

Transforming Literacy Practices in Early Childhood Education: A Systematic Review of Emergent Literacy, Multimodal Meaning-Making, Play, and Child Agency

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Abstract

Literacy practices in early childhood education (ECE) have expanded from approaches primarily emphasizing readiness for conventional reading and writing toward broader views of literacy as meaning-making and communication through language, text, images, symbols, movement, objects, play, and technology. Nevertheless, early childhood literacy research remains fragmented between emergent literacy perspectives focusing on oral-language and code-related skills and sociocultural/multimodal perspectives emphasizing meaning-making, identity, participation, and child agency. This review maps how literacy is conceptualized in ECE research, identifies literacy domains and learning experiences, examines adult mediation and spaces for child agency, and develops integrative principles for developmentally appropriate literacy practice. The study is designed as a systematic literature review reported with reference to PRISMA 2020. The preliminary search covers empirical articles published in Indonesian and English from 2020 to 28 August 2026 through Google Scholar, ERIC, Garuda, and DOI/publisher cross-searching. The preliminary synthesis matrix includes 23 empirical reports from international and Indonesian ECE contexts, representing shared/dialogic reading, storytelling, sociodramatic play, emergent writing, environmental and playful literacy, digital storytelling, multimodal assessment, and e-picture books. Five overlapping domains emerged: oral-narrative literacy, print/code and emergent writing, play-embedded literacy, multimodal/embodied literacy, and digital/new literacies. The synthesis suggests that meaning-making and foundational literacy skills should not be treated as competing agendas. Strong literacy practices connect conversation and narrative with attention to print and symbols, enable drawing and emergent writing, embed literacy in play and everyday activity, and use digital resources selectively with pedagogical purpose. Child agency expands when children move beyond answering adult questions to choosing, creating, negotiating, and transforming representations. The review proposes the MELPA-ECE Framework (Multimodal Emergent Literacy through Play and Agency), linking literacy domains, representational modes, experience contexts, adult mediation, child agency, and developmental outcomes.

Keywords

Child Agency; Early Childhood Literacy; Emergent Literacy; Multimodal Literacy; Play; Systematic Literature Review



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INTRODUCTION

Literacy in early childhood does not begin when children are able to read words conventionally. Long before that, children have participated in literacy practices through conversation, listening to stories, interpreting pictures, recognizing symbols, scribbling and drawing, pretending to read, making marks, using objects as representations, and observing adults use texts in everyday life. The emergent literacy perspective views oral language skills, phonological awareness, alphabet and print knowledge, narrative, and emergent writing as foundations that develop interrelatedly before conventional reading and writing (Whitehurst & Lonigan, 1998).

Over the last two decades, understandings of early childhood literacy have developed further. Sociocultural and multimodal approaches emphasize that literacy is not merely a set of individual skills, but a social practice for making meaning. Children use more than one mode when communicating: oral language, images, gestures, movement, sound, objects, emergent writing, and digital media. The relationship between drawing and emergent writing among preschool children, for example, indicates a shared representational core even though the two systems have different conventions (Pinto & Incognito, 2022). Multimodal literacy studies also show that children's literacy experiences move across print and digital texts and bring home practices into the classroom (Ly & Forzani, 2023).

These conceptual changes create productive tensions in ECE practice. On the one hand, intervention research demonstrates the importance of oral language and code-related skills. Shared/dialogic reading can enrich vocabulary, grammar, narrative, and perspective, while activities that attend to print, phonology, and emergent writing remain important for later literacy readiness. On the other hand, experiences that are overly formal, fragmented, and exercise-oriented risk transferring elementary-school pedagogy into ECE. Therefore, the challenge is not to choose between meaning and code, but to integrate both into experiences of play, stories, dialogue, exploration, and meaning production.

Empirical evidence shows that dialogue-rich shared reading can support language learning, but outcomes do not automatically emerge simply because adults ask more questions. The Extend Program for bilingual children in Norway, for example, combined shared reading with open-ended questions, theme exploration, character perspectives, and story extension through play and other activities (Grøver et al., 2020). Narrative dialogic reading using wordless picture books also supports narrative comprehension and vocabulary (Grolig et al., 2020). In contrast, interactive

elaborative storytelling produced stronger gains in story-vocabulary than repeated reading or phonemic awareness in one large experiment (Suggate et al., 2021).

Literacy also develops when children are given opportunities to become authors and meaning-makers. Byrnes-Cloet and Hill (2022) involved multilingual children in drawing books, jointly composing written narratives, and then replaying the child-created books through sociodramatic play. Mathew et al. (2025) showed that emergent writing can be strengthened when teachers broaden their definition of what counts as writing and value scribbling, mark-making, drawing, and early letter formation as part of developmental continuity. In digital storytelling, children aged 4–5 even changed storylines, negotiated the meaning of images, and explored application features; their agency expanded or narrowed depending on teacher responses (Shengjergji, 2024).

Technological development adds a new dimension. Digital storybooks and e-picture books offer audio, animation, highlighting, replay, and interactive hotspots, but more features are not always better. Son and Butcher (2024) found that detailed illustration animations can interfere with comprehension, whereas animations directly related to the storyline can help under certain conditions. Wu and Amzah (2026) also showed that e-picture book design features can support phonological awareness, but effects on print knowledge depend on feature salience and the characteristics of the writing system. These findings indicate that digital literacy in ECE needs to be positioned as an expansion of meaning-making modes, not as an automatic substitute for print experiences, interaction, and play.

Indonesian literature shows similar dynamics. Teachers use games, songs, storytelling, flashcards, loose parts, picture reading, role play, reading corners, and digital media to stimulate early literacy (Fuadah & Ruhaena, 2024; Utamimah et al., 2024; Rina et al., 2025; Royani & Adiningsih, 2026). However, surveys of teacher beliefs and practices show that beliefs about the importance of literacy are not always proportional to the time and quality of literacy practices occurring in classrooms (Salsa et al., 2024). This suggests that ECE literacy cannot be adequately explained by lists of media or activities; an understanding is needed of how teachers mediate activities and how much room is provided for children's participation.

Several recent reviews have examined parts of this landscape separately. Yakubu and Obafemi (2023) reviewed multiliteracies and multimodal tools in early childhood classrooms. Grøver et al. (2023) reviewed the benefits of interactive book reading beyond vocabulary and literacy outcomes. Cusiter et al. (2025) conducted a meta-analysis of combined language and code interventions for at-risk preschool

children. Other reviews have focused on play-based literacy, home literacy, multisensory reading, and digital literacy (Kucirkova et al., 2023; Latifah et al., 2025; Silva-Chelles et al., 2025; Ferreira et al., 2026; Suryadi et al., 2026). This fragmentation leaves a gap: how can skill-based emergent literacy and sociocultural-multimodal literacy perspectives be brought together within one pedagogical framework appropriate to the characteristics of ECE?

Based on this gap, the review addresses seven questions: (1) how is early childhood literacy conceptualized in ECE research from 2020–2026; (2) which literacy skill domains are most frequently developed; (3) what forms of experience and representational modes are used; (4) how do adults mediate literacy experiences; (5) how much space is provided for child agency; (6) how do literacy practices connect early skills with play, culture, everyday life, and technology; and (7) what research gaps remain?

The novelty of the review lies in a cross-perspective synthesis. This article does not position oral language/code skills and multimodal meaning-making as mutually exclusive camps. Instead, the review formulates the MELPA-ECE Framework—Multimodal Emergent Literacy through Play and Agency—to show how literacy domains, representational modes, experience contexts, adult mediation, and child agency can be integrated toward literacy development that is both strong and developmentally appropriate.

METHODS

Study Design

The study was designed as a systematic literature review (SLR) with reporting referenced to PRISMA 2020 (Page et al., 2021). Because relevant studies included experiments, quasi-experiments, mixed methods, surveys, case studies, and interaction analyses, synthesis was conducted narratively and thematically. Meta-analysis was not planned at this stage because of heterogeneity in literacy definitions, interventions, representational modes, and outcomes.

Search Strategy

The preliminary search was conducted through 28 August 2026 using Google Scholar, ERIC, Garuda, and cross-searching DOI/publisher websites. The 2020–2026 range was selected to capture changes in literacy practices following the expansion of digital technology, attention to child agency, and developments in multimodal pedagogy, while maintaining a focus on contemporary practice.

• ("emergent literacy" OR "early literacy" OR "literacy practices" OR "multimodal literacy") AND ("early childhood education" OR preschool OR

kindergarten) AND (play OR storytelling OR "meaning making" OR agency)

- ("shared reading" OR "dialogic reading" OR storytelling OR "emergent writing" OR "environmental print") AND (preschool OR "early childhood")

- ("digital storytelling" OR "digital storybook" OR "e-picture book" OR multimodal) AND (preschool OR kindergarten) AND (literacy OR reading OR writing OR narrative)

- ("emergent literacy" OR "early literacy" OR "early childhood literacy" OR literacy) AND (ECE OR "early childhood" OR kindergarten) AND (play OR storytelling OR picture OR "loose parts" OR digital OR multimodal)

Inclusion and Exclusion Criteria

Aspect	Inclusion	Exclusion
Publication type	Empirical, peer-reviewed journal articles, 2020–28 August 2026, in Indonesian/English.	Reviews, opinions, proceedings without a complete empirical article, undergraduate theses/master's theses/dissertations.
Context	ECE/preschool/kindergarten or structured interventions connected to ECE institutions.	Studies of elementary-school children and above; purely family practices without a relationship to ECE programs/settings.
Literacy focus	Explains at least one literacy domain and provides information about activities, interactions, representations, or literacy environments.	Only measures digital-device use without literacy outcomes/processes; media-only studies without practice analysis.
Child participation	Children approximately 3–6/7 years old or ECE teachers when the data explain classroom practices.	Studies discussing only general perceptions without evidence of practices/activities.
Outcome/process	Language/narrative, print/code, emergent reading/writing,	No information about literacy processes or outcomes.

	comprehension, meaning-making, engagement, agency, or multimodal practices.	
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Selection, Extraction, and Appraisal

Selection was conducted through deduplication, title and abstract screening, and then full-text reading. Extracted data included author/year, country, design and participants, literacy conception/domain, activity form, representational mode, adult role, child agency indicators, and main outcomes. Quality appraisal in the final rerun is planned using the Mixed Methods Appraisal Tool (MMAT) 2018 according to research design. Because this document is a draft article based on an actual search, the numbers of records at each PRISMA stage need to be locked through a documented final rerun before submission.

Analysis Strategy

Coding was conducted deductively and inductively. Deductively, literacy was mapped to the domains of oral-narrative, code/print, emergent writing, and comprehension. Inductively, studies were mapped according to meaning-making modes—talk, text, image, gesture/movement, object/material, and digital—and experience contexts such as shared reading, storytelling, play, composing, environmental print, and digital creation. Adult mediation was coded as modeling, prompt/question, scaffold, co-construction, or responsive observation. Child agency was mapped on a respond–choose–create–negotiate–transform continuum.

Table 1. PRISMA Protocol Locked in the Final Rerun

Stage	Number
Records identified from all sources	[n = to be filled after final rerun]
After duplicates removed	[n = ...]
Titles/abstracts screened	[n = ...]
Full texts assessed	[n = ...]
Empirical reports included in synthesis	Initial matrix: 23 reports; confirmed after final rerun

FINDINGS AND DISCUSSION

Initial Study Characteristics

The initial matrix contained 23 empirical reports published in 2020–2026. Studies came from Indonesia, Norway, Germany, the United States, Sweden, Italy, China, Malaysia, and other multilingual contexts. Designs included cluster-randomized trials, randomized/controlled interventions, quasi-experiments, mixed methods,

surveys, case studies, video observations, interaction analyses, and pilot assessments. This diversity shows that ECE literacy is studied simultaneously as a developmental ability, classroom practice, interactional process, and representational activity.

Study	Context/design	Literacy practice	Dominant mode	Agency/mediation	Relevant finding
Grøver et al. (2020)	Norway; cluster-RCT; 464 DLL children aged 3–5	Content-rich shared reading + theme extension into play	Talk, book, play	Teacher invites reasoning/perspective; children respond and connect meanings	Intervention supported L2 vocabulary, grammar, and perspective taking; shared reading was stronger when connected to activities.
Grolig et al. (2020)	Germany; cluster-RCT; 201 preschoolers	Narrative dialogic reading with wordless picture books	Image, talk, narrative	Teacher provides dialogic prompts; children infer and narrate	Supported inferential/literal narrative comprehension and vocabulary; some effects persisted.
Suggate et al. (2021)	Experiment; 293 preschoolers	Interactive elaborative storytelling	Oral narrative, talk	Adult elaboration and child response	Elaborative storytelling produced the largest gains in story-vocabulary compared with repeated reading/phonemic awareness.
Byrnes-Cloet & Hill (2022)	Multilingual classroom; classroom-based	Child-authored play-books + sociodrama	Drawing, talk, writing, play	High: children draw, author, and replay; teacher/peer scaffold	Narrative language, composing, literate identity, and child-led

	study	tic enactment			interaction developed.
Maureen et al. (2022)	Indonesia; 59 children aged 4–5; 3 conditions	Oral and digital storytelling	Talk, image, digital, narrative	Teacher organizes story; children follow and respond	Standardized tests showed similar development across conditions; activity-specific tests favored the storytelling group.
Pinto & Incognito (2022)	Italy; 115 children aged 3–5	Emergent drawing and emergent writing	Drawing, mark, writing	Children produce representations individually	Drawing and writing showed a stable and interconnected representational core.
DeBaryshe (2023)	US; quasi-experiment ; 15 Head Start classrooms, 240 children	Literacy environment + emergent writing PD	Print, writing, talk	Teacher scaffolds and modifies challenge level	Writing-environment quality increased; gains occurred in emergent reading/letter knowledge; intervention children also advanced in emergent writing.
Ly & Forzani (2023)	US; pilot in two urban preschools	Integrative Multimodal Literacy Assessment	Paper/digital text, image, talk, performance	Assessment reads practices children bring from home; teacher	Shows the importance of recognizing children's multimodal

			nce	responsive planning	repertoires for relevant and inclusive instruction.
Shengje rgji (2024)	Sweden; 10 children aged 4–5, 2 teachers; 140 hours of video	Digital storytelling with Book Creator	Talk, drawing, digital, narrative	High: children change plot, negotiate images, explore application; teacher responds	Agency is relational and mediated by teacher responses and digital affordances.
Pramling et al. (2024)	Sweden; two multilingual preschools	Collaborative teacher-child (re)storytelling	Talk, book/image, stance	Agency negotiated through authoring and stancetaking	Shows agency as a dynamic process; who 'authors' the story changes throughout interaction.
Son & Butcher (2024)	US; RCT; 86 preschoolers	Digital storybooks with varied animation	Text, image, animation, audio	Children read/navigate; digital features mediate attention	Detailed illustration animation can interfere with comprehension; storyline animations help in limited ways depending on complexity/vocabulary.
Hewi et al. (2024)	Indonesia; qualitative study, Group A	Stepping-on-pictures game	Image, movement, talk	Children actively move, choose/respond to pictures; teacher as facilitator	Language literacy was reported to develop through visual-kinesthetic play.
Utamim	Indonesia;	Loose parts	Object,	Children	Loose parts

ah et al. (2024)	qualitative; children aged 4–6	for literacy and social- emotional developme nt	symbol, talk, emergent writing	arrange/name/i mitate letters and play together	support recognition of letters/numbers/ words as well as social interaction.
Salsa et al. (2024)	Indonesia; survey of 60 ECE teachers in West Papua	Classroom literacy beliefs and practices	Various	Teacher mediation is the focus	Teacher beliefs were very good and practice was rated good, but literacy time was often <11 minutes; indicates a belief–practice gap.
Fuadah & Ruhaen a (2024)	Indonesia; qualitative, Yogyakarta school	Games, songs, storytelling , flashcards, books	Talk, song, image, print	Teacher organizes classroom and repeats stimulation; peer/family support	Beginning- reading stimulation becomes more enjoyable through varied methods and media.
Setiawa ti et al. (2024)	Indonesia; implement ation study, children aged 4–5	Differentiat ed learning + loose parts	Object, symbol, talk, emergent literacy	Media/explorati on choices adjusted to children's abilities	Loose parts in differentiation were associated with literacy, critical reasoning, participation, and creativity.
Mathe w et al. (2025)	US; multimoda l case study, 15	Kid Writing/ap plied phonics	Drawing, scribble, writing, talk	High: children write from experience; adult scaffold	A broad definition of writing nurtures voice,

	preschool classrooms	from lived experience		without removing voice	motivation, and development from scribble to words/sentences.
Solekah et al. (2025)	Indonesia; quasi-experiment	Varied play + loose parts for prereading	Object, image, symbol, talk	Children explore materials in various types of play	The experimental group showed increased prereading ability.
Rina et al. (2025)	Bandung; intrinsic case study; 10 teachers in 5 kindergartens	Integration of digital and traditional media	Video, interactive storybook, word card, apps, talk	Teacher as communication mediator	Literacy is understood multidimensionally; digital media function as a communicative ecosystem when curated in a developmentally sensitive manner.
Royani & Adiningsih (2026)	Indonesia; ECE case study	Early literacy through play	Role play, symbolic play, picture reading, storytelling	Responsive teacher facilitator; children explore symbols and meanings	Play-integrated literacy increases engagement and interaction without formal academic pressure.
Wu & Amzah (2026)	China; mixed methods; 90 five-year-olds	E-picture books vs paper book vs regular program	Audio, animation, highlighted print, hotspot	Children replay/interact; design features as scaffold	E-picture books support phonological awareness compared with control; print knowledge

					depends on design alignment.
Zainudin et al. (2026)	Malaysia; quasi-experimental mixed methods; 60 children aged 5–6	Teacher-guided digital storytelling	Narrative, image, audio, digital	Teacher guides/scaffolds; children collaboratively interpret	Gains in phonological awareness, vocabulary, narrative sequencing, conceptual understanding, and multimodal meaning-making.
van Huisstede et al. (2026)	US; classroom-randomized; 196 children aged 3–5	Drama-based instruction during story time	Talk, gesture, facial/body movement, narrative	Embodied participation; teacher integrates drama into story	Drama supports recall of character feeling states/emotion words and provides an embodied route to story comprehension.

1. From 'Reading Readiness' to a Meaning-Making Ecology

The initial synthesis shows that ECE literacy cannot be reduced to one single definition. Some studies operationalize literacy as oral language, vocabulary, phonological awareness, alphabet/print knowledge, narrative comprehension, and emergent writing. Other studies focus on how children use signs, pictures, objects, gestures, sounds, space, and technology to construct meaning. These differences do not have to be resolved by choosing one side. Instead, ECE literacy is better understood as an ecology connecting language and symbolic skills with social and representational practices.

2. Oral-Narrative Literacy as a Foundation of Meaning

Shared reading and storytelling are the most consistent practices within the oral-narrative literacy group. Their main strength is not simply exposure to books, but the

quality of the conversation accompanying them. Open-ended questions, elaboration, reasoning, inference, character perspective, and opportunities for retelling give children reasons to use more complex language. Grøver et al. (2020), Grolig et al. (2020), and Suggate et al. (2021) show that narrative talk can support vocabulary and comprehension. Drama-based story time also adds an embodied dimension: gestures, facial expressions, changes in voice, and bodily movement can help children represent characters' emotional states (van Huisstede et al., 2026). However, shared reading is not automatically dialogic. Adult mediation needs to avoid one-answer interrogation patterns. When questions only test recall, children become respondents. When teachers provide room for interpretation, invite perspectives, and connect stories with play or children's experiences, literacy moves toward co-construction of meaning.

3. Print/Code Skills and Emergent Writing Remain Important—but the Way They Are Taught Changes

The synthesis does not support removing attention to print and code. Phonological awareness, print knowledge, alphabet knowledge, and emergent writing remain important parts of literacy development. What changes is how these skills are positioned. DeBaryshe (2023) shows that emergent writing can be embedded in a rich literacy environment and modified according to the level of challenge. Mathew et al. (2025) broaden what counts as writing by recognizing scribbling, mark-making, drawing, letters, words, and child-authored texts as a developmental continuum. Pinto and Incognito (2022) provide conceptual support that drawing and writing share a representational core. This finding is important for ECE because children do not need to be forced to abandon drawing in order to be considered as 'writing'. Drawing can become a bridge toward increasingly conventional symbols. Within developmentally appropriate literacy, code skills can be developed through brief and meaningful attention to letters, sounds, names, signs, or writing appearing in stories and play.

4. Play-Embedded Literacy: Literacy Emerges Because Children Need It

The play-embedded literacy group demonstrates a shift from literacy exercises to functional literacy use. In child-authored play-books, children draw, author, and role-play based on texts they themselves create (Byrnes-Cloet & Hill, 2022). In Indonesia, symbolic play, role play, picture reading, storytelling, stepping-on-pictures games, and loose parts provide contexts for speaking, recognizing symbols, remembering forms, and making representations (Hewi et al., 2024; Utamimah et al., 2024; Royani & Adiningsih, 2026). The quality of play-literacy lies in function. A

child who makes a 'menu' while playing restaurant, labels a construction, pretends to read a list, or draws a map is using literacy to achieve a play goal. Pedagogically, this differs from adding flashcards to play without changing the meaning-making structure. Therefore, literacy-play integration needs to be evaluated based on whether symbols and language genuinely have a function for the child.

5. Multimodal and Embodied Literacy Expands the Question: What Counts as Text?

Multimodal literacy shifts attention from 'reading writing' toward 'reading and creating representations'. Studies of multimodal assessment (Ly & Forzani, 2023), digital storytelling (Shengjergji, 2024), collaborative restorytelling (Pramling et al., 2024), emergent writing (Mathew et al., 2025), and drama-based story time (van Huisstede et al., 2026) show that meaning can be constructed through combinations of language, images, drawing, gesture, the body, objects, audio, and screens. This shift has inclusive implications. Children who are not yet able to express ideas through conventional writing can still demonstrate understanding through pictures, gestures, enactment, construction, and oral stories. Thus, multimodal literacy is not media decoration, but a way to expand access to participation and expression.

6. Digital/New Literacies: Affordance Should Matter More Than Technological Novelty

Digital studies reveal findings more nuanced than the assumption that 'digital is more interesting and therefore more effective'. Son and Butcher (2024) found that animations focusing on illustration details can interfere with comprehension, whereas storyline animations can help when their amount and complexity are controlled. Wu and Amzah (2026) show that auditory/interactivity features support phonological awareness, but highlighted print does not automatically strengthen print knowledge. Digital storytelling in Malaysia demonstrates potential for vocabulary, narrative sequencing, and collaborative multimodal interpretation when activities remain teacher-guided and connected to curriculum goals (Zainudin et al., 2026). These findings support the principle of pedagogical selectivity: digital features should be selected according to their literacy function. Features directing attention to sound structure, storyline, or representational relationships can help; merely decorative features may increase cognitive load. Technology should expand, rather than replace, conversation, shared attention, physical play, drawing, and material experience.

7. Adult Mediation: From Giving Answers to Opening Possibilities

Across studies, the teacher/adult role can be mapped as model,

prompt/questioner, scaffolder, co-constructor, and responsive observer. Modeling is important when introducing print functions or ways of using a tool. Prompts direct attention to sounds, signs, characters, or cause-and-effect relationships. Scaffolding provides temporary support. Co-construction occurs when teachers and children build a story or text together. Responsive observation is needed so teachers know when to enter and when to provide space. The quality of mediation cannot be measured by the number of interventions. In digital storytelling and collaborative restorytelling, children's agency grows when teachers respond to initiatives and do not immediately return the story to an adult scenario. Conversely, overly dense adult questioning can turn literacy back into an evaluation session.

8. Child Agency: Respond → Choose → Create → Negotiate → Transform

Agency is an important distinction between literacy practices centered only on performance and literacy practices as participation. At the respond level, children answer, point, imitate, or complete. At the choose level, children select books, tools, pictures, roles, or ways of responding. At the create level, children produce pictures, marks, stories, emergent texts, constructions, or media. At the negotiate level, children negotiate meanings, roles, storylines, and representations with peers or teachers. At the transform level, children change stories, create new rules, remix representations, or bring literacy into new contexts. This continuum is not intended as a hierarchy that must always end in transformation. Children still need opportunities to respond and imitate. However, if every experience stops at response, literacy will be difficult to develop into a meaningful practice belonging to the child.

9. MELPA-ECE Framework: Multimodal Emergent Literacy through Play and Agency

Based on the initial synthesis, this review proposes the MELPA-ECE Framework. The framework does not replace emergent literacy or multimodality theories, but brings them together at the level of pedagogical decision-making.

Layer	Component	Pedagogical question	Example
1. Literacy domain	Oral language/narrative; print/code; comprehension; emergent writing	What ability is currently developing?	Vocabulary, inference, phonological awareness, print knowledge, mark-making.

2. Meaning-making mode	Talk, text, image, gesture/movement, object/material, audio/digital	Through which mode do children understand and express meaning?	Storytelling, drawing, pointing to symbols, role play, creating a digital book.
3. Experience context	Shared reading, storytelling, play, composing, daily/environmental literacy, digital creation	Does literacy have a real function in the activity?	Menu in restaurant play, construction label, retelling, writing center.
4. Adult mediation	Model, prompt, scaffold, co-construct, responsive observe	What assistance is needed now?	Modeling, asking open questions, giving hints, co-authoring, stepping back to observe.
5. Child agency	Respond, choose, create, negotiate, transform	To what extent do children's decisions affect the process?	Choosing a book, making a picture, changing the plot, negotiating writing.
6. Outcome	Language, code/print, comprehension, writing, engagement, identity, collaboration, critical meaning-making	What evidence of development is observed?	Retelling, vocabulary use, emergent text, participation, explanation of meaning.

The MELPA-ECE Framework emphasizes that there is no linear sequence from oral to digital. In a single activity, a child may speak, draw, recognize print, move, and create a digital story. The teacher's focus is to connect these modes with literacy goals, maintain the function of play and meaning-making, and provide

sufficient scaffolding without taking over the child's agency.

Implementation Challenges

Four challenges stand out. First, literacy can be narrowed to early reading-writing, especially when school-readiness demands dominate developmental experiences. Second, there is a gap between teacher beliefs and actual practice: teachers may state that literacy is important but provide limited time, variety, and dialogue. Third, teachers need competence in interpreting emergent writing and multimodal expression; if only conventional writing is recognized, many children's abilities remain invisible. Fourth, digitalization can shift attention toward device features and screen duration, even though interaction quality and pedagogical affordance are more decisive.

Seven initial gaps were identified. First, skill-based and multimodal studies are still rarely analyzed within one design. Second, emergent-writing outcomes are less common than vocabulary, phonological awareness, and reading-related skills. Third, agency is often discussed in qualitative studies but rarely connected with measurable literacy outcomes. Fourth, multimodal assessment has not yet been widely used in ECE. Fifth, Indonesian research still often describes activities/media without micro-analysis of teacher-child interaction. Sixth, research is needed on multilingual and culturally sustaining literacy that recognizes family languages/representations. Seventh, digital technology needs to be compared based on design function, rather than simply digital versus print format.

This draft was prepared from an actual search and an initial matrix of 23 empirical reports, but it is not yet the final corpus. The final rerun needs to record the number of results from each database, remove duplicates, document reasons for exclusion, and conduct quality appraisal. ECE literacy literature is very broad; the 2020–2026 limitation and focus on ECE practices are intended to maintain screening feasibility. Some articles assess language development that overlaps with literacy; final inclusion needs to retain only studies that explicitly explain relationships with literacy/narrative/print/meaning-making practices.

CONCLUSION

Contemporary ECE literacy practices show a shift from reading-writing readiness as separate skill exercises toward a meaning-making ecology integrating language, narrative, print, drawing, emergent writing, play, the body, objects, and technology. This shift does not mean that phonological awareness, alphabet/print knowledge, vocabulary, narrative comprehension, and emergent writing become less

important. Rather, these skills become more meaningful when they develop within interaction, stories, play, representational production, and everyday experiences.

The literature indicates that the quality of adult mediation and the space for child agency are two mechanisms cutting across approaches. Teachers can model, prompt, scaffold, co-construct, and observe responsively. Children can move from merely responding toward choosing, creating, negotiating, and transforming representations. Digital tools offer additional modes, but their usefulness depends on relevant affordances and avoiding burdens on comprehension.

The MELPA-ECE Framework connects literacy domains, meaning-making modes, experience contexts, adult mediation, child agency, and outcomes. The framework can serve as a basis for designing literacy practices that are simultaneously foundationally strong, multimodal, playful, inclusive, and developmentally appropriate. Future research should test the relationship between agency and measurable literacy outcomes, expand multimodal assessment, and document teacher-child micro-interactions in multilingual and culturally diverse Indonesian contexts.

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