



Comparative analysis of senior high school education systems in Indonesia and Vietnam

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Abstract

This study aims to analyze and compare the senior secondary education systems in Indonesia and Vietnam with a focus on educational equity covering four main aspects: Access to Education, Teaching Quality, Curriculum Relevance and Education Efficiency. This study is motivated by various challenges faced by Indonesia, such as inequality in access to education between urban and rural areas, low quality of teaching, inconsistency of the curriculum with the needs of the 21st century, and lack of innovation in learning. Vietnam was chosen as the object of comparison because of its success in improving the quality of education evenly despite having limited resources. This study uses a qualitative approach through a literature study of education policies and practices in both countries. The results of the analysis show that Vietnam implements various effective strategies, such as providing incentives for teachers in remote areas, community-based teacher training, strengthening competency-based curriculum, utilizing digital technology, and consistency in the direction of education policy. These findings provide an overview that Indonesia can learn from these policies to strengthen educational equity, improve teaching quality, adjust the curriculum to current needs, and encourage sustainable educational innovation.

Keywords: Access to education, quality of teaching, curriculum relevance, education efficiency

Introduction

The education system plays a strategic role in shaping the quality of a country's human resources. Every nation has a national education system. The national education of each nation is based on the spirit and personality of its culture. The education system in Indonesia is based on the culture of the Indonesian nation and is based on Pancasila and the 1945 Constitution. Senior high school, as a crucial stage before entering higher education or the world of work, plays an important role in equipping students with relevant academic and vocational skills. However, in many developing countries, including Indonesia and Vietnam, the challenges of educational equality and innovation are still major issues that need to be addressed. The education system in Indonesia is based on the national education system regulated by Law Number 20 of 2003. With the aim of fostering positive character, providing academic knowledge, forging students' skills from an early age and developing students' potential to become people who believe and fear God Almighty.

In Indonesia, various policies have been implemented to improve access and the quality of senior high school education. The Merdeka Belajar program aims to provide flexibility in the curriculum, while the School Operational Assistance (BOS) and the Smart Indonesia Program (PIP) are designed to help students from low-income families. However, gaps in access and quality of education still exist, especially between urban and rural areas. Limited infrastructure, uneven distribution of educators, and low quality of teaching have an impact on the inequality of learning outcomes. Data from the Programme for International Student Assessment (PISA) shows that Indonesian students are still ranked lower in reading, mathematics, and science skills compared to other countries, reflecting the need for improvements in the national education system.

One of the biggest challenges facing Indonesia is the low level of creative thinking competence of students. Only 31%

of Indonesian students reach a basic level in creative thinking, far below the OECD average of 78%. In addition, only 5% of Indonesian students are categorized as high achievers in creative thinking, far behind the OECD average of 27% (OECD 2022) ^[17]. The lack of integration of technology in learning, minimal innovation in the curriculum, and lack of training for teachers are the main factors causing these limitations. In addition, more than 1% of students who excel in creative thinking also excel in mathematics, and 0% excel in reading, far below the OECD average (20% and 17%) (OECD 2022) ^[17]. This shows that the education system in Indonesia has not been able to develop creative thinking skills in line with basic academic competencies, which can have an impact on the readiness of graduates to face global challenges.

This inequality is increasingly evident at the senior secondary education level. The Gross Enrollment Rate (APK) for senior secondary education in Indonesia reached 74.5% in 2022, still far from the target of 100% in 2024 (Ministry of Education and Culture, 2024). APK in rural and remote areas tends to be lower than in urban areas, indicating the need for more systematic efforts to improve educational equity. In addition, the curriculum applied is often less relevant to industry needs, especially in vocational schools, which makes it difficult for graduates to adapt to the world of work. In comparison, Vietnam has shown significant progress in the education sector. Based on PISA 2018 data, Vietnam is ranked 22nd in the world in reading, mathematics, and science skills, much better than Indonesia which is ranked 72nd. Vietnam has achieved this through effective educational equity policies, such as incentives for teachers to teach in remote areas, the use of educational technology, and the implementation of competency-based and character-based curricula.

The Vietnamese government also emphasizes ongoing teacher training and the integration of technology into the learning process. Programs such as community-based teacher training and competency-based curriculum

development have yielded positive results, with improved PISA scores and graduates better prepared to face global challenges (Kieu Vo 2022) ^[13]. On the other hand, although Indonesia has launched various programs to improve the quality of senior secondary education, the results are still not optimal. Limited funding allocations are often insufficient to address educational infrastructure issues, especially in remote areas. Meanwhile, efforts to improve the quality of teaching and teacher training are often hampered by the lack of ongoing training and low incentives for teachers teaching in less developed areas (Kemdikbud 2018) ^[12]. The lack of certified teaching staff is also an obstacle to improving the quality of education, with less than half of teachers having certification despite meeting the minimum qualifications.

The ideal condition expected is that senior secondary education is evenly distributed throughout Indonesia, both in terms of access and quality, with a curriculum that is adaptive to technological developments and industry needs. In addition, the existence of competent educators and adequate infrastructure support in all regions are important factors in achieving high education standards. However, the actual conditions still show significant gaps. In remote areas, access to senior secondary education is still limited due to the lack of schools, minimal facilities, and teachers who are not evenly distributed. Meanwhile, in urban areas, although access is better, the challenges faced include disparities in quality between schools, less flexible curriculum loads, and the lack of optimal technology integration in the learning process.

Therefore, a comparative study between the Indonesian and Vietnamese education systems is relevant to identify the best policies and practices that can be applied to achieve equity and innovation in senior secondary education in Indonesia. This study aims to analyze the senior secondary education systems in both countries, identify the challenges faced, and explore solutions that can be applied in Indonesia based on Vietnam's experience. Thus, it is hoped that this study can provide applicable and contextual policy recommendations to improve the quality and equity of senior secondary education in Indonesia.

Method

The research method used in this study is a literature study approach. This approach was chosen because it allows researchers to dig up comprehensive and analytical information regarding the comparison of the senior high school education systems in Indonesia and Vietnam, as well as the policies implemented in both countries.

The data used in this study comes from various literature, such as journal articles, books, research reports, and policy documents obtained through searches in various academic databases. In addition, reports from international institutions are also used to obtain a broader perspective on the condition of education in both countries.

The data collection technique is carried out through a literature study that includes an analysis of literature related to education policy, as well as a review of previous research results to identify trends and challenges in improving the quality of education. In addition, this study also utilizes the results of observations regarding the implementation of education policies and analysis of statements from various stakeholders, such as the government and educational institutions. With this approach, research can provide a

more comprehensive picture of the factors that influence the quality of education and the effectiveness of the policies implemented.

The data collection technique is carried out through the collection of literature relevant to the research topic. The first step is to search for and download literature sources from academic databases and reports from international institutions. The data obtained includes information on education equity policies and teaching innovations in Indonesia and Vietnam. After the literature search step, the next step is data selection and filtering, where the data found is evaluated based on its relevance and quality. This is done by reviewing the abstracts and conclusions of the literature found. This step aims to ensure that only data relevant to the research topic is selected for further analysis.

Then, relevant data is collected and organized based on emerging themes. This stage involves grouping the data found into categories that are in accordance with the focus of the research, for example education equity policies or teaching innovations in Indonesia and Vietnam. The final step is data analysis and synthesis, where the grouped data is analyzed to find patterns that can help answer the formulation of the research problem. This analysis aims to extract information that can provide new insights into the differences and similarities in education policies and teaching innovations in both countries. Thus, this data collection technique focuses on collecting relevant literature, selecting data based on quality and relevance, and analyzing it to form in-depth conclusions regarding the topic being studied.

The qualitative data obtained were analyzed using content analysis techniques as explained by Krippendorff (2004), which is a method that allows researchers to interpret the meaning of text data systematically, objectively, and repeatedly. This technique is used to identify patterns, themes, and relationships between concepts that emerge from policy documents, official reports, and previous study results related to education in Indonesia and Vietnam. In the context of this study, content analysis was carried out through several stages, namely: (1) collecting secondary data from various relevant literature sources, including government policy documents, UNESCO reports, scientific journals, and education articles; (2) data reduction, by sorting information that is relevant to the focus of the study, namely educational equity, teaching quality, curriculum relevance, and innovation in education; (3) categorizing data into main themes based on previously determined dimensions of analysis; and (4) interpreting findings, by comparing the approaches applied in Indonesia and Vietnam, and identifying key factors that contribute to the success of policies in Vietnam. The results of this process are used to formulate policy recommendations that have the potential to be adapted in the Indonesian context to improve the quality and equity of senior secondary education.

Results and Discussion

Results

1. Access to Senior Secondary Education

a. Indonesia

Access to senior secondary education in Indonesia has shown a positive trend in recent decades. The Gross Enrollment Ratio (GER) for senior secondary education in Indonesia reached 87.29% in 2024, with urban areas having

slightly higher enrollment rates than rural areas. Historical data also shows a gradual increase in the enrollment rate for the 16-18 age group, from 45.31% in 1994 to 74.35% in 2024. However, despite the increase in enrollment rates, there was a slight decline in 2023 that requires further investigation, with several factors such as economic conditions or data collection methodology possibly influencing the results. Meanwhile, the completion rate of senior secondary education in Indonesia varies, with data showing a wide range, ranging from 18.8% to 78.73%, with significant influence from family background, especially parental education level.

Socioeconomic and geographic disparities play a large role in access and completion of education. Adolescents from the poorest households are four times more likely to be out of school than those from the richest households. Regional disparities are also evident, with eastern Indonesia, such as Papua, having higher rates of uneducated individuals than western Indonesia, such as Jakarta. Ethnic inequality is also a significant factor, with ethnic minorities often lagging behind in educational attainment. Socioeconomic factors, such as poverty and the need for children to contribute to the family income, as well as geographic barriers such as limited infrastructure, also affect access to senior secondary education. The free education policy implemented to improve equity of access has had a significant impact, but challenges remain in terms of uneven school quality and limited school zoning policies. Thus, while overall access has improved, educational equity remains a major challenge that requires a comprehensive approach to addressing disparities in access across Indonesia.

b. Vietnam

Vietnam's senior secondary education has shown significant progress in terms of enrollment and participation, with enrollment reaching 2.4 million students in an unspecified year. The net enrollment rate at the senior secondary level has increased from 27% in the early 1990s to over 70% in recent years. In addition, the net attendance rate for senior secondary schools in 2020-2021 was 78.1%, with urban areas showing higher attendance rates than rural areas. Vietnam's gross secondary school enrollment reached 97.25% in 2022, reflecting a strong emphasis on education and successful policies. However, the small gap between net attendance and gross enrollment indicates that there are students who are too young or too old to attend senior secondary education, indicating challenges in retaining students to the end of their education.

Vietnam's senior secondary completion rate in 2020-2021 was 58.1%, with females (65.0%) completing more than males (51.4%). In urban areas, completion rates were 74.8%, compared to 46.4% in rural areas. Completion rates also varied significantly by ethnicity, with the Kinh/Hoa group achieving 62.9%, while the Khmer and Mong groups had lower rates. Socioeconomic factors, such as household wealth and maternal education, also significantly influenced completion rates. Despite high enrollment, upper secondary completion rates were much lower than primary and lower secondary, indicating high dropout rates, particularly among ethnic minority groups and low-income rural areas. Significant disparities were seen between more and less developed areas, particularly in terms of completion of upper secondary education. Children from ethnic minority backgrounds and low-income rural areas faced significant

barriers, both in terms of access to quality education and retention to completion. Inadequate educational infrastructure in rural areas, coupled with socioeconomic barriers and language difficulties for ethnic minority children, further exacerbated these inequalities. These factors show that while Vietnam has made overall progress, the benefits have not been evenly distributed, and marginalized groups, such as ethnic minorities and those from poor families, still face significant challenges in accessing senior secondary education. The combination of geographic, socioeconomic, and linguistic barriers suggests the need for more inclusive policies tailored to the specific needs of these communities.

2. Quality of Teaching in Senior High Schools

a. Indonesia

The quality of teaching in senior high schools in Indonesia is influenced by a variety of factors, from teacher qualifications and training to student-teacher ratios and teaching methods. Based on Law Number 14 of 2005, teachers in Indonesia are required to have at least a bachelor's degree and pass a certification exam. However, in reality, many teachers, especially in remote areas, do not meet these minimum qualifications. The government has introduced the Teacher Professional Education Program (PPG) as an effort to improve the quality of teaching, with a bachelor's degree required to be eligible for this program. Despite efforts to improve teacher training, the quality of training institutions and the effectiveness of the certification process remain concerns, especially in ensuring that training is truly effective and can improve the quality of teaching across Indonesia. In addition, although the student-teacher ratio in secondary education is relatively favorable, with an average of 15.21 students per teacher, regional variations may affect actual classroom conditions.

Indonesia is also transitioning to more modern, student-centered teaching methodologies, such as in the Independent Curriculum where teachers have the freedom to adapt teaching methods to the level of achievement and development of students. However, in some classrooms, teacher-centered methods still dominate, and this transition may not be evenly distributed across schools. The success of implementing this more innovative approach depends largely on adequate training and support for teachers to move away from traditional methods that focus more on memorization and teacher instruction. Furthermore, the impact of teacher quality on student learning outcomes is complex. Several studies have shown a positive correlation between teacher quality and student achievement, however, stronger evidence on the effectiveness of teacher certification in improving student learning outcomes is still debated. This suggests that while teacher quality is important, other factors such as teacher competence and broader educational support need to be considered to truly improve student learning outcomes in Indonesia.

b. Vietnam

In Vietnam, the senior secondary education system has clear and high standards for teacher qualifications and training. The 2019 Education Law requires teachers to have at least a bachelor's degree to teach at the senior secondary level, while grade 1 public senior secondary school teachers must have a master's degree or higher in teacher training or related majors. Pedagogical training is also mandatory for

those who have a bachelor's degree in a relevant field and want to become teachers at the secondary level. The Vietnamese government emphasizes continuing professional development through various programs, such as the Teacher Education Enhancement Program (ETEP), which supports lifelong learning and professional growth of teachers. This emphasis on high qualifications and continuous development is expected to contribute to the quality of teaching in the country.

The student-teacher ratio in junior secondary education in 2016 was recorded at 16.39%, indicating a fairly manageable ratio to allow for more individual attention to students. Although specific data for senior secondary education are not available, this student-teacher ratio provides a positive picture of the ability to provide more attention to students. In terms of teaching methods, the Vietnamese education system has traditionally emphasized rote learning and a teacher-centered approach. However, there is a shift towards more student-centred learning, particularly in international schools, which encourages critical thinking and active participation. Interactive teaching methods such as cooperative, inquiry-based and project-based learning are increasingly being introduced to enhance critical thinking skills and deeper learning. Teacher quality has a significant impact on student learning outcomes in Vietnam, as reflected in the country's high performance in international assessments such as PISA. Teachers are revered in Vietnamese culture, and strong relationships between teachers and students are considered critical to good learning outcomes. Research shows that teacher effectiveness has a significant positive impact on students' core academic skills, as well as non-cognitive skills such as executive functioning. High teacher quality is one of the key strengths of Vietnam's education system and contributes significantly to the achievement of high learning outcomes. A culture that values education and respects teachers reinforces this factor, suggesting that investment in teacher development and support is key to educational success in Vietnam.

3. Relevance of the Senior High School Curriculum

a. Indonesia

The senior high school curriculum in Indonesia is designed to provide a broad foundation with opportunities for specialization, covering general subjects (groups A and B) and academic specialty subjects (group C) in areas such as Mathematics and Natural Sciences, Social Sciences, and Language and Culture. The 2013 Curriculum emphasizes character development, mastery of competencies, and practical application of knowledge, while the Independent Curriculum aims to simplify content, prioritize project-based learning, and provide flexibility in implementing learning. Assessment in the Indonesian curriculum involves objective and essay tests as well as non-test techniques such as observation, portfolios, projects, and self- and peer-assessment. Ongoing curriculum reform reflects efforts to improve its relevance and effectiveness in preparing students for future challenges, with a focus on holistic competency development.

Although the Indonesian curriculum has evolved, the issue of education relevance to the job market remains a major challenge. In Indonesia, many graduates are over-educated, where their qualifications do not match existing job

requirements, especially among vocational and university graduates. To address this, the Independent Campus Curriculum policy in higher education aims to enhance graduate competitiveness by encouraging collaboration with industry and providing needed practical skills. Vocational education is also a key focus to increase the number of work-ready graduates. However, regional conditions also affect employment opportunities for university graduates, so curricula need to be tailored to the specific needs of each region. The significant skills gap, reported by many employers, suggests an urgent need to bridge the gap between educational qualifications and job market demands, with the aim of preparing graduates who are better prepared and relevant to the world of work.

b. Vietnam

The upper secondary curriculum in Vietnam includes compulsory subjects as well as specializations covering Natural Sciences, Technology, Social Sciences, and Foreign Languages. Assessment is carried out continuously through coursework and examinations, culminating in the national graduation examination, *Bang Tốt Nghiệp Phổ Thông Trung Học*. The curriculum emphasizes the development of in-depth academic knowledge as well as practical skills, including technology and vocational training. With a balance between general and specialized education, Vietnam's curriculum places great emphasis on core academic subjects while increasing the focus on practical skills. National examinations play a crucial role in determining students' progress. The well-organized curriculum structure and rigorous assessment system are believed to contribute to Vietnam's consistent academic performance.

However, despite Vietnam's success in basic education, major challenges remain in upgrading workforce skills. Employers report difficulties in recruiting graduates with adequate leadership, managerial, socio-emotional, and technical skills. This highlights the urgent need to align vocational training with the demands of the evolving labor market. The Vietnamese government is focused on modernizing the education system to support the needs of industrialization in a global context, involving collaboration with foreign universities and initiatives to align higher education with labor market needs. While Vietnam has succeeded in providing a solid academic foundation through its upper secondary education curriculum, the mismatch between graduates' skills and those required by employers suggests that there is room for increased focus on practical skills and soft skills development in the curriculum.

4. Efficiency of Senior High School Education

a. Indonesia

Indonesia allocates 20% of its national budget to education, but public spending on education as a percentage of Gross Domestic Product (GDP) was recorded at 1.28% in 2023, which is relatively low compared to the world average. This figure had reached 3.58% in 2015. Although the budget allocation for education is quite significant, overall public spending in the education sector is still limited when viewed from the size of the country's economy. This difference between budget allocation and percentage of GDP shows that although education is a government priority, investment in this sector is relatively small compared to the size of the Indonesian economy, which may impact the quality of

education at various levels, including senior secondary education.

Education resources in Indonesia are allocated in a decentralized manner, with provincial governments responsible for overseeing senior secondary, vocational, and non-formal education. The efficiency of education budget utilization varies across provinces, creating disparities in spending per student across education levels and regions. This decentralized system aimed at meeting local needs can lead to variations in education funding and quality, which poses a major challenge in ensuring efficient and equitable distribution of resources. Therefore, while decentralization aims to bring education services closer to the people, it requires better coordination and tighter monitoring to minimize regional disparities and maximize resource utilization.

b. Vietnam

Vietnam has demonstrated a strong financial commitment to education, with investment accounting for 18% of total government expenditure in 2022. Education expenditure as a percentage of GDP was recorded at 3.57% in 2000, 5.18% in 2006, 4.82% in 2009, and 5.65% in 2013, higher than many countries in the region. This consistency and high level of education spending reflects the Vietnamese government's long-term priority for the education sector, which is believed to contribute to its relatively strong education outcomes. By allocating a large share of the government budget and GDP to the sector, Vietnam demonstrates its dedication to improving the quality of education across the country.

However, despite significant government investment by the Vietnamese government, challenges remain in ensuring equitable access to quality education across ethnic groups, genders, and income levels. The gap in secondary school enrollment between more developed and less developed regions remains pronounced, mainly due to the inability of low-income communities to afford fees at non-state schools. To achieve the government's ambitious goal of meeting advanced Asian education standards within five years and world standards within ten years, Vietnam must focus on strategic resource allocation and ensuring equitable distribution. This will help address persistent inequalities, prioritizing areas that need support most to ensure equal access and quality of education for all.

Discussion

1. Access to Senior Secondary Education

Data analysis shows that Indonesia and Vietnam have made significant progress in increasing access to senior secondary education, albeit with different challenges. Indonesia has relatively high enrollment rates, but still faces significant gaps in completion between urban and rural areas, as well as between socio-economic and ethnic groups. Factors such as poverty and limited infrastructure in remote areas are major barriers. Free education policies and school zoning are government efforts, but their implementation has not fully addressed equity issues.

On the other hand, Vietnam has achieved near-universal enrollment rates, but completion rates are lower than at the primary and junior secondary levels, especially among ethnic minorities and rural communities. Geographic, socio-economic, and language barriers are important factors affecting access and completion in Vietnam. Overall, both

countries demonstrate a commitment to improving access, but structural challenges and inequalities still need to be addressed to ensure that senior secondary education is equally accessible to all levels of society.

2. Quality of Teaching in Senior High Schools

In terms of teaching quality, Indonesia has set teacher qualification standards through the Teachers and Lecturers Law, but its implementation still faces obstacles, especially in meeting minimum qualifications and distributing teachers evenly across regions. The student-teacher ratio appears to be quite good nationally, but regional variations may affect teaching effectiveness. Teaching methods in Indonesia are transitioning to a more student-centered approach, but adoption has not been evenly distributed.

Meanwhile, Vietnam has relatively high teacher qualification standards and emphasizes continuous professional development. The student-teacher ratio in Vietnam also appears to support better interaction between teachers and students. Vietnam's teaching system has traditionally been teacher-centered, but is now moving towards a more interactive and student-centered approach. Vietnam's high student performance in international assessments such as PISA is often attributed to the good quality of teachers and the respect for the teaching profession in Vietnamese culture. Analysis shows that Vietnam has an advantage in terms of standards and perceptions of the teaching profession, which may contribute to better teaching quality compared to Indonesia, although Indonesia is also working to improve teacher quality through relevant, innovative and ongoing training. Training materials include: Improving pedagogy, Mastery of teaching materials, utilization of technology in learning and development of 21st century skills. Other innovations that are currently being used as solutions to improve the quality of teaching are stricter and more sustainable certification, internship and teacher exchange programs, Teacher Learning Communities (KBG) and providing appreciation and awards for outstanding teachers.

3. Relevance of High School Curriculum

The relevance of the curriculum to higher education and the job market is a concern in both countries. Indonesia has made several curriculum changes, including the 2013 Curriculum and the Independent Curriculum, with the aim of developing students' character, competence, and practical skills. The independent curriculum at the high school level has significant relevance because it is designed to address various challenges and current educational needs.

There are several points of relevance of the Independent Curriculum, namely.

a. Simpler and deeper learning

This curriculum focuses on essential material and the development of student competence according to their developmental stage. In this case, it allows students to understand concepts more deeply without rushing to pursue a broad scope of material.

b. More independent and flexible

High school students are no longer fixated on interest programs (science, social studies, language). They have the freedom to choose subjects according to their interests, talents and aspirations in grades XI and XII. Teachers have

the flexibility to adjust teaching methods to the needs and characteristics of students, and choose teaching materials that are relevant to the local context.

c. Relevant and Interactive Learning

The independent curriculum encourages learning through project activities that provide opportunities for students to explore current issues and develop 21st-century skills such as critical thinking, collaboration, and communication. Learning outside the classroom is also encouraged to provide a more contextual and meaningful learning experience.

d. Holistic competency development

This curriculum not only focuses on cognitive, but also on character development through the Pancasila Student Profile, as well as practical skills that are relevant to everyday life and the world of work.

e. Increasing student motivation and involvement

By providing freedom in choosing more interesting subjects and learning methods, the independent curriculum can increase student motivation and involvement in the learning process.

f. Adaptation to the times

This curriculum is designed to be more adaptive to changes and challenges in the era of society 5.0, preparing students to become competent, characterful and innovative lifelong learners.

However, data shows the problem of over-education among graduates, indicating a mismatch between qualifications and job needs. In Vietnam, the senior secondary curriculum includes compulsory subjects and elective specializations, with rigorous assessments including national exams. Although Vietnam performs well in basic education, upgrading workforce skills to match labor market demands remains a challenge. Both countries recognize the importance of aligning curricula with workforce needs, and efforts are underway, but the skills gap among graduates remains an issue that needs to be addressed.

4. Efficiency of Senior Secondary Education

In terms of education efficiency, Indonesia allocates a significant budget to education, but public spending as a percentage of GDP is still relatively low compared to the global average. Indonesia's decentralized resource allocation system can lead to variations in funding and quality across regions. Meanwhile, Vietnam demonstrates a strong financial commitment to education, with education spending as a percentage of GDP higher than many countries in the region. The Vietnamese government has ambitious targets to achieve advanced education standards in Asia and the world. However, challenges remain in ensuring equitable access to quality education across ethnic, gender, and income groups. Analysis shows that Vietnam tends to be more efficient in terms of investment and allocation of education resources compared to Indonesia, which still faces challenges in equity and effectiveness of budget use amidst a decentralized system.

Conclusion

1. Indonesia and Vietnam have made progress in access to senior secondary education, but they face different

challenges. In Indonesia, despite increasing enrollment, the gap between urban and rural areas and socio-economic groups remains significant. In Vietnam, while enrollment is almost universal, the main challenge lies in lower completion rates in rural areas and among ethnic minority groups.

2. In Indonesia, despite efforts to improve teaching quality through teacher certification and training programs, equitable distribution of teachers and implementation of modern teaching methodologies remain challenges. In Vietnam, teaching quality is supported by high teacher qualification standards, with an emphasis on continuous professional development, which contributes to good student performance, especially in international assessments such as PISA.
3. The curriculum in Indonesia continues to adapt with the aim of developing student competencies, but the problem of over-education and the mismatch between graduate qualifications and labor market needs remain challenges. Meanwhile, Vietnam focuses on balancing academic education with practical skills, but still faces challenges in aligning the curriculum with evolving labor market needs.
4. Indonesia faces challenges in education efficiency, with relatively low education spending compared to GDP and a decentralized system that creates regional disparities. In contrast, Vietnam shows a higher financial commitment to education, with higher spending as a percentage of GDP, although challenges in resource distribution remain, especially in certain regions.

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