



Integration of Enculturation and Child Protection through Future Play in Early Childhood Education

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Abstract: Future play is increasingly positioned as a central construct for understanding how early childhood education responds to digital transformation, particularly in relation to learning, enculturation, and child protection. This study aims to map research trends, identify dominant themes, theories, and methodologies, and synthesize evidence on how future play contributes to cultural identity formation, safeguarding, and the development of social value in early childhood settings. A systematic literature review was conducted using a transparent protocol aligned with established standards for evidence synthesis. Fifty peer-reviewed journal articles, indexed in Google Scholar, Scopus, and SINTA-2, and published between 2020 and 2025, were selected and analyzed through a combined bibliometric mapping and thematic synthesis. Results show marked growth in publications post-2021, shifting from gamification/simulation to concerns about socio-cultural identity and the digital environment. Four thematic clusters emerged: digital play in education, enculturation/identity, child protection/mental health, and theory-methodology development, dominated by cultural-historical and subcultural frames. Synthesis across themes shows that future play enhances motivation/learning, inclusion, cultural participation/identity, and protection functions such as well-being, privacy awareness, and family-school co-regulation. Overall, the study positions future play as an integrative paradigm for curriculum innovation, ethical digital design, and rights-based child protection, while emphasizing the need for longitudinal, context-sensitive research on sustained impacts.

Keywords: child online safety; digital play-based learning; enculturation; future play

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INTRODUCTION

Play remains a foundational medium through which young children construct knowledge, develop social relationships, and exercise imagination. Contemporary research consistently shows that play-based learning supports cognitive, motor, language, and social-emotional development while also providing an authentic basis for assessment in early childhood education (Garaigordobil et al., 2022; Montoya-Fernández et al., 2024; Yee et al., 2022; Yogman et al., 2018). However, play activities must have five essential characteristics: play is intrinsic, the child must freely choose to play, play must be enjoyable, play is non-literal, and play is actively performed by children (Hughes, 1991). These characteristics are important as boundaries and guidelines in implementing play activities in the child development process. Changes in the cultural and technological landscape have had major implications for how children interact, learn, and play. The concept of future play has emerged in response to the digital transformation that increasingly dominates the social and educational lives of young children. A survey of students' perceptions of the use of digital educational games as learning tools found that around 86% of students stated that the use of digital educational games facilitated their learning process, indicating that the majority of students are positive about the integration of games into formal learning (Aminah & Salman, 2024).

According to data from the Central Statistics Agency (BPS) in 2022, around 33.44% of early childhood in Indonesia already use gadgets (Putri, 2024). During the COVID pandemic, 36% of young children in Ireland have their own tablet. Even when children may not have their own screen device, they still have access to one: 93% have access to a family TV, 79% have access to a parent's or sibling's tablet, and 57% have access to a computer or laptop (Egan & Beatty, 2021). In Indonesia, preschool children have been using screen media since infancy, and they spend more than 1 hour per day on screens. The most used digital media were mobile phones (91.6%), followed by television (86.1%) and computers (61%) (Susilowati et al., 2021). In the digital world, enculturation occurs through media connected to global networks, so that children grow up with increasingly complex cultural experiences (Abraham, 2023; Poyntz & Hoechsmann, 2011). Transmedia learning allows children to participate in digital culture from an early age, making play part of the process of cultural identity formation (Sánchez-Caballé & Martínez, 2023). This aligns with the view of digital capitalism that shapes social institutions and the way individuals internalize values through play practices (Frolov, 2024). Therefore, an in-depth study of future play trends and their implications for early childhood education is highly relevant. The importance of this research is further highlighted by the global challenges children face in the digital age. Generation Z is known to be at high risk of excessive smartphone use, which can trigger anxiety and psychological developmental disorders (Wei et al., 2024). However, studies have shown that gamification-based

applications can help manage student stress, suggesting that digital games have great potential to support mental well-being (Alhasani & Orji, 2025). On the other hand, gamification also showed enhanced understanding of educational concepts, fostering improved communication skills, creativity, and self-expression in early childhood education (Dhanya et al., 2025). In this context, future play is not only associated with risks but also with opportunities to create adaptive, beneficial learning media. Research findings reinforce this view by showing how game-based approaches can protect the rights of children with special needs in the learning process (Gallud et al., 2023; Perez-Gonzalez, 2023; Yildirim & Surer, 2021). Recent studies further indicate that parental mediation roles are negatively associated with young children's digital game addiction tendencies (Çalhan & Göksu, 2024) and that parental guidance strategies are closely linked to changes in digital play addiction tendencies before, during, and after the pandemic (İşıkoğlu et al., 2025). Thus, studies on future play are crucial because they offer a dual perspective: as an innovative learning tool and an instrument for protecting children in the face of the challenges of the digital world.

However, current research on future play still shows at least three important limitations. First, many studies continue to emphasize gamification techniques, platform affordances, or short-term learning outcomes, while the longer-term processes of enculturation and identity work remain less explicitly synthesized (Alotaibi, 2024; Cerezo-Pizarro et al., 2023; Chu et al., 2024). Second, child protection is often treated through the language of device overuse, risk, or regulation, yet it is rarely connected systematically to curriculum design, cultural participation, and rights-based early childhood practice (Gui et al., 2023; Ishak & Hasran, 2023; Nirmala et al., 2024; Putnam & Martin, 2025). Third, existing reviews commonly discuss digital play, gamification, transmedia learning, or metaverse-related harms in separation, so the field still lacks an integrative synthesis linking research trends, dominant themes, theoretical lenses, and methodologies to the combined concerns of enculturation, child protection, and social value in early childhood education (Cullen, 2022; Gui et al., 2023; Ishak & Hasran, 2023; Nirmala et al., 2024; Putnam & Martin, 2025).

The theoretical novelty of this study is grounded in conceptualizing future play beyond a mere pedagogical technique, reframing it instead as a comprehensive paradigm for the simultaneous examination of learning, enculturation, identity formation, and child safety. Within this framework, future play emerges as a versatile mechanism that facilitates educational engagement and cultural immersion while serving as a protective buffer against digital vulnerabilities. To address previously identified scholarly gaps, this investigation explores the primary developmental trajectories of future play research alongside the prevailing thematic, theoretical, and methodological frameworks dominating the discourse. Furthermore, it examines how current literature articulates the role of future play in facilitating enculturation, ensuring child protection, and cultivating social values, thereby allowing this comprehensive review to yield three distinct scholarly contributions. It maps the field's development, clarifies its conceptual and methodological architecture, and offers a synthesized framework for curriculum innovation and child protection in the digital age (Cerezo-Pizarro et al., 2023; Hännikainen et al., 2013; Snyder, 2019). This also extends previous work on identity, subculture, and social learning in digital environments (Kristina & Achsan, 2024; Rahma & Fajar, 2022) while retaining the broader interdisciplinary insights already used in the manuscript (Gal & Gan, 2020; Glover, 2021; Smagorinsky, 2023; Ummayah et al., 2025). Therefore, this study not only describes the current state of the existing literature on this topic but also outlines a framework for future research and educational practices for children.

METHODS

This study uses a systematic literature review to examine trends, themes, theories, and methodologies concerning the future of play in relation to early childhood education, enculturation, and child protection (Lei et al., 2025). The research design was selected for its capacity to map literature development in a critical and replicable manner (Ikiz & Keskin, 2025; Nirmala et al., 2024; Snyder, 2019). To improve reporting transparency, the review was organized according to the PRISMA 2020 principles, particularly for the search, screening, eligibility, and inclusion stages (Page et al., 2021). First, a search strategy was conducted using Google Scholar's Publish or Perish interface to search for sources, while VOSviewer was used to support bibliometric mapping and keyword visualization. The search terms used were 'future play', 'digital play', 'game-based learning', 'gamification', 'child protection', 'enculturation', 'cultural identity', and 'early childhood education'. The searches were limited to journal articles published during 2020–2025. To improve the quality of the sources, the screened corpus was narrowed to peer-reviewed journal articles indexed in Scopus or SINTA 2, where applicable. Sources cited outside the corpus of 50 studies were only retained for conceptual and methodological framing, to preserve the original citation base of the manuscript.

To be included in the review, the selected literature was required to consist of fully accessible journal articles published between 2020 and 2025 that provided sufficient empirical, conceptual, or review data for comprehensive extraction. Furthermore, these sources needed a primary focus on subjects such as future and digital play, educational gamification, play-based enculturation and cultural identity, or child protection and well-being within early childhood and general educational contexts. Conversely, the selection process strictly excluded conference proceedings, editorials, books, book chapters, academic theses, and research situated

outside of educational or childhood settings, alongside any literature that merely made tangential references to games or digital media. To ensure robust methodological rigor, the retained full-text articles underwent a thorough quality appraisal based on established review practices, which evaluated their relevance to the core research inquiries, contextual and methodological clarity, data reporting adequacy, and the overall coherence of their findings and contributions (Alotaibi, 2024; Kumar et al., 2025; Montoya-Fernández et al., 2024). The selection process is summarized in Table 1.

Table 1. Study selection process

Stage	Description	Records
Identification	Using future play and related terms, records were retrieved through Google Scholar via Publish or Perish (2020–2025)	350
Excluded after title and abstract screening	Duplicates, non-journal outputs and out-of-period records were removed, as were those not directly relevant to early childhood, play, enculturation or child protection.	200
Full-text articles assessed for eligibility	It was assessed against indexing, relevance, and transparency criteria	150
Full-text excluded	Did not meet Scopus/SINTA 2, early-childhood, play-focus, or reporting criteria	100
Final inclusion	The studies included in the bibliometric and thematic synthesis	50

A total of 350 records were initially identified. Following title and abstract screening, 200 records were excluded as they were not sufficiently relevant to the topic. The remaining 150 full-text articles were then assessed for eligibility. Of these, 100 were excluded because they did not meet the indexing requirements, did not focus on early childhood or play, or lacked methodological transparency. The final sample, therefore, consisted of 50 articles. Data were extracted using a structured sheet capturing author, year, journal, context, study design, theoretical lens, major theme, principal findings, and implications for early childhood education. The analysis proceeded in two stages. First, bibliometric mapping was used to describe publication growth, recurring keywords, and thematic relations. Secondly, thematic synthesis grouped the included studies according to three research questions: (1) trends and directions of research, (2) dominant themes, theories, and methods, and (3) contributions to enculturation, child protection, and social value formation. This combined procedure enabled the study to retain descriptive breadth while also producing interpretive insights relevant to theory and practice.

RESULT AND DISCUSSION

The first research question concerned publication trends and the field's changing direction, to understand how these factors have influenced the field's development as a whole. A clear increase in publications is evident in the reviewed literature after 2021. Table 2 presents publication trends and changing research focus.

Table 2. Publication trend and changing research focus

Period	Number of articles	Dominant focus	Interpretive direction
2020-2021	12	Gamification, classroom motivation, and adaptation to digital learning	Future play is treated mainly as instructional support
2022-2023	18	Digital pedagogy, transmedia learning, participant	Future play begins to be understood as a broader socio-cultural practice
2024-2025	20	Identity, online safety, well-being, privacy, family meditation	Future play is positioned as a pedagogical, cultural, and protective ecology

As shown in Table 2, the number of articles increased from 12 in 2020-2021 to 18 in 2022-2023, and then to 20 in 2024-2025. This growth suggests that future play has become a more visible topic in the post-pandemic educational landscape, where digital learning environments, hybrid pedagogies, and online child participation have received stronger scholarly attention. The field's direction has also changed over time. Earlier studies in the review emphasized gamification and digital tools, and their direct effects on motivation and classroom engagement. In later publications, the focus broadened to include digital pedagogy, transmedia participation, identity formation, online safety, privacy, and parental mediation. This finding extends previous

reviews that highlighted the educational potential of digital play by showing that the recent literature no longer treats play only as a motivational technique; it increasingly understands play as a socio-cultural and ethical practice situated within wider digital ecologies (Chu et al., 2024; Sánchez-Caballé & Martínez, 2023). The themes analyzed across the 50 articles can be grouped into four broad categories. The initial theme encompasses the subject of digital games in education, comprising a total of 22 articles, including those addressing the application of gamification in the classroom setting (Jack et al., 2025; Junruang & Kanjug, 2025; Kuswandi & Fadhi, 2022; Lampropoulos & Sidiropoulos, 2024; Legaki et al., 2020; Oliveira et al., 2022; Wulansari & Wati, 2024) and about music learning with mobile applications (Pesek et al., 2020; Uludag, 2025). Second, the theme of enculturation and cultural identity, with 10 articles, for example, about fandom narratives in JRPGs (Wong, 2023) and a discussion of subcultures on TikTok (Santaolalla-Rueda & Muñoz, 2024), is warranted. Third, the theme of child protection and mental health, with 9 articles, including one on children with special needs (Chan, 2022; Malthaner et al., 2024; Tso et al., 2022) and another on anxiety caused by smartphones (Shuai et al., 2021). Fourth, the theme of theory and methodology, with nine articles on cultural-historical theory and bibliometric research on attribution. All of them show a balanced variation in the focus of the studies between the aspects of education, culture, child protection, and methodology. Themes and case studies are identified as in Figure 1.

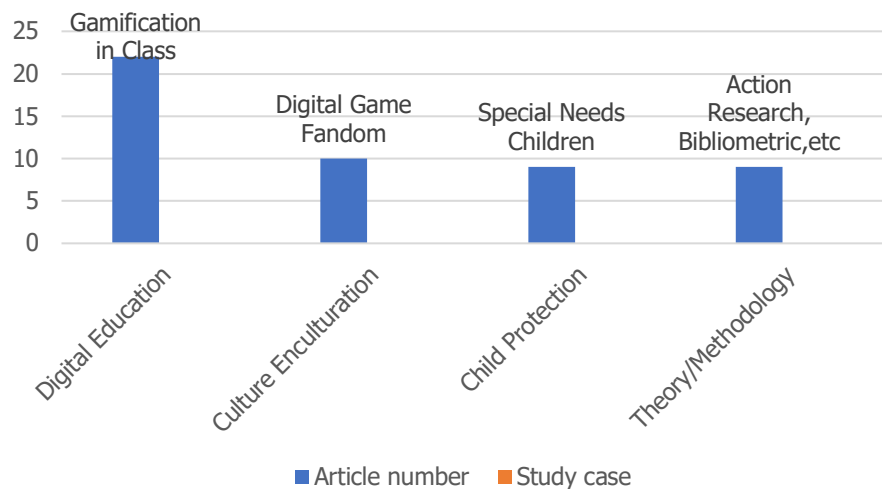


Figure 1. Identification of Themes and Case Studies

The thematic pattern suggests that future play is no longer reducible to a single educational intervention. Instead, it functions as a meeting point between pedagogy, culture, and governance. This is an important extension of earlier work that documented the educational and cultural effects of video games and transmedia learning, because the present review shows that these concerns are now increasingly integrated within early childhood scholarship rather than discussed in separate disciplinary silos (Cerezo-Pizarro et al., 2023; Sánchez-Caballé & Martínez, 2023). Table 3 displays the main thematic clusters in the reviewed literature.

Table 3. Main thematic clusters in the reviewed literature

Cluster	n	Representative focus	Interpretive note
Digital play in education	22	Gamification, classroom integration, mobile learning, AR, interactive learning	Dominant cluster emphasizing engagement, participation, and learning design
Enculturation and identity	10	Fandom, transmedia, digital culture, identity, belonging	Shows that play supports cultural participation and social meaning-making
Child protection and mental well-being	9	Online safety, privacy, addiction risk, parental mediation, support special needs children	Positions future play as part of safeguarding and well-being ecologies.
Theory and methodology development	9	Cultural-historical theory, bibliometric mapping, and review methods	Indicates conceptual consolidation and methodological maturation

In terms of theory, the literature was dominated by cultural-historical perspectives, followed by subcultural and identity-based perspectives and, to a lesser extent, media equation or human-technology

interaction perspectives. The predominance of cultural-historical theory is significant because it positions play as a socially mediated process shaped by tools, interaction, and cultural meanings rather than by individual cognition alone. This theoretical pattern helps explain why future play studies increasingly address identity, belonging, and participation, not only performance outcomes. Methodologically, the field was heterogeneous. Qualitative case studies, interviews, and classroom-based observations were common where researchers sought to understand children's situated participation and teacher mediation. Surveys and experiments were more frequent in studies that measured engagement, addiction tendencies, or digital habits. Bibliometric and review studies, meanwhile, played an important role in mapping the field and clarifying its conceptual boundaries. This combination shows that future play has matured into a research area with both empirical and synthetic strands, but it also indicates that the field still needs more longitudinal and cross-contextual studies to connect short-term observations with sustained developmental outcomes. The dominant theoretical and methodological patterns are presented in Table 4.

Table 4. Dominant theoretical and methodological patterns

Dimension	Cultural-historical theory	Significance for interpretation
Theoretical frame	Cultural-historical theory	Play is interpreted as a socially mediated practice shaped by tools, interaction, and cultural meanings.
	Subcultural and identity perspectives	It is useful for explaining belonging, fandom, gendered identities, and participation in digital cultures.
	Media equation / human-technology interaction	It supports analysis of interface response, engagement, feedback, and affective immersion.
Methodological tendency	Survey and experiment	It can be used to trace motivation, engagement, digital habits, and risk-related patterns.
	Bibliometric and review studies	It can map emerging agendas and identify conceptual fragmentation or consolidation.

The factor analysis revealed that the dimensions of future play protection are mental health, identity security, digital inclusion, and family support. These factors were identified through research that employed large-scale surveys, interviews with parents and teachers, and observations of inclusive and digital learning environments. Most articles discuss the effectiveness of future play in alleviating children's stress, enhancing family engagement, facilitating children's adaptation to social changes, and protecting children's rights in digital educational settings. Overall, the analysis results show a strong relationship between future play and cognitive, social, and protective processes. Future play takes place in flexible, adaptive, and inclusive educational spaces that combine play experiences with technology, local values and culture, and cutting-edge pedagogical practices. This is evident in the literature review synthesis presented in Figure 2.

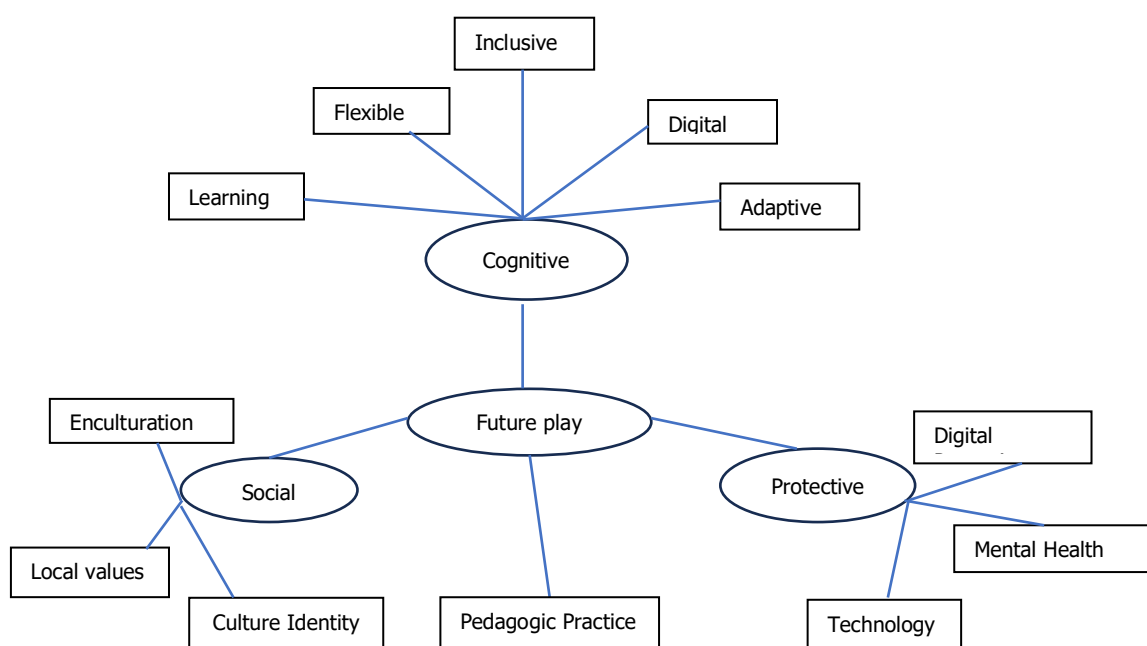


Figure 2. Future Play Conceptual Framework

Future play contributes to enculturation, child protection, and social value formation by functioning not only as a learning medium but also as a socio-cultural ecosystem that shapes children's identities, values, and relationships within digitally mediated environments. In this ecosystem, play operates as a cultural interface that blurs the boundaries between physical and digital spaces, while involving children and caregivers in processes that shape appropriate behavior, valued competencies, and desired identities (Arnott & Yelland, 2020; Chen et al., 2024; Gee, 2007; Marsh et al., 2019; Pangrazio & Sefton-Green, 2022; Squire, 2011). Because of this, future play should be understood as an intersection of pedagogical design, cultural learning, and digital governance rather than merely as a technical instructional tool (Edwards et al., 2025; Gui et al., 2023; Ishak & Hasran, 2023; Lin et al., 2024; Zhang, 2025). From an enculturation perspective, the literature shows that future play is an important pathway through which children encounter cultural narratives, symbolic roles, and forms of belonging. Digital play, storytelling, and transmedia participation allow children not only to consume content but also to rehearse identities, negotiate meaning, and engage in the cultural practices of their communities. This extends the interpretation of play from developmental activity to cultural participation. The evidence reviewed supports the idea that future play is one way early childhood education can connect local values, digital culture, and children's developing identities (Cerezo-Pizarro et al., 2023; Poyntz & Hoechsmann, 2011; Sánchez-Caballé & Martinez, 2023).

The child-protection contribution is equally important. The reviewed literature suggests that future play becomes protective when it is supported by adult mediation, age-appropriate digital competence, privacy awareness, and clear routines for safer participation. Studies on online harm and problematic digital use indicate that young children are vulnerable to risks long before adolescence, suggesting that protection cannot be postponed until adolescence (Gath & Swit, 2024). Likewise, studies on parental mediation show that restrictive, active, and supportive guidance are all associated with healthier digital routines and lower tendencies toward addiction among young children (Çalhan & Göksu, 2024; Işkoğlu et al., 2025). These findings strengthen the argument that future play should be designed within a family-school co-regulation framework rather than as a child-only activity. The review also highlights the role of social value formation. Inclusion, collaboration, empathy, and responsible participation emerged repeatedly in studies linking digital play to classroom interaction and digital competence. In this respect, future play can contribute to rights-based education by creating environments where children learn to participate safely, respectfully, and creatively in both digital and non-digital communities. The emphasis on digital competence in early childhood education reinforces this point: children need opportunities to become not only technology users, but also thoughtful, ethical, and socially aware participants (Li et al., 2025; Masoumi & Bourbour, 2024). At the same time, the findings caution against reducing future play to a purely instrumental system of rewards, monitoring, and behavioral compliance. When play is designed only to maximize engagement or screen exposure, it may weaken the very autonomy, imagination, and relational care that make play educationally powerful. The contribution of future play is therefore strongest when pedagogy, enculturation, and protection are designed together. Future play should be understood as an educational ecology that integrates learning, cultural mediation, and child safeguarding within a single framework. Table 5 synthesizes these contributions.

Table 5. Integrated contributions of future play in early childhood education

Dimension	Key Contribution	Implication for Practice
Learning and Motivation	Strengthens engagement, participation, feedback, and learning outcomes	It can use play-based digital activities as structured but flexible pedagogy
Enculturation and identity	Supports cultural participation, narrative role-taking, and identity exploration	It connects digital play with local values, storytelling, and reflective dialogue.
Child protection	Develops privacy awareness, adult mediation, safer routines, and digital well-being	It embeds age-appropriate supervision and privacy-preserving design.
Social value formation	Promotes inclusion, collaboration, empathy, and family-school co-regulation	It treats future play as a shared social ecology rather than an individual screen activity.

CONCLUSION

This systematic literature review demonstrates that *future play* has consolidated into a multidimensional paradigm in early childhood education, operating at the intersection of learning, enculturation, and child protection. Across the reviewed evidence base, the core results indicate a sustained expansion of scholarship from primarily instructional applications of gamification toward broader socio-cultural and safeguarding concerns, with thematic clusters emphasizing digital play in education, cultural identity and enculturation processes, child protection and well-being, and theory–methodology consolidation. The discussion further

clarifies that the educational promise of *future play* is inseparable from the ethics of visibility and governance within digitally mediated environments, where well-being agendas may converge with surveillance capacities. The findings also suggest that enculturation and identity work unfold through relational and cultural mechanisms, including epistemic trust and worldview negotiation, and that protective outcomes depend on culturally situated caregiver mediation and family–school co-regulation. By integrating trend mapping with thematic and protection-oriented synthesis, this study contributes to the body of knowledge by reframing *future play* as an ecosystem-level construct that must be evaluated for developmental value, cultural effects, and safeguarding implications simultaneously, rather than as a narrowly technical instructional tool. Future research should prioritize longitudinal designs, culturally diverse contexts, and design-sensitive evaluations that distinguish supportive scaffolding from coercive control, including privacy-preserving approaches to child protection in digital play ecologies.

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