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Inclusive Education as an Effort to Improve Access to Education for All Students in Formal Schools

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Abstract. Inclusive education is an important approach in modern education systems to ensure that all students have access without discrimination. However, its implementation still faces various challenges, such as limited teacher competency and suboptimal supporting policies, so a comprehensive review is needed. Based on these problems, this study aims to analyze the role of inclusive education in improving access to education for all students in formal schools, as well as identify challenges and opportunities in its implementation based on a review of relevant literature. This study uses a Systematic Literature Review (SLR) approach by examining 20 journals, consisting of 3 Indonesian national journals (universities) and 17 journals from international databases, and identifying 7 theories related to the research topic. The results of the literature review are as follows: 1. Inclusive Higher Education for Students with Special Needs: A Review of Progress, Challenges, and Future Directions, 2. Bibliometric Analysis of Inclusive Education in Indonesia: Achievements and Its Relationship with General Education, 3. Students' Perspectives on Inclusive Education in Indonesia: Insights from a Systematic Literature Review, 4. Implementation of Inclusive Education Policy in Elementary Schools, 5. Implementation of Inclusive Education in Elementary Schools: A Study of Challenges and Opportunities, 6. Accessible Information and Inclusive Education for Students with Disabilities at Airlangga University, Indonesia, 7. Quality of Inclusive Education for Children with Special Needs in Indonesia. Thus, inclusive education expands access and offers multidimensional benefits, but is hampered by gaps between policy and practice, teacher competencies, facilities, technology, and social barriers.

Keywords: *Access to Education, Inclusive Education, Students with Special Needs, Systematic Literature Review, Implementation Challenges*

Abbreviations: SLR: Systematic Literature Review; UDL: Universal Design for Learning; ILP: Individual Learning Programme; AI: Artificial Intelligence; ICT: Information and Communication Technology; ESD: Education for Sustainable Development; ABK: Children with Special Educational Needs

INTRODUCTION

Education is a fundamental right of every individual, including pupils with special educational needs, who must have equal access to education. Inclusive education is an approach that enables all students to learn together within a formal school environment without discrimination. This paradigm has shifted from the medical model towards a rights-based model that emphasises equality of rights and the removal of systemic barriers in education [1]. In Indonesia, the implementation of inclusive education has been supported by various regulations, yet there remains a gap between policy and practice on the ground [2]. Various studies indicate that the main challenges include limitations in teachers' competences, a lack of facilities and infrastructure, and social stigma towards pupils with special educational needs [3].

Nevertheless, inclusive education has been shown to improve access to education, social interaction and acceptance of diversity without compromising the academic achievement of mainstream pupils [4]. Furthermore, the use of educational technology and the Universal Design for Learning (UDL) approach has the potential to broaden access to more inclusive and adaptive learning for all pupils [1]. However, various barriers to implementation are still encountered in many countries, necessitating a comprehensive review. Although a number of studies have examined inclusive education from various perspectives, there remains a limited body of literature that synthesises findings relating to access to education, implementation challenges and opportunities for its development in formal schools. Consequently, this study aims to analyse and synthesise research findings regarding the role of inclusive education in improving access to education for all students in formal schools.

To enhance teachers competence in inclusive education, this must be achieved through ongoing practical training that covers an understanding of the concept of inclusion, the identification of students' needs, and the implementation of Individual Learning Programmes (ILPs) and Universal Design for Learning (UDL). To address the limitations of support teachers, this training is integrated with the use of assistive technology to promote students' independence, as well as the use of Artificial Intelligence (AI) to develop adaptive curricula more efficiently. The development of these competencies is also reinforced through digital collaboration with relevant parties, such as ICT subject teachers, so that teachers are able to design and deliver learning that is responsive to the diverse needs of students.

METHODS

This study employed a Systematic Literature Review (SLR) methodology. The literature was sourced from Google Scholar, Scopus, ERIC and Web of Science using keywords related to inclusive education. The selected articles were publications from 2015 to 2025 relevant to the research topic. Of the 33 articles identified, 20 met the inclusion criteria and were analysed using thematic synthesis to identify and synthesise the main themes relating to inclusive education and access to education.

RESULTS AND DISCUSSION

No	Citation	Title	Findings
1	[1]	Inclusive Higher Education for Students with Special Educational Needs: Review of Advances, Challenges, and Future Directions	The findings of the study indicate that inclusive education improves access to education through a rights-based approach, Universal Design for Learning (UDL) and technology. However, its implementation is still hampered by issues relating to teacher competence, policy, funding and social stigma towards students with special educational needs.
2	[5]	The Impact of AI on Inclusivity in Higher Education: A Rapid Review	The findings of the study indicate that Artificial Intelligence (AI) supports inclusive education through personalised learning, improved accessibility and greater student participation. However, its implementation still faces challenges in the form of the digital divide, limited digital skills amongst educators, uneven infrastructure, and ethical issues surrounding the use of AI.
3	[6]	Education for Sustainable Development and Inclusive Education with Particular Consideration of Learners with Special Needs: A Scoping Literature Review	The findings of the study indicate that inclusive education and Education for Sustainable Development (ESD) both emphasise equality and the empowerment of pupils. However, their implementation remains limited due to a lack of empirical evidence, a shortage of guidance on inclusive teaching, and the need for teacher competence and support from an adaptive school system.
4	[7]	A Review of Energy Management and Power Management Systems for Microgrid and Nanogrid Applications	The findings of the study show that the Energy Management System (EMS) focuses on economic efficiency, whilst the Power Management System (PMS) emphasises technical

No	Citation	Title	Findings
			reliability. Various optimisation methods have been shown to reduce energy costs, improve system efficiency and optimise the use of renewable energy in microgrids.
5	[3]	A Bibliometric Analysis of Inclusive Education in Indonesia: Achievement and its Relations to General Education	The results of the study indicate that research into inclusive education in Indonesia is on the rise, with a primary focus on barriers to implementation, special needs, teacher competencies and ICT-based learning strategies. The findings also reveal a gap between inclusive education policy and practice in schools.
6	[8]	Students' Perspectives on Inclusive Education in Indonesia: Insights from a Systematic Literature Review	The findings of the study indicate that inclusive education improves access to education through support from teachers and peers, a sense of belonging, and pupils' independence. However, challenges such as academic barriers, social isolation, stigma and bullying suggest that the quality of inclusive education implementation still needs to be improved.
7	[9]	The Implementation of Inclusive Educational Policies in Elementary School	The findings of the study indicate that the implementation of inclusive education is classified as 'good' and has succeeded in improving access to education, self-confidence, social interaction and acceptance of diversity. However, limitations in teachers' competencies, facilities and infrastructure, curriculum adaptations and support teachers remain the main challenges.
8	[10]	Inclusive Education as an Alternative to Improve Access to Education for Children with Disabilities in Society	The findings indicate that inclusive education improves access to education, participation, learning outcomes, and the social and psychological development of pupils with special educational needs. Its success is underpinned by a flexible curriculum, teacher training, assistive technology, and multi-stakeholder collaboration, although challenges relating to facilities, policies, and disparities in access remain.
9	[11]	The Implementation of Inclusive Education in Elementary Schools: A Study of Challenges and Opportunities	The findings indicate that inclusive education expands access to equitable and non-discriminatory education for all pupils. However, implementation still faces challenges including limited facilities, teacher competence, and systemic

No	Citation	Title	Findings
			support. Policy support, technology, and multi-stakeholder collaboration are key factors in its success.
10	[2]	Inclusive Education Innovation: Building Learning Spaces for All	The findings of the study indicate that inclusive education promotes fair and participatory access to education for all pupils. However, its implementation is still hampered by schools' readiness, as well as limitations in terms of teaching staff and facilities. Curricular innovation, technology and collaboration amongst various stakeholders are key to the success of inclusive education.
11	[12]	Towards a Sustainable Future in Education: A Systematic Review and Framework for Inclusive Education	The findings of the review indicate that research into inclusive education continues to evolve, focusing on concepts, policies, implementation and impact. The success of inclusive education is influenced by policies, teacher competence and the school environment, although it still faces challenges relating to facilities, training and systemic support.
12	[13]	Promoting Quality Inclusive Education for Children with Disabilities in Nigerian Basic Schools Through Research Data Integration	The findings of the study indicate that the implementation of inclusive education in Nigeria remains limited, despite policy support. The low level of access to education for children with disabilities is influenced by limitations in facilities, teacher training, assistive technology, regional disparities, and a lack of data integration to support effective policy-making.
13	[14]	Inclusive Education: Promoting Equity and Access for Students with Disabilities	The findings of the study show that inclusive education promotes equality, access and diversity in education. As well as improving pupils' academic achievement and social development, inclusive education also fosters tolerance and reduces discrimination, although it still faces challenges in the form of limited resources and systemic support.
14	[15]	Inclusion, Access, and Accessibility of Educational Resources in Higher Education Institutions: Exploring the Ethiopian Context	The findings of the study indicate that access to inclusive education continues to face personal, institutional and social barriers, such as low digital literacy, limited facilities and technology, economic factors, and practices and attitudes that do not sufficiently support the inclusion of learners with disabilities.
15	[16]	Accessible information and	The findings of the study

No	Citation	Title	Findings
		inclusive education for students with disabilities in Universitas Airlangga, Indonesia	indicate that visually impaired students still face personal, accessibility and institutional support barriers within inclusive education. Although technologies such as screen readers can enhance independent learning, their use remains limited due to a lack of facilities, policies and teaching practices that are not yet fully inclusive.
16	[17]	The Quality of Inclusive Education for Children with Special Needs in Indonesia	The findings of the study indicate that the quality of inclusive education in Indonesia is still not optimal. This situation is influenced by unequal access to education, limited infrastructure, low levels of teacher competence in inclusive education, and a lack of support from the government and the community
17	[18]	Inclusive Education: Shaping the Future for All Children	The findings indicate that inclusive education improves social skills, independence, academic understanding, and empathy towards diversity. However, implementation is hampered by limited resources, curriculum constraints, teacher competence, and social stigma, requiring support through policies, facilities, training, and multi-stakeholder collaboration.
18	[19]	Inclusive learning strategies for students with intellectual disabilities in East Kalimantan: A case study in primary education	The findings of the study indicate that inclusive learning strategies enhance pupils' participation, self-confidence, social interaction and learning outcomes. However, their implementation still faces challenges in the form of limited teacher competence, inadequate facilities and learning resources, insufficient parental involvement, and sub-optimal policy support.
19	[20]	From Access to Agency: Exploring the Synergy of Openness, Inclusion, and Equity in Education	The findings of the study indicate that improved access to education does not in itself guarantee the realisation of inclusion and equity. The success of inclusive education requires adaptive learning design, adequate accessibility, the development of teachers' competencies, and collaboration amongst various stakeholders to address the digital divide and systemic barriers.
20	[4]	Academic Outcomes of Inclusive Education in Typically Developing Children	The findings of the study indicate that inclusive education does not reduce the academic achievement of

No	Citation	Title	Findings
			mainstream pupils and may even contribute to improved learning outcomes in more inclusive schools. Its success is underpinned by adaptive teaching practices, teacher competence and a school environment that promotes equal access to education.

Discussion

The Role of Inclusive Education in Improving Access to Education

A review of 20 articles shows that inclusive education has shifted from a medical model towards a rights-based model, regarding access and participation as fundamental educational rights [1]. Implementation in Indonesia has yielded fairly good results, with a rate of 76.8 per cent and a student acceptance rate of 88.48 per cent. Strategies such as Individual Learning Programmes (ILP), curriculum adaptations, and multisensory learning have enhanced participation and self-confidence of pupils with special needs. Inclusive education does not diminish mainstream pupils' achievement and contributes to improved empathy, collaboration, and acceptance of diversity [10].

Challenges in the Implementation of Inclusive Education

Only around 14.83 per cent of inclusive schools in Indonesia are fully prepared. Key challenges include stigma, social isolation, bullying [8], low teacher competence, lack of accessible facilities and technology, and a persistent gap between policy and practice.

Opportunities for Development through Technology and Collaboration

Technologies such as AI, assistive tools, and Universal Design for Learning (UDL) can enhance access to inclusive education when supported by teacher training, adequate infrastructure, and multi-stakeholder collaboration [1]. Inclusive education thus remains an effective strategy for equitable and high-quality education for all.

A broader view of inclusion also recognizes religious identity and religious literacy as relevant dimensions of equitable participation in professional education [21].

CONCLUSION

Inclusive education plays a vital role in improving equal access for all pupils, including those with special educational needs, without compromising mainstream academic achievement. However, challenges such as limited teacher competence, inaccessible facilities, and policy-practice gaps persist. Synergy between government, schools, parents, and communities through policy strengthening, teacher capacity building, and adaptive technology utilisation is essential to realise a high-quality, equitable, and sustainable education system for all learners..

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