

The Future of Indonesian Education: A Case Analysis on the Supply of High-Quality Teachers in Indonesia

Khansa Filza Ferdina¹, Maya Hikmah Isnaini², Muhammad Daffa Tri Arnoldi^{3*}
English Language Education Study Programme, Faculty of Languages and Arts,
Universitas Negeri Jakarta, Indonesia

Submitted: 16 June 2024

Revised : 10 Oct 2024

Accepted : 30 Nov 2024

Abstract

Despite continuous efforts to improve education, Indonesia still faces challenges such as unequal access to quality education, disparities in learning outcomes, and persistent teacher shortages. While the government has introduced professional development programs like Pengembangan Keprofesional Berkelanjutan (PKB) to enhance teacher quality, the effectiveness of these initiatives remains underexplored. This study aims to discuss the effectiveness of professional development programs in improving teacher competencies and addressing teacher shortages. This qualitative case analysis examines the challenges in the supply and quality of teachers in Indonesia, highlighting systemic issues and proposing a comprehensive approach to improve teacher qualifications, resource allocation, and policy implementation. The findings indicate that professional development programs significantly enhance both pedagogical and professional competencies, with blended learning models proving to be the most effective in supporting teacher development. However, challenges related to teacher recruitment and retention persist, particularly in replacing retiring educators. These results suggest the importance of continuous evaluation and adaptation of teacher development programs like PKB to sustain educational quality and effectively address teacher shortages across Indonesia.

Corresponding e-mail:

*)daffatriarnold@gmail.com

Keywords: *Quality education; Teacher professional development; Teaching quality; Teaching challenges.*

INTRODUCTION

Education plays a crucial role in various aspects of life, not only for economic growth but also for personal and societal development. It equips individuals with the skills and knowledge needed for employment and innovation, attracts businesses, and fosters entrepreneurship to boost productivity (Hanushek & Woessmann, 2021). Education also helps foster personal growth by continuously practicing coping with the complex challenges of modern life to improve critical thinking, creativity, communication, collaboration, and character building (Luthfi et al, 2023; Nurhayya & Tamela, 2021) to maintain harmony within society. It encourages active citizenship by empowering people with the knowledge and values needed to contribute meaningfully to their communities and society at large.

Moreover, education plays a key role in promoting social equity by providing opportunities for individuals from diverse backgrounds to improve their quality of life, mitigating any disparities due to socioeconomic status, race, or gender, and contributing to a more balanced and just society (OECD, 2024). This relationship between education and equity emphasizes the need for educational systems to offer fair, accessible, and tailored learning opportunities to ensure all individuals, regardless of their background, can thrive and succeed.

As a global issue, governments can implement strategies to ensure equal access to high-quality education for all citizens. A critical factor in achieving this goal is the quality of teachers, as they play a pivotal role in shaping students' learning experiences and outcomes (OECD, 2018). Beyond their primary role as educators, teachers also serve as informers, organizers, motivators, directors, and facilitators, positioning them at the forefront of efforts to enhance educational quality (Harmer, 2007). Moreover, in the face of rapid technological advancements and increasing global interconnectedness, teachers must act as role models, equipping students with the skills to effectively utilize technology for both academic and professional purposes. This ensures that learners are prepared to adapt, innovate, and thrive in an ever-evolving world. Ultimately, competent and well-trained teachers are essential to delivering quality education and fostering student success (UNESCO, 2020).

Despite Indonesia's substantial teaching workforce of approximately 3.36 million educators as of the 2023/2024 academic year (Ministry of Education, Culture, Research and Technology, 2024), the nation continues to face challenges in educational quality compared to other countries. A significant factor contributing to this issue is the uneven distribution of teachers across the archipelago. The ideal and comprehensive distribution throughout regions in Indonesia is still a challenge (Haekal & Muhammad, 2022). Geographical challenges lead to disparities, with some regions experiencing a surplus of teachers while others face shortages. This imbalance is worsened by the misalignment between retiring teachers and incoming educators, further straining the system. Another issue is the implementation of classroom instructions is not yet aligned with the previously determined objectives (Kurniawati, 2022). These challenges highlight the urgent need for strategic policies that focus on equitable teacher distribution, effective recruitment, and continuous professional development to enhance the overall quality of education in Indonesia, as those criteria determine the qualification of teachers (Ulfatun, 2021). Without addressing these issues, disparities in educational outcomes across regions will likely persist.

Teacher professional development (TPD), when done systematically, can provide teachers with the knowledge, skills, and values required to navigate and contribute to a continually evolving world. Indonesia has made some efforts by encouraging teachers to join some TPD programs, such as *Pengembangan Keprofesian Berkelanjutan* (PKB). Professional allowance and certification systems have also been implemented to draw youngsters to choose careers as teachers. However, issues in the teacher recruiting process are the institutional, political economic, and social dynamics of the process of recruitment (Huang, 2020). Additionally, seniority in the hiring process for teachers is discussed, which may be problematic and result in a burdensome, low-quality instructor. Huang (2020) asserts that regional variations in teacher supply and demand have further compounded the issue of teacher supply. The Ministry finds it difficult to adapt its employment procedures to meet the needs of regional governments, even though they often have different priorities and objectives. Conversely, concerns over the quality of teachers, including absenteeism, a lack of subject-matter expertise, and poor teaching skills add to a more widespread problem with teacher quality.

Due to a number of reasons, including education, training, experience, motivation, and assistance received, Indonesian teachers are still not up to par. Aside from the aforementioned criteria, experience tends to improve a teacher's quality. An experienced teacher attends to the needs of the students and has a solid grasp of how to manage classroom situations. The fact that we are still using the outdated educational system, which forbids kids from asking questions, is another barrier. This old teaching system could cause the students' laziness and the lack of communication between students and their teachers (Fajri & Afriansyah, 2019). The current state of Indonesian educators will be examined in this article, along with their qualifications to guarantee high-quality instruction. We are also examining the issues that impede Indonesia's progress toward high-quality education.

RESEARCH METHOD

This research employs a qualitative case analysis method to examine the future supply of high-quality teachers in education. A qualitative approach, as described by Hancock et al. (2021), involves data collection through individual interviews, focus groups, observations, and document analysis, which are time-intensive but provide valuable insights. The case analysis method, central to the research design, allows for an in-depth exploration of the current state of education and the challenges related to teacher supply and quality. The research draws from a variety of sources, including academic publications in education, government reports, and policy documents, with a particular focus on recent publications from 2019 to 2024, including a 2022 report by the Ministry of Education, Culture, Research, and Technology. The primary data sources—academic journals, books, and government reports—offer crucial information about the education sector's trends, challenges, and best practices regarding teacher supply and quality. Data collection involved a thorough analysis of selected sources, ensuring that the data was up-to-date and accurately represented the state of education. The data analysis identifies the effectiveness of the TPD program, policy implementation and outcomes, and significant challenges in teacher supply and quality in Indonesia.

RESULTS AND DISCUSSION

A. Demographic and Statistical Data of Teachers in Indonesia

Data from the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) for the 2023/2024 academic year shows that Indonesia has 3,391,918 registered teachers. However, the ministry also reports a loss of approximately 70,000 teachers annually, as evidenced by data collected from 2020 to 2024, presented in the table below.

Year	Registered Teacher	Retired Teacher	Shortage
2020	3.333.109	72.976	1.020.921
2021	3.310.818	69.757	1.090.678
2022	3.339.219	77.124	1.167.802
2023	3.378.675	75.195	1.242.997
2024	3.391.918	69.762	1.312.759

Table 1. The Numbers of Teachers in Indonesia

Source: Data Pokok Pendidikan Direktorat Jenderal Pendidikan Anak Usia Dini, Pendidikan Dasar dan Pendidikan Menengah, Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi

In 2020, it is registered that the number of retired teachers was around 72.976, and the shortage total reached 1.020.921. In 2021, the number of retired teachers decreased to 69.757, yet the shortage increased to 1.090.678. In 2022, there were around 77.124 teachers, and the total shortfall for teachers was 1.167.802. In 2023, the number of teachers retired decreased to 75.195, but the shortage increased to 1.242.997 teachers needed. In 2024, there were around 69.762 teachers who will reach the retirement age and the total shortage of teachers will increase to 1.312.759.

Based on the data above, apart from 2020 to 2021, the number of registered teachers increases every year. Meanwhile, the number of retired teachers has gone up and down every year. The number of shortages always increases every year, even if the number of registered teachers is also increasing every year. This shows that even if the Indonesian government had tried to strive to increase the number of teachers, the needs of professional teachers continue to increase every year, showing promising employment.

However, the recruitment and acknowledgment of quality educators generally takes a complicated process and often hampers potential candidates' interest. Tracing back to Indonesian Law (UU) No. 14 / 2005 of Teachers and Lecturers, the process of becoming a teacher or lecturer requires complex procedures (Susiani & Abadiyah, 2021). It is stated that a professional teacher is defined as a teacher who: 1) meets the requirements of academic qualifications, namely having an adequate educational background relevant to the teaching field; and 2) masters the four teacher competencies, namely: personal, pedagogical, professional, and social competencies. However, Ulpah (2022) suggested that the government redesign teacher competency standards —covering pedagogical, professional, social, and personal competencies— to ensure they are more quantifiable and emphasize quality improvement. After completing the teacher certification process and passing it, a teacher can demonstrate their professionalism by having an educator certificate. Teachers and lecturers must fulfill qualifications and have valid and credible certifications to be eligible for employment. Teacher certification is indeed an essential step since its main objective is to enhance the qualifications of graduates and the standard of education by improving the quality of teachers (Sholihah et al. 2020). Yet, the process cannot catch up with the teacher shortage across the country.

The Indonesian government hopes to overcome this issue by conducting the selection of State Civil Apparatus (ASN) Government Employees with Work Agreements (P3K). The government seeks to assess and validate the credentials of educators at particular levels and specializations through the certification procedure. An educational program created to qualify instructors is the certification program. This program assumes that the educator in charge of planning the educational process will successfully carry out their duties in light of their scientific background.

B. Effectiveness of Teacher Professional Development Programs

Besides new recruitment strategies, the Indonesian government also provides teacher training programs to keep the teachers' quality up to the standard. One of them is a program named *Pengembangan Keprofesian Berkelanjutan* (PKB) which is the process of organizing teaching and learning activities to improve teachers' abilities and competencies, both pedagogical and professional, in carrying out their professional duties, as well as their performance as educators and leaders for their students. The PKB program is very important because it can develop instructional skills and knowledge of the learning content involved. This is in line with one of the dimensions for competent teachers proposed by Hasanah et al. (2024), which is knowledge of the field they are teaching. Moreover, the PKB program offers three modes of implementation: 1) *Moda Tatap Muka*, a learning

model for teachers that is conducted face-to-face and facilitated by national instructors or experts; 2) *Moda Daring*, a learning model for teachers that is conducted fully online; and 3) *Mod Kombinasi*, a learning model for teachers that is conducted online and face-to-face, accompanied by mentors and facilitated by teachers (Kemdikbud.go.id, 2024).

As Revina et al. (2020) pointed out, it is the most recent step that Indonesia has taken to promote the ongoing professional development of teachers. The program is required for all teachers who are currently employed at educational levels such as TK, SD/SDLB, SMP/SMPLB, SMA/SMALB, and SMK/SMKLB, and they are required to participate in training depending on their scores on the Teacher Competence Test (UKG). Although the PKB program had some technical issues, including a lack of teacher capacity and poorly designed modules, it had certain qualities expected of an effective professional development program. However, limited duration and ineffective training materials caused problems in its implementation (Revina, 2020). A study by Kastawi and Yuliejantiningasih (2019) identified several key challenges in implementing the PKB program, including a lack of professional facilitators and the heavy workload of teachers at school. Another major issue is the absence of structured government programs to support PKB, coupled with inadequate funding. Additionally, there is little peer support for teachers to apply what they have learned after completing the program, and no clear expectations for change in teaching practices. While feedback from participants and performance indicators, such as student learning outcomes, can help evaluate the program's effectiveness, there is a lack of comprehensive data on these aspects.

Another teacher training program the government encourages teachers to join in is Teacher Professional Development (TPD). According to Sgouros & Stavrou (2019), the TPD program is a program that helps teachers improve their learning practices by providing changes in their attitudes, knowledge, and skills. The goal of this program is to improve the learning outcomes that affect students. By participating in activities such as workshops, lesson study, peer teaching, and demonstrations in the classroom, teachers are expected to be able to teach the new curriculum standards and reform their knowledge and skills. As cited in Kasi et al. (2022), future enhancements to the TPD program have to concentrate on the processes that make it possible for teachers to implement the changes to education that are necessary for their teaching. Kasi et al. (2022) also suggested that the TPD program may be implemented in Indonesia by utilizing a partnership, technology, and ethnoscience approach. This would assist in enhancing the function of the program in terms of enhancing science education teaching in the classroom. The effectiveness of the TPD program can be evaluated based on information provided by participants and performance criteria, which include teacher knowledge, abilities, and attitudes, as well as student learning outcomes.

C. Policy Implementation and Outcomes

Studies by Sunarti (2022) and Ariawan (2022) stated that one of the policies implemented to improve teacher's quality and supply was teacher certification. Through the certification process, the government aims to evaluate and verify the qualifications of education employees in specific levels and areas of expertise. The certification program is an educational program designed to qualify teachers. This program assumes that the teacher responsible for organizing the learning process effectively addresses their role based on their scientific expertise. Teachers are also encouraged to continue actively participating in ongoing professional development and training opportunities to improve and develop their expertise and knowledge. This commitment to continuous learning not only enhances their teaching methods but also keeps them informed about the latest advancements in

educational practices, technologies, and subject-specific developments. By staying updated, educators can adapt to the evolving needs of their students and the demands of a rapidly changing world. This involves projects such as teacher certification, teacher performance assessments, and continuous teacher professional development (Novita, 2022).

The government has also implemented salary and welfare enhancements to attract and maintain high-quality teachers. This consists of activities that focus on enhancing teacher working conditions and creating more effective support systems (Sunarti, 2022; Ariawan, 2022). The government has implemented an education quality assurance system that monitors and evaluates the quality of education. This contains strategies to make sure that teachers are held responsible for their performance and that schools are held to high goals.

The effect of these policies on the quality and supply of teachers differs in urban and rural schools, as also pointed out in a study by Kawuryan (2021). Urban schools, often equipped with better resources and infrastructure, provide numerous opportunities for professional development. These advantages enable urban schools to attract and retain high-quality teachers, who benefit from access to advanced training programs, mentorship opportunities, and professional networks. As a result, students in urban areas typically receive instruction from educators who are well-prepared and supported in their roles. In contrast, rural schools frequently encounter substantial challenges in attracting and retaining qualified teachers. Limited resources, geographical isolation, and fewer opportunities for professional growth can deter educators from working in these regions. Additionally, rural schools often struggle with high teacher turnover rates, which disrupt the continuity of instruction and place additional strain on existing staff. These factors contribute to disparities in the quality of education between urban and rural settings, further perpetuating educational inequities. These findings align with a study by Goldhaber et al (2019) which revealed that the teacher quality gap existed, stating that disadvantaged students tend to have less qualified and less effective teachers than their more advantaged peers. To address these challenges, policies must be tailored to the unique needs of rural schools, including increased funding, targeted incentives for educators to work in remote areas, and access to technology-driven professional development. By implementing strategies that address these disparities, education systems can work toward ensuring that all students, regardless of location, have access to high-quality teachers and equitable learning opportunities.

D. Challenges and Barriers

The teacher recruitment process in Indonesia is afflicted with institutional and social dysfunctions, such as a lack of accountability and transparency, as stated by a study conducted by Huang et al. (2020). These problems may result in recruiting low-quality teachers. They also stated that the political economy of the teaching profession in Indonesia prioritizes stakeholder interests over education goals, which leads to a focus on seniority rather than quality in teacher performance evaluations. The government has implemented a professional allowance for qualified teachers in an effort to solve the problem. This allowance is meant to serve as a positive motivation to recognize and reward the qualifications and efforts of educators, as supported by a study by Suratman et al. (2020). However, despite its potential, the professional allowance has not yet had a significant impact on improving overall teacher quality. Many teachers continue to struggle with financial challenges, and the allowance alone is insufficient to fully address the deep-rooted issues affecting teacher motivation. According to Temu Ismail, the Director of the PPG, the strategy that the Ministry of Education and Culture is employing to meet the need for qualified teachers is to identify the

requirements of teachers across the country. The next step is to make LPTK the assessment organizer to improve recruitment developments and the number of employees.

In addition to the difficulties in finding and keeping qualified educators, there are systemic problems with infrastructure, financing, and the application of policies. According to a study conducted by Novita (2022), the availability of resources for teacher recruitment, training, and retention in Indonesian education is very limited due to funding limits. Indonesia's wide geography and limited infrastructure also pose difficulties in ensuring that all schools have enough resources and facilities to facilitate high-caliber teaching and learning. The Indonesian government acknowledges that substantial financial investment is necessary to implement numerous educational reforms and ensure a top-notch education system in Indonesia. Another systemic issue that happened was the implementation of education policies in Indonesia can often be delayed by bureaucratic inefficiencies and lack of coordination with different levels of government, which causes inconsistent and inefficient policy implementation. Teacher motivation and incentives play a critical role in the education system, directly impacting the effectiveness and commitment of educators. Currently, one of the significant challenges is the low level of teacher pay, which contributes to some adverse outcomes. Low salaries often lead to teacher absence, as educators may seek additional income through side jobs, reducing their focus and attendance in the classroom. In addition, the lack of proper compensation also affects teachers' work motivation, leading to a lack of enthusiasm and motivation to carry out their duties effectively. This situation not only hinders the quality of education but also undermines teachers' professional satisfaction. (Suryahadi & Sambodho, 2013)

CONCLUSION AND RECOMMENDATION

Education promotes equality, economic growth, and individual development, all of which are critical to the development of society. Education is the process of giving people the knowledge and skills they need through methodical instruction. Since teachers influence students' learning experiences and results, the caliber of education is directly related to the caliber of teachers. Ensuring equity and access to high-quality education is essential to national development on a global scale. The future of Indonesia's educational system will be greatly influenced by the availability of qualified teachers. Problems like uneven distribution, teacher shortages, and recruitment difficulties continue despite initiatives to raise the caliber of teachers. This article looks at Indonesia's teacher supply situation right now, analyzes the variables that influence teacher quality, and suggests ways to make it better.

This study examines Indonesia's supply of qualified teachers using a qualitative case analysis approach. With an emphasis on the most recent data, information was gathered from official reports, policy documents, and scholarly publications. Despite initiatives to boost teacher numbers and credentials, the investigation found notable issues with teacher supply and quality. To solve these problems, a comprehensive strategy that includes enhanced training initiatives and better resource allocation is required.

Demographic data and teacher statistics in Indonesia show that, as of the 2023/2024 semester, Indonesia has 3,391,918 teachers, but loses around 70,000 teachers each year, leading to a growing shortage of qualified teachers. While the number of registered teachers continues to increase, the teacher shortage continues to grow, highlighting the need for more effective strategies to attract and

retain teachers. Teacher quality in Indonesia is low compared to other countries, with factors such as unequal distribution and inadequate training contributing to this problem.

Pengembangan Keprofesian Berkelanjutan (PKB) and Teacher Professional Development (TPD) programs aim to improve teachers' skills and knowledge. However, these programs face challenges such as lack of funding, inadequate duration, and poorly designed training materials. Improving these programs through better resource allocation and more effective training methods is crucial to improving teacher quality. Teacher certification aims to evaluate and verify teachers' qualifications, thus promoting continuous professional development. However, the effectiveness of this policy varies between urban and rural areas, with urban schools benefiting more from having better resources and opportunities for professional development. Ensuring consistent policy implementation and support across regions is crucial. Teacher recruitment in Indonesia faces issues such as a lack of accountability and transparency and a focus on seniority over quality. Systemic issues relating to funding, infrastructure, and bureaucratic inefficiencies also further hamper the recruitment and retention of high-quality teachers. Overcoming these challenges requires substantial financial investment and better coordination at all levels of government.

Indonesia needs to address the unequal distribution of teachers, improve training programs, implement effective policy implementation, and address systemic problems in teacher recruitment and retention to increase the supply of high-quality teachers. The government can facilitate rural teaching by providing financial incentives, housing, and other services. Transparent recruiting procedures and standardized testing can help eliminate nepotism. To enhance teacher training programs, rewrite the PKB program, update modules, and extend training durations. Increase the education budget to fund projects focused on recruitment, training, and retention. Protect teachers' well-being and improve working conditions, guarantee fair compensation, provide strong support networks, simplify bureaucratic procedures, and enhance coordination among government levels. Implement e-learning platforms, digital teaching resources, and performance-based evaluations to prioritize teacher quality over seniority. Opportunities for career advancement should be based on performance and continual professional development.

REFERENCES

- Ariawan, S. (2022). The analysis of teacher policy in Indonesia. *Journal of Advanced Multidisciplinary Research*, 3(2), 107-114. <http://dx.doi.org/10.30659/JAMR.3.2.107-114>
- Data Pokok Pendidikan. Direktorat Jenderal Pendidikan Anak Usia Dini, Pendidikan Dasar dan Pendidikan Menengah, (n.d). Data guru. Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi. <https://dapo.kemdikbud.go.id/guru> (retrieved in May 2024)
- Direktorat Jenderal Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, Republik Indonesia. (2023). Pendidikan profesi guru berkualitas fasilitasi transformasi penyediaan pendidik berkompeten. <https://itjen.kemdikbud.go.id/web/pendidikan-profesi-guru-berkualitas-fasilitasi-transformasi-penyediaan-pendidik-berkompeten/> (retrieved in May 2024)
- Fajri, I., & Afriansyah, H. (2019). Faktor-faktor yang mempengaruhi rendahnya kualitas pendidikan di Indonesia. <https://doi.org/10.31227/osf.io/3a6qj>
- Goldhaber, D., Quince, V., & Theobald, R. (2019). Teacher quality gaps in U.S. public schools: Trends, sources, and implications. *The Phi Delta Kappan*, 100(8), 14–19. <https://www.jstor.org/stable/26677388>

- Hancock, D. R., Algozzine, B., & Lim, J. H. (2021). *Doing case study research: A practical guide for beginning researchers*. Teachers College Press.
- Hanushek, E., & Woessmann, L. (2021). *Education and economic growth*. Oxford Research Encyclopedia of Economics and Finance. <https://doi.org/10.1093/acrefore/9780190625979.013.651>
- Harmer, J. (2007). *The practice of English language teaching* (4th ed.). Pearson Education Limited.
- Hasanah, I. M., Asbari, M., & Wardah, H. (2024). Guru berkualitas: Esensi pendidikan bermutu. *Journal Of Information Systems and Management*, Volume 03(No. 03), 123-126. <https://doi.org/10.4444/jisma.v3i3.1032>
- Huang, A. (2020). *Strategies to improve Indonesia's teacher recruitment process*. Rise Programme in Indonesia. <https://rise.smeru.or.id/en/publication/strategies-improve-indonesia%E2%80%99s-teacher-recruitment-process> (retrieved in May 2024)
- Huang, A. R., Revina, S., Fillaili, R., & Akhmadi. (2020). The struggle to recruit good teachers in Indonesia: Institutional and social dysfunctions. *RISE Working Paper Series*. 20/041. https://doi.org/10.35489/BSG-RISE-WP_2020/041.
- Jendela Pendidikan dan Kebudayaan. (2024). *Program Pengembangan Keprofesian Berkelanjutan (PKB)*. <https://jendela.kemdikbud.go.id/v2/fokus/detail/program-pengembangan-keprofesian-berkelanjutan-pkb> (retrieved in May 2024)
- Kasi, Y. F., Widodo, A., Samsudin, A., & Riandi. (2022). The benefits of Teacher Professional Development (TPD) program based on partnership, technology, and ethnoscience approach to improving the TPACK of science teachers. *Pedagonal: Jurnal Ilmiah Pendidikan*, 6(2). <https://doi.org/10.55215/pedagonal.v6i2.5756>
- Kastawi, N. S., & Yuliejantiningih, Y. (2019). Pengembangan keprofesian berkelanjutan guru untuk meningkatkan mutu pendidikan. *Kelola: Jurnal Manajemen Pendidikan*, 6(2), <https://doi.org/10.24246/j.jk.2019.v6.i2.p157-168>
- Kawuryan, S. P., Sayuti, S. A., & Dwiningrum, S. I. A. (2021). Teachers quality and educational equality achievements in Indonesia. *International Journal of Instruction*, 14(2), 811-830.
- Ketersediaan Tenaga Pengajar yang Kompeten Harus Konsisten Dilakukan. (2023). MPR RI. <https://www.mpr.go.id/berita/Ketersediaan-Tenaga-Pengajar-yang-Kompeten-Harus-Konsisten-Dilakukan> (retrieved in May 2024)
- Luthfi, N., Agustina, I. W. & Pujiati, H. (2023). The incorporation of the 4C skills in the lesson plans of grade eight. *STAIRS: English Language Education Journal*, 4(1), 52-61, <https://doi.org/10.21009/stairs.4.1.5>
- Novita, P. (2022). The quest for teacher education quality in Indonesia: The long and winding road. In *Handbook of Research on Teacher Education: Innovations and Practices in Asia* (pp. 651-673). Singapore: Springer Nature Singapore.
- Nurhayya, F., & Tamela, E. (2021). Character building values in student teacher's lesson plans: A content analysis. *STAIRS: English Language Education Journal*, 2(1), 17-24. <https://doi.org/10.21009/stairs.2.1.3>
- OECD. (2024). Equity in education and on the labour market: Main findings from education at a glance 2024. *OECD Education Policy Perspectives*, No. 107, OECD Publishing, Paris, <https://doi.org/10.1787/b502b9a6-en>.
- Revina, S. (2020). Four decades of Teacher Professional Development in Indonesia: One step forward, two steps back. Rise Programme in Indonesia. <https://rise.smeru.or.id/en/blog/four-decades->
- Ferdina, K. F., Isnaini, M. H., & Arnoldi, M. D. T. (2024). The future of Indonesian education: A case analysis on the supply of high-quality teachers in Indonesia. *STAIRS: English Language Education Journal*, 5(2), 133-142

[teacher-professional-development-indonesia-one-step-forward-two-steps-back](#) (retrieved in May 2024)

- Revina, S., Pramana, R. P., Fillaili, R., & Suryadarma, D. (2020). Systemic constraints facing Teacher Professional Development in a middle-income country: Indonesia's experience over four decades. *RISE Working Paper Series*, 20/054. https://doi.org/10.35489/BSGRISEWP_2020/054
- Sgouros, G., & Stavrou, D. (2019). Teachers' professional development in Nanoscience and nanotechnology in the context of a Community of Learners. *International Journal of Science Education*, 41(15), 2070–2093. <https://doi.org/10.1080/09500693.2019.1659521>
- Sholihah, M., Ratnasari, K., Permatasari, Y. D., Muawanah, U., & Fajri, A. N. F. (2020). The policy of educators' certification: an effort to improve quality, qualification, and teachers' competence. *IOP Conference Series: Earth and Environmental Science*, 485(1), 012130
- Sunarti, S. (2022). The Indonesian government's policy in improving the teachers' quality of elementary school. *Pedagogik: Jurnal Pendidikan*, 9(2), 112-125, <https://doi.org/10.33650/pjp.v9i2.4243>
- Suratman, B., Wulandari, S. S., Nugraha, J., & Narmaditya, B. S. (2020). Does teacher certification promote work motivation and teacher performance? A lesson from Indonesia. *International Journal of Innovation, Creativity and Change*, 11(10), 516-525.
- Suryahadi, A., & Sambodho, P. (2013). *Assessment of Policies to Improve Teacher Quality and Reduce Teacher Absenteeism*. The SMERU Research Institute.
- Susiani, I. R., & Abadiah, N. D. (2021). Kualitas guru dalam meningkatkan mutu pendidikan di Indonesia. *Modeling: Jurnal Program Studi PGMI*, 8(2), 292-298, <https://doi.org/10.69896/modeling.v8i2.1098>
- Ulfatun, T. (2021). Good teachers: Indonesia's perspective. *Jurnal Pendidikan dan Pembelajaran*, 28(1), 23-29.
- Ulpah, M. (2022). Redesigning and professionalizing teacher recruitment in Indonesia: A transition from the State Civil Apparatus (ASN) to Work Agreements. In Collaboration. *Proceedings ICTE*, 2, 355-366, e ISBN 978-967-18002-5-6