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Orchestrating Digital Technology and Child-Centered Pedagogy: Management Strategies for Mindful, Meaningful, and Joyful Learning in Early Childhood Education

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Abstract: This study aims to investigate management practices in early childhood education that promote attentive, meaningful, and joyful learning in the digital age. A qualitative approach with a case study design was employed. Data were collected through semi-structured interviews, participatory observation, and document analysis. The participants were the principal and teachers of a kindergarten in Palopo City, Indonesia, selected through purposive sampling due to their direct involvement in planning, managing, and implementing learning processes. Data were analyzed using the interactive model of Miles, Huberman, and Saldaña, which involves data condensation, data display, and conclusion drawing/verification. The findings reveal that digital technology is used selectively as a pedagogical supplement rather than as the primary mode of instruction. Mindful learning is reflected in teachers' preparedness, attentiveness, and responsiveness to classroom conditions. Meaningful learning is fostered through contextual and experience-based activities that connect learning content with children's daily lives. Joyful learning is supported through play-based, multimodal, and emotionally supportive classroom practices. In addition, school management plays a strategic role through instructional planning, provision of digital facilities, teacher scheduling, professional development, and ongoing supervision. This study argues that effective early childhood education management in the digital era depends not on the intensity of technology use, but on the institution's ability to integrate technology, pedagogy, and child-centered interaction in a coherent and developmentally appropriate manner.

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Introduction

All stages of education, especially early childhood education (ECE), have been greatly impacted by the quick growth of digital technology (Blackwell, C. K., Lauricella, A. R., & Wartella, E. 2014). Young children are increasingly exposed to digital media in modern learning environments, both at home and at school. This requirement pushes educational establishments to preserve developmentally appropriate learning concepts while adjusting to digital transformation (Blyznyuk et al., 2025; Li et al., 2024; Su & Yang, 2023; Su as al., 2022; Väëäjä & Ruokamo, 2021). However, as children learn best via play, direct connection, and tangible experiences, the use of technology in early childhood settings necessitates rigors pedagogical evaluation. Recent research suggests that technology usage in early childhood education should be limited, guided, and balanced with social engagement and hands-on learning experiences (Hirsh-Pasek et al., 2015; Zosh et al., 2017). Recent evaluations also emphasise the need of considering children's digital well-being, purposeful play, and pedagogically supported digital media use rather than just screen exposure (Cao & Li, 2023; Chu et al., 2024; Donehower Paul et al., 2023; Oades-Sese et al., 2021). When digital devices

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are utilised without pedagogical control, they might limit opportunities for meaningful engagement and social-emotional development. As a result, the task for school administrators is not simply to provide digital facilities, but also to ensure that technology is integrated in ways that promote children's overall development.

In this context, the concepts of mindful, meaningful, and joyful learning provide valuable instructional frameworks. Mindful learning is defined as learning done with awareness, alertness, and sensitivity to the present moment (Andayanie, L. M., Adhantoro, M. S., Purnomo, E., & Kurniaji, G. T., 2025; Diputera et al., 2024). Meaningful learning focuses on contextual understanding and the relationship between new knowledge and children's living experiences (Rogoff, Dahl, & Callanan, 2018; Widyastuti et al., 2025). Joyful learning emphasises emotional engagement, playfulness, and a good classroom environment that encourages students to actively participate (Eriani et al., 2025; Sun, Y., Zhou, G., & Deng, X., 2024). These three elements are especially essential in early childhood education because they prioritise children's developmental needs in instructional practice.

Despite the growing importance of these concepts, limited research has examined how school management strategies systematically support mindful, meaningful, and joyful learning in the digital era, especially in early childhood institutions that operate within local Indonesian contexts (Kangas, M., Siklander, P., Randolph, J., & Ruokamo, H., 2017). The Indonesian context is significant not merely because it is underrepresented in the literature, but because many early childhood institutions are required to negotiate digital adoption within uneven access to infrastructure, limited teacher training opportunities, and strong cultural expectations that young children should learn through care, play, religious habituation, and direct social interaction. TK ABA 2 in Palopo offers an important case because it has begun integrating digital media such as Smart TV, YouTube-based learning materials, Android-based games, and Wi-Fi while still emphasizing child-centered, play-based, and contextual learning. This combination makes the school analytically useful for understanding how digital transformation can be managed without weakening the humanistic and developmental foundations of ECE. Existing discussions often focus either on digital learning or on pedagogy, without sufficiently examining how both are integrated through educational management (Blayone, T. J., vanOostveen, R., Barber, W., DiGiuseppe, M., & Childs, E., 2017). Recent leadership studies show that pedagogical leadership, distributed leadership, and leader-supported professional development are crucial for quality improvement in early childhood settings (Fonsén et al., 2022; Junaedi et al., 2023; Lähdesmäki et al., 2023; Movahedazarhouligh et al., 2021). This study addresses that gap by examining how TK ABA 2 in Palopo manages learning practices to support child-centered education in the digital era. Accordingly, this study aims to examine the management strategies implemented in TK ABA 2 in Palopo to enhance mindful, meaningful, and joyful learning in the digital era. It also seeks to show how school management functions as a strategic driver in balancing technology integration with humanistic and developmentally appropriate learning practices.

Research Method

This study employed a qualitative approach using a case study design. The case study design was selected because it allows an in-depth exploration of complex educational phenomena within their real-life context, particularly when the boundaries between the phenomenon and the context are not clearly defined (Yin, 2018). The investigation was conducted at TK ABA 2 in Palopo, Indonesia. The site was selected purposively because the school had begun to incorporate digital learning practices through Smart TV, YouTube-based

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materials, Android-based games, and Wi-Fi while maintaining a strong commitment to child-centered instruction, play-based activity, and contextual learning materials. This combination made the school a relevant case for examining how an early childhood institution manages the balance between digital innovation and developmentally appropriate pedagogy. Participants were selected through purposive sampling because of their direct involvement in planning, managing, and implementing classroom learning. The principal was responsible for instructional planning, facility provision, teacher scheduling, supervision, and evaluation. The first teacher contributed information about daily lesson planning, contextual learning materials, classroom routines, and children's engagement. The second teacher provided information about the use of music, movement, digital media, games, and strategies for maintaining children's attention and joyful participation. These participant profiles provided sufficiently rich information about managerial practices, classroom implementation, and digital media integration in early childhood learning.

Data were gathered through semi-structured interviews, participatory observation, and documentation. First, semi-structured interviews were conducted with the principal and teachers to explore their thoughts on classroom planning, technological integration, mindful learning, meaningful learning, joyful learning, and school management strategies. The interview method allowed the researcher to probe emerging themes and obtain detailed accounts of pedagogical and managerial practices.cSecond, participatory observation was used out to examine classroom interactions, the use of digital media, teacher response, and the overall learning environment. This approach enabled the researcher to capture naturalistic learning practices as they occurred in the school setting. Third, documentation was used to support and validate the interview and observation findings. The documents included lesson plans such as RPPH and RPPM, photographs of classroom activities, and records of digital media use during instruction.

Data were analyzed using the interactive model of Miles, Huberman, and Saldaña (2014), which includes three concurrent processes: data condensation, data display, and conclusion drawing/verification. Data condensation involved selecting, simplifying, and organizing data from interview transcripts, observation notes, and documentation. Data display involved arranging the data into thematic categories and narrative descriptions to facilitate interpretation. Conclusion drawing and verification involved identifying recurring patterns, relationships, and themes, followed by continuous checking of the evidence to ensure the validity of interpretations. The analysis was conducted iteratively throughout the research process.

For assuring the trustworthiness of the study, few strategies were employed. First, triangulation was implemented by comparing evidence from interviews, observations, and documents. Second, prolonged engagement in the field enabled the researcher to gain a deeper understanding of the school context. Third, member checking was used by confirming important findings with participants. Fourth, peer debriefing was conducted to minimize researcher bias and strengthen interpretive rigor. Ethical principles were followed throughout the investigation. Participants were informed about the purpose of the research and gave their consent prior to data collection. Confidentiality and anonymity were maintained by using data codes in reporting the findings. All research data were stored securely and used only for academic purposes.

Results and Discussion

Selective and Purposeful Technology Integration in Early Childhood Learning

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The findings reveal that digital technology at TK ABA 2 is viewed as a supplementary pedagogical resource rather than as the dominant mode of instruction. This viewpoint is evident in both school management and daily classroom practice. The principal explained, "We prepared supporting media such as Smart TV and Wi-Fi so that teachers can use digital media for learning" (KP.1). She also stated that all teachers were able to use Smart TV in their teaching (KP.3), while the school addressed limited facilities by organizing a usage schedule and sending teachers to training on video production and Canva (KP.2; KP.5). This indicates that digital integration is not incidental; rather, it is institutionally planned and supported through infrastructure, scheduling, and capacity building.

Observation findings support this pattern. RPPH and RPPM were thoroughly documented and already contained digital learning components, especially the use of Smart TV and YouTube videos for singing, play activities, and tahfidz programs. These planning documents also reflected mindful, meaningful, and joyful learning elements (01.PP). In classroom implementation, teachers used Smart TV and YouTube videos as part of play, singing, and memorization exercises (02.PeP). Observation also recorded the use of Android-based digital games alongside videos (07.DG). Documentation further showed the teacher using Smart TV during tahfidz and interactive class activities.

These findings indicate that the school uses a guided and selective digital pedagogy. Technology is not designed to substitute teacher engagement; rather, it is utilized to enhance learning episodes that remain centered on teacher mediation, child participation, and concrete experience. This finding is consistent with the idea of guided digital interaction in early childhood education, where technology becomes beneficial when it is pedagogically framed and balanced with human interaction (Plowman et al., 2010). It also supports the view that digital tools in early childhood settings should serve meaningful learning goals rather than become ends in themselves (Hirsh-Pasek et al., 2015). More recent scholarship similarly emphasizes that digital technology in ECE is most effective when it is integrated through play-based, collaborative, and teacher-guided practices that preserve children's agency and interaction (Li et al., 2024; Lim & Wardrip, 2024; Nolan & Moore, 2024; Pan et al., 2021; Studhalter et al., 2024).

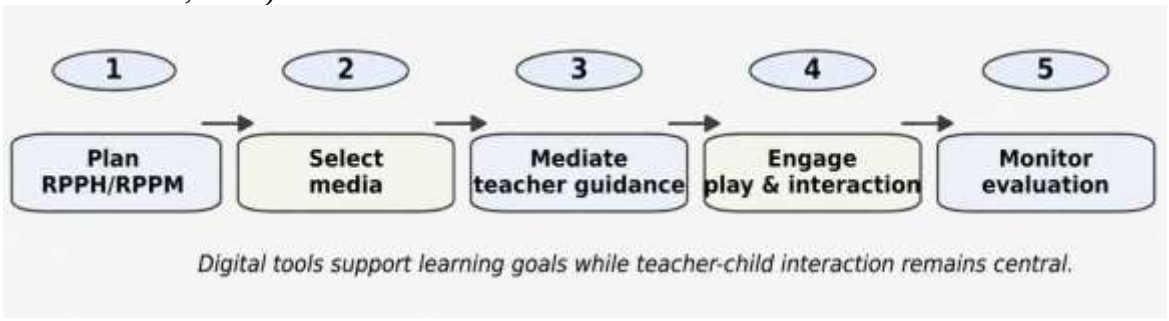

Figure 1. Guided and Selective Digital Technology Integration Process

Mindful Learning in Classroom Practice

Mindful learning in TK ABA 2 is reflected in teachers' preparedness, attentiveness, and responsiveness to children during the learning process. Teacher 1 emphasized that teaching is always preceded by structured planning: *"We prepare annual plans, weekly programs, and daily lesson plans so that what we do is truly in accordance with the plan"* (G1:01). Teacher 2 confirmed the same pattern by stating that planning was conducted on a daily, weekly, semester, and annual basis (G2:01). This shows that mindfulness in this context is not only about awareness during classroom interaction, but also about careful preparation before instruction takes place. Mindful learning also appears in teachers' efforts to ensure children's presence and focus in class. Teacher 1 explained, *"We have to make sure*

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that children really pay attention to the learning. Usually, we do innovations such as saying 'attention' and the students answer 'ready'" (G1:02). Teacher 2 similarly stressed the need for creativity to maintain children's focus and described the use of games, Smart TV, songs, and music as practical strategies (G2:02; G2:03). She added, *"When we play music that invites children to dance and move, they do not get bored and can focus again. They also become happier"* (G2:04).

Observation data support these interview statements. Teachers were observed showing high enthusiasm during instruction and responding when children needed additional attention, while the classroom setting itself supported concentration because partitions reduced noise from adjacent classes (03.ML). These findings indicate that mindful learning in early childhood is relational and environmental at the same time: it depends on the teacher's pedagogical presence as well as on a classroom ecology that helps children remain calm and focused. This finding supports the argument that teacher mindfulness contributes to positive classroom climate and more responsive teacher-student interaction (Schonert-Reichl, 2017). In this study, however, mindful learning is also shown to be institutionally reinforced through planning routines and organized classroom arrangements. This interpretation is consistent with recent discussions of deep learning and mindful pedagogy that frame teacher attentiveness, reflection, and adaptive instruction as important conditions for holistic learning experiences (Andayanie et al., 2025; Diputera et al., 2024; Widyastuti et al., 2025).

Meaningful Learning through Contextual and Experience-Based Activities

Meaningful learning in this study is grounded in contextual and experience-based activities that connect lesson content to children's immediate environment. Teacher 1 explicitly stated that learning should be contextual and adjusted to the child's world (G1:03). She explained, *"If the theme is plants, then we choose flowers that are around the school"* (G1:04). In another response, she said, *"We use stones or soil as learning media, so the materials are not unfamiliar to the children"* (G1:05). This demonstrates that meaningful learning is developed through familiarity, relevance, and lived experience rather than through abstract instruction. Observation findings confirm the same pattern. Teachers were seen linking learning to children's real experiences by using flowers, stones, and leaves from around the school as learning materials (04.MeL). In addition, learning was connected to daily routines such as waking up in the morning and having breakfast (04.MeL). These practices suggest that children construct meaning more effectively when the lesson is tied to objects, activities, and experiences they already recognize.

Analytically, this contextual orientation is consistent with constructivist and experiential approaches, which emphasize that knowledge is built through interaction with meaningful contexts rather than passively transmitted to learners (Fosnot, 2005; Kolb, 2015). The significance of this finding lies in the fact that contextual learning at TK ABA 2 was not merely spontaneous; it was evident in both teacher narratives and documented planning. Thus, meaningful learning appears as a deliberate pedagogical strategy supported by school management through the design of flexible and context-sensitive instruction. This is also aligned with recent studies that highlight meaningful learning as an intentional connection between content, prior experience, local context, and active participation (Eriani et al., 2025; Widyastuti et al., 2025).

Joyful Learning and Emotional Engagement

Joyful learning emerged as a central feature of classroom practice at TK ABA 2. Teacher 1 clearly affirmed that children should feel happy while learning: *"Of course"* (G1:07). She explained that to maintain this condition, teachers provide activities suited to children's characteristics, especially through play, singing, and guessing games (G1:08). She

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also noted that digital media are included in this joyful atmosphere: *"We have a Smart TV connected to digital materials. We use YouTube programs, so children learn using both traditional and digital media"* (G1:09). Observation data strongly support this account. Teachers were seen using a variety of media to maintain a pleasant classroom atmosphere, including picture media, blocks, and digital videos shown through Smart TV (05.JL). Another observation found that Smart TV and YouTube videos were used during singing and play activities (02.PeP), while documentation showed children playing and singing as they interacted with digital video content. These dataindicate that joyful learning was expressed through multimodal experiences in which children could move, sing, play, and observe at the same time.

This finding is important because it shows that emotional engagement in early childhood learning can be cultivated through the balanced use of conventional and digital media. Joy is not created by digital technology alone; rather, it emerges from the teacher's ability to orchestrate media, movement, interaction, and play into a coherent learning experience. This supports the broader argument that emotion is central to learning, not peripheral to it (Immordino-Yang, 2015). In the context of this study, joyful learning is therefore best understood as a pedagogical atmosphere that sustains participation, motivation, and emotional security. This view is supported by recent evidence that digital play, social-emotional media interventions, and joyful learning designs can strengthen engagement when guided by teachers and embedded in developmentally appropriate activities (Chu et al., 2024; Eriani et al., 2025; Oades-Sese et al., 2021).

The Strategic Role of School Management

Across all themes, school management emerged as the key organizing force that enabled mindful, meaningful, and joyful learning to operate coherently. The principal reported that the school had prepared digital infrastructure such as Smart TV and Wi-Fi (KP.1), organized teacher schedules for access to technology (KP.2), ensured teachers' ability to use Smart TV in classroom instruction (KP.3), and conducted regular monitoring and evaluation through learning evaluation meetings (KP.4). When limitations in facilities were encountered, the school responded by arranging shared use of available resources and strengthening teacher competence through digital-related training (KP.5). Observation findings reinforce this conclusion. Learning time was well planned and classroom space was well organized (06.MK). The principal also conducted regular and incidental monitoring to ensure that learning was implemented in accordance with planning and reflected mindful, meaningful, and joyful principles (08.PKS). Moreover, the presence of properly documented RPPH and RPPM (01.PP) suggests that management support was translated into formal planning instruments that guided daily classroom practice.

Theoretically, these findings align with the concept of instructional leadership, which emphasizes the principal's role in improving teaching and learning quality (Hallinger, 2003). However, this study suggests a broader and more integrated role for school management in early childhood education. The principal does not merely supervise performance, but actively orchestrates the conditions under which technology remains supportive, contextual learning remains grounded in children's experiences, and joyful interaction remains central to classroom life. In this sense, school management becomes the institutional mechanism that aligns digital adaptation with a humanistic pedagogical orientation. This interpretation is strengthened by recent studies showing that ECE leaders support quality learning through pedagogical leadership, partnership building, teacher professional development, and instructional supervision (Fonsén et al., 2022; Junaedi et al., 2023; Lähdesmäki et al., 2023; Larosa et al., 2025; Movahedazarhouligh et al., 2021).

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Integrated Interpretation of Findings

Taken together, the findings suggest that management strategies in TK ABA 2 do not treat mindful, meaningful, and joyful learning as separate pedagogical components. Rather, these dimensions are interdependent and mutually reinforcing. Mindful learning is strengthened through intentional planning and responsive teaching; meaningful learning is sustained through contextual and experience-based activities; joyful learning is cultivated through playful and multimodal interaction; and all three are supported by selective digital integration and continuous school management. This integrated pattern is especially important in the digital era. The study indicates that effective early childhood management does not require technology to dominate the classroom. Instead, it requires management to ensure that digital tools are pedagogically guided, developmentally appropriate, and balanced with direct interaction, contextual materials, and joyful experiences. Therefore, the contribution of this study lies in showing that successful educational management in early childhood settings is not measured by the intensity of technology use, but by the school's ability to orchestrate technology, teacher responsiveness, contextual learning, and emotional engagement into a coherent and child-centered learning ecology. This position resonates with recent models of digital pedagogy that treat technology integration as a spectrum of pedagogical choices rather than a single uniform practice (Li et al., 2024; Lim & Wardrip, 2024; Su & Yang, 2023; Väätäjä & Ruokamo, 2021).

Conceptual Model

Figure 2. Thematic Relationship Map of the Study Findings

The conceptual model shown in Figure 2 should be read as a set of dynamic relationships rather than as a static list of components. The first directional relationship moves from school management to technology integration: planning, facility provision, scheduling, teacher development, supervision, and evaluation determine whether digital tools are used selectively or allowed to dominate classroom activity. The second relationship moves from technology integration to the three pedagogical dimensions: when mediated by teachers, Smart TV, YouTube, digital games, and Wi-Fi can support attention, contextualization, and emotional engagement. The third relationship moves from mindful, meaningful, and joyful learning back to management through evaluation and reflection, because classroom responses provide feedback for adjusting schedules, learning media, teacher support, and supervision.

This model also shows a reciprocal relationship among the three learning dimensions. Mindful learning regulates children's attention and teacher responsiveness; meaningful learning ensures that digital and non-digital materials remain connected to children's everyday experiences; and joyful learning sustains motivation through play, movement, music, and emotionally supportive interaction. When one dimension weakens, the others are

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affected. For example, excessive screen stimulation may reduce mindfulness, while weak contextualization may make joyful activities entertaining but less educational. Therefore, the arrows in the model emphasize continuous orchestration: management guides technology use, technology supports pedagogical interaction, classroom realities generate feedback, and feedback informs subsequent managerial decisions. (Andayanie et al., 2025; Diputera et al., 2024; Eriani et al., 2025; Widyastuti et al., 2025).

Table 1. Conceptual Model

Core Component	Sub-Component	Function in Learning	Impact
School Management	Supervision, scheduling, training, monitoring	Ensures quality implementation and pedagogical coherence	Consistency and sustainability of practice
Technology Integration	Smart TV, YouTube, digital games, Wi-Fi	Supports stimulation, variation, and engagement	Increased attention and learning interest
Mindful Learning	Teacher preparedness, attentiveness, responsiveness	Builds focus, emotional security, and quality interaction	Better concentration and classroom regulation
Meaningful Learning	Contextual materials and real-life experiences	Connects learning to children's environment and routines	Deeper understanding and knowledge retention
Joyful Learning	Play, singing, games, multimodal interaction	Creates positive emotional engagement	Increased participation and learning motivation

Based on the findings, the conceptual model of this study positions school management as the core driver that integrates technology use with mindful, meaningful, and joyful learning. Through supervision, planning, scheduling, and teacher development, management ensures that digital innovation remains aligned with child-centered pedagogy. In turn, this alignment creates a learning ecology that supports cognitive, emotional, and social development in early childhood education.

Conclusion

This study concludes that effective management strategies in early childhood education require a balanced integration of technology and humanistic learning approaches. At TK ABA 2 in Palopo, digital media are used selectively and purposefully as pedagogical supports rather than as dominant instructional tools. Mindful learning is reflected in teachers' awareness, preparation, and responsiveness to classroom conditions. Meaningful learning is constructed through contextual and experience-based activities that connect learning content to children's daily lives. Joyful learning is fostered through play-based, interactive, and emotionally supportive classroom experiences. The study also shows that these practices are not implemented without difficulty; limited facilities, fluctuating attention, and the risk of screen overstimulation require teachers and school leaders to regulate technology use carefully.

The study demonstrates that school management plays a central role in orchestrating these dimensions through instructional planning, facility provision, teacher scheduling, professional development, supervision, and reflective evaluation. Therefore, the success of learning in the digital era depends not merely on access to technology, but on the school's capacity to manage technology in ways that remain developmentally appropriate,

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pedagogically intentional, and emotionally supportive for young children. The implication of this study is that early childhood institutions should treat digital transformation as a pedagogical and managerial process, not simply as the procurement of digital devices. School leaders must ensure that digital media strengthen, rather than replace, teacher-child interaction, contextual experience, and joyful participation.

Recommendation

First, kindergarten leaders should develop clear internal guidelines for selective and developmentally appropriate technology use. These guidelines should include scheduling for shared digital facilities, criteria for selecting digital content, limits on screen duration, supervision mechanisms, and reflective evaluation meetings that discuss both successful practices and classroom challenges. Leaders should also provide continuous professional development so that teachers can design digital materials that support play, movement, local context, and child-centered interaction.

Second, teachers should use digital media as a bridge to concrete, social, and experiential learning rather than as a replacement for direct interaction. YouTube videos, Smart TV, and digital games should be accompanied by questioning, singing, movement, manipulation of real objects, and follow-up activities that connect learning to children's daily lives. Teachers also need practical strategies for managing overstimulation, such as pausing videos, using breathing or call-and-response routines, shifting to non-digital play, and providing individual attention when children lose focus.

Third, policy makers should support early childhood institutions by providing equitable access to basic digital infrastructure, context-sensitive training, and supervision models that emphasize pedagogical quality rather than the mere presence of digital devices. Policies on digital learning in ECE should acknowledge differences in local resources and should promote balanced standards that protect children's well-being, social interaction, and play-based learning.

Fourth, future researchers should examine similar management strategies across multiple early childhood institutions with different levels of digital infrastructure. Further studies may include parents, school committee members, and children as additional perspectives, use longer observation periods, and compare schools in urban, semi-urban, and rural settings. Future research should also explore negative cases in greater depth, including children's resistance to stopping screen activities, teachers' workload in preparing digital materials, and institutional strategies for maintaining mindful, meaningful, and joyful learning during technological or classroom disruptions.

References

Andayanie, L. M., Adhantoro, M. S., Purnomo, E., & Kurniaji, G. T. (2025). Implementation of deep learning in education: Towards mindful, meaningful, and joyful learning experiences. Journal of Deep Learning, 47–56. https://doi.org/10.23917/jdl.v1i1.11157

Blackwell, C. K., Lauricella, A. R., & Wartella, E. (2014). Factors influencing digital technology use in early childhood education. Computers & Education, 77, 82–90. https://doi.org/10.1016/j.compedu.2014.04.013

Blayone, T. J., vanOostveen, R., Barber, W., DiGiuseppe, M., & Childs, E. (2017). Democratizing digital learning: Theorizing the fully online learning community model. International Journal of Educational Technology in Higher Education, 14(1), Article 13. https://doi.org/10.1186/s41239-017-0051-4

Vol. 12, No. 2 : June 2026
E-ISSN: 2442-7667
pp. 948-959
Email: jklppm@undikma.ac.id

Blyznyuk, O., Kachak, T., Blyznyuk, T., & Nazaruk, S. K. (2025). Quality education in the digital age: Adapting to 21st century primary school learners. Journal of Vasyl Stefanyk Precarpathian National University, 12(1), 58–68. https://doi.org/10.15330/jpnu.12.1.58-68

Cao, S., & Li, H. (2023). A scoping review of digital well-being in early childhood: Definitions, measurements, contributors, and interventions. International Journal of Environmental Research and Public Health, 20(4), 3510. https://doi.org/10.3390/ijerph20043510

Chu, C., Paatsch, L., Kervin, L., & Edwards, S. (2024). Digital play in the early years: A systematic review. International Journal of Child-Computer Interaction, 40, Article 100652. https://doi.org/10.1016/j.ijcci.2024.100652

Diputera, A. M., Zulpan, & Eza, G. N. (2024). Memahami konsep pendekatan deep learning dalam pembelajaran anak usia dini yang meaningful, mindful dan joyful: Kajian melalui filsafat pendidikan. Jurnal Bunga Rampai Usia Emas, 10(2), 1–12.

Donehower Paul, C., Hansen, S. G., Marelle, C., & Wright, M. (2023). Incorporating technology into instruction in early childhood classrooms: A systematic review. Advances in Neurodevelopmental Disorders. https://doi.org/10.1007/s41252-023-00316-7

Eriani, E., Pratiwi, N., Mastuinda, & Siswanto, I. (2025). Fostering deep learning in early childhood education through traditional games: Joyful, meaningful, and mindful learning. JOYCED: Journal of Early Childhood Education, 5(2). https://doi.org/10.14421/joyced.2025.52-01

Fonsén, E., Szecsi, T., Kupila, P., Liinamaa, T., Halpern, C., & Repo, M. (2022). Teachers' pedagogical leadership in early childhood education. Educational Research, 65(1), 1–23. https://doi.org/10.1080/00131881.2022.2147855

Fosnot, C. T. (Ed.). (2005). Constructivism: Theory, perspectives, and practice (2nd ed.). Teachers College Press.

Hallinger, P. (2003). Leading educational change: Reflections on the practice of instructional and transformational leadership. Cambridge Journal of Education, 33(3), 329–352. https://doi.org/10.1080/0305764032000122005

Hirsh-Pasek, K., Zosh, J. M., Golinkoff, R. M., Gray, J. H., Robb, M. B., & Kaufman, J. (2015). Putting education in "educational" apps: Lessons from the science of learning. Psychological Science in the Public Interest, 16(1), 3–34. https://doi.org/10.1177/1529100615569721

Immordino-Yang, M. H. (2015). Emotions, learning, and the brain: Exploring the educational implications of affective neuroscience. W. W. Norton & Company.

Junaedi, E., Suherman, S., & Syarifudin, E. (2023). The relationship between transformational leadership and building partnerships on the performance of early childhood education principals. Indonesian Journal of Early Childhood Education Studies, 12(1). https://doi.org/10.15294/ijeces.v12i1.66287

Kangas, M., Siklander, P., Randolph, J., & Ruokamo, H. (2017). Teachers' engagement and students' satisfaction with a playful learning environment. Teaching and Teacher Education, 63, 274–284. https://doi.org/10.1016/j.tate.2016.12.018

Kolb, D. A. (2015). Experiential learning: Experience as the source of learning and development (2nd ed.). Pearson Education.

Larosa, R., Formen, A., & Diana. (2025). The principal's instructional leadership on the professionalism and self-efficacy of early childhood education teachers. Jurnal Ilmiah Pendidikan Profesi Guru, 8(2). https://doi.org/10.23887/jippg.v8i2.102828

Vol. 12, No. 2 : June 2026
E-ISSN: 2442-7667
pp. 948-959
Email: jklppm@undikma.ac.id

Li, H., He, H., Luo, W., & Li, H. (2024). Early childhood digital pedagogy: A scoping review of its practices, profiles, and predictors. Early Childhood Education Journal. https://doi.org/10.1007/s10643-024-01804-8

Lim, J., & Wardrip, P. (2024). Technology integration as a spectrum: Integrating technology in early childhood classrooms. Teachers and Teaching: Theory and Practice. https://doi.org/10.1080/13540602.2024.2420137

Lähdesmäki, S., Maunumäki, M., & Nurmi, T. (2023). Play is the base! ECEC leaders' views on the development of digital pedagogy. Early Childhood Education Journal. https://doi.org/10.1007/s10643-023-01530-7

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). SAGE.

Movahedazarhouligh, S., Banerjee, R., & Luckner, J. L. (2021). An examination of current leadership practices in early childhood and early childhood special education: A mixed methods study. Early Education and Development. https://doi.org/10.1080/10409289.2021.1909937

Nolan, A., & Moore, D. (2024). Broadening the notion of peer-to-peer interactions when young children engage with digital technology. Early Childhood Education Journal. https://doi.org/10.1007/s10643-024-01662-4

Oades-Sese, G. V., Cahill, A., Allen, J. W. P., Rubic, W.-L., & Mahmood, N. (2021). Effectiveness of Sesame Workshop's Little Children, Big Challenges: A digital media SEL intervention for preschool classrooms. Psychology in the Schools, 58(10), 2041–2067.

Pan, Z., López, M. F., Li, C., & Liu, M. (2021). Introducing augmented reality in early childhood literacy learning. Research in Learning Technology, 29, Article 2539. https://doi.org/10.25304/rlt.v29.2539

Plowman, L., Stephen, C., & McPake, J. (2010). Supporting young children's learning with technology at home and in preschool. Research Papers in Education, 25(1), 93–113. https://doi.org/10.1080/02671520802584061

Rogoff, B., Dahl, A., & Callanan, M. (2018). The importance of understanding children's lived experience. Developmental Review, 50, 5–15. https://doi.org/10.1016/j.dr.2018.05.006

Schonert-Reichl, K. A. (2017). Social and emotional learning and teachers. The Future of Children, 27(1), 137–155. https://doi.org/10.1353/foc.2017.0007

Studhalter, U. T., Jossen, P., & Tettenborn, A. (2024). Tablet computers in early science education: Enriching teacher-child interactions. Early Childhood Education Journal. https://doi.org/10.1007/s10643-024-01766-x

Su, J., & Yang, W. (2023). Digital competence in early childhood education: A systematic review. Education and Information Technologies. https://doi.org/10.1007/s10639-023-11972-6

Su, J., Zhong, Y., & Chen, X. (2022). Technology education in early childhood education: A systematic review. Interactive Learning Environments. https://doi.org/10.1080/10494820.2022.2160470

Sun, Y., Zhou, G., & Deng, X. (2024). Emotional intelligence and joyful teaching: Pathways to enhanced student engagement and achievement. Lecture Notes in Education Psychology and Public Media, 52(1), 163–168. https://doi.org/10.54254/2753-7048/52/20241533

Vol. 12, No. 2 : June 2026
E-ISSN: 2442-7667
pp. 948-959
Email: jklppm@undikma.ac.id

Väätäjä, J. O., & Ruokamo, H. (2021). Conceptualizing dimensions and a model for digital pedagogy. Journal of Pacific Rim Psychology, 15, 1–12. https://doi.org/10.1177/1834490921995395

Widyastuti, Sutopo, A., Widyasari, C., Rahmawati, F. P., & Minsih. (2025). Implementasi prinsip pengelolaan meaningful, mindful, dan joyful learning dalam proses pembelajaran mendalam: Studi kasus di Sekolah Dasar Islam Terpadu. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 9(5), 2172–2181. https://doi.org/10.31004/obsesi.v9i5.7339

Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). SAGE.

Zosh, J. M., Hopkins, E. J., Jensen, H., Liu, C., Neale, D., Hirsh-Pasek, K., Solis, S. L., & Whitebread, D. (2017). Learning through play: A review of the evidence. The LEGO Foundation.