

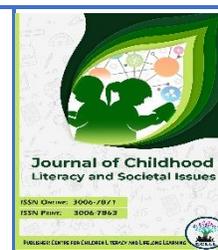


## Journal of Childhood Literacy and Societal Issues

Peer-reviewed, Open-access, HEC-recognized Y-category

Journal DOI: <https://doi.org/10.71085/joclsi>

P-ISSN: [3006-7863](https://doi.org/10.71085/joclsi) E-ISSN: [3006-7871](https://doi.org/10.71085/joclsi)



# Building the Future: Comparative Perspectives on ECE Curriculum, Access, and Quality in Pakistan and Indonesia

Dr. Muthmainnah<sup>1</sup>  Muqaddas Sajjad<sup>2</sup>

<sup>1</sup> Lecturer, State University of Makassar, Universitas Al Asyariah Mandar Sulawesi Barat, Indonesia.

<sup>2</sup> Bachelor in Early Childhood Education, Faculty of Psychology and Education, Universitas Negeri Yogyakarta, (State University of Yogyakarta), Yogyakarta, Indonesia.

Email: [muqaddassajjad57@gmail.com](mailto:muqaddassajjad57@gmail.com)

Correspondence: Dr. Muthmainnah, Email: [muthmainnah@unasman.ac.id](mailto:muthmainnah@unasman.ac.id)

Doi: <https://doi.org/10.71085/joclsi.04.02.80>

### Article information

#### Article History:

Received: 2025-10-18

Received in revised form:  
2025-11-06

Accepted: 2025-11-22

Published Online: 2025-12-01

#### Keywords:

Early childhood education;  
Pakistan; Indonesia;  
Comparative education;  
Curriculum reform

### ABSTRACT

The priority of improving ECE is shared between Indonesia and Pakistan, which can be explained by international commitments, such as SDG 4.2, to provide universal access to pre-primary education. This review takes a comparative narrative approach to the contexts of ECE in these two large nations with reference to curriculum structures, access systems, and quality assurance. This comparative narrative synthesis is based on peer-reviewed articles published since 2020 and up to 2025 and defines findings in the areas of national policy directions, governance structures. The main results are that, whereas the Indonesian curriculum, Merdeka Curriculum, focuses on child-centered learning processes that are based on play and places a high emphasis on quality assurance and inclusion, Pakistan has been experiencing discontinuities in policy implementation, child access, teacher preparation, and infrastructure. There are issues in both nations with respect to the absence of equitable access, especially concerning rural-urban inequities and barriers that are socioeconomically motivated. Some of the recommended areas are the improvement of decentralized ECE governance, the provision of more earmarked financial resources, the promotion of continuous professional development for teachers, and the establishment of quality assurance systems that are more sensitive to the various needs of a community.



© 2025 by the Authors. Licensee Muthmainnah & Sajjad. This article is an open-access distributed under the terms and conditions of the Creative Commons Attribution (CC BY) License <https://creativecommons.org/licenses/by/4.0/>

## Introduction

It is not a secret that Early Childhood Education (ECE) has been called one of the most important investments in infant, cognitive, and social, emotional development, providing a solid base in the lifetime learning and national development (Iskandar, 2020; World Bank, 2023). The importance of such an impact is seen in that the national policy promises of Indonesia and Pakistan are to improve the delivery of ECE, and their respective education systems are moving in the same direction as the international agenda (UN Sustainable Development Goal 4.2) of universal access to quality pre-primary education (Iskandar, 2020; Samuel Hall, 2023). However, the challenge of converting these high-level policy promises into large scale, equitable and good practices is still a big challenge to both nations.

In Indonesia, although the rate of enrollment has been encouraging, almost half the total number of children have yet to receive any pre-primary support, and nearly half of the available ECE centers have yet to be assessed or recognized (World Bank, 2023). Simultaneously, Pakistan has very low attendance rates, radical infrastructural limitations, and a fragmented approach to ECE, an area that underwent one of the biggest devolutions to the provincial level in 2010 (Samuel Hall, 2023). They are simultaneous yet dissimilar battles that require the need to empower ECE.

The Pakistani and Indonesian ECE systems are the case study, which could be compared in terms of their large population and youthfulness, and their various socio-economic and political settings. This review will dismantle the ECE curriculum frameworks, accessibility obstacles, and quality guarantees in both nations and will be based on peer reviewed publications published within the years 2020 and 2025. A comparative lens of this nature can prove helpful in illuminating the similarities in the issues and the methods of dealing with them. Although it is acknowledged

that ECE plays a role and influences social, educational, and economic outcomes on the international level (Rashid et al., 2025), there must be significant differences in the provision and implementation of ECE in both countries (Rashid et al., 2025; Kusmawati and Madhakomala, 2023). An example is the country of Pakistan and especially the most populated state of it, Punjab which continues to experience systemic problems of access, quality, and equity despite having many policy efforts (Rashid et al., 2025). On the same note, the gaps in the implementation of strategic investment in quality ECE as a crucial determinant of human development in Indonesia also have loopholes in terms of quality assurance schemes (Kusmawati and Madhakomala, 2023). The overall purpose is to locate powerful strategies and resolve the key deficiencies in the ECE delivery, thereby facilitating overall child upbringing in the two nations (Tupalessy, 2024).

The present review is particularly limited to the study of three main dimensions of ECE, including: the curriculum structures, access and equity, and quality dimensions. To guide the research questions in this analysis, they include:

1. How do the ECE curriculum frameworks in Pakistan and Indonesia compare in terms of their goals, pedagogical approaches, and assessment strategies?
2. What are the primary barriers to equitable access to ECE in each country, and what strategies are being employed or considered to overcome them?
3. What are the key indicators and pervasive challenges related to ECE quality, including teacher training, pedagogical practices, and learning environments, in both Pakistan and Indonesia?

This review aims to provide a comprehensive understanding of the current state of early childhood education (ECE) in Pakistan and Indonesia by addressing these questions,

ultimately offering actionable insights for future policy and practice.

## Methods

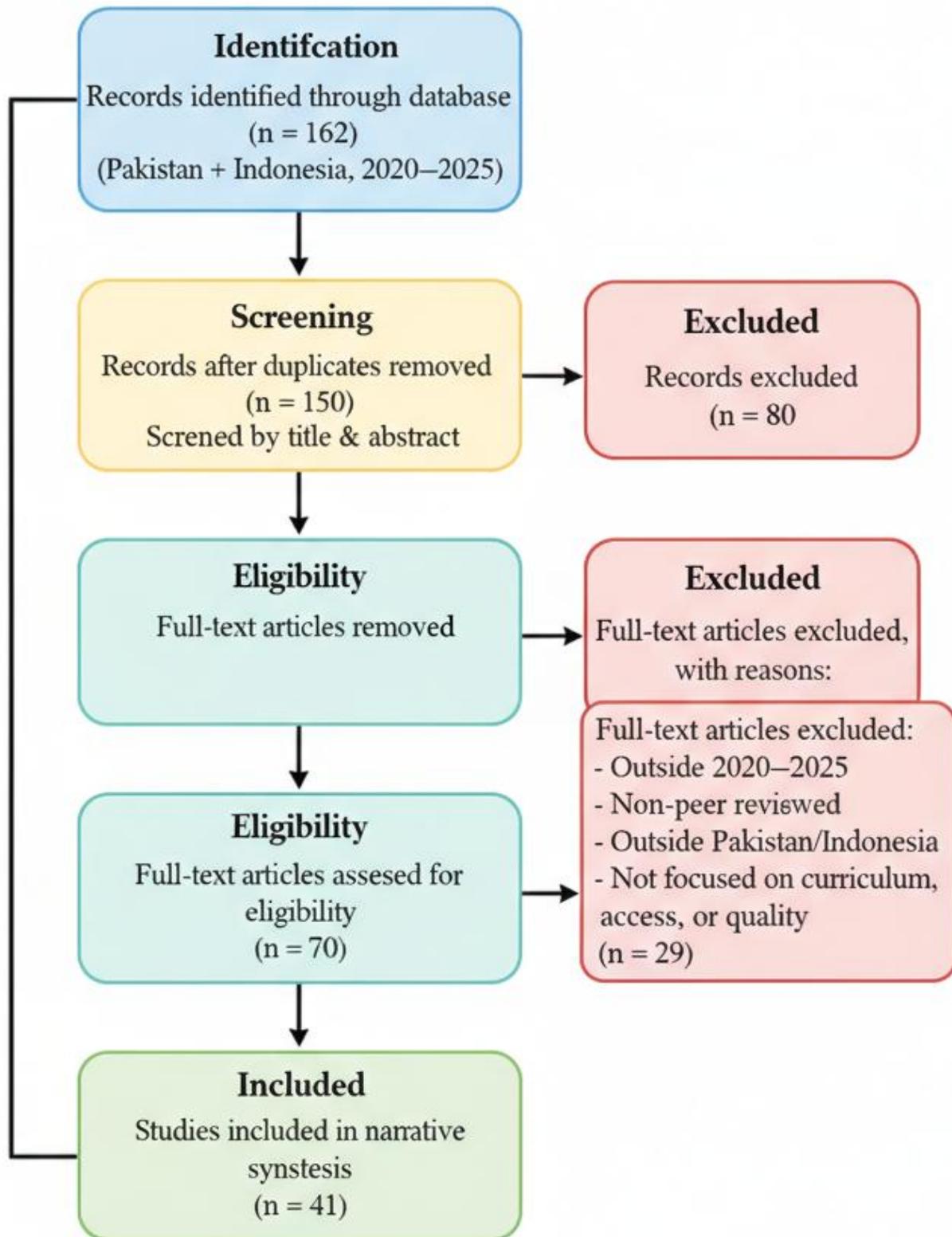
This review uses a narrative synthesis method, where the main sources include peer-reviewed journal articles written after 2020 and before 2025. A narrative review is especially well-adapted to the wide-ranging investigation of the intricate problems encompassed in the ECE curriculum, access, and quality in specific national settings, which allows for the integration of the results of various qualitative and quantitative studies (Rashid et al., 2025; Khalisa, 2025). Through this, it is possible to have a broad perspective of the literature available to date and thus define major themes and any emerging patterns that would be of interest to the comparative analysis.

The search took place in academic databases available on different scholarly aggregators, with an emphasis placed on educational and social science journals. The Boolean search strings were carefully designed to search through the relevant literature exhaustively. In the case of Pakistan, the search terms were: Early Childhood Education Pakistan, ECE Punjab, curriculum Pakistan ECE, access ECE Pakistan, and quality ECE Pakistan. Similarly, the search terms for Indonesia were: "PAUD Indonesia," "Early Childhood Education Indonesia," "Merdeka Curriculum ECE Indonesia," "access PAUD Indonesia," and "quality PAUD Indonesia." The specified terms were then filtered by the timeframe (2020-2025) to ensure that the information was up-to-date and relevant.

The inclusion criteria for the selected articles were very demanding: peer-reviewed, direct relevance

to Early Childhood Education in Pakistan or Indonesia, publication within the identified timeframe (2020-2025), and written in English. The articles published before 2020, non-peer-reviewed policy reports, and news articles were excluded. Studies that did not focus on our keywords of curriculum, access, or quality of ECE were also excluded. A systematic and multi-stage method was adopted to select relevant literature from open access databases like Google Scholar, Semantic Scholar, and Dimensions. To check the relevance with the objectives of this review, selected articles were filtered after reviewing their titles and abstracts.

Articles that were considered potentially qualified were recalled and carefully examined in accordance with the formulated inclusion and exclusion criteria, with a main focus on being accurately oriented to the research questions that guided the work. The purpose of this strict, organized procedure was to establish a strong underpinning for the comparative analysis with minimal selection bias and maximum representativeness of the synthesized results. Although a complete PRISMA diagram was not created because of the narrative synthesis approach, the approach resembles systematicity in defining and filtering available literature, following exemplary processes (Yeung et al., 2024; Hosany et al., 2022; Ha et al., 2024; Chudzik et al., 2025). To provide a clear example of such a process, a model representation, albeit probably limited to drone education, illustrates the common steps of identification, screening, eligibility, and inclusion of studies (see Figure 1).



**Figure 1.** PRISMA-Like Flowchart Illustrating Study Selection Process

### **Context: National Snapshots**

A significant comparative study of ECE systems in Pakistan and Indonesia must begin with an understanding of the unique national contexts. Although both countries are large, growing economies in Asia, their distinct policy trajectories, governance structures, and historical approaches to ECE have produced unique environments, each with its own set of systemic issues and advantages.

#### **Pakistan**

In Pakistan, and particularly in the highly populated province of Punjab, addressing ECE has serious structural problems, although its importance in social and educational development is non-controversial all over the world. ECE in the country is underdeveloped and does not reach most of the population, who face restricted opportunities to access quality education and a severe shortage of trained personnel (Rashid et al., 2025; Artipah et al., 2024). This lack of development is further complicated by the complex interplay of socio-economic impediments such as costs being unaffordable to many households, gender differences in access, the poor state or inadequacy of infrastructure, and extreme financial restrictions (Rashid et al., 2025).

A more recent process evaluation of the ECE system in Punjab particularly identified the existence of several inconsistencies in accountability relationships, which creates an urgent need to enhance the coordination of various stakeholders, establish more transparent communication channels, distribute resources more evenly, make better use of data to guide decisions, and provide more effective support mechanisms for teachers (Ansari et al., 2024). The policy environment has a history of ambitious educational changes but has a deep-rooted issue of a significant disconnect between proclaimed intentions and actual implementation (Tasleem,

2024). Having been devolved to the provincial level in 2010, ECE is currently in need of collaborative work by various stakeholders, the development of autonomous ECE policies at sub-national levels, greater government funding, and strategic alliances to address its shortcomings (Artipah et al., 2024). The existing educational setting does not meet the needs of a diverse young population, as there are children with disabilities as well as those facing significant gender inequalities, although there is still an attempt to assess the ECE initiatives in public sector schools with the help of quantitative descriptive research designs (Rashid et al., 2025; Farmayash et al., 2023).

#### **Indonesia**

In sharp contrast to the disjointed strategy of Pakistan, Indonesia has shown a dynamic and responsive change in the education curriculum, and it has been revised more than ten times due to the changing political ideologies, government structures, social culture, economic needs, and technological changes (Hidayat et al., 2025; Raodatul, 2023). This constant change is an indication of an active approach to the reform of education. It is strategically acknowledged that Early Childhood Education (PAUD) in Indonesia plays a key role in human development with an underlying focus on the overall requirement of access to quality education (Kusmawati and Madhakomala, 2023).

ECE is a recent adaptive example of the current Independent Curriculum (Kurikulum Merdeka) adopted in Indonesia. It is designed to facilitate holistic child development, which involves the creative process of critical thinking and independence in flexible learning experiences with a strong focus on children (Tupalessy, 2024; Lisnawati et al., 2024). This curriculum has already had a successful effect in terms of learning outcomes, particularly in the essential areas of language and social skills (Tupalessy, 2024).

In Indonesia, education governance is mainly controlled by the Ministry of Education, Culture, Research, and Technology, which governs a 12-year compulsory education policy (Saiful et al., 2024). In line with this, religious education is governed by the Ministry of Religious Affairs (Bahri et al., 2024), which implies the presence of a dual but aligned governance framework. In PAUD, quality assurance is regarded as the key to a successful future for Indonesian children (Kusmawati and Madhakomala, 2023). Indonesia is another country with a high adherence to inclusive education, in which policies on ECE, as well as higher education, are characterized by an innovative and strategic approach to increase access to education for all, including children with

disabilities (Nugraha et al., 2024; Sofwanudin et al., 2024). The emphasis is placed on the development of a well-organized but interactive learning environment that is responsive and accommodative to a variety of cultural backgrounds and developmental needs (Kusumaningtyas & Aprianto, 2025).

Although both countries are eager to increase the outcomes in the sphere of ECE, the policy patterns and the models of governance they follow bring about a variety of achievements and a range of issues that are common in both countries. These disparities are also emphasized in Table 1, which gives a comparison of important ECE indicators in Punjab, Pakistan, and Indonesia.

**Table 1.** Comparison of Early Childhood Education Indicators: Punjab (Pakistan) vs. Indonesia

Indicator	Pakistan (Punjab)	Indonesia
<b>Population (0–5 years)</b>	A significantly large young population, facing challenges in adequately serving this demographic.	A substantial young population, with ongoing efforts to expand pre-primary services.
<b>Gross Enrollment Rate</b>	Characterized by limited ECE provision and significant access challenges (Rashid et al., 2025). Specific numerical data are often unavailable or low.	Demonstrates increased pre-primary enrollment, reflecting improved policies and provisions (Rashid & Akkari, 2020). Specific numerical data often highlight regional disparities.
<b>% of GDP on Education</b>	Educational outcomes are pivotal for national development; Pakistan's GDP share on education stood at 2.9% (Amir et al., 2021).	Education system heavily regulated by the Ministry of Education, Culture, Research, and Technology. Specific numerical data on GDP share for ECE is not explicitly detailed in the under studying sources even than this is a focused area of government investment.
<b>Governance Structures</b>	Oversight is frequently fragmented, creating a significant gap between policy formulation and effective implementation, especially following the devolution to provinces (Tasleem, 2024).	Regulated by the Ministry of Education, Culture, Research, and Technology; religious education is governed by Federal Ministry of Religious Affairs (Bahri et al., 2024), shows its centralized and coordinated framework nature.

### **Curriculum: Frameworks and Pedagogy**

A central core of the quality and success of Early Childhood Education (ECE) is the curriculum framework and the pedagogical strategies. These two basic elements determine the learning curves of children and the adopted outcomes. While comparing Pakistan and Indonesia as a case study, it seems that both countries have different philosophies and realities, as shown in Table 2.

There are widespread quality concerns in the ECE system, especially in the Province of Punjab, Pakistan. These concerns are manifested in the curriculum and methods of pedagogy (Rashid et al., 2025). Current literature does not elaborate extensively on a single national ECE curriculum. Literature indicates that the overall challenges in delivering quality learning opportunities are due to inconsistencies in the design and implementation of the curriculum (Tasleem, 2024).

This necessity to address the natural rights and developmental needs of each child, regardless of their socio-economic or geographical background, implies that the curriculum should preferably be inclusive, culturally responsive, and child-centered in nature. However, the existing success rates and issues of access indicate a colossal discrepancy between the ideal and the reality of implementation (Rashid et al., 2025). Additionally, the evaluation of ECE programs, where specific focus is often placed on the removal of gender inequities, suggests an implicit realization that the curriculum must serve as an active factor in the development of all children in terms of equality (Farmayash et al., 2023). The pedagogical environment is more conservative and teacher-centered, making it difficult to switch to a child-centered or play-based approach due to systemic barriers.

In its turn, Indonesia has a rather proactive and receptive approach to curriculum development that is the result of a set of reforms caused by the interaction of social, political, economic, and

technological factors (Hidayat et al., 2025; Raodatul, 2023). A good example can be seen in the recent and successful introduction of the so-called Merdeka Curriculum to the Indonesian ECE (PAUD), which can be viewed as a representation of such a progressive orientation. According to the new curriculum, there will be a drastic shift towards promoting creativity, critical thinking, and independence through the assistance of flexible, highly child-centered, and engaging learning activities (Tupalessy, 2024; Lisnawati et al., 2024). Its primary purpose is the emergence of a holistic child, and the initial outcomes indicate a positive impact on learning outcomes, namely, the development of language and social skills (Tupalessy, 2024).

The Merdeka Curriculum is pedagogically appropriate due to its focus on project-based learning and the acquisition of 21st-century skills and perfectly suits modern trends in global education (Bahri et al., 2024). One of the pillars of the Indonesian ECE system is related to Learning Through Play (LTP), which advocates a play-based approach to the curriculum that has proven to have a positive effect on the overall learning and capacity building of children (Pang et al., 2025). Being child-centered, this model improves cognitive, interpersonal, and emotional development through active exploration and discovery. In addition, other innovative elements incorporated into the curriculum include AI literacy at an early age, educating children to become technologically adept (Arifah and Kuncorowati, 2025), and implementing technological trends in storytelling into the learning environment (Purnama et al., 2022).

Insofar as assessment is concerned, the flexibility of the Merdeka Curriculum implies a deliberate move towards less rigid, less standardized, and more formative, authentic, and holistic types of assessment, which are consistent with the child-centered approach that the curriculum adopts (Tupalessy, 2024). Although one of these new pedagogical practices is digital storytelling, it can

also be utilized as an adaptive assessment tool (Purnama et al., 2022). Such a curriculum orientation positions the ECE curriculum in Indonesia in a more inclusive stance regarding governmental directives from organizations like UNESCO and UNICEF, which have been advocating play-based, inclusive, and culturally sensitive ECE models. The emphasis on the development of cognitive, social, and emotional skills with the help of adaptive teaching practices, as described in comparative research from other environments (Adewusi et al., 2023), simply confirms Indonesia's interest in individualized and effective pedagogy.

On the other hand, the currently reviewed literature on Pakistan, despite emphasizing the necessity of providing high-quality education and resolving accessibility issues, offers fewer specific details on the content, educational philosophy, and the most common methods of testing its ECE program. The continuous and widely recognized disparity between the planning of policies and their successful implementation suggests that even seemingly well-constructed curricula can face significant obstacles on their way to effective implementation. Such obstacles are frequently caused by the lack of support for educators, limited professional development opportunities, and systemic barriers that prevent the implementation of modern, child-oriented pedagogical practices.

**Table 2:** Provides a concise comparative matrix, illustrating the key differences in curriculum goals, pedagogical approaches, and assessment methods between the ECE systems of Pakistan and Indonesia.

Feature	Pakistan (General ECE)	Indonesia (Merdeka Curriculum in PAUD)
<b>Curriculum Goals</b>	Aims to address the rights and developmental needs of children, with objectives of improving access and equity (Rashid et al., 2025). Goals are often broad and face challenges in consistent translation to practice.	Fosters creativity, critical thinking, independence, and holistic development (Tupalessy, 2024; Lisnawati et al., 2024). Prioritizes 21st-century skills and adaptability.
<b>Pedagogical Approach</b>	Focuses on basic learning, but struggles with effective quality implementation and the widespread adoption of child-centered pedagogies (Alam et al., 2022). Often constrained by traditional methods and resource limitations.	Emphasizes flexible, child-centered, project-based learning, 21st-century skills, and Learning Through Play (LTP) (Bahri et al., 2024; Tupalessy, 2024; Pang et al., 2025). Integrates AI literacy and digital storytelling (Khosibah et al., 2025; Purnama et al., 2022).
<b>Assessment Methods</b>	Not explicitly detailed in available sources; likely traditional, outcome-focused assessments, often needing adaptation for diverse learner needs (Rashid et al., 2025). Potential for inconsistency across different ECE settings.	Features flexible, formative assessments aligned with child-centered learning; increasingly explores digital tools and innovative methods (Tupalessy, 2024; Purnama et al., 2022). Aims for holistic evaluation of development.
<b>Teacher Qualifications</b>	Inadequate support for teachers remains a key challenge. Data indicates low rates of specialized training; only 11% of ECE teachers received specialized training in the past year, while 74.4% reported no training at all (Ansari et al., 2024).	Strong emphasis on continuous professional development for ECE educators, including peer teaching and tiered training programs (Soffianningrum & Yetti, 2022). Focus on enhancing pedagogical skills for child-centered approaches.
<b>Language Policies</b>	Not explicitly detailed in the provided sources, but often reflects a complex interplay of national (Urdu), provincial, and regional languages, potentially leading to varied instructional languages in ECE.	Not explicitly detailed in the provided sources for ECE specifically, but the broader education system accommodates national (Bahasa Indonesia) and regional languages, with rapid expansion of English education at higher levels (Khalisa, 2025).

## Access & Equity

Access to Early Childhood Education (ECE) and the equitable distribution of its benefits remain profound challenges in both Pakistan and Indonesia, though the specific manifestations and strategic responses to these issues diverge considerably. The two countries are working to increase ECE provision, but they operate in complicated socio-economic environments that greatly affect enrollment and attendance. The education system in Pakistan, especially in Punjab, continues to be characterized by struggles with access, quality, and equity. Although the role of ECE has been recognized by the government as essential, its practice is significantly low and less advanced in the country, and a significant number of young children have no opportunity to receive preliminary educational classes (Rashid et al., 2025). The most critical impediment to the expansion of access is the prevalent disjuncture between good intentions in policy and their application on the ground (Tasleem, 2024). The absence of implementation is often manifested as a lack of resources, inefficient infrastructure, and the community being unaware of the advantages of ECE. Furthermore, other challenges like gender disparities are specifically mentioned during the implementation of ECE initiatives, which implies unequal access and engagement among various groups of people (Farmayash & Saeed, 2025). Although not clearly measured in the literature presented on the specific example of Pakistan, rural-urban differences are a natural characteristic of such underdeveloped systems, where educational facilities, infrastructure, and professional staff are concentrated in urban regions in a disproportionate manner, leaving rural and remote regions underserved.

In its turn, Indonesia has registered a significant rise in pre-primary enrollment, which is directly caused by better policies and increased provisions, and which is largely supported by private providers (Rashid & Akkari, 2020). Nevertheless, even with this development, inequitable access

still remains a problem. The nation has actively focused on inclusive education policies, and it has an objective of critically increasing educational opportunities for all children, including those with disabilities (Nugraha et al., 2024; Sofwanudin et al., 2024). Nevertheless, differences remain, which in part can be explained by the highly devolved political organization of Indonesia, which may cause differences in the distribution of resources and the capacity for their implementation in different regions, as well as the presence of socio-economic inequalities (Raikes et al., 2023). Policy allowing inclusive education in all levels of education, from early to higher, show the strategic and innovative ways of thinking that follow the policy for providing better access diverse learners in Indonesia (Nugraha et al., 24).

Cost-effectiveness hurdle common to ECE and many of the other daunting challenges throughout the world, including Pakistan and Indonesia (Copeland et al., 2024). Tuition fees, Unavailability of universal subsidies or inflexible payment arrangements can serve as effective deterrents that limit the capacity of low-income families to access critical ECE services. In addition to the financial outlays, costs associated with shortages of knowledge of the available schemes and their bureaucracy and outdated technology in administration as well as non-transparency in provision of information (Copeland et al., 2024). Transportation and geographical access are other logistical concerns that impact the accessibility for many families, particularly in underserved or more distant areas (Copeland et al., 2024).

Both national setting has their own clear and different roles played out by both public and private providers in a moving fashion. In Pakistan, early childhood education (ECE) is primarily offered through a mix of public and private sectors, but the public sector faces persistent challenges, including poor resource allocation and insufficient teacher support, which hinder equitable access

(Rashid et al., 2025). In contrast, Indonesia has experienced a more dynamic and diverse growth in pre-primary education, driven by both state and non-state actors (Rashid & Akkari, 2020). The management of inclusive ECE in Indonesia highlights ongoing efforts to improve equity in access through various strategies and continuous evaluations (Sofwanudin et al., 2024). Overcoming the complex barriers to ECE often requires tailored, context-specific solutions that involve collaboration between ECE staff and parents, as well as systemic interventions like universal application processes, digital children's passports, dedicated ECE coaches, and, importantly, increased and equitable funding allocations (Copeland et al., 2024).

### **Quality: teacher qualifications, pedagogy, and learning environments**

Studies of Early Childhood Education (ECE) in Punjab overemphasize policy backing of activity-based learning and dropout rates (Adnan and Ramzan, 2024; Nuzhat Iqbal and Ahmad Bilal, 2024) despite the presence of significant gaps in implementation. Assessments indicate the lack of accountability and its resources frameworks (Ansari et al., 2024). Among them, one can distinguish insufficient training of teachers, poor infrastructure, insufficient parental engagement (Rashid et al., 2025), and inequalities in programs and curriculum provision (Iqbal and Bilal, 2024). Although the specifics of the training of the educators and the conditions of the classroom are not thoroughly described in the literatures given, the overall poor state of ECE in Pakistan suggests that such spheres are probably underdeveloped (Rashid et al., 2025). Attempts are undertaken to assess the introduction of ECE programs in the state sector schools, gender inequalities, which are directly related to the quality (Farmayash et al., 2025).

Quality education is also demanded by the fact that the strategic role of ECE in human development is

emphasized in Indonesia (Kusmawati and Madhakomala, 2023). The implementation of Quality Assurance Management of PAUD (ECE) is considered the one that is important in providing a bright future to Indonesian children (Kusmawati and Madhakomala, 2023). One of the priorities is the performance of teachers, and the research has examined how teaching experience and peers' instructional competencies affect the performance of the ECE teacher under the impact of the structured and tiered training program (Soffiananningrum et al., 2022). Indonesian classroom management is also critical and seeks to create well-organized and interactive learning environments to facilitate the learning process of various cultural origin and developmental needs (Kusumaningtyas and Aprianto, 2025). This kind of focus on classroom management highlights the relevance of pedagogical practice that is adaptive and child-centered.

The curriculum in Indonesia is known as the Merdeka Curriculum and it is aimed at promoting creativity, critical thinking, and independence through flexible and child-centered learning, resulting in improved learning outcomes, in particular the language and social skills (Tupalessy, 2024). As it has been shown that practical implementation of play-based learning (Learning Through Play, LTP) has a positive influence on the overall development of children, one can speak about the approach towards education when engagement and exploration become the priority of education (Pang et al., 2025). The application of ECE kits in student learning is associated with higher education to generate professional ECE teachers and once more signifies the desire to improve teacher quality and the provision of resources (Widhi and Amini, 2024).

Quality assurance practices in Indonesia encompass literature reviews on the management of inclusive ECE strategies and evaluation, which

include policy implementation and the effectiveness of ECE experiences (Sofwanudin et al., 2024). It is believed that the process of classroom management and organizational climate are key determinants of the quality of ECE institutions (Nisa' & Astuti, 2021). The discussion of digital storytelling and AI literacy in Indonesian ECE is also associated with attempts to incorporate new resources and innovative methods of teaching to improve quality (Khosibah et al., 2025; Purnama et al., 2022). It is also possible that the constant review and renewal of the education program, which is currently observed in the Indonesian historical context, serve as an indicator that there is a continued focus on enhancing the quality of education to reflect the changing needs of society (Hidayat et al., 2025; Raodatul, 2023).

### **Governance, Financing & Implementation**

The management, funding, and practice of Early Childhood Education (ECE) have unique features and problems in Pakistan and Indonesia. The administration of ECE in Pakistan is quite challenging because of the existing and severe gap between policy intentions and their execution. Although a history of ambitious education policy has existed, the school system, especially in Punjab, has a problem of poor policy execution, which has created a lack of quality learning opportunities, as well as insufficient teacher support. This implies a centralized policymaking strategy which might not have effective decentralization implementation mechanisms nor adequate resources at the local levels. The few services and underdeveloped state of ECE in Pakistan denote that the resources are underfunded or allocated inefficiently (Rashid et al., 2025). The assessment of ECE programs in the public sector schools with the establishment of gender inequalities reveals that effective governance and monitoring are necessary to provide equity in implementation (Farmayash et al., 2025).

Education in Indonesia is governed by the Ministry of Education, Culture, Research, and Technology, and religious education is governed under the Ministry of Religious Affairs, which shows a dual system of governance (Saiful et al., 2024). This arrangement provides the opportunity to have a wide national system and yet—it suits particular religious' education requirements. The history of the ECE system in Indonesia has been characterized by frequent changes in the curriculum that occurred because of political, social, economic, and technological factors, and it can be assumed that the curriculum changes in the system will become more responsive and adaptive to the changes in the governance approach toward educational reform (Hidayat et al., 2025; Raodatul, 2023). Quality assurance management of PAUD (ECE) is essential, indicating the desire to seek standard quality throughout the system (Kusmawati and Madhakomala, 2023).

In Indonesia, ECE financing is associated with seeking educational support and estimating the costs of operational units of ECE programs (Murdiyningrum & Perdana, 2020). It is also concerned with financial governance of early childhood development, and case studies have been based on best practices in financial management at the village level, including the case of Panggungharjo Village, Yogyakarta (Indrawati et al., 2021). This implies a decentralized way of financing and management, giving power to people at the local level and promoting sustainable development at the grassroots level. Fair and more generous funding is classified as a mutually agreed-upon solution to the cost barrier to ECE enrollment, and this implies that the financial mechanisms play a key role in enhancing access (Copeland et al., 2024).

Inter-sectoral coordination seems to be more established in Indonesia, where such policies as inclusive education is extended to the level of higher education, including multiple stakeholders

and creative ways of broadening access to education (Nugraha et al., 2024; Sofwanudin et al., 2024). This is unlike the system of Pakistan, in which the gap in implementation implies poorer coordination and integration between the levels and sectors of education. The attempt to integrate various managerial strategies into an organizational system through which high-quality services are delivered is another strategic area in which PAUD strives to achieve an integrated and coherent ECE governance in Indonesia (Mardiyati et al., 2025).

### **Innovations & Emerging Priorities**

With changing dynamics in Early Childhood Education (ECE), Indonesia and Pakistan are addressing new trends through the integration of innovative practices and addressing imperatives in real time, namely in matters relating to technology, inclusive education, and community-led approaches.

The growth of Artificial Intelligence (AI) in Indonesia has moved very fast and brought a lot of influence in various sectors, including Early Childhood Education (ECE). This program clearly highlights the importance of introducing AI literacy from an early age in order for the population to be technically adaptive, both against future and also current practice of AI literacy within the Indonesian ECE framework (Khosibah et al., 2025). In addition, the trend of ECE's use of digital storytelling in Indonesia is very predominant as a learning tool to enrich learning experiences (Purnama et al., 2022). These instantiations of technology tend to be designed to improve and enliven learning. Furthermore, Indonesia consistently revises and develops policies of inclusive education covering all levels from early childhood to tertiary level; a conscious and innovative step taken toward better access to educational services for every child including those with disabilities as active citizens (Nugraha

et al., 2024; Sofwanudin et al., 2024). The implementation of inclusive ECE is discussed in several literature reviews, whereby several countries discuss their frameworks and evaluation, and Indonesia falls among them (Sofwanudin et al., 2024). More than this, the country highly emphasizes adaptive teaching practices in ECE to accommodate the needs of all early learners (Adewusi et al., 2023).

In the case of Pakistan, no particular technological innovation in ECE is described in the available literature, but the overall educational system is looking into the possibility of AI and social media integration in adaptive learning (Masih et al., 2025). Even though the study was conducted on undergraduate learners, its concepts of improving student engagement and improving their grades using AI-based adaptive platforms and social media tools can be applied to ECE in the future (Masih et al., 2025). The necessity of quality learning opportunities and sufficient teacher support in Pakistan implies that technological tools might be a transformative factor in the context of bridging current gaps. The communal models are implicitly significant in the ECE situation in Pakistan, particularly since provision is minimal and the policy-implementation gap is critical, indicating a need for local-level interventions to fill gaps in service delivery (Rashid et al., 2025). The attempts to mitigate the issue of gender inequalities in ECE initiatives can also refer to a community-focused approach to the issue, in which domestic dynamics and societal norms must be considered (Farmayash et al., 2025).

The idea of Learning Through Play (LTP) is gaining global acceptance and is inextricably linked to ECE, which promotes comprehensive education and skill development in children (Pang et al., 2025). The Merdeka Curriculum of Indonesia, which aims to foster creativity, critical thinking, and independence through adaptable and child-centered learning, exemplifies this

instructive methodology (Tupalessy, 2024). In addition, the global trend towards the integration of technology in ECE is supported by bibliometric analyses that reveal growing interest in technology in early childhood, such as digital literacy, media, and interactive tools. The COVID-19 pandemic has accelerated the adoption of remote learning through the use of digital devices, making digital documentation and media essential in education (Bölükbaş, 2024).

The common issue experienced in both countries is the quality and equity of such innovations. The relevant concept to enhance the performance of educational institutions in both settings is the customer-oriented approach to strategy planning and implementation that helps identify customer needs and enhances the performance of students (Mittal and Jung, 2024). This approach will be a feedback process and adapted to the changing requirements of children, parents, and educators in the ECE environment.

### Comparative Synthesis

The ECE system in Pakistan has faced problems of outdated practices and massive discrepancies between policy and practice that have impeded quality and access for a large number of children. Indonesia, by contrast, proactively reforms its curriculum, such as the so-called Merdeka Curriculum, which incorporates child-centered and play-based learning and even includes AI. This makes the early childhood education (ECE) system in Indonesia more dynamic and responsive, while Pakistan still has a long way to go in modernizing and maintaining quality in early childhood education.

### Policy Recommendations

In an effort to enhance Early Childhood Education (ECE), Pakistan needs to put more focus on practical, play-based learning and heavily invest in training teachers in the new methods of teaching.

It is also important to create nationwide curriculum standards and enhance accountability at the local level. Although Indonesia is progressive, it should aim at minimizing inequalities in access to and quality of ECE in the regions, and among disadvantaged populations. The two countries need to allocate more funds to ECE, provide subsidies to families, and improve infrastructure, especially in rural locations. Through the combined efforts of the government, communities, and the private sector, there can be a solution to the gaps that currently exist, and as a result, each child will have a fair start.

### Research Gaps and Future Directions

There is a lack of knowledge about the country's ECE curriculum and even less about Pakistani classroom practices and assessment. Future research should critically investigate the ground realities of Pakistani ECE classrooms with deeper investigations outside policy documents to include observation of teacher-child interaction, learning material used, and child assessment practices. Within this context, we also need research on what successful strategies would be to implement child-centered and play-based learning in Pakistan as a whole seeing resource limitations.

In the Indonesian context, while the Merdeka Curriculum is promising it would require longitudinal research to track its impact on different child development dimensions and teacher implementation- efficacy across regions. It is also possible to research the way AI literacy and digital storytelling are incorporated so that these digital technologies become a part of the learning process, rather than being seen as new additions.

The two countries would benefit from more comparative research that goes beyond simply defining the differences, but also explains why certain approaches succeed or fail in various cultural and socio-economic settings. Research on the most effective uses of parental involvement and community-based models in each country is

also important, especially to reach underserved groups and enhance quality in the areas that need it most. Lastly, a study of the economic analysis of the impacts of increased investment in early childhood education (ECE) in the two environments could be of interest to policymakers.

## Conclusion

Pakistan and Indonesia are both interested in developing ECCE, but they are doing so very differently, even though they are obligated to do it. The education sector in Indonesia has voiced a strong interest in a modern child-focused approach with educational curricula such as the Merdeka Curriculum, which aligns with contemporary

times. This more proactive approach, along with better coordination from the government, is encouraging people to study and practice their languages while also mastering social skills. In Pakistan, the early childhood education (ECE) system is grappling with issues like inconsistent policies, traditional instructional strategies, and significant disparities in the quality and accessibility of education, which particularly affect disadvantaged children. There is an urgent need to revamp the teacher training system, revise the curriculum, and ensure equitable distribution of resources to unlock the potential of the youngest citizens of Pakistan. Indonesia, in turn, should be the first to follow this example, reinforcing its inclusive initiatives and expanding its successful programs for a better future for both nations.

## Author Contributions

**Dr. Muthmainnah:** Conceptualization (equal), Methodology (equal), Quantitative Analysis, Writing –original draft, Writing –review & editing

**Muqaddas Sajjad:** Methodology (equal), Quantitative Analysis, Writing –review& editing

## Acknowledgment

To enhance the quality of the final manuscript, a grammar and editing tool, WordVice, was used to improve grammar, word choice, and overall readability.

## Conflict of Interest

The author declares no conflict of interest.

## Funding

We did not receive any funding for this research project.

## References

- Adewusi, O. E., Al Hamad, N. M., Adeleke, I. J., Nwankwo, U. C., & Nwokocha, G. C. (2023). Adaptive teaching strategies in early childhood education: a review for Nigeria and the UK. *International Journal of Applied Research in Social Sciences*, 5(8), 255-271.
- Adnan, A., & Ramzan, M. (2024). Effects of Educational Reforms and Policies on the Quality of Early Childhood Education: Teachers' Perspective. *Pakistan Journal of Humanities and Social Sciences*, 12(3), 2916-2920.
- Alam, J., Ashraf, M. A., Tsegay, S. M., & Shabnam, N. (2022). Early childhood between a rock and a hard place: Early childhood education and students' disruption in Khyber Pakhtunkhwa province, Pakistan. *International journal of environmental research and public health*, 19(8), 4486.
- Amir, M. W., Bibi, A., Akhtar, N., & Raza, Z. (2021). Modeling and forecasting of gross domestic product percentage share of education sector: A statistical study in Pakistan. *Transactions in Mathematical and Computational Sciences*, 1(1), 75–84.
- Ansari, A., Fasih, T., & Humphry, E. (2024). Ten Years of Early Childhood Education (ECE) in Punjab (Pakistan): What Have We Learned?. *Journal of Research in Childhood Education*, 38(sup1), S161-S179.
- Arifah, I., & Kuncorowati, D. (2025). Integration of Artificial Intelligence Technology in Indonesian Language Teaching: Innovative Solutions in the Digital Era. *Journal of Practice Learning and Educational Development*, 5(1), 1-5.
- Artipah, A., Sain, Z. H., Asfahani, A., & Sa'diyah, S. D. (2024). Early childhood education reform in Pakistan: challenges, innovations, and future prospects. *Absorbent Mind*, 4(1), 57-64.
- Astuti, R. (2021). Viewing The Quality Of Early Childhood Education From The Organizing Point Of View And Classroom Management. *Indonesian Journal of Islamic Early Childhood Education*, 6(1), 37-44.
- Bölükbaş, A. F. (2025). Mapping the evolution of early childhood technology: A bibliometric analysis. *Education and Information Technologies*, 30(6), 8159-8186.
- Bahri, S., Muhidin, S., Warta, W., Rahman, M. A., & Hayaturrohman, H. (2024). Comparative Study of Levels and Curriculum in Education Systems of Indonesia and Australia. *Journal of Instructional and Development Researches*, 4(6), 455-466.
- Chudzik, M., Corr, C., & Santos, R. M. (2025). Trauma-informed care in early childhood education settings: A scoping literature review. *Early Childhood Education Journal*, 53(2), 477-488.
- Copeland, K. A., Amsterdam, A., Gerker, H., Bennett, D., Ladipo, J., & King, A. (2025). Why is ECE enrollment so complicated? An analysis of barriers and co-created solutions from the frontlines. *Early Childhood Research Quarterly*, 71, 12-25.

- Farmayash, M. Z., Ali, S., & Mehmood, S. (2023). Public Secondary Schoolsâ€™ Early Childhood Education System and its Effectiveness for Learners in Punjab Province. *Global Educational Studies Review*, 8(2), 589-597.
- Ha, N. T. N., Tham, M., & Hurley, P. (2025). Process quality in early childhood education and care in Australia: A systematic literature review. *Early Childhood Education Journal*, 53(6), 2193-2206.
- Hidayat, M. T., Suryadi, S., Latifannisa, N., Sari, S. N., & Rino, R. (2025). Evolution of The Education Curriculum in Indonesia. *Journal of Innovation in Educational and Cultural Research*, 6(2), 381-395.
- Hosany, A. S., Hosany, S., & He, H. (2022). Children sustainable behaviour: A review and research agenda. *Journal of Business Research*, 147, 236-257.
- Indrawati, R., Ragamustari, S. K., & Wijaya, M. E. (2021). Best Practice in early childhood development financial governance: A case study in Indonesia villages. *JPUD-Jurnal Pendidikan Usia Dini*, 15(2), 319-341.
- Iqbal, N., & Ahmad, B. (2024). Teachers' Perspective on Early Childhood Education Initiative in Public Sector Schools. *Journal of Early Childhood Care and Education*, 8(2).
- Iskandar, H. (2020). Realizing quality early childhood education and parenting in Indonesia: Pitfalls and strategies. *Advances in Social Science, Education and Humanities Research*, 454, 1-9. <https://doi.org/10.2991/assehr.k.200808.001>
- Khalisa, L. (2025). English Language Education in Indonesia: A Literature Review of Teaching Methods, Curriculum, and Challenges. *Global Education Journal*, 3(2), 829-835. <https://doi.org/10.59525/gej.v3i2.877>
- Khosibah, S. A., Rahmaningrum, A., & Kusumawardani, C. T. (2025). Potensi dan Praktik Literasi Artificial Intelligence (AI) dalam Pendidikan Anak Usia Dini di Indonesia: Systematic Literature Review. *JEA (Jurnal Edukasi AUD)*, 11(1), 55-69.
- Kusmawati, I., & Madhakomala, R. (2023). Implementation of Quality Assurance Management Basic Education (PAUD) in Indonesia. *East Asian Journal of Multidisciplinary Research*, 2(11), 4403-4414.
- Kusumaningtyas, N., & Aprianto, R. (2025). Literature Analysis on Classroom Management in Early Childhood Education in Indonesia. *JURNAL OBSESI Учредители: Universitas Pahlawan Tuanku Tambusai*, 9(1), 350-358.
- Lisnawati, R., Jannah, N. L., & Sari, D. A. (2024). Independent curriculum policy in early childhood education units in Indonesia. *Jurnal Edusci*, 2(1), 14-22.
- Mardiyati, M., Nahdiah, I., Setiawan, E., & Suwandari, L. (2025). Integrating Strategic PAUD Management Approaches in Early Childhood Education; A Systematic Literature Review on Foundational Phase Quality Services. *Journal of Educational Management Research*, 4(3), 879-893.

- Masih, M., Suleman, S., Khan, M. H., Sahito, Z., & Shahid, S. (2025). THE FUTURE CLASSROOM: INTEGRATING AI AND SOCIAL MEDIA FOR ADAPTIVE LEARNING. *FUTURE*, 4(3).
- Mittal, V., & Jung, J. (2024). Revitalizing educational institutions through customer focus. *Journal of the Academy of Marketing Science*, 52(5), 1323-1342.
- Mligo, I. R. (2025). International perspectives on early childhood education curriculum development: Reflections on a documentary review. *Early Years*, 45(1), 119-131.
- Murdiyningrum, Y., & Perdana, N. S. (2020). Operational Cost Requirements Analysis in Early Childhood Education. *JPUD-Jurnal Pendidikan Usia Dini*, 14(1), 65-77.
- Nugraha, R. A., Karsidi, R., Rahman, A., Sunardi, S., Asrowi, A., Murwaningsih, T., & Supratiwi, M. (2024, July). Analysis of The Implementation of Inclusive Education Policy in Indonesia: A Literature Review. In *Proceeding of International Conference on Special Education in South East Asia Region* (Vol. 3, No. 1, pp. 421-432).
- Pang, L. X., Ismail, A. S., & Ariff, S. S. M. (2025). Spatial Design Strategies for Preschools with Learning Through Play (LTP) Approach. *Built Environment Journal*, 22(2).
- Raikes, A., Alvarenga Lima, J. H. N., & Abuchaim, B. (2023). Early childhood education in Brazil: Child rights to ECE in context of great disparities. *Children*, 10(6), 919.
- Raodatul, J. (2023). Analysis of educational curriculum evolution in Indonesia and its impact on increasing education quality. *International Journal of Social Service and Research*, 3(8), 2041-2049.
- Rashid, M., Fatima, M., Azmat, M., & Mahmood, T. (2025). Early Childhood Education in Punjab, Pakistan: Navigating Challenges and Exploring Solutions—A Narrative Review. *The Critical Review of Social Sciences Studies*, 3(1), 2214-2228.
- Rashid, R., & Akkari, A. (2020). A review of Early Childhood Education (ECE) in Bangladesh: status and impact. *International Journal of Education*, 12(1), 59-74.
- Samuel Hall. (2023). *Review of early childhood education (ECE) models in Pakistan*. Commissioned by UNICEF Pakistan.
- Soffianningrum, I., & Yetti, E. (2022). ECE Educator Performance: Teaching Experience and Peer Teaching Ability through Basic Tiered Training. *JPUD-Jurnal Pendidikan Usia Dini*, 16(1), 52-68.
- Sofwanudin, W., Boeriswati, E., & Arbah, F. (2024, December). The Management of Inclusive Early Childhood Education: A Literature Review on Strategies and Evaluation in Various Countries. In *Proceeding of International Conference on Islamic Education (ICIED)* (Vol. 9, No. 1, pp. 328-339).
- Sousa, D., & Moss, P. (2022). Introducing the special issue on ‘Comparative studies in early childhood education: past, present and future’. *Comparative Education*, 58(3), 287-296.

- Tasleem, Z. (2024). Analysis of the Education Policies of Pakistan: Identifying Factors Behind Its Shortcomings and Failure to Achieve Goals. *Journal of Public Policy Practitioners*, 3(1), 31-46.
- Tupalessy, P. (2024). The Implementation of Kurikulum Merdeka in Indonesia Early Childhood Education (PAUD): A Literature Review. *HUELE: Journal of Applied Linguistics, Literature and Culture*, 4, 49-54.
- Widhi, E. N., & Amini, M. (2024). Implementation of Early Childhood Education Kits in Higher Education Student Learning: Ex-post Facto Study of Open University Students. *JPUD-Jurnal Pendidikan Usia Dini*, 18(1), 299-307.
- World Bank. (2023). *Assessment of Indonesia's early childhood education and development accreditation process*. World Bank.
- Yeung, R. C. Y., Yeung, C. H., Sun, D., & Looi, C. K. (2024). A systematic review of Drone integrated STEM education at secondary schools (2005–2023): Trends, pedagogies, and learning outcomes. *Computers & Education*, 212, 104999.