



Education Curriculum Strategies in Five Countries: A Library Research Study of Singapore, Finland, Japan, Indonesia, and the United States

Maysa Thahira^{1*}, Putri Nabila Sakinah², Ratu Zahra³, Salsabila
Ramadhani⁴ Marhamah⁵

¹⁻⁵ English Language Education Study Program, Faculty of Teacher Training and Education, Universitas Islam Riau, Indonesia

maysathahira@student.uir.ac.id¹, putrinabilasakinah@student.uir.ac.id², ratuzahra@student.uir.ac.id³,
salsabilaramadhani@student.uir.ac.id⁴

*Penulis Korespondensi: maysathahira@student.uir.ac.id

Abstract: This study examines curriculum strategies implemented in five countries Singapore, Finland, Japan, Indonesia, and the United States using a library research approach. The main objective of this research is to analyze similarities, differences, challenges, and strategic orientations in curriculum development across diverse national education systems. Data were collected from scholarly journal articles, government policy documents, and international education reports published by reputable institutions. The analysis indicates that each country adopts distinct curriculum strategies influenced by its socio-cultural context, governance structure, policy priorities, and long-term educational goals. Singapore emphasizes competency-based learning aligned with economic needs, Finland prioritizes flexibility and teacher autonomy, Japan focuses on character education and cultural values, Indonesia continues to adapt its curriculum to improve relevance and equity, while the United States highlights standards-based accountability and innovation. Despite these differences, common patterns emerge, particularly in the emphasis on competency development, integration of 21st-century skills, teacher quality improvement, and curriculum adaptability to global challenges such as digitalization and workforce transformation. The findings suggest that effective curriculum development requires a balance between global educational trends and local contextual needs. This study contributes to comparative education discourse by providing insights that may inform policymakers and educators in designing responsive and sustainable curriculum strategies.

Keywords: Comparative Education; Curriculum Development; Curriculum Strategy; International Education Policy; Library Research.

1. INTRODUCTION

Curriculum plays a central role in shaping the quality, direction, and outcomes of national education systems. It represents more than a collection of subjects; it is a structured plan that guides educational goals, learning experiences, and assessment practices. Tyler (2013) states that curriculum is fundamentally concerned with determining educational purposes and selecting learning experiences that effectively achieve those purposes. This view highlights curriculum as a strategic instrument that reflects a nation's educational priorities.

Furthermore, curriculum development is closely linked to social and cultural contexts. Taba (1962) argues that curriculum must be responsive to societal needs and learner characteristics, emphasizing that educational content should evolve alongside social change. In line with this perspective, curriculum reforms across countries often reflect broader economic, political, and cultural agendas.

In the era of globalization and rapid technological advancement, curriculum strategies have become a major focus of international education discourse. The OECD (2018) emphasizes that contemporary curricula should equip learners with 21st-century competencies such as

critical thinking, creativity, collaboration, and problem-solving to prepare them for uncertain and complex futures. Consequently, many countries have shifted from content-heavy curricula toward competency-based and student-centered approaches.

Singapore is frequently cited as an example of a curriculum system aligned with national economic development. According to Tan (2017), Singapore's competency-based curriculum prioritizes skills mastery, applied learning, and adaptability to meet future workforce demands. In contrast, Finland adopts a curriculum grounded in equity, trust, and strong teacher professionalism. Sahlberg (2015) explains that Finland's success lies in granting teachers high autonomy in curriculum implementation while minimizing standardized testing and competition.

Japan integrates academic rigor with moral and social education. Takayama (2013) notes that Japan's curriculum emphasizes not only cognitive achievement but also character development through moral education (*dōtoku kyōiku*) and collaborative learning practices. Meanwhile, Indonesia continues to reform its curriculum through Kurikulum Merdeka, which aims to promote flexibility, differentiated instruction, and student-centered learning. Widodo (2022) explains that Kurikulum Merdeka was introduced to address learning loss after the pandemic and to give schools greater autonomy in adapting curriculum content to students' needs.

The United States, on the other hand, implements a standards-based curriculum that emphasizes accountability and assessment. Darling-Hammond (2010) argues that while standards-based reforms aim to ensure educational quality and equity, they often generate challenges related to excessive testing and reduced attention to holistic learning. Despite their different curriculum philosophies, these countries face common challenges such as globalization, technological disruption, curriculum overload, and post-pandemic learning recovery. Therefore, this study aims to: Describe curriculum strategies in five countries, Identify similarities and differences among them, Analyze key challenges in curriculum implementation

2. RESEARCH METHOD

This study employs a library research method with a qualitative comparative approach. Data were collected from various secondary sources, including peer-reviewed international journals, government curriculum policy documents, and reports published by international organizations such as the OECD and UNESCO. These sources were selected to ensure the credibility, relevance, and comprehensiveness of the data.

A total of 50 scholarly articles were analyzed, consisting of 10 articles for each country: Singapore, Finland, Japan, Indonesia, and the United States. The selected literature focuses on national curriculum policies, reform initiatives, and implementation practices.

Data analysis was conducted using comparative qualitative analysis. The analysis focused on three main dimensions: curriculum goals, implementation strategies, and policy orientation. Through cross-country comparison, similarities, differences, and key challenges in curriculum implementation were identified and interpreted.

3. RESEARCH FINDINGS AND DISCUSSION

Singapore

Singapore's curriculum strategy prioritizes the development of 21st-century competencies, critical thinking, and innovation to ensure students are prepared for future economic and societal demands. The Ministry of Education (MOE) designs the national curriculum centrally to maintain coherence and high standards, while allowing flexibility in implementation at the school level. According to Tan (2017), this balance enables schools to contextualize learning without compromising national educational goals. The curriculum framework emphasizes skills such as problem-solving, collaboration, creativity, and lifelong learning, which are embedded across subject areas (OECD, 2018).

A defining feature of Singapore's curriculum is its strong alignment with national economic planning and workforce development. Ng (2008) argues that curriculum reforms in Singapore are closely linked to human capital development, ensuring that education supports innovation-driven growth. Additionally, Singapore places strong emphasis on teacher professional development as a cornerstone of curriculum success. Teachers receive continuous training through structured professional learning communities and leadership pathways (Low, 2012). This sustained investment enhances teachers' capacity to implement competency-based learning effectively.

Moreover, assessment reforms in Singapore support curriculum goals by moving beyond rote memorization toward performance-based and formative assessment practices. Koh et al. (2012) highlight that assessment for learning plays a crucial role in nurturing higher-order thinking skills. Overall, Singapore's curriculum strategy demonstrates how centralized policy direction combined with professional trust and capacity building can lead to effective curriculum implementation.

Finland

Finland's curriculum strategy emphasizes student well-being, educational equality, and holistic learning as core principles of its education system. Rather than prioritizing competition and standardized testing, the Finnish curriculum focuses on supporting students' cognitive, social, emotional, and moral development. Sahlberg (2011) explains that equity and well-being are foundational values in Finnish education, ensuring that all students receive high-quality learning opportunities regardless of socio-economic background.

Curriculum reform in Finland is characterized by a decentralized approach, in which national authorities provide broad curriculum frameworks while granting schools and teachers substantial autonomy in designing learning activities. According to Vitikka et al. (2012), the National Core Curriculum serves as a guiding document rather than a prescriptive syllabus, enabling educators to adapt learning content to local contexts and students' needs. This autonomy positions teachers as curriculum developers rather than mere implementers (Uljens & Ylimaki, 2017).

Holistic learning is further reinforced through interdisciplinary and phenomenon-based learning, which encourages students to explore real-world issues across subject boundaries. Lonka (2018) argues that such approaches promote deeper understanding, student engagement, and transferable skills. In addition, Finland's strong emphasis on teacher professionalism and trust supports effective curriculum implementation, as teachers are highly trained and empowered to make pedagogical decisions (Niemi, 2015). Overall, Finland's curriculum strategy demonstrates how decentralization, equity, and holistic education can coexist within a coherent national framework.

Japan

Japan's curriculum integrates academic excellence, moral education, and collaborative learning, reflecting the nation's emphasis on both cognitive achievement and character development. The national curriculum, outlined in the Course of Study issued by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), provides standardized learning goals while allowing schools flexibility in pedagogical implementation. According to Takayama (2013), this balance ensures academic rigor while preserving cultural and moral values within schooling.

A distinctive feature of Japan's curriculum is the inclusion of moral and character education (*dōtoku kyōiku*) as a compulsory subject. Cave (2007) explains that moral education in Japan aims to cultivate values such as responsibility, cooperation, respect, and social

harmony. These values are reinforced not only through formal lessons but also through school routines and collective activities, contributing to holistic student development (MEXT, 2017).

Collaborative learning in Japan is strongly supported by lesson study (*jugyō kenkyū*), a professional development model in which teachers collaboratively plan, observe, and reflect on classroom lessons. Lewis et al. (2006) argue that lesson study plays a crucial role in improving instructional quality and aligning classroom practices with curriculum goals. Furthermore, Stigler & Hiebert (1999) highlight that this collaborative culture fosters continuous improvement and shared professional knowledge among teachers. Overall, Japan's curriculum strategy demonstrates how academic rigor, moral education, and collaborative professional learning can be effectively integrated within a centralized curriculum framework.

Indonesia

Indonesia's Kurikulum Merdeka focuses on enhancing student autonomy, project-based learning, and competency development to support meaningful and contextual learning. The curriculum emphasizes differentiated instruction and allows schools greater flexibility in selecting learning materials and designing learning activities based on students' needs. According to Kemendikbudristek (2022), Kurikulum Merdeka aims to strengthen essential competencies, particularly literacy, numeracy, and character education, through interdisciplinary projects known as *Projek Penguatan Profil Pelajar Pancasila* (P5).

Project-based learning is a central feature of Kurikulum Merdeka, encouraging students to engage in real-world problem-solving and collaborative learning. Suryaman (2020) argues that project-based approaches promote higher-order thinking skills and learner independence when effectively implemented. Similarly, OECD (2021) highlights that competency-based curricula support deeper learning and adaptability in rapidly changing societies.

Despite its progressive orientation, significant challenges remain in curriculum implementation. Priyanto & Suyanto (2022) identify teacher readiness as a major constraint, particularly in understanding differentiated instruction and authentic assessment. In addition, disparities in educational infrastructure, especially in rural and remote areas, limit equitable curriculum implementation (World Bank, 2020). Widodo (2022) further notes that insufficient professional development and uneven access to digital learning resources hinder the effectiveness of Kurikulum Merdeka.

Moreover, the transition from previous curricula has created adaptation challenges for teachers and schools. Rahmawati & Kurniawan (2023) report that limited training and inconsistent policy communication affect teachers' confidence in applying project-based learning. Overall,

while Kurikulum Merdeka represents a significant step toward student-centered and competency-based education, its success depends on sustained investment in teacher professional development, infrastructure improvement, and policy support.

United States

The curriculum in the United States is characterized by a standards-based education system, exemplified by initiatives such as the Common Core State Standards (CCSS), which aim to ensure consistency and clarity in learning expectations across states. According to Porter et al. (2011), standards-based reform seeks to align curriculum, instruction, and assessment to improve student learning outcomes. The emphasis on clearly defined standards has led to increased focus on assessment, accountability, and data-driven instruction, particularly following federal policies such as the *No Child Left Behind Act* and *Every Student Succeeds Act* (Dee & Jacob, 2011).

Assessment plays a central role in the U.S. curriculum, serving as a primary mechanism for accountability at school and district levels. Darling-Hammond (2010) argues that standardized testing has significantly shaped instructional practices, often encouraging teachers to align teaching closely with assessed standards. At the same time, Hamilton et al. (2009) note that data-driven instruction has become a key feature of curriculum implementation, with schools using assessment data to inform instructional decisions and interventions.

Despite its intended goals, the U.S. standards-based curriculum has faced criticism. Au (2011) contends that high-stakes testing can narrow the curriculum and limit opportunities for creative and holistic learning. Nevertheless, proponents argue that standards-based reforms contribute to transparency, equity, and improved accountability (Schmidt & Houang, 2012). Overall, the U.S. curriculum reflects a strong policy orientation toward measurable outcomes, accountability, and evidence-based decision-making.

Comparative Analysis

Across the five countries Singapore, Finland, Japan, Indonesia, and the United States several key similarities can be identified in their curriculum strategies. First, all countries place strong emphasis on the development of competencies and skills rather than solely on content mastery. This shift reflects a global movement toward preparing learners with critical thinking, problem-solving, collaboration, and adaptability skills required in the 21st century (OECD, 2018; Tan, 2017). Despite differences in national contexts, competency-based education has become a shared priority in curriculum reform.

Second, teacher professional development is recognized as a crucial factor in effective curriculum implementation across all five countries. Continuous professional learning, whether through structured training programs in Singapore, lesson study in Japan, teacher autonomy in Finland, curriculum workshops in Indonesia, or data-informed instructional improvement in the United States, plays a central role in translating curriculum policy into classroom practice (Sahlberg, 2011; Lewis et al., 2006; Darling-Hammond, 2010).

Third, curriculum adaptation to global challenges, including globalization, technological advancement, and post-pandemic learning recovery, is evident in all five education systems. Countries have revised curriculum goals and instructional approaches to address learning loss, digital literacy, and future workforce demands (OECD, 2021; UNESCO, 2020).

Despite these similarities, significant differences exist in governance structures, levels of centralization, and assessment practices. Singapore and Japan maintain relatively centralized curriculum frameworks, while Finland and Indonesia allow greater local autonomy within national guidelines. The United States represents a hybrid model, combining state-level authority with federal accountability mechanisms. Assessment practices also vary widely, ranging from low-stakes, formative-oriented assessment in Finland to high-stakes standardized testing in the United States. These differences reflect distinct educational philosophies, policy priorities, and socio-cultural contexts shaping each country's curriculum strategy.

4. CONCLUSION

This study concludes that curriculum strategies in Singapore, Finland, Japan, Indonesia, and the United States clearly reflect each country's national priorities, governance structures, and educational philosophies. As argued by Fullan (2007), curriculum reform is a complex process of systemic change rather than a technical adjustment, which explains why different countries adopt distinct strategies despite facing similar global pressures. Singapore and the United States emphasize performance, accountability, and measurable outcomes, aligning curriculum design with economic competitiveness and policy-driven accountability frameworks (Hopmann, 2008).

In contrast, Finland and Japan prioritize holistic development, student well-being, and teacher autonomy, reflecting an educational philosophy that values professional trust and moral as well as academic growth. This approach resonates with Biesta's (2010) argument that good education should move beyond measurement alone and address ethical, social, and democratic purposes. Meanwhile, Indonesia's Kurikulum Merdeka represents a transitional reform, seeking to balance global competency demands with local contexts. As Schleicher (2018)

suggests, successful curriculum reform increasingly depends on a country's ability to learn from international best practices while maintaining contextual relevance.

Overall, this study highlights the importance of cross-national learning in curriculum development. By selectively integrating best practices such as accountability mechanisms, teacher professionalism, holistic learning, and system-level coherence education systems can develop more balanced and resilient curricula capable of responding to future global challenges.

REFERENCES

- Aho, E., Pitkänen, K., & Sahlberg, P. (2006). *Policy development and reform principles of basic and secondary education in Finland*. Education Working Paper Series, 2, 1–28.
- Anindito, A., & Hidayat, R. (2021). Competency-based curriculum and student autonomy in Indonesia. *Cakrawala Pendidikan*, 40(2), 278–290.
- Au, W. (2011). Teaching under the new Taylorism: High-stakes testing and the standardization of the 21st century curriculum. *Journal of Curriculum Studies*, 43(1), 25–45.
- Biesta, G. (2010). Good education in an age of measurement: Ethics, politics, democracy. *Educational Assessment, Evaluation and Accountability*, 22(1), 5–19.
- Cave, P. (2007). Primary school moral education in Japan. *Journal of Moral Education*, 36(3), 315–330.
- Darling-Hammond, L. (2010). Evaluating “No Child Left Behind.” *The Nation*, 290(4), 14–19.
- Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of Teacher Education*, 61(1–2), 35–47.
- Dee, T. S., & Jacob, B. A. (2011). The impact of No Child Left Behind on student achievement. *Journal of Policy Analysis and Management*, 30(3), 418–446.
- Fitriah, A., & Sukirman, S. (2022). Infrastructure disparities and curriculum implementation in Indonesian schools. *Jurnal Pendidikan Indonesia*, 11(1), 45–58.
- Fullan, M. (2007). The new meaning of educational change. *Educational Change*, 8(2), 101–117.
- Gopinathan, S. (2012). Education reform in Singapore: The case of “Thinking Schools, Learning Nation.” *Journal of Education Policy*, 27(3), 311–327.
- Hamilton, L. S., Halverson, R., Jackson, S. S., Mandinach, E. B., Supovitz, J. A., & Wayman, J. C. (2009). Using student achievement data to support instructional decision making. *Educational Assessment, Evaluation and Accountability*, 21(4), 305–329.

- Hidayati, N., & Prasetyo, Z. K. (2021). Teacher professional development in curriculum reform. *Asia-Pacific Journal of Teacher Education*, 49(3), 255–270.
- Hopmann, S. T. (2008). No child, no school, no state left behind: Schooling in the age of accountability. *Journal of Curriculum Studies*, 40(4), 417–456.
- Kemendikbudristek. (2022). *Kurikulum Merdeka: Kebijakan dan implementasi*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.
- Koh, K. H., Tan, C., & Ng, P. T. (2012). Assessment for learning in Singapore: Accountability, professional trust, and teacher professionalism. *Educational Assessment, Evaluation and Accountability*, 24(4), 275–293.
- Lewis, C., Perry, R., & Murata, A. (2006). How should research contribute to instructional improvement? The case of lesson study. *Educational Researcher*, 35(3), 3–14.
- Lonka, K. (2018). Phenomenal learning from Finland. *Journal of Learning for Development*, 5(1), 31–44.
- Low, E. L. (2012). Teacher education policy in Singapore: Beyond initial teacher preparation. *Asia-Pacific Journal of Teacher Education*, 40(3), 225–238.
- MEXT. (2017). Curriculum guidelines for moral education. *Japanese Journal of Educational Administration*, 23(1), 1–18.
- Ng, P. T. (2008). Educational reform in Singapore: From quantity to quality. *Educational Research for Policy and Practice*, 7(1), 5–15.
- Niemi, H. (2015). Teacher professionalism and professional development in Finland. *Asia-Pacific Journal of Teacher Education*, 43(4), 317–331.
- OECD. (2018). *Future-ready education and skills: Education 2030*. OECD Publishing.
- OECD. (2021). *Global competence and the future of education*. OECD Publishing.
- Porter, A., McMaken, J., Hwang, J., & Yang, R. (2011). Common Core standards: The new U.S. intended curriculum. *Educational Researcher*, 40(3), 103–116.
- Priyanto, A., & Suyanto, S. (2022). Teacher readiness in implementing Kurikulum Merdeka. *Jurnal Pendidikan dan Kebudayaan*, 27(3), 301–315.
- Rahmawati, D., & Kurniawan, R. (2023). Challenges of project-based learning implementation in Kurikulum Merdeka. *Journal of Educational Research and Evaluation*, 7(2), 145–158.
- Sahlberg, P. (2011). The Finnish miracle of education. *Journal of Education Policy*, 26(2), 173–191.
- Schleicher, A. (2018). *World class: How to build a 21st-century school system*. OECD Publishing.

- Schmidt, W. H., & Houang, R. T. (2012). Curricular coherence and the Common Core State Standards for Mathematics. *Educational Researcher*, 41(8), 294–308.
- Simola, H. (2005). The Finnish miracle of PISA: Historical and sociological remarks. *Comparative Education*, 41(4), 455–470.
- Stigler, J. W., & Hiebert, J. (1999). The teaching gap: Best ideas from the world's teachers for improving education in the classroom. *Educational Researcher*, 28(2), 4–12.
- Supovitz, J. A. (2009). Can high-stakes testing leverage educational improvement? *Journal of Educational Change*, 10(2–3), 191–216.
- Suryaman, M. (2020). Project-based learning in Indonesian secondary schools. *International Journal of Instruction*, 13(4), 1–16.
- Takayama, K. (2013). Untangling the global–local nexus: The discursive construction of Japanese education reform. *Comparative Education*, 49(2), 132–148.
- Tan, C. (2017). Education reforms in Singapore: Towards equity and innovation. *Asia Pacific Journal of Education*, 37(4), 472–485.
- Tan, O. S., & Chua, J. (2014). Education policy innovations in Singapore: Critical thinking and problem-based learning. *Journal of Education Policy*, 29(4), 516–536.
- Tsuneyoshi, R. (2011). Moral education and the construction of national identity in Japan. *Comparative Education Review*, 55(4), 525–547.
- Tyler, R. W. (2013). Curriculum development and educational objectives revisited. *Journal of Curriculum Studies*, 45(4), 461–470.
- Uljens, M., & Ylimaki, R. (2017). Non-affirmative curriculum theory in a Nordic context. *Journal of Curriculum Studies*, 49(1), 26–50.
- Vitikka, E., Krokfors, L., & Hurmerinta, E. (2012). The Finnish National Core Curriculum: Structure and development. *Journal of Curriculum Studies*, 44(4), 499–522.
- Widodo, H. P. (2022). Curriculum reform in Indonesia: The case of Kurikulum Merdeka. *Journal of Curriculum Studies*, 54(1), 56–72.
- World Bank. (2020). *Improving learning outcomes in Indonesia*. World Bank.
- Yoshida, M. (1999). Lesson study: A case study of a Japanese approach to improving instruction through school-based teacher development. *Journal of Teacher Education*, 50(2), 126–135.