



Challenges and Opportunities: Reforming the Thai Education System for Global Competitiveness

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Received: 11 August 2024; Revised: 16 September 2024; Accepted 22 September 2024

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Abstract: Thailand's education system faces significant challenges that hinder its global competitiveness. Key issues include an outdated curriculum focused on rote learning, educational inequality between urban and rural areas, insufficient teacher training, and a lack of digital literacy and STEM education. These problems have resulted in poor performance on international assessments such as PISA and TIMSS, highlighting the need for comprehensive reform. This paper analyzes these challenges and explores opportunities for reform through curriculum modernization, enhanced teacher training, and the integration of technology in education. The proposed reforms emphasize critical thinking, creativity, problem-solving, and digital literacy to better prepare students for the demands of the 21st century. The role of government initiatives, such as Thailand 4.0, and collaboration with the private sector and international organizations, is also examined. Additionally, the paper draws lessons from successful education reforms in neighboring countries like Singapore, South Korea, and Malaysia. Implementing these strategies can improve Thailand's global education standing, reduce inequalities, and produce a globally competitive workforce. The long-term implications of successful reform will position Thailand to thrive in a rapidly changing global economy.

Keywords: Education Reform, Global Competitiveness, Curriculum Modernization, Teacher Training, Digital Literacy

1 Introduction

Thailand's education system has a long and complex history, reflecting the country's cultural, political, and economic transformations over time. Formal education was first established in the 19th century as part of the modernization efforts of King Chulalongkorn (Rama V), who sought to create a centralized education system to promote national unity and development (Office of the Education Council, [2017](#)). Over the decades, the system evolved, with education becoming compulsory for nine years in 2002 under the National Education Act, and more recent reforms aiming to extend this to 12 years (UNESCO, [2019](#)). The system is divided into four levels: early childhood education, primary education, secondary education, and higher education, with both public and private institutions available at each level.

In recent years, the rapid pace of globalization and the fourth industrial revolution have led to significant shifts in global education trends. Countries worldwide are increasingly focusing on developing 21st-century skills such as critical thinking, problem-solving, digital literacy, and collaboration, which are essential for competitiveness in the global economy (Schleicher, [2018](#)). Education systems are being restructured to foster innovation, creativity,



and adaptability in students to meet the demands of rapidly changing job markets. For Thailand, aligning its education system with these global trends is crucial for improving its position in global education rankings and ensuring that its workforce remains competitive on the international stage (World Economic Forum, [2020](#)).

Educational reform in Thailand is, therefore, not just a domestic necessity but an imperative driven by international pressures. In order to thrive in a globalized world, the country must address structural weaknesses in its education system, particularly in areas such as curriculum relevance, teacher quality, digital integration, and equitable access to education. Without such reforms, Thailand risks falling further behind in global competitiveness and failing to meet the demands of the modern economy (Baker & Phongpaichit, [2017](#)). The Thai education system is currently facing several critical challenges that hinder its ability to produce graduates equipped with the skills needed for global competitiveness. First, the curriculum has been widely criticized for being outdated and overly focused on rote memorization rather than fostering critical thinking, creativity, and problem-solving abilities (OECD, [2016](#)). This approach limits students' capacity to adapt to new and complex challenges in a rapidly changing world.

Second, there is significant inequality in access to quality education, with rural areas suffering from a lack of resources, qualified teachers, and infrastructure compared to urban centers. This urban-rural divide creates disparities in educational outcomes, with students in rural areas often receiving a lower standard of education (UNESCO, [2019](#)). Third, the integration of digital literacy into the curriculum remains insufficient, despite the increasing importance of technological skills in the global workforce (World Economic Forum, [2020](#)). Finally, teacher training and professional development are lacking in both quantity and quality. Many teachers are unprepared to implement modern pedagogical methods that promote active learning and student engagement (Schleicher, [2018](#)). These challenges have negatively impacted Thailand's standing in global education assessments such as PISA (Program for International Student Assessment), where the country consistently performs below average in key areas such as reading, mathematics, and science (OECD, [2019](#)). As a result, there is an urgent need for comprehensive reforms that address these fundamental issues in the education system. This paper aims to: (1) analyze the key challenges in the Thai education system, focusing on curriculum relevance, educational inequality, digital literacy, and teacher quality; (2) explore opportunities for reform that can enhance Thailand's global competitiveness by aligning the education system with international standards and global trends; (3) propose strategies for implementing changes that can benefit the Thai education system and contribute to the development of a globally competitive workforce.

2. The Current State of Education in Thailand

2.1 Overview of the Education System

Thailand's education system is divided into three main levels: primary, secondary, and tertiary education. Primary education, covering grades 1 to 6, is compulsory and aims to provide basic literacy, numeracy, and foundational skills for all students. Secondary education, split into lower (grades 7-9) and upper secondary (grades 10-12), allows students to choose between academic or vocational tracks based on their interests and career aspirations (Office of the Education Council, [2017](#)). Tertiary education includes universities, colleges, and vocational institutions that offer undergraduate and graduate degrees or diplomas. The Thai education system consists of both public and private institutions, with public schools catering to the majority of students, especially in rural areas. Public schools are often funded by the

government, and the quality of education provided can vary significantly depending on the region. Schools in urban centers, such as Bangkok, tend to have more resources and better-qualified teachers, leading to higher educational outcomes. In contrast, rural schools often suffer from a lack of funding, outdated facilities, and less experienced teachers (UNESCO, [2019](#)). Private schools, especially in urban areas, generally provide higher-quality education and have access to better resources, modern facilities, and highly qualified teachers. They also often adopt international curricula, particularly in English-medium schools, which gives students a competitive edge in global contexts. However, the high costs associated with private education make it inaccessible to many Thai families, exacerbating inequalities within the system (Baker & Phongpaichit, [2017](#)).

2.2 Key Challenges

A significant issue in Thailand's education system is the outdated curriculum, which has not been revised to meet the demands of the 21st century. The curriculum remains heavily focused on rote learning and memorization, which limits students' ability to think critically, solve problems creatively, and adapt to new challenges (OECD, [2016](#)). This approach contrasts with global educational trends that emphasize inquiry-based learning, digital literacy, and the development of critical thinking skills. Educational inequality is another major challenge in Thailand, particularly the disparity between rural and urban schools. Schools in rural areas often lack the necessary resources, such as updated textbooks, modern technology, and adequately trained teachers, which negatively impacts the quality of education (UNESCO, [2019](#)). These resource gaps result in significantly lower academic achievement among students in rural areas compared to their urban counterparts, creating long-term disadvantages in terms of career prospects and higher education opportunities. English proficiency is increasingly essential in the globalized economy, yet Thailand continues to struggle with low levels of English language proficiency. According to the EF English Proficiency Index, Thailand ranks among the lowest in Southeast Asia, which poses a major hurdle for students and professionals seeking to engage in the global marketplace (World Economic Forum, [2020](#)). The limited emphasis on English language skills in the Thai education system, especially in public schools, further contributes to this problem. This lack of proficiency restricts students' access to global knowledge, international education opportunities, and competitive job markets. Another pressing issue in the Thai education system is the quality of teaching. Many teachers lack access to continuous professional development and are not trained to use modern pedagogical methods that encourage active learning and student engagement (Schleicher, [2018](#)). Teacher preparation programs in Thailand often emphasize theoretical knowledge over practical teaching skills, which results in a lack of readiness to handle diverse classrooms or integrate technology into lessons effectively. Furthermore, many teachers in rural areas face additional challenges due to limited resources and support, making it difficult for them to provide high-quality education.

3. Global Competitiveness in Education: What It Means for Thailand

3.1 Defining Global Competitiveness in Education

Global competitiveness in education refers to a country's ability to equip students with the necessary skills and knowledge to succeed in a rapidly changing, interconnected world. For Thailand, achieving global competitiveness means developing an education system that produces graduates capable of critical thinking, collaboration, and digital literacy—skills essential for navigating the challenges of the 21st century. The 21st century demands a shift from traditional learning models that emphasize memorization toward skill sets that include

critical thinking, problem-solving, collaboration, and digital literacy (Schleicher, [2018](#)). Critical thinking allows students to analyze complex information and make reasoned decisions. Collaboration, both in physical and virtual environments, is increasingly important in diverse, globalized workplaces. Digital literacy, including the ability to navigate technology and apply it in various contexts, is vital for students entering a job market where many industries are becoming increasingly digitalized (World Economic Forum, [2020](#)).

Thailand must prioritize the development of these skills within its education system to ensure that its students are well-prepared for both the domestic job market and global opportunities. Currently, however, the country's curriculum does not sufficiently emphasize these areas, focusing more on content recall than on the application of knowledge in real-world scenarios (OECD, [2016](#)). In terms of global education rankings, Thailand has consistently lagged behind many of its Southeast Asian neighbors. International assessments, such as the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS), have revealed that Thai students perform below average in critical areas such as reading, mathematics, and science. According to the latest PISA results, Thailand ranks significantly lower than Singapore, Vietnam, and Malaysia in these key subjects, highlighting a growing gap in education outcomes across the region (OECD, [2019](#)). Thailand's relatively weak performance in these global assessments underscores the need for urgent reforms to enhance the quality of education. Improving the country's ranking in these assessments is not just about prestige; it directly impacts Thailand's ability to remain competitive in the global economy by producing a workforce equipped with the necessary skills to innovate and thrive in complex environments (UNESCO, [2019](#)).

3.2 The Importance of International Standards

International assessments such as PISA and TIMSS play a crucial role in shaping educational policy by providing data-driven insights into the strengths and weaknesses of a country's education system. PISA, for instance, evaluates 15-year-olds in reading, mathematics, and science every three years, allowing policymakers to benchmark their students' performance against global standards. These assessments highlight areas where reforms are necessary and help in setting measurable goals for improvement (OECD, [2019](#)). For Thailand, participation in such assessments has revealed critical shortcomings in the current system, particularly in terms of student outcomes in science and mathematics - two areas essential for thriving in the modern, technology-driven economy (World Bank, [2018](#)). By utilizing the data from these assessments, Thailand's policymakers can make informed decisions about where to direct resources and how to adjust the national curriculum to better align with international best practices.

To improve its global competitiveness, Thailand needs to adapt its education system to meet international benchmarks. One approach is to update the national curriculum to place a stronger emphasis on 21st-century skills, including critical thinking, problem-solving, and digital literacy. Moreover, teacher training programs must be restructured to equip educators with the tools to foster these skills in students. Integrating more active learning approaches and reducing the reliance on rote memorization is also crucial. Countries such as Singapore have successfully shifted towards inquiry-based and problem-solving education models, which focus on student engagement and practical applications of knowledge (Schleicher, [2018](#)). Thailand can also learn from Vietnam, which has made significant strides in its education system by investing in teacher quality, education infrastructure, and equitable access to learning resources (World Bank, [2018](#)). Finally, leveraging technology to support personalized and accessible learning environments can help Thailand meet global benchmarks. E-learning platforms, mobile applications, and digital tools can provide students with more flexible and

individualized learning opportunities, ensuring that they gain the skills needed for the 21st-century economy (UNESCO, [2019](#)).

4. Opportunities for Reform

4.1 Policy Reforms and Government Initiatives

Thailand 4.0 is a national economic model aimed at transitioning the country towards a value-based economy driven by innovation, creativity, and technology. A key component of this strategy is the reform of the education sector, with an emphasis on integrating technology into the learning process to equip students with the skills needed for the 21st-century economy (National Economic and Social Development Board, [2017](#)). The Thai government has initiated several programs under this framework, focusing on increasing access to digital tools in schools, enhancing digital literacy, and promoting science, technology, engineering, and mathematics (STEM) education. These reforms are intended to bridge the gap between traditional education practices and the digital economy, ensuring that students are better prepared to compete in global markets (Ministry of Digital Economy and Society, [2018](#)). In recent years, Thailand has implemented a series of educational reforms aimed at improving student outcomes and aligning the education system with international standards. These include revisions to the national curriculum to emphasize more holistic, competency-based learning, as well as initiatives to reduce educational inequality by providing more resources to rural schools. The introduction of “Smart Classrooms” equipped with digital learning tools and the expansion of vocational education programs to meet labor market demands are other key reforms (Office of the Education Council, [2019](#)). However, challenges remain in effectively implementing these policies, particularly in terms of teacher training and resource allocation.

4.2 Curriculum Modernization

One of the central reforms needed in Thailand’s education system is the modernization of the curriculum to foster critical thinking, creativity, and problem-solving skills. These are essential competencies for students to thrive in a rapidly changing global environment (Schleicher, [2018](#)). Currently, the Thai curriculum places too much emphasis on rote memorization, which limits students’ ability to apply their knowledge in real-world situations. To address this, curriculum reforms should focus on incorporating project-based learning, inquiry-based approaches, and collaborative learning activities that encourage students to think critically and creatively. In the context of a global economy increasingly driven by technology and innovation, enhancing STEM education is crucial for Thailand’s future competitiveness. The country has made strides in promoting STEM disciplines, but further efforts are needed to ensure that students receive quality education in these fields from an early age (World Bank, [2018](#)). Investments in STEM-focused teacher training, modern laboratories, and partnerships with industries can help align STEM education with global standards. Encouraging student participation in STEM competitions and international collaborations can also enhance the global competitiveness of Thailand’s workforce.

4.3 Digital Transformation in Education

The integration of technology into classrooms has the potential to transform how education is delivered and received in Thailand. Technology can facilitate personalized learning, enabling students to learn at their own pace and focus on areas where they need the most improvement (UNESCO, [2019](#)). The government’s Smart Classroom initiative, which

provides schools with access to digital tools such as interactive whiteboards and tablets, is a step in the right direction. However, further investments are needed to ensure that these technologies are accessible to all schools, especially in rural areas, and that teachers are adequately trained to use them effectively. The COVID-19 pandemic highlighted the potential of e-learning and hybrid learning models, where students engage in a mix of online and in-person instruction. E-learning platforms allow students to access educational resources remotely, breaking down geographical barriers and providing flexible learning opportunities (World Economic Forum, [2020](#)). For Thailand, expanding the use of e-learning can help address issues of educational inequality, as students in rural or underserved areas can benefit from quality online resources. Additionally, hybrid models offer the flexibility to combine the best elements of traditional classroom learning with the advantages of digital tools, catering to different learning styles and needs. Teacher quality is one of the most significant determinants of student success. To improve education outcomes in Thailand, it is crucial to invest in teacher training and continuous professional development. Current teacher training programs often emphasize theoretical knowledge over practical classroom skills, which leaves many teachers unprepared to engage students actively and apply modern pedagogical approaches (Schleicher, [2018](#)). New approaches to teacher training should focus on practical, hands-on methods, such as classroom simulations, peer collaboration, and mentorship programs. Continuous professional development is equally important, ensuring that teachers can stay updated on the latest teaching strategies and technologies. Educational technology can play a critical role in improving teacher training and professional development. Online platforms and digital tools offer teachers access to global teaching resources, online courses, and virtual professional communities where they can share experiences and strategies (UNESCO, [2019](#)). For example, digital simulations and interactive teaching modules can help teachers practice new pedagogical techniques in a virtual environment before applying them in the classroom. Additionally, integrating technology into teacher training programs ensures that teachers are comfortable using digital tools, which is essential as classrooms become increasingly tech-driven.

5. Addressing Educational Inequality

One of the most pressing issues in Thailand's education system is the significant disparity in the quality of education between urban and rural areas. Schools in urban centers often have access to better resources, experienced teachers, modern facilities, and digital technologies, while rural schools struggle with inadequate infrastructure, outdated teaching materials, and a shortage of qualified educators (UNESCO, [2019](#)). This divide contributes to unequal learning outcomes, leaving students in rural areas at a disadvantage and limiting their future opportunities. To address the urban-rural divide, several strategies can be implemented. One key solution is increasing government funding for rural schools to improve infrastructure, provide updated learning materials, and ensure that these schools have access to the same resources as urban institutions (World Bank, [2018](#)). Additionally, targeted teacher recruitment and retention programs can help ensure that rural schools have well-qualified and experienced educators. Offering incentives such as housing, higher salaries, and professional development opportunities can attract and retain teachers in rural areas, ensuring that students receive high-quality instruction regardless of their location. Another approach is the use of mobile learning units and digital platforms to bridge the gap in access to educational content. For example, e-learning tools and mobile classrooms can bring modern educational resources to remote areas, allowing students in underserved regions to benefit from the same curriculum and materials as their peers in urban settings (Ministry of Digital Economy and Society, [2018](#)).

Community-based initiatives can also play a vital role in bridging the urban-rural divide. Collaboration between local governments, businesses, and non-governmental organizations (NGOs) can help mobilize resources and support educational programs tailored to the needs of rural students (Baker & Phongpaichit, [2017](#)). For instance, community learning centers can be established in rural areas, providing supplementary education and after-school programs that enhance the learning experience for students. Additionally, partnerships with private companies and philanthropic organizations can help fund scholarships, school improvement projects, and teacher training programs. Local communities can also contribute by encouraging parental involvement in education. Engaging parents in their children's learning process can lead to better academic outcomes, as students who receive support at home are more likely to stay motivated and succeed in school. Parent-teacher associations (PTAs) and community outreach programs can foster stronger ties between schools and families, leading to a more supportive learning environment.

Policies and Programs to Support Students with Special Needs and Disadvantaged Backgrounds: In addition to addressing geographical inequalities, Thailand must also focus on creating an inclusive education system that supports students with special needs and those from disadvantaged backgrounds. Inclusive education ensures that all students, regardless of their physical, intellectual, or socio-economic status, have access to quality education and are given the tools they need to succeed (UNESCO, [2019](#)). Thailand has made progress in implementing inclusive education policies, particularly through the enactment of the Persons with Disabilities Education Act, which guarantees access to education for children with disabilities. However, significant challenges remain in fully realizing these policies, as many schools lack the necessary infrastructure, specialized staff, and resources to support students with disabilities (Office of the Education Council, [2019](#)).

To create a truly inclusive education system, Thailand should invest in training teachers to work with diverse student populations, including those with disabilities and learning difficulties. Specialized training in differentiated instruction, assistive technologies, and behavioral management can help teachers create more inclusive classrooms where all students can thrive. Furthermore, schools need to be equipped with the appropriate infrastructure, such as ramps, accessible bathrooms, and adaptive learning materials, to ensure that students with physical disabilities can participate fully in their education. Programs that support students from socio-economically disadvantaged backgrounds are also crucial. Poverty is a major barrier to education for many students in Thailand, particularly in rural areas, where families may lack the financial resources to provide their children with the necessary school supplies, uniforms, or transportation (World Bank, [2018](#)). Providing scholarships, free school meals, and transportation subsidies can help reduce these barriers and ensure that all students have the opportunity to attend school and complete their education. Another important aspect of inclusive education is addressing language barriers. Thailand is home to various ethnic and linguistic minority groups, and students from these communities may struggle to succeed in school if the language of instruction is not their native tongue. Implementing bilingual education programs and providing additional language support can help these students overcome linguistic challenges and succeed academically (Baker & Phongpaichit, [2017](#)).

6. Case Studies of Successful Reforms

Countries in Asia have implemented various education reforms that have significantly improved their global competitiveness and education outcomes. Thailand can draw valuable lessons from the experiences of neighboring countries like Singapore, South Korea, and

Malaysia.

Singapore: Focus on Holistic Education and Critical Thinking: Singapore's education system is globally recognized for its consistent top performance in international assessments such as PISA and TIMSS. The country's success can be attributed to its well-structured, student-centered education system, which balances academic rigor with the development of critical thinking and problem-solving skills (Ng, [2019](#)). Singapore has implemented a holistic education approach that goes beyond traditional academic subjects to include character education, digital literacy, and leadership training. Furthermore, the country emphasizes continuous teacher development, ensuring that educators are well-equipped to implement innovative pedagogical methods (OECD, [2018](#)). One of Singapore's key reforms has been the shift from rote learning to inquiry-based and problem-solving methods. This reform encourages students to think critically and apply knowledge in practical contexts, preparing them for real-world challenges. The Ministry of Education also places significant emphasis on regular curriculum updates to stay relevant to the changing demands of the global workforce (Ng, [2019](#)).

South Korea: Teacher Quality and Educational Equity: South Korea's education system is renowned for its rigorous standards and high student achievement. A major factor in the success of South Korean education is the emphasis on teacher quality. Teachers in South Korea undergo extensive training, and the profession is highly respected and well-compensated (Park & Byun, [2015](#)). Teacher recruitment is selective, and continuous professional development is a key part of the education system, ensuring that teachers remain up-to-date with the latest pedagogical practices. In addition to teacher quality, South Korea has implemented policies to address educational equity. The government has introduced measures to reduce the urban-rural divide by investing in technology and infrastructure in rural areas, ensuring that all students have access to quality education regardless of their location (OECD, [2018](#)). This focus on equity, combined with rigorous academic standards, has helped South Korea consistently perform well in global education rankings.

Malaysia: STEM Education and Digital Transformation: Malaysia has made significant strides in reforming its education system, particularly in promoting STEM (science, technology, engineering, and mathematics) education and integrating digital tools into classrooms. The Malaysia Education Blueprint (2013-2025) aims to transform the education system by focusing on 21st-century skills, digital literacy, and STEM subjects (Ministry of Education Malaysia, [2013](#)). One key initiative is the widespread introduction of ICT (information and communication technology) in schools, including the provision of digital devices to students and the development of digital learning platforms. Malaysia has also focused on expanding access to education, particularly for underserved communities, and ensuring that schools in rural and urban areas have the resources to deliver quality education. The country has set ambitious goals to improve student outcomes in STEM fields, which are critical for Malaysia's future competitiveness in the global economy (Ministry of Education Malaysia, [2013](#)).

Lessons for Thailand: Thailand can draw several lessons from the education reforms in Singapore, South Korea, and Malaysia:

1) **Emphasis on Teacher Quality and Professional Development:** One of the key lessons from South Korea and Singapore is the importance of investing in teacher quality. Thailand should prioritize teacher recruitment and training, ensuring that educators are well-prepared to implement modern pedagogical approaches that promote critical thinking, creativity, and active learning. Continuous professional development, similar to the South Korean model, can help teachers stay current with the latest teaching methods and technologies.

2) Curriculum Modernization and Student-Centered Learning: Singapore's shift from rote learning to inquiry-based and problem-solving education can serve as a model for Thailand. Modernizing the curriculum to focus on developing critical thinking, collaboration, and digital literacy will better prepare Thai students for the challenges of the 21st century. Regular updates to the curriculum, incorporating real-world applications, are essential to keep the education system relevant to global trends.

3) Focus on STEM Education and Digital Transformation: Like Malaysia, Thailand can benefit from emphasizing STEM education and integrating digital tools into classrooms. Investing in modern educational technology and ensuring that all schools, especially those in rural areas, have access to digital resources will help reduce the urban-rural divide and provide equitable opportunities for all students. Expanding STEM programs and encouraging participation in international STEM competitions can also help prepare Thai students for the demands of a global economy driven by technology and innovation.

4) Equity in Education: Both South Korea and Malaysia have implemented successful reforms to address educational inequalities. Thailand should focus on reducing disparities between urban and rural schools by increasing funding, improving infrastructure, and providing targeted support to disadvantaged areas. By addressing these inequities, Thailand can ensure that all students have access to quality education, regardless of their socio-economic background or location. By adopting these strategies and drawing on the successes of its neighbors, Thailand can improve the quality and competitiveness of its education system on the global stage.

7. Conclusion

The Thai education system faces several significant challenges that hinder its ability to remain globally competitive. Key issues include an outdated curriculum overly focused on rote learning, a disparity in educational resources between urban and rural areas, insufficient teacher training, and a lack of integration of digital literacy and STEM education. These challenges contribute to Thailand's lower performance in global education rankings and limit the country's ability to produce graduates who are equipped with the 21st-century skills necessary for success in the global economy. Addressing these issues through comprehensive reforms is critical for enhancing the quality of education and improving Thailand's position on the global stage.

To enhance Thailand's global competitiveness, the following actionable strategies are recommended: (1) The national curriculum must be modernized to emphasize critical thinking, creativity, problem-solving, and digital literacy. Project-based and inquiry-based learning models should replace rote memorization to encourage students to apply their knowledge in practical contexts. Additionally, a stronger focus on STEM education will prepare students for the growing demands of the global workforce. (2) Teacher training programs should be restructured to emphasize active learning methods, technology integration, and the development of 21st-century skills. Continuous professional development opportunities must be provided to ensure teachers are up-to-date with the latest pedagogical practices and innovations in education. (3) The Thai government should expand its digital transformation efforts in education by equipping schools, particularly in rural areas, with modern technological tools. E-learning platforms and hybrid learning models should be promoted to ensure students have access to high-quality education regardless of their location. Additionally, educational technology can enhance teacher training by providing online resources and virtual teaching simulations. (4) Successful education reform requires the collaboration of various stakeholders, including the government, private sector, and international organizations. The Thai government should establish partnerships with technology companies, educational NGOs, and

international education experts to provide resources, expertise, and support for implementing reforms. Collaborative efforts will ensure that the reforms are sustainable and widely adopted across the country. If successfully implemented, these reforms will have a long-term positive impact on Thailand's education system and its global competitiveness. (5) A modernized curriculum, well-trained teachers, and greater access to digital resources will produce graduates who are globally competent, innovative, and equipped with the critical skills needed to thrive in an increasingly interconnected world. (6) By addressing inequalities in education and focusing on preparing students for the demands of the 21st-century workforce, Thailand can secure its place as a competitive and prosperous nation in the global economy. The reforms will not only improve individual student outcomes but also contribute to national economic growth and social development.

Originality & Body of Knowledge

Originality: This paper presents an innovative approach to analyzing the challenges and opportunities in reforming Thailand's education system to enhance global competitiveness. By integrating perspectives from international benchmarks, national policies like Thailand 4.0, and successful education reform models from neighboring countries, the study offers unique insights into addressing systemic educational issues. Unlike previous research, this paper emphasizes the critical interplay between curriculum modernization, teacher quality, digital transformation, and equity in education, providing a comprehensive framework for reform. Its original contribution lies in contextualizing global educational trends to the Thai landscape, proposing tailored strategies for fostering critical thinking, creativity, and digital literacy among Thai students.

Body of Knowledge: The study significantly enriches the discourse on educational reform by addressing key issues such as outdated curricula, educational inequality, and the integration of digital tools in classrooms. It provides actionable recommendations for improving teacher training and leveraging technology to bridge the urban-rural divide, thus contributing to the literature on equitable education. By analyzing case studies from countries like Singapore, South Korea, and Malaysia, the paper highlights best practices in curriculum design, STEM education, and digital integration that can inform Thailand's education policies. Additionally, the focus on aligning the Thai education system with global competitiveness standards advances the understanding of how localized reforms can address global challenges, making this research valuable for policymakers, educators, and scholars.

Funding: This study did not receive financial support from any public or private agencies or organizations.

Declarations

Conflict of interest: The authors declare no conflicts of interest.

Ethical treatment of experimental subjects (animals & human): The research was conducted in compliance with the principles of the Helsinki Declaration regarding human subjects, so formal ethical approval was not required.

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References

- Baker, C., & Phongpaichit, P. (2017). *A history of Thailand (4th ed.)*. Cambridge University Press.
- Ministry of Digital Economy and Society. (2018). *Thailand digital economy and society development plan*. Ministry of Digital Economy and Society.
- Ministry of Education Malaysia. (2013). *Malaysia education blueprint 2013-2025*. Ministry of Education Malaysia.
- National Economic and Social Development Board. (2017). *Thailand 4.0 economic model*. NESDB.
- Ng, P. T. (2019). *Singapore's education system: Perspectives from students, parents, and teachers*. Springer.
- Office of the Education Council. (2017). *Thailand's education system in brief*. Office of the Education Council.
- Office of the Education Council. (2019). *Educational reform in Thailand: Current policies and future directions*. Office of the Education Council.
- Organisation for Economic Co-operation and Development (OECD). (2018). *Education policy outlook: Korea*. OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD). (2016). *Education in Thailand: An OECD-UNESCO perspective*. OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD). (2019). *PISA 2018 results*. OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD). (2016). *Education in Thailand: An OECD-UNESCO perspective*. OECD Publishing.
- Park, H., & Byun, S. Y. (2015). Why some countries attract more high-ability young students to teaching: Cross-national comparisons of students' expectation of becoming a teacher. *Comparative Education Review*, 59(3), 523-549.
- Schleicher, A. (2018). *World class: How to build a 21st-century school system*. OECD Publishing.
- UNESCO. (2019). *Education policy review: Thailand*. UNESCO Publishing.
- World Bank. (2018). *STEM education in Thailand: A pathway for global competitiveness*. World Bank.
- World Bank. (2018). *Thailand's education sector: Strengthening inclusivity and access*. World Bank.
- World Bank. (2018). *Vietnam: Achieving success as a middle-income country*. World Bank.
- World Economic Forum. (2020). *The future of jobs report 2020*. World Economic Forum.