



A Review of the Impact and Use of Play in Early Childhood Education Programmes

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Abstract

Play is widely regarded as a central mechanism through which young children learn, develop, and make sense of the world, yet its role within formal early childhood education programmes remains the subject of continuing debate. It examines the principal theoretical foundations of play-based learning, the developmental domains it influences, the pedagogical approaches through which play is enacted in early years settings, and the barriers that constrain its implementation. The review synthesises evidence indicating that play, particularly guided and free play, supports cognitive, language, social-emotional, and physical development, and that playful pedagogies can advance academic outcomes without sacrificing children's well-being. It further distinguishes among free play, guided play, and games, and considers the tension between play-based and more academically oriented, direct-instruction approaches that has intensified as accountability pressures have reached the early years. Four summary tables consolidate the theoretical perspectives, types of play, developmental benefits, and implementation barriers identified across the literature. The review concludes that although the evidence base broadly supports play as an effective and developmentally appropriate medium for early learning, its use in practice is uneven and shaped by curricular demands, educator beliefs, resources, and cultural expectations. Directions for future research, including the need for rigorous longitudinal designs and greater attention to diverse cultural contexts, are outlined.

Keywords: play, early childhood education, play-based learning, guided play, child development, pedagogy

1. Introduction

Play occupies a distinctive place in the education of young children. Across cultures and throughout history, children have learned through play, and early childhood educators have long recognised its value as a vehicle for development and learning. In contemporary early childhood education, however, the role of play has become increasingly contested. On one hand, developmental science and educational theory continue to affirm that play is fundamental to how young children acquire knowledge, regulate emotions, and build relationships. On the other, mounting expectations for academic achievement and school readiness have placed pressure on early years settings to adopt more structured, instruction-focused approaches, sometimes at the expense of play. This review examines the impact and use of play in early childhood education programmes, synthesising recent evidence on its benefits, the forms it takes, and the conditions that shape its implementation.



Early childhood education generally refers to the care and education of children from birth to around eight years of age, a period during which the foundations of lifelong learning, health, and behaviour are established. Within this field, play is frequently described as the natural language of childhood and the primary means through which children explore, experiment, and construct understanding. Influential curricular frameworks in many countries, including the early years foundation stage in England, Te Whariki in New Zealand, and the developmentally appropriate practice guidelines in the United States, position play at the centre of early learning. Yet the practical meaning of play in these settings varies considerably, ranging from wholly child-directed free play to carefully structured, adult-guided activities designed to achieve specific learning goals. Understanding this diversity is essential to evaluating the role of play in early childhood programmes.

1.2 Defining Play in Early Childhood

Play is notoriously difficult to define, in part because it encompasses a wide range of behaviours and because its meaning shifts with context. Scholars commonly characterise play as an activity that is intrinsically motivated, actively engaging, freely chosen, pleasurable, and often imaginative, involving a degree of non-literality in which children treat objects and situations as other than they are. Contemporary discussions distinguish among several forms, including free play, in which children direct the activity themselves; guided play, in which adults structure the environment or gently steer the activity toward a learning goal while preserving child agency; and games with rules. This spectrum, running from child-initiated to adult-initiated activity, has become central to debates about how play can be harnessed for learning without losing the qualities that make it play. Recent scholarship has proposed reconceptualising play as a spectrum rather than a fixed category, arguing that the defining features of play, such as active engagement, meaningfulness, and iterative exploration, can be present in varying degrees across both free and more structured activities (Zosh et al., 2018).

1.3 Rationale and Significance

The significance of examining play in early childhood education arises from both its developmental importance and the practical dilemmas facing educators and policymakers. If play is indeed a powerful medium for learning, then curtailing it in favour of formal instruction may undermine the very outcomes that such instruction seeks to promote. Conversely, if the benefits of play are overstated or contingent on specific conditions, then uncritical advocacy may be equally misguided. A careful synthesis of recent evidence is therefore needed to inform balanced, developmentally appropriate practice. Comprehensive reviews of the evidence have argued that learning through play is not a peripheral activity but a driver of the holistic skills, including cognitive, social, emotional, and creative capacities, that children need to thrive (Zosh et al., 2017; Parker & Thomsen, 2019). This is particularly pressing given the global expansion of early childhood provision and the accompanying scrutiny of its quality and outcomes.

The literature on play in early childhood education is extensive and multidisciplinary, spanning developmental psychology, education, and neuroscience. This review organises the evidence under four themes: the theoretical foundations of play-based learning, the developmental benefits of play, pedagogical approaches to play in practice, and the barriers to implementation. Four summary tables consolidate the principal findings.

2.1 Theoretical Foundations of Play-Based Learning

The case for play-based learning rests on a rich theoretical heritage. Constructivist and socio-cultural theories provide the most influential foundations, with the work of Piaget and Vygotsky continuing to shape contemporary understanding. Piagetian theory frames play as a means by which children assimilate experience and construct knowledge through active exploration, while Vygotskian theory emphasises the social nature of play and its capacity to advance development within the zone of proximal development, particularly through make-believe play that supports self-regulation (Weisberg et al., 2016). Building on these foundations, contemporary scholars have articulated the concept of guided play as a middle ground that combines the child agency valued by constructivists with the adult scaffolding emphasised by socio-cultural theory (Skene et al., 2022).

Beyond these classical perspectives, more recent theoretical work has drawn on developmental neuroscience and on ecological and cultural-historical frameworks. Neuroscientific accounts suggest that playful, exploratory experiences support the development of executive functions and neural connectivity during a period of considerable plasticity (Yogman et al., 2018). Cultural-historical and ecological perspectives, meanwhile, stress that the meaning and value of play are shaped by the social and cultural contexts in which children live, cautioning against universal claims derived from a narrow range of settings (Roopnarine & Davidson, 2015). Table 1 summarises the principal theoretical perspectives that inform play-based learning.

Table 1

Principal Theoretical Perspectives Informing Play-Based Learning

Perspective	Key Theorist(s)	Central Idea
Constructivist	Piaget	Play enables active knowledge construction
Socio-cultural	Vygotsky	Play advances the zone of proximal development
Guided play	Weisberg; Skene	Blends child agency with adult scaffolding
Neuroscientific	Yogman et al.	Play supports executive function development
Cultural-historical	Roopnarine	Play's meaning is culturally situated

Note. Compiled from Weisberg et al. (2016), Skene et al. (2022), Yogman et al. (2018), and Roopnarine and Davidson (2015).





A substantial body of research documents the developmental benefits of play across multiple domains. In the cognitive domain, play, and especially guided play, has been associated with gains in early mathematics, spatial reasoning, and problem solving, with meta-analytic evidence suggesting that guided play can be as effective as or more effective than direct instruction for certain learning outcomes (Skene et al., 2022). Pretend and symbolic play have been linked to the development of executive function and self-regulation, capacities that are strongly predictive of later academic success (Yogman et al., 2018). Play-based interventions in early mathematics, for instance, have been shown to produce learning gains comparable to those of more traditional training approaches while sustaining children's motivation and engagement (Vogt et al., 2018). In the language domain, play provides rich opportunities for vocabulary development, narrative skill, and communication, particularly when adults engage responsively with children during play (Toub et al., 2018).

The social-emotional benefits of play are equally well documented. Through play, children learn to negotiate, cooperate, take turns, manage conflict, and understand the perspectives of others, thereby developing social competence and emotional regulation (Colliver & Fleer, 2016). Play also contributes to physical development, as active and outdoor play supports motor skills, health, and physical activity levels (Truelove et al., 2017). Importantly, several studies emphasise that these benefits are interconnected, with play simultaneously engaging multiple domains of development in an integrated manner. Table 2 summarises the developmental benefits of play by domain, and Table 3 distinguishes the principal types of play discussed in the literature.

Table 2

Developmental Benefits of Play by Domain

Developmental Domain	Reported Benefits of Play
Cognitive	Mathematics, problem solving, executive function
Language	Vocabulary, narrative, communication skills
Social-emotional	Cooperation, self-regulation, empathy
Physical	Motor skills, health, physical activity
Creative	Imagination, divergent thinking, flexibility

Note. Compiled from Skene et al. (2022), Yogman et al. (2018), Toub et al. (2018), Colliver and Fleer (2016), and Truelove et al. (2017).



Principal Types of Play in Early Childhood Education

Type of Play	Description	Degree of Adult Direction
Free play	Child-initiated, self-directed activity	Low
Guided play	Child agency within an adult-framed goal	Moderate
Games with rules	Structured activity governed by rules	Moderate to high
Playful instruction	Adult-led teaching using playful methods	High

Note. Adapted from Weisberg et al. (2016) and Pyle and Danniels (2017).

2.3 Pedagogical Approaches to Play in Practice

The translation of play into pedagogy is a central concern of the literature. A key distinction is drawn between free play, which is child-directed and minimally structured, and guided play, in which educators intentionally design environments or interactions to support specific learning goals while retaining children's sense of agency and enjoyment (Pyle & Danniels, 2017). Research increasingly favours guided play as a means of reconciling developmental appropriateness with curricular objectives, since it appears to harness the motivational and exploratory qualities of play while directing them toward intended outcomes (Weisberg et al., 2016). Play-based learning is best understood as an approach in which children's play is intentionally connected to learning goals rather than left entirely to chance, encompassing both child-directed and more mutually directed forms (Danniels & Pyle, 2018). Reviews of classroom-focused evidence similarly conclude that thoughtfully implemented play-based learning can enrich children's experiences and outcomes in kindergarten settings (Taylor & Boyer, 2020). Educators play a crucial role in this process, and their ability to observe, scaffold, question, and extend children's play is repeatedly identified as decisive for its educational value.

Studies of practice reveal considerable variation in how play is enacted. Some early years classrooms integrate play seamlessly with learning objectives, while others treat play and academic work as separate, sometimes competing, activities (Pyle et al., 2017). The role of the educator ranges from passive supervision to active co-play and intentional teaching, with the most effective approaches typically involving responsive, sensitive adult engagement rather than either complete non-interference or heavy-handed direction (Pyle & Danniels, 2017). Skilful educators create purposeful invitations to play that open up learning possibilities while following children's interests, a form of responsive engagement that sustains rather than displaces children's own initiative (Wallerstedt & Pramling, 2016). Professional knowledge and beliefs strongly influence these choices, underscoring the importance of educator preparation and ongoing professional development in supporting high-quality play-based pedagogy.



Despite broad support for play, its implementation in early childhood settings is frequently constrained. A prominent barrier is the pressure for academic achievement and school readiness, which has led in many jurisdictions to a narrowing of the curriculum and a reduction in time for play (Pyle et al., 2017). Educators often report tension between their belief in the value of play and external accountability demands that privilege measurable academic outcomes (Fesseha & Pyle, 2016). This tension can result in the marginalisation of play or its reduction to a reward that follows the completion of academic tasks.

Additional barriers include inadequate resources, limited physical space, large class sizes, and insufficient professional preparation for play-based teaching (Nolan & Paatsch, 2018). Educator beliefs and confidence also matter: those who lack a clear understanding of how play supports learning may struggle to justify or implement it effectively, particularly in the face of parental or institutional scepticism. A systematic review of teachers' views has shown that while educators generally endorse play-based learning, they frequently experience uncertainty about their own role and about how to balance play with curricular expectations (Bubikova-Moan et al., 2019). Efforts to embed play-based approaches in the early years of primary schooling have likewise encountered structural obstacles, including timetabling, assessment demands, and the expectations of colleagues teaching older year groups (Jay & Knaus, 2018). Cultural expectations further shape the acceptability of play, as some communities place greater value on formal, teacher-directed instruction (Roopnarine & Davidson, 2015). Parental concerns that play is not real learning can reinforce these pressures, especially where transitions to primary school emphasise academic performance. Table 4 summarises the principal barriers to the implementation of play in early childhood education.

Table 4

Principal Barriers to the Implementation of Play in Early Childhood Education

Barrier	Nature of the Constraint
Academic pressure	School-readiness demands narrow the curriculum
Accountability	Measurable outcomes privileged over play
Resources and space	Limited materials, space, and staffing
Educator beliefs	Uncertainty about play's learning value
Professional preparation	Insufficient training in play pedagogy
Cultural expectations	Preference for teacher-directed instruction

Note. Compiled from Pyle et al. (2017), Fesseha and Pyle (2016), Nolan and Paatsch (2018), and Roopnarine and Davidson (2015).



This paper adopts the methodology of a structured narrative literature review, synthesising peer-reviewed evidence on the impact and use of play in early childhood education published between 2014 and 2023. A narrative review approach was selected because the subject spans multiple disciplines and methodological traditions, requiring an integrative synthesis that accommodates qualitative, quantitative, and theoretical contributions. The review process comprised systematic literature searching, screening against defined criteria, and thematic synthesis.

3.1 Search Strategy

Relevant literature was identified through searches of major academic databases, including ERIC, Scopus, PsycINFO, and Google Scholar. Search terms combined keywords relating to the domain (“early childhood education,” “early years,” “preschool,” “kindergarten”), the focus of interest (“play,” “play-based learning,” “guided play,” “free play,” “playful pedagogy”), and the outcomes of concern (“development,” “learning,” “school readiness,” “outcomes”). Boolean operators were used to combine terms, and the search was limited to peer-reviewed publications in English appearing between January 2014 and December 2023.

3.2 Inclusion and Exclusion Criteria

Studies were included if they reported empirical findings or authoritative theoretical analysis concerning the role, impact, or implementation of play in early childhood education for children up to approximately eight years of age. Priority was given to peer-reviewed journal articles, systematic reviews, and meta-analyses that addressed developmental outcomes, pedagogical practice, or implementation. Publications were excluded if they focused on play therapy in clinical contexts unrelated to education, addressed older age groups, were not peer-reviewed, or were unavailable in full text. Reference lists of key articles were examined to identify further relevant sources.

3.3 Data Extraction and Synthesis

Information extracted from the selected sources included the theoretical perspective adopted, the type of play examined, the developmental domains or outcomes considered, the pedagogical approach described, and the barriers or facilitators identified. The extracted information was organised thematically into the four areas presented in the literature review and consolidated in summary tables. Because the review integrates heterogeneous studies employing diverse methods, findings are synthesised qualitatively, with an emphasis on identifying consistent patterns, methodological strengths and limitations, and gaps in current knowledge. This approach provides a coherent overview of the field while acknowledging the variability inherent in the primary literature.



The synthesis of the reviewed literature reveals several consistent themes. First, there is broad theoretical and empirical support for the developmental value of play, particularly guided play, across cognitive, language, social-emotional, and physical domains. The convergence of constructivist, socio-cultural, and neuroscientific perspectives lends coherence to the case for play-based learning, and the accumulating meta-analytic evidence suggests that playful approaches need not come at the expense of academic outcomes (Skene et al., 2022). This is an important corrective to the assumption that play and learning are opposed.

Second, the literature increasingly points to guided play as a productive resolution of the longstanding tension between child-directed and adult-directed approaches. By preserving children's agency while incorporating intentional adult support, guided play appears to capture the benefits of both free play and direct instruction (Weisberg et al., 2016; Pyle & Danniels, 2017). The pivotal role of the educator in enacting this approach is a recurring finding, highlighting that the benefits of play are not automatic but depend on skilled, responsive pedagogy.

Third, the review underscores a persistent gap between the evidence base and everyday practice. Despite widespread endorsement of play in curricular frameworks, its implementation is frequently undermined by academic pressure, accountability demands, resource constraints, educator beliefs, and cultural expectations (Fesseha & Pyle, 2016; Nolan & Paatsch, 2018). This implementation gap represents a central challenge for the field, suggesting that advancing play-based learning requires attention not only to evidence but also to policy, professional development, and the beliefs of educators, parents, and communities.

5. Conclusion

This review has examined the impact and use of play in early childhood education programmes, synthesising recent evidence on its theoretical foundations, developmental benefits, pedagogical enactment, and barriers to implementation. The evidence broadly affirms that play, and particularly guided play, is a powerful and developmentally appropriate medium for early learning, supporting cognitive, language, social-emotional, and physical development in an integrated manner. Far from being opposed to academic learning, well-designed playful pedagogies appear capable of advancing it while preserving children's well-being and engagement.

At the same time, the review makes clear that the use of play in practice is uneven and contingent. Its benefits depend on the quality of pedagogy and the skill of educators, and its implementation is shaped by curricular demands, resources, professional preparation, and cultural expectations. The frequently observed gap between the strong evidence for play and its inconsistent use in early years settings represents the central tension in the field. Bridging this gap requires coordinated effort across research, policy, and practice, including clearer articulation of how play supports learning,

stronger professional development, and greater engagement with parents and communities. Sustaining play at the heart of early childhood education is thus not only an educational imperative but also a matter of aligning belief, evidence, and practice.

6. Future Work

Several directions for future research emerge from this review. First, there is a clear need for rigorous longitudinal studies that trace the long-term effects of play-based approaches on both academic and developmental outcomes. Much existing evidence is cross-sectional or short-term, limiting conclusions about the durability of play's benefits and its relationship to later schooling. Well-designed longitudinal and experimental studies would strengthen the causal claims that inform policy and practice.

Second, future work should attend more closely to the cultural and contextual dimensions of play. The majority of influential research derives from a relatively narrow range of high-income, Western settings, yet the meaning and value of play vary across cultures. Research in diverse cultural, linguistic, and socio-economic contexts would clarify the extent to which findings generalise and would support the development of culturally responsive play-based practice. Related to this, greater attention to the inclusion of children with disabilities and additional needs in play-based settings is warranted.

Third, research is needed on the mechanisms and conditions that make play effective, moving beyond the question of whether play works toward an understanding of how, for whom, and under what circumstances. This includes closer examination of the educator's role, the design of guided play, and the professional development required to implement it well. Finally, studies that address the implementation gap directly, examining how policy, accountability systems, and stakeholder beliefs can be aligned to support play, would be of considerable practical value. Together, these avenues of investigation would advance both the science and the practice of play in early childhood education.

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