among local governments [39]. Programs like Guru Penggerak are designed to enhance teacher leadership, but their implementation is uneven, especially in remote areas. The lack of coordination between the central and local governments also leads to policy overlap [40], [41]. A concrete example is the disparity in teacher training quality between Java and NTT, where access to infrastructure and the internet are significant barriers. Despite this, this flexibility has fostered local innovations, such as teacher training based on local wisdom in Bali. The main challenge remains funding and oversight to ensure quality equity [42].

Malaysia adopts a centralized approach through the Institute of Teacher Education (IPG) to ensure national standards. IPG manages 27 campuses that conduct curriculum-based training, ensuring consistency in teacher competencies[42]. According to Hussin, this system effectively produces teachers with uniform qualifications but is less responsive to local needs. For example, teachers in Sabah and Sarawak face difficulties adapting the national curriculum to the local geographical and cultural context. The UNESCO report also highlights the limitations of technology-based training in remote areas. However, Malaysia's centralized system supports the systematic integration of technology, such as the DELIMa platform for digital teacher training. Another weakness is the lack of space for teacher innovation due to a rigid curriculum. However, Malaysia excels in maintaining national teacher quality standards.

Bilateral collaboration can focus on exchanging best practices, such as Malaysia's cluster-based training model, which Indonesia can adopt for remote areas. Indonesia can share its experience with the Merdeka Belajar (Freedom to Learn) approach to increase the flexibility of the Malaysian curriculum. ASEAN has recommended a Teacher Exchange Programme framework to strengthen collaboration. A concrete example is the cooperation between IPG and the Indonesian Teacher Training Institution (LPTK) in technology training. Joint research on inclusive education can also be conducted, drawing on Malaysia's success in the " " for special education. Joint funding through schemes such as the ASEAN Education Fund will support sustainable programs. Integrating the two countries' online training systems, such as combining the Ruang Guru and DELIMa platforms, is also worth considering. With this synergy, both countries can reduce disparities while maintaining the uniqueness of their respective systems.

CONCLUSION

Fundamental Finding : Based on a study comparing human resource management (HRM) policies at the primary and secondary education levels between Indonesia and Malaysia, both countries have strong policy frameworks to support the management of educational human resources. However, there are significant differences in implementation and strategic focus. In Indonesia, education HRM policies are based on Law No. 20 of 2003, while Malaysia refers to the Education Act 1996 and the Malaysian Education Development Plan (PPPM). Implication : Both countries place education as a pillar of national development and prioritize improving teacher quality. Indonesia uses CPNS and PPPK recruitment systems coordinated with local governments, while Malaysia relies on the centralized SPP system. Despite differing approaches, both aim to align placement with regional needs. However, Indonesia still experiences disparities, especially in 3T areas. Limitation : Indonesia promotes teacher professionalism through the PPG program, certification, and continuing education, though access and quality remain uneven. In contrast, Malaysia mandates CPD as part of its promotion system, with structured indicators on innovation and learning outcomes. Indonesia applies PKG linked to credit points, while Malaysia uses a more detailed competency-based e-Rank system. Future Research : Malaysia's system is more adaptive to professional growth. Both countries continue to face HRM challenges including uneven distribution, limited incentives, and training disparities. Yet, potential exists through technology, regional partnerships, and best practice exchange. Further comparative studies could strengthen contextualized, equitable, and sustainable HRM policy development.

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