

A Comparative Analysis of the Curriculum Systems of Indonesia and Singapore Based on the PRISMA Protocol

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ABSTRACT

This study aims to map the comparison of curriculum systems between Indonesia and Singapore using a descriptive qualitative approach through a Systematic Literature Review (SLR) following the PRISMA protocol. Data were gathered from the Publish or Perish database for the 2012-2024 period; from 312 initial documents, 24 selected studies were analyzed bibliometrically and through content analysis across seven primary dimensions. The results reveal fundamental differences: Indonesia's curriculum is deeply rooted in Pancasila values focusing on national character, while Singapore adopts a pragmatic-technocratic approach oriented toward individual potential and global efficiency. Significant differences were found in curriculum content; Indonesia implements a broad multidisciplinary scope, whereas Singapore emphasizes the mastery method in core subjects. Systemic challenges include geographic infrastructure gaps in Indonesia and student mental health pressures in Singapore. In conclusion, strengthening curriculum literacy for educators in Indonesia and integrating emotional well-being in Singapore are crucial. Future research should explore specific educator roles and the education-employment link to fill limited global research gaps.

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ABSTRAK

Penelitian ini bertujuan memetakan perbandingan sistem kurikulum antara Indonesia dan Singapore menggunakan pendekatan kualitatif deskriptif melalui metode *Systematic Literature Review* (SLR) dengan protokol PRISMA. Data dikumpulkan melalui *Publish or Perish* rentang 2012-2024, di mana dari 312 dokumen awal, 24 studi terpilih dianalisis secara bibliometrik dan konten berdasarkan tujuh dimensi utama. Hasil penelitian mengungkapkan perbedaan fundamental: kurikulum Indonesia berakar kuat pada nilai Pancasila dengan fokus karakter kebangsaan, sementara Singapore bersifat pragmatis-teknokratis yang berorientasi pada potensi individu dan efisiensi global. Perbedaan signifikan ditemukan pada isi kurikulum; Indonesia menerapkan cakupan multidisiplin yang luas, sedangkan Singapore menekankan metode *mastery* pada subjek inti. Tantangan sistemik meliputi kesenjangan infrastruktur geografis di Indonesia dan tekanan kesehatan mental siswa di Singapore. Kesimpulannya, penguatan literasi kurikulum bagi pendidik di Indonesia dan integrasi kesejahteraan emosional di Singapore menjadi krusial. Riset masa depan perlu mengeksplorasi peran spesifik pendidik dan kaitan pendidikan dengan dunia kerja untuk mengisi celah penelitian global yang masih terbatas.

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INTRODUCTION

Education constitutes a fundamental foundation for the development of globally competitive human resources. The quality of a country's education system is strongly influenced by the curriculum it adopts, as the curriculum serves as the primary framework guiding learning processes, assessment practices, and the development of students' competencies (Cao et al., 2023; González-Pérez & Ramírez-Montoy, 2022). In the context of globalization and the Fourth Industrial Revolution, education systems are required to produce graduates who are not only academically proficient but also equipped with twenty-first-century skills, such as critical thinking, creativity, collaboration, and technological literacy (Muhaimin et al., 2025).

As a developing country, Indonesia has continuously implemented curriculum reforms to enhance the quality of national education. Curriculum changes over time, from the 2013 Curriculum to the Merdeka Curriculum, reflect efforts to adapt to evolving societal demands and the diverse needs of learners (Tarso et al., 2025; Wibowo et al., 2025). Nevertheless, various challenges persist, including disparities in educational quality across regions, teachers' readiness to implement the curriculum, and the alignment between curriculum objectives and classroom learning practices.

In contrast, Singapore is widely recognized as one of the countries with the most effective education systems in the world. Singapore's consistent success in producing high-achieving students in international assessments such as PISA and TIMSS is closely linked to a well-structured, competency-oriented curriculum supported by sustainable education policies (Berger et al., 2020; Maulidah et al., 2021). The Singaporean curriculum emphasizes a balance between mastery of fundamental concepts, the development of higher-order thinking skills, and character building, thereby enabling students to become adaptive and globally competitive graduates.

Differences in social, cultural, and educational policy contexts between Indonesia and Singapore make a comparative study of the two countries' curriculum systems both important and relevant. Through comparative analysis, similarities, differences, strengths, and limitations of each curriculum system can be systematically identified (Caesaria et al., 2024; Mateo-Berganza et al., 2022). The findings of such a study are expected to provide an objective overview of the position of Indonesia's curriculum system within the global education landscape, while also opening opportunities to adopt best practices that are compatible with national educational characteristics.

METHOD

This study employs a descriptive qualitative approach using a *Systematic Literature Review* (SLR) method that follows the PRISMA (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) protocol to objectively map and compare the curriculum systems of Indonesia and Singapore (Rahmatillah & Ardiansyah, 2023; Siswanto et al., 2024). Data were collected through the *Publish or Perish* database, with the publication period limited to 2012–2024. The literature search strategy utilized a combination of specific keywords such as “*Comprehensive Assessment*”, “*Curriculum Literacy*”, and “*Education System Comparison*”



to ensure the relevance of the selected documents to ideological foundations, educational levels, and curriculum implementation in both countries.

Data analysis was conducted using bibliometric techniques. After a screening process based on predefined inclusion criteria, the selected literature was synthesized comparatively using *content analysis*, which was categorized into seven main dimensions: curriculum foundations, objectives, functions, educational levels, curriculum content, supporting factors, and systemic issues. This comparative approach enables an in-depth evaluation of how Indonesia's Pancasila-based character orientation interacts with Singapore's pragmatic-technocratic approach, as well as their respective impacts on students' academic performance and psychological well-being.

Table 1. PRISMA Method Filtering

Stages	Activity Description	Total (n)
Identification	Searched the Publish or Perish database using the following keywords: "Comprehensive Assessment," "Curriculum Literacy," and "Singapore-Indonesia Education System."	n = 312
Screening	Filtered by year range (2012–2024) and document type (Journal Article/Proceedings).	n = 119
Eligibility	Eligibility was assessed based on the availability of citation data and subject relevance in the Education category.	n = 77
Included	The final study was synthesized to compare seven aspects of the Indonesian and Singaporean curricula.	n = 24

The literature selection process in this study began with an identification stage using the Publish or Perish database through the keywords "Comprehensive Assessment", "Curriculum Literacy", and "Singapore Indonesia Education System" which resulted in 312 documents, then through a screening stage based on the year criteria (2012–2024) and document type until 119 publications remained. After an eligibility assessment based on the availability of citation data and relevance in the Education category of 77 articles, this study finally determined 24 selected studies (included) for in-depth synthesis to compare seven fundamental aspects of the education curriculum system in Indonesia and Singapore. The following are the 24 articles that were screened.

Table 2. Articles resulting from screening

No	Author	Article Contents
1	(Anindya & Pamungkas, 2023)	The results indicate that the implementation of the Cambridge Curriculum at SIS Semarang is highly effective across the planning, implementation, and evaluation stages of learning, while also integrating character education through school input, process, and output.
2	(Sunarti et al., 2022)	The results of the study indicate that the Indonesian education curriculum is categorized as low based on five curriculum components: objectives, content and materials, media, learning strategies, and the learning process.
3	(Nasution & Indrasari, 2024)	Over the past two decades, despite teachers' initial openness to curriculum reforms in Indonesia, persistent challenges such as limited practical training, difficulties with student-centered learning, assessment, digital proficiency, and resource constraints have led many to revert to traditional practices, indicating the need for a



more practical, classroom-oriented approach and a systemic re-evaluation of teacher recruitment and pre-service training.

4	(Setiawan & Suwandi, 2022)	This qualitative study shows that curriculum changes have shaped the integration of science learning and textbook development in Indonesia, with junior high schools previously implementing integrative science and textbooks provided through both government-developed and nationally standardized non-government publishers.
5	(Assegaf et al., 2022)	The results indicate that the Islamic Education Study Program needs to promptly establish an international class program, beginning with the takhassus class, followed by the excellent class, and ultimately the international class.
6	(Wahyudin & Suwirta, 2020)	The results also indicate that, in the Indonesian context, curriculum coherence between planning and actual implementation remains relatively low.
7	(Teng et al., 2020)	These elements are shaped by national ideologies, societal needs, and educational goals within a neoliberal framework that often undermines equity, and although Singapore and Finland are both regarded as top-performing systems in global assessments, they have achieved this status through distinct paths and different forms of neoliberalism.
8	(Abidin et al., 2023)	The results of this study indicate that the historical development of curricula in Indonesia, from a comparative perspective, can be traced through the 1947, 1952, 1964, 1968, 1975, 1984, 1994, 2004, 2013, and Merdeka curricula.
9	(Low, 2024)	Singapore's founding Prime Minister Lee Kuan Yew's assertion that a nation is only as strong as its teachers underscores the central role of teacher education in nation-building, and this editorial synthesizes insights from former deans of teacher education at Singapore's National Institute of Education to highlight key trends, challenges, and the ongoing importance of providing relevant, responsive, and high-quality teacher education amid a rapidly changing global context.
10	(Nandy, 2024)	With its flexible, purposeful, and activity-based science curriculum, Singapore has achieved high performance in international assessments, while India, through the NEP 2020 reforms, is undertaking transformative curriculum changes aimed at improving students' science achievement and developing scientifically and technologically competent 21st-century human resources.
11	(Tan & Ng, 2021)	The results show that creativity education in Singapore is developed through a harmonized approach that emphasizes everyday creativity and innovation, integrates design thinking for social good, and embeds creative thinking within subject teaching alongside a high-stakes examination system.
12	(Dhitareka et al., 2022)	Singaporean textbooks contain fewer materials yet demonstrate abundant, high-quality NOS integration, highlighting the critical role of textbooks in shaping students' NOS understanding.
13	(Tan-Şişman et al., 2021)	The study finds that while Singapore and Turkey share similarities in centralized curriculum administration, they differ significantly in the implementation and sustainability of educational reforms, with



		Singapore demonstrating more systematic planning and monitoring.
14	Royani et al. (2022)	The results indicate that while both curricula share similar learning outcomes aimed at equipping students with life skills, they differ in their emphasis on character building, independence, and responsibility.
15	Hairon et al. (2018)	The study finds that in Singapore, despite strong centralized standards and a culture of high academic achievement, curriculum innovation at the school level is shaped by a societal emphasis on pragmatism.
16	Bahri et al. (2024)	Indonesia implementing a nationally standardized Merdeka Curriculum emphasizing project-based learning and 21st-century skills, and Australia adopting a more flexible senior secondary curriculum aligned with students' interests and expertise under national standards.
17	Michie (2017)	The implementation of Indonesia's 2013 Curriculum, which is competency-based and promotes integrative science at the junior secondary level.
18	Iriansyah et al. (2025)	This comparative review finds that high-performing education systems in Finland, Japan, Singapore, and the United States are driven by distinct governance, curriculum, and teacher development models, and suggests that Indonesia must strengthen teacher capacity, equity, and formative evaluation while selectively adapting global best practices aligned with its socio-cultural context.
19	Lim et al. (2020)	The results show that the undergraduate public health curriculum developed at the National University of Singapore was systematically designed through a five-stage framework, aligned with workforce needs and international standards, and structured as a second major with core, elective, and internship components to address regional gaps in public health education.
20	Ro (2020)	The study finds that policy discourse on teacher professionalism in Singapore reflects a hybrid model combining managerial and professional perspectives that supports policy objectives but risks de-professionalising teachers by constraining professionalism to compliance with national curriculum implementation.
21	Meilasari et al. (2023)	The results indicate that the education curricula of Singapore and Finland are classified as advanced systems based on societal welfare, teacher quality, and a strong focus on children's future development, with a novel analysis encompassing curriculum objectives, content, learning media, learning strategies, and evaluation.
22	Nukman et al. (2024)	The study concludes that Singapore has successfully implemented education reform, as reflected in its high international education rankings, while Indonesia continues to face challenges due to differing social, economic, political, cultural, and geographical contexts, with curricula in developed countries like Singapore aimed at sustaining quality of life and in developing countries like Indonesia focused on catching up.
23	Machmud et al. (2021)	The study finds that while ASEAN countries share similar educational technology policies focused on improving network



infrastructure and equity, Singapore demonstrates more advanced implementation particularly in the use of artificial intelligence in classrooms compared to Thailand and Indonesia, where AI integration remains in a developmental stage.

24	Warosari (2022)	The Islamic Religious Council of Singapore (MUIS) oversees and manages Islamic education through various programs and the ALIVE curriculum under SIES, with strong government support to serve the Muslim community.
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RESULTS

1. Basic Curriculum

The results of the analysis based on the basic curriculum in Indonesia and Singapore are presented in the following table.

Table 3. Differences in Basic Curriculum

Country	Core Curriculum Principles	Focus of the Approach
Indonesia	Pancasila and the UUD 1945	National Character
Singapore	Student Interests and Abilities	Individual Potential Development

Indonesia's education system is firmly rooted in the country's ideological and constitutional foundations. The curriculum is developed based on the 1945 Constitution and the values of Pancasila, aiming to shape individuals who are faithful, pious, and possess a strong sense of nationalism. This ensures that any curriculum changes remain within the framework of Indonesian national identity.

In contrast, Singapore adopts a more pragmatic approach that focuses on individual potential. Singapore's education system is based on the belief that each student is unique and needs to be guided according to their individual interests and abilities. The primary focus is efficiency and talent development to support the progress of a nation with limited natural resources but rich in human resources.

2. Educational Goals

The results of the analysis of educational goals between Indonesia and Singapore are presented in the following table.

Table 4. Differences in Educational Goals

Country	Primary Graduate Target	Orientation
Indonesia	Superior individuals with Pancasila character	Community development
Singapore	Independent and work-ready individuals	Global competitiveness

The goal of education in Indonesia is aimed at building a society that is intellectually intelligent and possesses noble morals. The primary focus is on developing skills and national character so that citizens can actively contribute to national development. The government emphasizes a balance between soft skills (character) and hard skills (academic competencies).

Singapore sets educational goals that are closely aligned with global market needs and individual independence. Students are trained to become independent, responsible, and well-behaved individuals not only in their daily lives but also in the workplace. These goals are futuristic, ensuring graduates are highly competitive internationally.



3. Functions of Education

The results of the analysis regarding the functions of education in Indonesia and Singapore are presented in the following table.

Table 5. Differences in the Functions of Education

Country	Main Function	Priority Skills
Indonesia	Developing national potential	General knowledge and character
Singapore	Developing student creativity	Information technology and innovation

The primary function of education in Indonesia is as an instrument for developing the nation's potential to create superior human resources for the achievement of national goals. Education is seen as a means to improve the standard of living and national dignity through equitable access to knowledge for all Indonesians.

In Singapore, the function of education places greater emphasis on developing technical skills and adapting to the future. This focus includes fostering creativity and information technology skills. Education serves to ensure that every citizen has the tools necessary to innovate in a knowledge-based economy.

4. Educational Levels

An analysis of educational levels in Indonesia and Singapore is presented in the following table.

Table 6. Differences in Educational Levels

Level	Indonesia	Singapore
Elementary	Elementary School	Primary School
Intermediate	Middle School and High School/ Vocational School	Secondary and Junior College/ Polytechnic
Higher	University	University

The educational structure in Indonesia begins with early childhood education (PAUD) and kindergarten, followed by primary education (SD), junior secondary education (SMP/MTs), senior secondary education (SMA/MA/SMK), and ends with tertiary education. This system encompasses a broad formal pathway, integrating religious and general education under the supervision of two different ministries.

Singapore has a slightly different but highly organized structure, starting with kindergarten, followed by primary school, and then secondary school. Afterward, students can choose from a junior college (pre-university) or polytechnic pathway before entering university. The vocational pathway (Polytechnic) in Singapore is very strong and internationally recognized as a provider of skilled labor.

Mapping these educational levels and structures is part of a growing research trend. Since a stable period from 2012 to 2020, research on the structure of global education systems began to experience a sharp acceleration from 2021 to 2024. Understanding this level structure is crucial for conducting accurate comparative studies.

5. Curriculum Content

The results of the analysis regarding the differences in curriculum content in Indonesia and Singapore can be seen in the following table.

Table 7. Differences in Curriculum Content

Content Aspects	Indonesia	Singapore
Scope	Vast and multidisciplinary	Focused and specific
Key Subjects	Religion and national character	English and applied sciences



The Indonesian curriculum is very comprehensive, encompassing religious education, Pancasila (the five principles of Indonesian state ideology), citizenship, language, science, history, art, and physical education. The curriculum is designed to provide students with a broad understanding of cultural identity and the foundational knowledge necessary to become good citizens.

Singapore prefers to specialize in core subjects that form the foundation of a modern economy. The primary focus is on English, mathematics, science, social studies, and other applied sciences. This approach allows students to delve deeper into specific subjects (the mastery method) rather than covering too many subjects broadly.

The dominance of the topic "Education" in research publications indicates that curriculum content remains the most discussed subject. However, recent research has begun to emphasize the importance of curriculum applications in real-life settings as an area that needs further development.

6. Factors Influencing Education

The results of the analysis of factors influencing education in Indonesia and Singapore can be seen in the following table.

Table 8. Differences in Factors Influencing Education

Factors	Indonesia	Singapore
External	Infrastructure and Geography	School facilities
Internal	Quality gap	Family background

In Indonesia, the factors that most influence educational success are complex, encompassing social background, economic background, infrastructure, and teacher distribution. The gap in education quality between urban and remote areas remains a significant challenge, influenced by Indonesia's vast geography.

In Singapore, influencing factors are more concentrated in students' microenvironments. Key factors include adequate facilities, family background, and a conducive learning environment. Due to its small size, access to quality facilities is relatively equitable, making family factors a key differentiator in academic achievement.

Interestingly, trend analysis shows that educator factors are still relatively underexplored in current research databases. This indicates the need for future research to examine the extent to which teacher quality influences curriculum success in both countries.

7. Problems Faced

The results of the analysis related to the problems faced in Indonesia and Singapore can be seen in the following table.

Table 9. Differences in Problems Faced

Main Problem	Indonesia	Singapore
Systematic	Access and quality gaps	High academic pressure
Social	Moral and academic inequality	Distance between teachers and students

The main problem with education in Indonesia lies in the gap between access and quality. There are still significant disparities in academic and moral achievement in several regions. Furthermore, the lack of synchronization between rapid curriculum changes and the readiness of educators in the field often hinders practical implementation.

Singapore faces a different challenge, namely the interpersonal relationships between teachers and students. High academic pressure can sometimes create emotional distance in the



school environment. Their main challenge is how to maintain students' mental health amidst the highly competitive demands for achievement.

DISCUSSION

The findings of this study confirm that the fundamental distinction between the Indonesian and Singaporean education systems lies in their ideological foundations, which strongly shape curriculum design and implementation. Indonesia's curriculum is deeply rooted in Pancasila and the UUD 1945, emphasizing national character formation, moral values, and social cohesion. This aligns with previous studies asserting that Indonesian education prioritizes nation-building and character education as core curricular goals (Cholifah & Faelasup, 2024; Mala et al., 2025). In contrast, Singapore adopts a pragmatic and meritocratic orientation that centers on individual interests, abilities, and efficiency in talent development. Nandy, (2024) and Ro (2020) argue that Singapore's curriculum philosophy reflects a strategic response to its limited natural resources, positioning human capital as the nation's primary asset. These ideological differences explain why Indonesia emphasizes moral-intellectual balance, whereas Singapore prioritizes adaptability and global competitiveness.

In terms of educational goals, this study reinforces earlier comparative research indicating that Indonesia focuses on producing citizens who contribute to community development through strong character and national identity, while Singapore aims to cultivate independent, work-ready individuals prepared for global labor markets (OECD, 2023). Indonesia's attempt to balance soft skills and hard skills resonates with the objectives of the Merdeka Curriculum, which seeks to integrate character education with competency-based learning (Kemendikbudristek, 2022). Meanwhile, Singapore's future-oriented goals align closely with neoliberal education paradigms that emphasize employability, productivity, and lifelong learning (Mhlanga, 2023). These differences suggest that curriculum goals are not merely pedagogical choices but reflect broader socio-economic priorities and state visions of development.

Regarding the functions of education, the results demonstrate that Indonesia views education primarily as a vehicle for developing national potential and social equity, whereas Singapore emphasizes creativity, innovation, and technological readiness. This finding is consistent with Khng (2018) and Machmud et al (2021), who note that Singapore's education system is explicitly designed to support a knowledge-based economy through strong emphasis on science, technology, and innovation. Conversely, Indonesia's broader focus on general knowledge and character development reflects its commitment to equitable access and social integration across diverse regions (UNESCO, 2017). However, prior research has also highlighted that such a broad mandate can pose challenges in implementation, particularly when teacher readiness and infrastructure are uneven, a concern echoed in the present study (Siswanto & Fatimah, 2024; Suban & Ilham, 2023).

The comparison of educational structures and curriculum content further substantiates earlier findings that Singapore's highly streamlined and differentiated education pathways particularly the strong role of polytechnics enhance alignment between education and labor market needs (OECD, 2023). Indonesia's more extensive and multidisciplinary curriculum, while culturally inclusive, often results in curriculum overload and difficulties in classroom application (Gurion & Nasir, 2024; Wulandari et al., 2024). Previous bibliometric studies also indicate that while curriculum content remains a dominant research theme globally, there is a growing recognition that effective application and contextualization of curriculum content are underexplored areas (Saleh et al., 2025). The present findings support this view by showing that breadth alone does not guarantee effectiveness without sufficient implementation support.



Finally, the problems faced by both countries reflect the structural consequences of their respective systems. Indonesia continues to struggle with systemic and geographical disparities in access and quality, a challenge widely documented in prior research (Sunarti et al., 2022). In contrast, Singapore's major challenge lies in managing high academic pressure and students' mental well-being, a concern increasingly highlighted in studies on high-performing education systems (Gallou, 2022; Regan et al., 2022). These contrasting challenges underscore that educational success must be evaluated not only through academic outcomes but also through equity and student well-being. Overall, this study strengthens existing literature by demonstrating that curriculum effectiveness is inseparable from ideological orientation, socio-economic context, and systemic capacity, and it highlights the need for future research to focus more deeply on educator quality as a mediating factor in curriculum success.

CONCLUSION

This study demonstrates that differences between the education systems of Indonesia and Singapore are fundamentally rooted in divergent ideological foundations, namely Indonesia's Pancasila-based emphasis on national character development versus Singapore's pragmatic approach prioritizing efficiency and global work-readiness. Despite a sharp increase in research publications on comprehensive assessment peaking in 2024 Indonesia continues to face systemic challenges related to infrastructure inequality, while Singapore grapples with high academic pressure that adversely affects students' mental health. Accordingly, this study recommends strengthening curriculum literacy among educators in Indonesia to promote more equitable implementation quality, as well as integrating emotional well-being considerations into Singapore's assessment systems. Furthermore, future research should place greater emphasis on the specific roles of educators and the alignment between education and the labor market in order to address existing research gaps that remain underexplored in global academic databases.

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