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Integration of Emergent Literacy Instruction Across Classroom Activities: A Systematic Review

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Abstract

The goal of emergent literacy instruction is to engage preschool-aged children with oral language, print, and sound-based skills to increase their language comprehension, alphabetic knowledge, concepts of print, and phonological awareness in order to lay the foundational elements required to learn phonics skills and to develop decoding (reading) and encoding (spelling) skills in their early elementary years of kindergarten through third grade (National Early Literacy Panel, 2008; Shanahan & Lonigan, 2010; Campbell, 2021). This review examined how preschool teachers integrate emergent literacy instruction across classroom activities, including play-based learning and literacy centers. Data was collected and analyzed from 26 experimental, survey, qualitative case study, and observational studies and found teacher-guided or knowledgeable-other facilitated play-based learning had effective outcomes for emergent literacy skills. Large group settings were sometimes found to have negative impacts on preschool children's emergent literacy outcomes. In intentionally-planned and well-structured free play settings where emergent literacy gains were the intended outcomes, children had literacy gains.

Introduction and Definitions

In this systematic review, the studies were included if they examined both emergent literacy skills (i.e., the content) and play-based approaches (i.e., the pedagogy). The review investigated how early literacy skills were instructed through forms of play and other types of activities. In this section, emergent literacy skills and play-based learning are discussed and defined.

Emergent Literacy Skills: The Content

In their summary of the key findings of the 2008 National Early Literacy Panel (NELP) report, Shanahan and Lonigan (2010) identified eleven variables for preschool students that predict the development of later literacy skills. These variables include the following: alphabet knowledge, phonological awareness, rapid automatized naming of letters / digits, rapid automatized naming of objects / colors, writing / writing name, phonological memory, concepts about print, print knowledge, reading readiness, oral language, and visual processing. The NELP and Shanahan and Lonigan (2010) use the term “early literacy skills” which they define as “precursor skills that may presage the development of conventional literacy skills” (p. 280). Shanahan and Lonigan (2010) refer to “conventional literacy skills” as “skills evident within all literacy practices that are readily recognizable as being necessary or useful components of literacy” and “typical targets of school instruction” (p. 280). The eleven variables they identified are aspects of early literacy skills, also known as emergent literacy, and are correlated with the development of conventional literacy skills typically taught in kindergarten through third grade (e.g., foundational literacy). Conventional or foundational literacy skills include “decoding, fluency, reading comprehension, spelling, [and] writing” (Shanahan & Lonigan, 2010, p. 280).

In addition to emergent reading skills, recent studies have more closely examined early writing skills and instructional writing practices (Rowe, Davis, & Piestrzynski, 2023; Gabas, Wood, & Cabell, 2022). Exploring language and print through writing experiences offers preschool children opportunities to develop literacy skills through play. Rowe, Davis, and Piestrzynski (2023) write, “As preschoolers playfully participate in writing events with more experienced writers, they form hypotheses about writing forms, directional patterns, and speech/print match as they construct their own messages” (p. 539). Gabas, Wood, and Cabell (2022) identified three domains of early writing skills, including handwriting, spelling, and composing. Early writing skills, or emergent writing skills, are developed through exploration and “experimenting with different marks and formations to approximate actual words” (Gabas et al. 2022, p. 4).

In the What Works Clearinghouse (WWC) practice guide for preparing young children for school, Burchinal et al. (2022) investigated 47 studies that tested the outcomes on school readiness in early childhood and preschool settings. They found strong evidence (tier 1) of three distinct recommendations for children’s literacy outcomes in vocabulary and language, letters and sounds, and knowledge of print and knowledge of the world. There are seven recommendations in total from the panel on early childhood school readiness and three of them include emergent literacy skills. The recommendations involving emergent literacy include: 1) Intentionally plan activities to build children’s vocabulary and language; 2) Build children’s

knowledge of letters and sounds; and 3) Use shared book reading to develop children's language, knowledge of print features, and knowledge of the world.

For the purposes of this review, the term "emergent literacy" includes both emergent reading and emergent writing and involves one or more of the following domains: oral language, vocabulary development, phonological awareness, alphabet knowledge, concepts of print, listening comprehension, and emergent writing. Table 1 outlines these domains and their definitions.

Table 1. Emergent Literacy Domains and Definitions

Emergent Literacy Domain	Definition
Oral language	The practice of listening and speaking to communicate and to learn.
Vocabulary development	The learning of new words and meanings through repeated exposure, conversations, and incidental and intentional instruction (Burchinal et al. 2022).
Phonological awareness	The "awareness of sounds of language" (Burchinal et al., 2022, p. 46).
Alphabet knowledge	The understanding of the alphabetic principle and that words are made up of print letters that have a corresponding sound.
Concepts of print	The understanding of how print works and how books are read (e.g., sentences are made up of words and words are made up of letters; direction of how to read print; identifying the book cover, title, author, etc.).
Listening comprehension	The ability to listen to a book read aloud (e.g., by a teacher or recorded audio book) or listen to a story and discuss or retell the concepts. Moats and Tolman (2019) define it as "the linguistic processes involved in the comprehension of oral language" (p. 17).
Emergent writing	The development of written composition skills through meaning making, such as drawing, letter strings, name writing, transcription, letter formation, etc.

Play-Based Classroom Activities: The Pedagogy

In early childhood classrooms, activities include teacher-led whole group and small-group lessons and individual or peer learning centers that integrate choice and play to increase engagement and to deepen understanding. The NELP (2008) meta-analysis found moderate to large effects for code-focused instruction on the later development of foundational literacy skills. Shanahan and Lonigan (2010) summarized the NELP (2008) report and noted that none of the code-focused intervention use whole group instruction; all the activities were implemented one-on-one or in small groups with teacher direction. In preschool classrooms, small groups and

one-on-one instruction often involve some form of play, whether that is child-initiated free play at centers or stations or adult-guided games in a small group.

Free choice or center activities are often specific spaces within a preschool classroom for children to select for a period of time to engage in learning individually or with a small group of peers. In some classrooms, teachers may set a timer and have children rotate or choose another center or station when the time concludes. In other classrooms, children may move freely from one space to another. At their station of choice, teachers may rotate to interact with children or they may work with a small group of children in another area and allow the children to play in their center without a teacher. Center activities may include a dramatic play area (e.g., toys, puppets, a toy kitchen or toy house for children to pretend and act out a story); a book reading center; building blocks; a writing station with crayons, paper, and pencils; alphabet puzzles or letter-matching games; or a technology station (e.g., a computer, iPad, laptop, books recorded on tape, etc.). Bratsch-Hines, Burchinal, Peisner-Feinberg, and Franco (2021) cite that several studies have consistently found "children in mainly urban pre-k programs spent approximately a third of their day in free choice settings" (p. 76). Given that many pre-k programs design much of their daily time to free choice or center activities, it is important to identify the ways they can be implemented to increase their rigor and to ensure literacy outcomes.

Play-based learning is a broad term that encompasses any form of play. Eberle (2016) defines play as "an ancient, voluntary, emergent process driven by pleasure that yet strengthens our muscles, instructs our social skills, tempers and deepens our positive emotions, and enables a state of balance that leaves us poised to play some more" (p. 215). For preschool children, learning through play motivates and engages them to continue to practice a skill, such as oral language or rhyming. Studies suggest that interactions with adults or peers through play can positively impact language and literacy development (Zigler & Bishop-Josef, 2009; Saracho & Spodek, 2006). Gabas, Wood, and Cabell (2022) emphasize the importance of writing centers and using play centers for students to practice writing; however, they also note that "children learn about writing from experienced adult writers (i.e., parents and teachers)…" (Gabas et al., 2022, p. 5). For preschool-aged children, learning through play is a core way for them to explore new concepts, practice oral language and vocabulary, and understand their environment.

Various terms are used to describe learning through play (e.g., free choice, centers, stations, guided play, structured play, play-based learning, etc.). For example, Campbell (2021) uses the term "educational play" which is "where adults link play to educational goals and outcomes" (p. 63). Essentially, play and exploration are important for early childhood development, but the guidance and instruction from a knowledgeable other must be a component of play-based learning in order for literacy outcomes to be effectively realized.

In the What Works Clearinghouse (WWC) practice guide for preparing young children for school, Burchinal et al. (2022) offer 13 specific ways to carry out the three recommendations that involve emergent literacy practices. Out of those 13 sub-recommendations, 9 of them suggest implementing both explicit teacher instruction and some form of play to further learning and to practice skills. As an example, in the recommendation on building children language and

vocabulary, the sub-recommendation suggests choosing activities that allow children to practice using target vocabulary words. "…if the vocabulary words being taught focus on marine life, the teacher can put out marine stuffed animals, art materials for children to create pictures of marine life, or dress-up materials and a marine scene that would allow children to pretend to be marine animals" (p. 43). Another example is found in the recommendation on building children's knowledge of letters and sounds. The panel offers forms of play and games such as "I spy" and making up rhyming words during their centers or playground time. The "I spy" game could ask children to work with a partner to "find something that starts with the /t/ sound" (p. 47). Further, in order to carry out the recommendation of using shared book reading to develop language, print knowledge, and world knowledge, the panel suggests aligning literacy activities to the theme of the texts read. "For example, set up a veterinary office in the dramatic play center after reading an informational book about what happens when pets are sick" (Burchinal et al. 2022, p. 58).

When Emergent Literacy Instruction and Play-Based Learning Are Most Effective

Using play as a medium for preschool children to learn and practice literacy skills is most effective when the goals and outcomes are clearly designed and linked to the play-based activity (Campbell, 2021; Johnson, 2014; Roskos & Christie, 2013). When teachers offer a well-structured and outcomes-based activity and allow children to play and experiment within the boundaries of the literacy goals, the literacy skills are more likely to be developed. Campbell (2021) writes, "Children need teacher-directed instruction with child-initiated play strategies. … Play becomes the curriculum, where core literacy skills are developed through focused instruction, modeling, demonstrating and clarifying" (p. 62). As indicated in the WWC Practice Guide (Burchinal et al. 2022) and in other research (Campbell, 2021; Gabas, Wood, & Cabell, 2022), the most effective ways to teach emergent literacy skills to young children involve clear and direct instruction of the skill (e.g., target vocabulary word, new letter, identifying initial sounds in words, etc.) and the intentional planning of play-based activities for children to authentically practice the new skills (e.g., games, dramatic play, book centers, etc.). In those play-based activities, incidental learning can still occur; however, it comes with the intentional planning of how children will achieve an outcome through the play-based activity.

In their review of play experiences in early literacy, Rand and Morrow (2021) outline the many ways that play is connected to early literacy learning. For example, they found sociodramatic play, pretend play, and thematic-fantasy play where children took on the role of characters and acted out story plots facilitated their ability to recall story elements and build more narrative competence versus children simply listening to a story being told or read to them. They also found several studies had results of increased vocabulary development when children received explicit instruction followed by play. In their review, they also found that not all play relates equally to learning outcomes and they found five studies point to the importance of adult guidance during play (e.g., small group play activities, teacher-mediated free play centers, etc.) to support and foster emergent literacy skills. They summarize the roles of teacher during play from Roskos and Neuman (1993): the onlooker, the player, and the leader. Teachers serve as the onlooker when they are the audience of children's play and name children's actions; the

player role is when teachers “enter the play frame” (p. 9) and scaffold the learning; and the leader role occurs when teachers intentionally structure play, which may include setting up props or suggesting play ideas for children to enact. Rand and Morrow (2021) write, “Adult guidance combined with thematic props and materials in play centers has increased pretend reading, book handling, and purposeful writing” (p. 9).

Across these findings, play-based learning and emergent literacy instruction are most effective when the activities are intentionally planned by an adult, whether that is an explicit lesson followed by or preceded by free play related to the concepts of the lesson or choice centers or stations stocked with materials, props, and hands-on activities that allow children to practice emergent literacy skills through forms of play either on their own, with peers, or with a teacher.

Barriers To Implementing Play-Based Learning Linked to Literacy Outcomes

Integrating emergent literacy instruction across classroom activities can be met with challenges. Some of those barriers include: a) teachers feeling pressure from policy shifts to limit play-based learning and other activities in favor of more direct literacy instruction; b) teachers not feeling confident to effectively integrate literacy outcomes with play-based learning; and c) preschool curricula do not focus on literacy outcomes (e.g., Creative Curriculum).

The increase in instructional rigor for children in kindergarten through third grades can put pressure on preschool teachers to ensure their 3-, 4-, and 5-year-old students are prepared to start kindergarten and to keep up with the curricular demands (Campbell, 2021). Campbell (2021) writes,

> “Over the past two decades, shifts in policies in England, USA and Australia, together with media and parental pressure favoring [sic] science-based reading research, accountability and school readiness have contributed to a shift in the status of play in early childhood literacy programs” (p. 62).”

Further, Tullis (2011) found that preschool teachers cited feeling caught between implementing direct instruction and using play to foster school readiness. In their review, Rand and Morrow (2021) emphasize the importance of play and how research supports the integration of play and literacy instruction for preschool children; however, they cite several reports (e.g., Preschool National Standards; 2003 Reauthorization of Early Head Start; Good Start, Grow Smart) that have shifted instructional policies in recent decades to emphasize direct instruction of emergent literacy skills and one effect of these new policies has been the decline of play opportunities in preschools. As outlined in the previous section, the thoughtful combination of play-based learning activities and emergent literacy instruction can be effective in supporting the developmental aspects of preschool children while ensuring they are prepared for kindergarten and set up for later reading success. When the pendulum swings too far in one direction (e.g., only play or only direct literacy instruction), the ideal outcomes for children are not as pronounced.

Another barrier to effectively teaching emergent literacy skills through play-based instruction is lack of teacher training or teachers not feeling confident to integrate literacy and play. In a survey with 60 preschool teachers, Puteh and Ali (2013) found that while the teachers were interested in play-based approaches, they did not believe they had the knowledge and skills to implement the developmentally appropriate instruction that led to academic outcomes. Further, in the WWC Practice Guide for Preparing Young Children for School, Burchinal et al. (2022) cite the following potential obstacle that a preschool teacher may provide: "I am not very comfortable engaging in conversations with children when they play. I want to let them play" (p. 45). The panel's advice to address that potential obstacle is to observe children as they play and comment or question on what they are doing well. For example, "You are working hard to make your soup. What are you adding to the pot?" Further, in their review, Rand and Morrow (2021) note the challenges to implementing guided play may be due to teachers not being able to find the balance between supporting play and being too directive or they were unsure about how to best support the children's learning during planned play experiences.

Lastly, in many preschools across the United States, the chosen curriculum is often not focused on literacy outcomes (Shea et al., 2025). In their study of 98 preschool classrooms, Shea, Piasta, Shen, Hudson, Greeley, Lewis, and Logan (2025) found that non-literacy-focused curricula was more widely used than literacy-focused curricula. They used the term comprehensive curriculum to describe many of the common preschool programs implemented in schools (e.g., Creative Curriculum, High Scope). These curricula are often child-centered, whole-child constructivist approaches to learning where preschool children explore and engage in their environment in a broad manner that favors social interaction, self-exploration, and incidental learning. Shea et al. (2025) write, "…many comprehensive curricula are designed to be broad, child-centered approaches that support multiple domains simultaneously, such breadth may result in fewer gains in any specific domain" (p. 4). For example, literacy objectives are included in Creative Curriculum but the curriculum guides teachers in "infusing" (p. 4) these practices into the environment and teaching the objectives in an implicit manner as opposed to explicitly instructing them. This aligns with much of the critique of whole-language and balanced literacy curricula in early elementary, where children can be engaged in a task that allows them full range of exploration while they were not provided with clear and explicit instruction to meet a literacy learning objective. Similarly, a caution for preschool teachers is to not rely on play-based learning that focuses too much on children learning implicitly through their own exploration of their environment; but, to thoughtfully combine play-based activities with explicit guidance and direction which can lead to more effective outcomes of emergent literacy skills.

Research Questions:

1. Research question 1: How do preschool teachers integrate emergent literacy instruction across classroom activities (e.g., play-based learning, center activities, etc.)?
2. Research question 2: What features of the classroom activities (e.g., literacy domain, duration, age, teacher and peer interactions, dosage) are associated with improved outcomes? Do these features differ according to student characteristics?

Methodology

Study Eligibility Criteria

Using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, literature was identified through a three-step process. First, studies were identified based on key search terms. Next, the titles and abstracts were screened for eligibility. Third, a full-text screening process based on eligibility criteria was implemented. To be included in the review, studies must have met the following criteria: a) at least 50% of the teachers in the sample taught preschool or the student or classroom sample included preschool (e.g., ages 3 or 4, or age 5 not yet in kindergarten); b) a literacy-focused instructional strategy; c) written in English and the study took place in the United States or its territories, England, Australia, Ireland, New Zealand, or Canada in a school-based setting, public or private, classroom, clinic, home, or early childhood center; and d) play-based, center/station, or other play domain (e.g., games, puppets, drama-based, guided play, free play, etc.).

Search Strategy

In the identification process, an electronic database search was conducted using the EBSCO interface, the ProQuest interface, and the Web of Science interface. The primary database for EBSCO included ERIC, and the following databases were included: Academic Search Complete, APA PsycINFO, Communication and Mass Media Complete, Education Full Text, Educational Administration Abstracts, Open Dissertations, Psychology and Behavioral Sciences Collection, Social Sciences Abstracts, Sociological Collection, and Teacher Reference Center. The following databases were searched using the ProQuest interface: APA PsycArticles, Education Research Index, Linguistics and Language Behavior Abstracts, ProQuest Dissertation and Theses Global, Publicly Available Content Database, and Sociological Abstracts. The Web of Science Core Collection database with searched within the Web of Science interface.

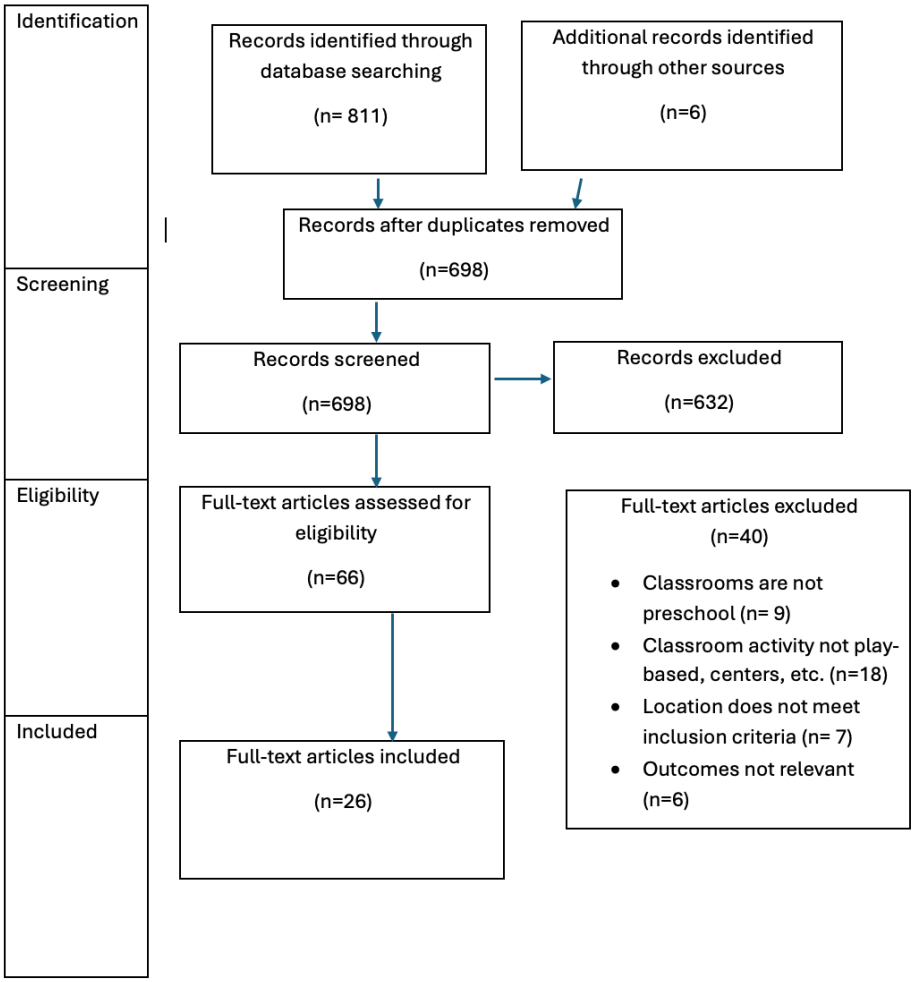
The search terms were developed based on the following framework: population, concept, and context. The population included preschool teachers, the concept centered on emergent literacy instruction, and the context focused on classroom activities. Observational, survey, experimental, and qualitative case study (e.g., teacher interviews, focus groups, artifacts, etc.) were included. Exclusion criteria included the date of publication. Studies must have been published between January 2018 and December 2025 when the search was conducted.

The database search produced 811 records. After completing the database search, prior literature reviews and meta-analyses related to emergent literacy and play-based learning were reviewed. The studies in prior reviews were cross-referenced with the studies included for final inclusion and against the inclusion criteria. Six records were included based on the cross-reference screening process. Once duplicates were removed, 698 records remained. The titles and abstracts of the 698 records were screened for the eligibility criteria and sorted into two

categories (“yes” or “no”). From the screening phase of the process, 632 records were excluded leaving 66 eligible for full-text screening.

The 66 records eligible for full-text screening were reviewed and included if they had the following criteria: a) at least 50% of the teachers in the sample taught preschool or the student or classroom sample included preschool (e.g., ages 3 or 4, or age 5 not yet in kindergarten); b) a literacy-focused instructional strategy; c) written in English and the study took place in the United States or its territories, England, Australia, Ireland, New Zealand, or Canada in a school-based setting, public or private, classroom, clinic, home, or early childhood center; and d) play-based, center/station, or other play domain (e.g., games, puppets, drama-based, guided play, free play, etc.). A spreadsheet was used with “yes” or “no” coding; if one criterion was missing, the record was excluded. From this process, 40 records were excluded leaving 26 records to be synthesized in this systematic review. Figure 1 includes a PRISMA diagram that outlines the selection process.

Figure 1. PRISMA diagram



Inclusion and Exclusion Criteria

The following includes a more in-depth description of the eligibility criteria:

1. *Study design:* Included studies used a study design that addressed the research question of how preschool teachers integrate emergent literacy instruction across classroom activities. The design must have collected data from teachers, via interviews, focus groups, surveys; classroom instruction via observations or student artifacts; or an experiment that examined emergent literacy and play-based learning.
2. *Participant sample / Population:* Included studies had at least 50% of the teachers in the sample that taught preschool or the students in the classrooms were preschool students (e.g., ages 3 or 4, or age 5 not yet in kindergarten). Studies with MLL and SWD students were included.
3. *Language and study location:* Included studies were written and conducted in English and the study took place in the United States or its territories, England, Australia, Ireland, New Zealand, or Canada in a school-based setting, public or private, classroom, clinic, home, or early childhood center. Studies with MLL students were included.
4. *Concept:* Included studies involved emergent literacy instruction, which focused on one or more of the following literacy domains: oral language, vocabulary, phonological awareness, concepts of print, alphabetic knowledge, writing, and listening comprehension.
5. *Context:* Included studies explained how classroom activities were conducted and they included a play-based element, such as play-based, center/station, or other play domain (e.g., games, puppets, drama-based, guided play, free play, etc.).

Coding Procedure

The 26 records included in the final analysis were coded using a spreadsheet to extract information on the following categories: a) research design; b) instructor / intervention implementer type; c) student demographics and participant information; d) independent variable name and description (if applicable); e) dependent variable(s) and description (if applicable); f) effect size (if applicable) and / or findings; g) fidelity of research; h) instructional setting, and i) dosage including intervention and control conditions (if applicable).

Analysis

After the 26 studies were coded by extracting the key information, the results were categorized into two tables to synthesize the findings. The first table included the study design, the emergent literacy domains (e.g., alphabet knowledge, emergent writing, etc.), the classroom activity type (e.g., guided play, free play, centers, games, etc.), and the specific instructional techniques (e.g., letter matching, picture cards, library center, etc.). The second table captured all the features of the emergent literacy classroom activities and their association with outcomes (e.g., literacy domain, duration, age, teacher and peer interactions, dosage).

After the tables were completed, the first table was organized and synthesized into charts to show the frequency of the classroom activity types, the emergent literacy domains, and the instructional techniques implemented. For the second table, the information was transferred into a spreadsheet, and filters and dropdown menus were used to clean the data and to sort and analyze based on outcomes. For example, the studies were sorted by the outcomes of the dependent variables to identify the characteristics of the classroom activity by literacy domain, duration, age, teacher and peer interactions, and dosage that were effective and ineffective. From there, the results were presented based on the outcomes and the effect sizes (if applicable). Once the studies were categorized based on the effectiveness of the classroom activity in improving emergent literacy outcomes, they were further analyzed to explore the effectiveness for students with disabilities, students at-risk of reading difficulties, students in general education, multilingual learners, and interventions implemented in tier 1, 2 and 3. Using the outcome categories of the seven emergent literacy domains, including phonological awareness, oral language, vocabulary development, concepts of print, alphabet knowledge, emergent writing, and listening comprehension, the subcategories of student demographics were sorted to identify patterns in the outcomes.

Results

Characteristics of Reviewed Studies

The first research question sought to identify the emergent literacy instruction that preschool teachers integrated into their classroom activities in publications from January 2018 and December 2025.

RQ1: How do preschool teachers integrate emergent literacy instruction across classroom activities (e.g., play-based learning, center activities, etc.)?

To address this question, the 26 studies were analyzed, and the characteristics are presented below. Table 2 includes an overview of the reviewed studies and their characteristics. Figure 2 provides the frequency of the emergent literacy domains (e.g., oral language, concepts of print, etc.) and Figure 3 includes the frequency of activities that were directed or guided by an adult through play and the activities that were child-centered or unstructured free play or free choice.

Out of the 26 studies, ten used observational methods (OBS); six used experimental design with four of those using quasi-experimental design (QED), one using multiple baseline (MB), and one using alternating treatment (AT); four of them used qualitative case study (QCS) which employed a combination of interviews, focus groups, artifacts, and / or observations; three used survey methods (SUR); and three were dissertations that used qualitative case study (QCS-diss).

Table 2. Emergent Literacy Instruction and Classroom Activities

Study	Study Design	Emergent Literacy Instruction Domain(s)	Classroom Activity Type(s)	Instructional Techniques
Aldemir et al. (2019)	QCS	Listening comprehension; oral language	Educational games on iPads; hands-on learning	Digital text reading (teacher directed)
Barker et al. (2021)	OBS	Listening comprehension; oral language; concepts of print; alphabet knowledge; phonological awareness; emergent writing	Child choice and initiative (e.g., centers)	Book reading in book area
Bratsch-Hines et al. (2019)	OBS	Oral language; vocabulary development; phonological awareness; concepts of print; alphabet knowledge; emergent writing	Free choice/center settings; small group; large group	Teacher-child language exchanges
Buell et al. (2018)	OBS	Oral language; concepts of print; emergent writing	Free play / centers	Toys and dramatic play props; alphabet games; book reading in book area; writing area; books on tape
DeBaryshe (2023)	QED	Oral language; phonological awareness; concepts of print; alphabet knowledge; emergent writing	Free play	Sand writing, journaling, family / class books in book area
Dempsey 2020	QED	Listening comprehension	Event exposure and free play	Toys, props, and picture cards
Deris et al. (2020)	MB	Oral language; listening comprehension; concepts of print; emergent writing	Free choice center time	Teacher interaction strategies / teacher mediation; book center (books on tape); block center; puzzle center (letter and word puzzles);

				science center; writing center; housekeeping center
Gabas et al. (2022)	OBS	Emergent writing	Writing task / center with teacher (teacher-child dyads)	Teacher mediation during writing-focused events
Karaolis (2023)	QCS	Oral language	Dramatic play	Puppets
Kirby et al. (2022)	SUR	Vocabulary development; alphabet knowledge	Music-based activities in whole-group, circle time, small group, and transitions	Acting out parts / characters; listening to and producing rhymes; singing and dancing to songs
Lawson (2018)	QCS – Diss.	Oral language; phonological awareness; concepts of print; alphabet knowledge; emergent writing	Steiner Waldorf-inspired programs and Reggio Emilio-inspired programs; Child-centered teaching; open-ended learning experiences	Talk; circle and story time; rhymes; songs; and poetry; movement; sociodramatic play; puppet shows; oral storytelling
Lenhart et al. (2019)	AT	Vocabulary development	Center-based playful learning experiences; guided play	Shared book reading; say-tell-do (STD) and say-tell-do-play (STDP); board game with picture cards; matching game; picture naming
Quinn & Philappakos (2023)	OBS	Listening comprehension; concepts of print; phonological awareness; alphabet knowledge; emergent writing	Centers	Book-making in writing center; letter-sound correspondence; typewriters in dramatic play; phonological awareness games; phoneme bingo; rhyme matching; word sorts; invented spelling; child dictation, teacher writes

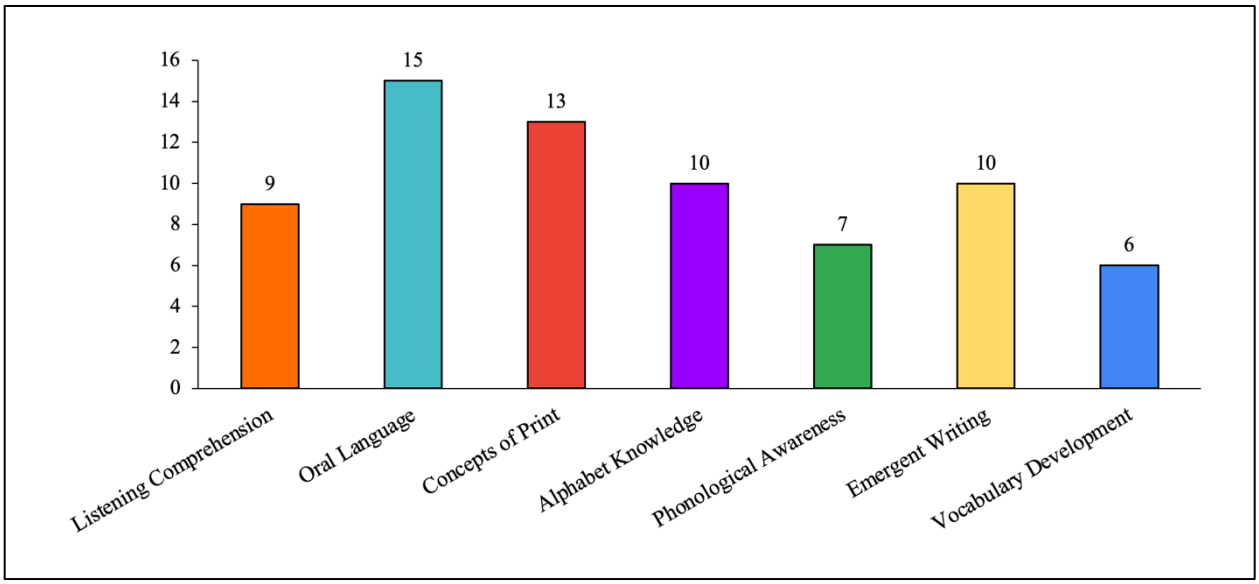
Ramey (2018)	QCS – Diss.	Oral language; concept of print; alphabet knowledge	Child-centered instruction; learning through play	Name writing; book reading; talk; letter of the week
Roche et al. (2024)	QCS	Oral language; vocabulary development	Play-based learning	Peer talk; book reading; adult-supported talk
Rountree (2025)	OBS	Concepts of print	Free choice in book /library center / station	Play, reading, talking
Rouse & Nicholas (2025)	QCS	Oral language; alphabet knowledge; concepts of print	Games; dramatic book reading	Matching letters to objects (make and match letters); name cards; picture books; music; peg-matching game
Rowe (2020)	QCS – Diss.	Oral language	Creative Curriculum's eleven interest areas (art, blocks, toys, games, library, outdoors, sand and water, music and movement, cooking, discovery, technology, dramatic play)	Read aloud practices and storytelling; interactive talk; gestures
Rowe et al. (2018)	OBS	Listening comprehension	Sociodramatic play / pretend play; free play sessions – preplay and postplay	Early-childhood theater performances; making up stories; using props
Rowe et al. (2023)	OBS	Emergent writing	Playful writing events in learning center events	Adult-child writing interactions; building with blocks and drawing and writing about their construction; making holiday cards; drawing and writing about science concepts; writing and labeling

Schmidt et al. (2024)	OBS	Listening comprehension; concepts of print	Drama-based reading	Pantomime, directed imagination, vocal variety and facial expressions, character development
Shea et al. (2025)	SUR	Oral language; listening comprehension; phonological awareness; concepts of print; alphabet knowledge	Self-interested learning centers	Literacy-focused curricula (e.g., Handwriting Without Tears; Ready, Play, and Learn!) and non-literacy-focused curricula (e.g., Creative Curriculum, Reggio Emilia Approach)
Toub et al. (2018)	QED	Vocabulary development	Free play, guided play, directed play	Shared book reading; read and play; read and picture card review
Vaisarova & Reynolds (2022)	SUR	Oral language; listening comprehension; concepts of print; alphabet knowledge; phonological awareness; emergent writing	Child-initiated instruction and teacher-directed instruction	Hands-on experimentation and play and explicit instruction
Vatalaro et al. (2018)	QED	Vocabulary development	iPad apps	Interactive, scaffolding-like to manipulate letters, words, and pictures (the app is the "more-knowledge other"); open-ended for children to produce words and sentences
Webb (2022)	OBS	Oral language	Informal, unstructured play experiences	Playdough table; naturalistic conversations between teacher and students

Note. QED=quasi-experimental design; MB=multiple baseline; AT=alternating treatment; QCS=qualitative case study; QCS-Diss=qualitative case study dissertation; OBS=observational; SUR=survey

Out of the 26 studies reviewed, the emergent literacy domains that were implemented the most included: a) oral language, b) concepts of print, c) alphabet knowledge, and c) emergent writing. Most studies named oral language as a goal or outcome for the activity; while some studies used the terms “language,” “conversational language,” or “discussions” and all of these were coded for the oral language domain. When studies included a book center, library center, or shared book reading, they were coded for the concepts of print domain. When studies taught a letter of the week, used letter puzzles in a center, or used letter-matching games, they were coded for alphabet knowledge. The higher occurrences for emergent writing were surprising, given that emergent writing is often not a key focus area in preschool classrooms. However, if a study included a writing center or an area with writing materials such as pencils, paper, and crayons, it was coded for the emergent writing domain. The occurrence of the emergent literacy domain should not be equated with the quality of the implementation of that domain. For example, the inclusion of writing materials in a free-play center is not as rigorous as didactic instruction for writing with a teacher where children are offered a form of guided play to engage in writing. Further, in some of the survey and interview studies, the participant teachers may have said they teach an emergent literacy domain, and those were included in the frequency, even if the observational data did not include that domain. Figure 2 provides the number of occurrences of the emergent literacy domains across the 26 studies.

Figure 2. Frequency of Emergent Literacy Domains

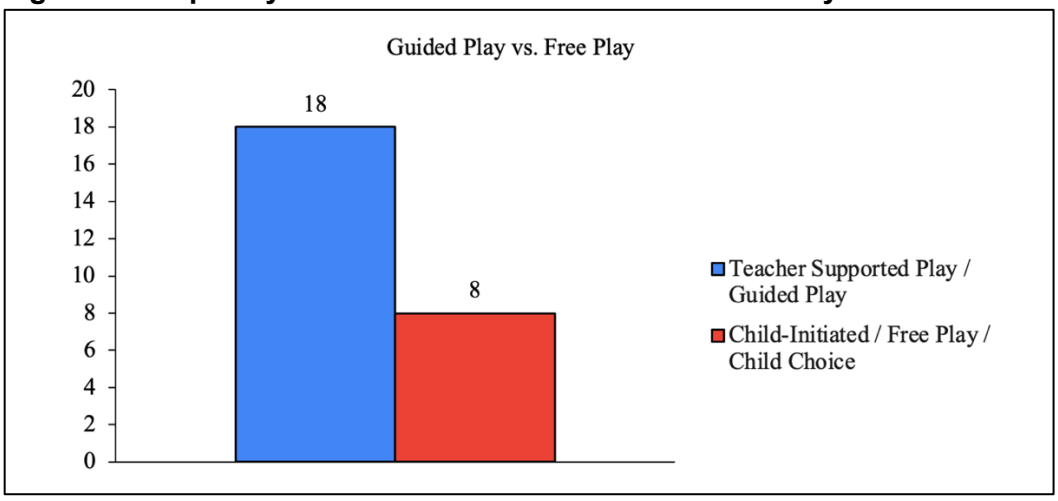


An example of an observational study that had a higher score for language environment and lower scores for print and early writing was Barker, Kim, and Pendergraft’s (2022) examination of preschool teachers’ classroom instruction after participating in a university-sponsored professional development program that focused on hands-on emergent literacy practices to develop alphabet knowledge, phonological awareness, concepts of print, and listening comprehension. They used the Early Language and Literacy Observation (ELLCO) Toolkit to

observe classroom instruction and rate indicators on a scale of 1 to 5 (one being deficient, 5 being exemplary). After classroom structure (mean=3.79), language environment had the highest average across the 23 classrooms (mean=3.64). Print and early writing had an average mean of 3.01 and books and book reading had an average mean of 3.16; both had the lowest scores of the seven subscales. The classroom structure subscale included the following: a) classroom organization, b) contents of the classroom, c) classroom management, and d) personnel. The language environment subscale included: a) discourse climate, b) opportunities for extended conversations, c) efforts to build vocabulary, and d) phonological awareness. The language environment subscale for this study was coded for oral language and phonological awareness when analyzing the frequency of emergent literacy domains. For the print and early writing subscale, the following were included: a) early writing environment, b) support for children's writing, and c) environmental print. The average mean scores were below basic (score of 3 is basic) for early writing environment (2.87) and support for children's writing (2.70). However, environmental print had an average mean above the basic level with 3.48. Altogether, these scores of quality indicate that an emergent literacy domain can be included in the classroom activities and instruction, yet the quality of implementation can be low. Thus, the frequency of emergent literacy domains across the 26 studies should be considered as a snapshot of which emergent literacy domains are implemented and how frequently and not the degree of quality.

In addition to identifying the frequency of the emergent literacy domains across the classroom activities, the activity components were analyzed and coded for teacher-supported play and child-initiated play. Figure 3 offers a visual for the number of activities that involved a teacher and the activities that were child-initiated. It is not surprising that most of the activities involved some form of teacher instruction or guidance, given that research shows children learn from a knowledgeable other (Rand and Morrow, 2021). Nearly two-thirds of the studies reviewed included activities that were led or facilitated by a teacher (e.g., games, dramatic reading, picture cards) or a knowledgeable other (e.g., scaffolding app on iPad).

Figure 3. Frequency of Activities with Teacher-Directed Play vs. Child-Directed Free Play



Gabas, Woods, and Cabell (2022) found the teacher-directed play in writing activities can have positive outcomes for preschool children's emergent writing skills, including handwriting, spelling, and composing. Instead of only offering a writing center with paper, pencils, and other materials for children to freely explore, they note that "children require explicit and focused instruction to develop early skills related to handwriting, spelling, and composing" (p. 5). They integrated writing-focused events with adults through dyadic writing interactions with 30 teacher-child dyads in 19 early childcare and preschool settings. Children were given a picture description open-ended writing task where they were asked to tell a story about the pictures which involved a family at a beach for the day. Each teacher discussed ideas with the child, almost like brainstorming, and provided guidance and support as needed while allowing the child to playfully engage in the writing task. The mediation practices teachers used the most were directives, closed-ended requests, and modeling, and they focused the most on spelling and composing. Although the tasks were designed to be open-ended and allowed for teachers to choose the strategies of support they implemented, open-ended requests, explain / elaborate, and review to support overall writing were used the least. Gabas et al. (2022) note that teachers may benefit from more professional development on pedagogical knowledge related to emergent writing to integrate higher-level practices to help to support the connection between oral language and writing through more open-ended requests and opportunities to explain and elaborate during writing tasks. The teacher-mediated writing dyadic tasks are an example of an emergent literacy domain integrated into teacher-supported play.

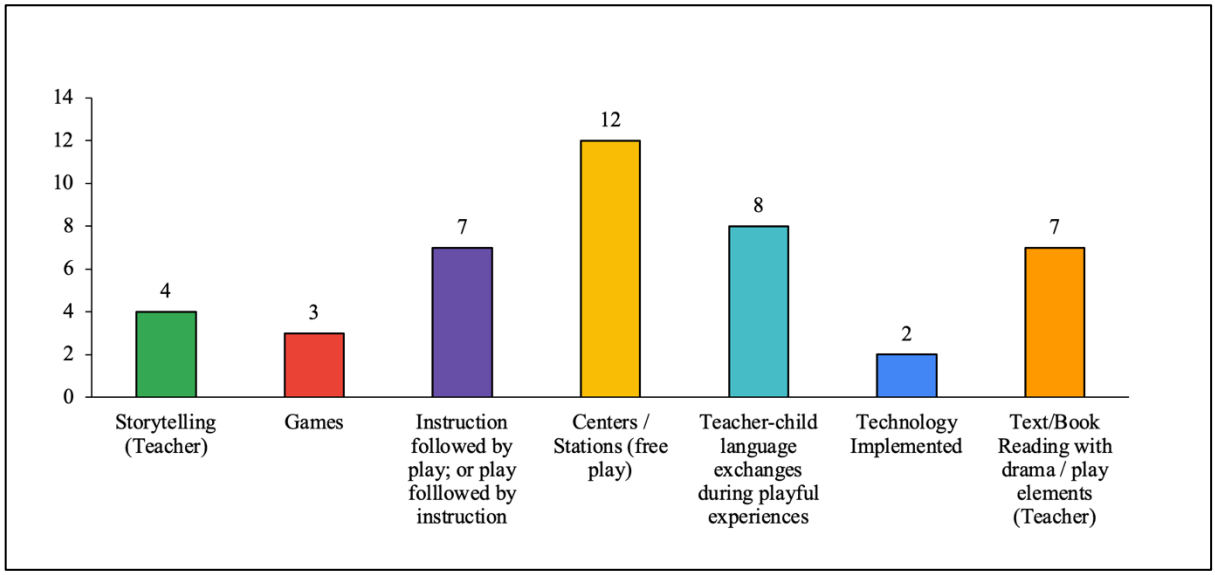
In addition to finding that most of the classroom activities involved support or instruction from a teacher or knowledgeable other, the specific types of classroom activities were coded and analyzed. In some studies, the teacher would provide instruction and then allow children to choose a center for free play. In these instances, the activities were coded for both "centers / stations (free play)" and "instruction followed by play or play followed by instruction." Also, in one study, iPad apps were used to teach and develop vocabulary and some of the apps used scaffolding naming that the app was acting as a knowledgeable other. In this case, that study was coded for "technology," "games," and "instruction followed by play or play followed by instruction." Most studies were coded for more than one instructional technique. Figure 4 offers a tally of the frequency of the types of activities.

It is not surprising that the centers / stations (free play) were implemented with the highest frequency as the research shows that play at the preschool age can foster learning through curiosity and practice (Rand & Morrow, 2021). As discussed previously, the use of centers and free play often was accompanied with teacher direction and instruction, either before or after the choice centers. For example, a teacher may read a book on a topic and then intentionally include dramatic props on that topic in the drama center. As another example, adults may provide children with free play time with props after watching a play.

It is also not surprising that technology was implemented the least frequently given that some research often suggests reducing screen time at younger ages (Vatalaro et al., 2018). The preponderance of classroom activities involved a teacher providing instruction through dramatic

book reading, oral storytelling, engaging children during playful experiences, or teaching a concept before or after play. The role of the teacher or knowledgeable other in play-based learning has been shown to have an impact on learning (Bubikova-Moan et al., 2019) and the findings from these 26 studies demonstrate that teachers played an active role in facilitating play in structured and thoughtfully-planned activities.

Figure 4. Frequency of Types of Classroom Activities



To present examples, two studies from the corpus demonstrate the types of classroom activities and how preschool teachers thoughtfully integrated emergent literacy instruction across them (Deris et al., 2020; Quinn & Philippakos, 2023). Through environmental modification and teacher mediation, Deris et al. (2020) observed preschool teachers in an inclusive classroom intentionally modify their existing centers and reconsider how to engage children during free choice centers. The three teachers in the study were given ratings on their existing classroom activities within their centers and after reflection on their scores, they added some of the following materials: letter and word puzzles, books on tape, letter bingo, letters and stencils, letter bingo, and grocery ads and menus. Similarly, teachers were trained on interaction strategies to implement while children played in the centers. Following the training, teachers were observed asking questions of children, modeling how to use materials, verbally encouraging the children's use of materials, and / or inviting the children to participate in one of the targeted centers.

Quinn and Philippakos (2023) closely investigated the preschool classroom of one teacher and found intentional integration of thematic content with emergent literacy skills across the classroom activities. Specifically, the teacher "connects reading and writing from the level of sound, to letter, to word, to sentences, and content and across all instructional parts of the day (large and small groups, centers)" (p. 260). One week, the teacher read *Click, Clack, Moo: Cows that Type* and chose to add old typewriters to the dramatic play farm center with the idea that children would act out the book while also engaging with letter knowledge. The teacher also

implemented a range of phonological awareness games to build sound-based skills while also connecting them to the alphabetic principle. The teacher may ask children to listen to two words that rhyme like fox and box and then see if they can identify the first sound in each word and write them on a whiteboard. In the centers, play-based activities to practice, such as picture-based games (e.g., phoneme bingo, rhyme matching, word sorts) align with the concepts and skills taught in large group time to give opportunities for practice through play.

In both of these examples, the studies highlight how preschool teachers made thoughtful shift to their free play centers to allow children to explore and practice while building their emergent literacy skills. The teacher incorporated materials to boost literacy; engaged children during centers to model, question, or encourage used of literacy materials; and / or connected books, content, and skills taught in large groups to extend their learning in their centers. In these classrooms, teachers structured the centers to increase learning opportunities while balancing the need for children to play and explore.

Effects and Other Findings

The second research question sought to identify the features of the classroom activities and emergent literacy instruction that were associated with improved outcomes.

RQ2: Research question 2: What features of the classroom activities (e.g., literacy domain, duration, age, teacher and peer interactions, group setting) are associated with improved student outcomes? Do these features differ according to student characteristics?

For 16 of the 26 studies, the design either did not include student outcomes (e.g., they surveyed teachers to inquire about their classroom practices and did not include student outcomes, which addressed the first research question in this review) or the design included qualitative findings that were not robust enough to be included (e.g., no measurable data, description of themes for findings, etc.). Therefore, ten studies were included in the analysis of the second research question. Table 3 provides an overview of the measures, outcomes, student characteristics, and description of classroom activities.

Table 3. Associated Outcomes Based on Features of Classroom Activities

Study	Study Design	Emergent Literacy Instruction Domain(s)	Child-Outcome Measures	Outcome(s)	Student Characteristics	Duration and Dosage; Activity Settings
Bratsch-Hines et al. (2019)	OBS	Oral language; vocabulary development; phonological awareness; alphabet knowledge; emergent writing; concepts of print	Expressive language skills; Letter-word identification; First Sound Fluency (FSF); Phoneme Segmentation Fluency (PSF)	Expressive language was higher with more teacher-child language exchanges (g=0.12) and with less time in whole group (g=-0.12); Letter-word ID was higher when children spent more time in small groups (g=0.13); FSF was higher with more time spent in activities related to sounds (g=0.15); PSF was higher with more time spent in activities related to sounds (g=0.13) and more time in small group (g=0.11)	455 pre-k children 36% dual language learners (DLLs)	5-minute snapshots; 10 30-second cycles of teacher-child language exchanges Large-group; small-group; free choice / center time

DeBarys he (2023)	QED	Oral language; phonological awareness; concepts of print; alphabet knowledge; emergent writing	Picture Vocab Test (PPVT); Test of Early Reading Abilities (TERA); Knowledge of Uppercase Letters; Emergent Writing Assessment; Alphabet Knowledge; Phonological Awareness	PPVT had time effect only (partial eta squared=0.13), intervention and control groups were the same; TERA had effect on time (pes=0.07) and intervention group (pes=0.07); UC Letters had time effect (pes=0.02) and intervention group (pes=0.05); emergent writing (d=1.52); alphabet knowledge (d=1.57); PA (d=1.65)	230 pre-k children from Head Start classrooms 13% DLL; 6.1% SWD	Year-long curriculum with 140 activities; daily large-group lesson, 2-3 daily small group lessons
Dempse y 2020	QED	Listening comprehensi on	Joint Story Retell (JSR); Picture-sequencing task; Comprehension questions (CQs)	Play-based event exposure had significant effects on picture-sequencing task (d=1.67); between group and time the event exposure group performed better on the JSR (pes=0.31); CQ goal-action inferencing question (d=0.90) for event exposure from time 1 to 2	24 pre-k children; typically developing and English as first language	Event exposure and free play, 5-10 minutes for ech group

Deris et al. (2020)	MB	Oral language; listening comprehension; concepts of print; emergent writing	Literacy behaviors: looking at a book, listening to a book, looking at letters or words in the environment, writing with or without a template, manipulating a puzzle or game that includes words or letters, or looking at another person writing	Improved Rate Difference (IRD) = (20/20) − (0/24) = 1.0 or 100% All the children across each classroom demonstrated an increase in literacy behaviors following intervention. Most to Least Observed Literacy: • Looking at letters or words in the • environment • Listening to a book • Manipulating a puzzle or game that includes • words or letters • Looking at a book • Writing with or without a template • Looking at another person writing	9 pre-k children receiving special education services, inclusive classroom; no ELL students	Half day, 4 days per week Free choice centers, 30 min per day
Lenhart et al. (2019)	AT	Vocabulary development	Word awareness – total, expressive, receptive; understanding of word meaning (TQVM)	STDP had significant effects for receptive and expressive; no sig. difference for understanding of word meaning; Posthoc – STDP group had significant effects for receptive word awareness; STDP and STD were effective in children learning taught and untaught words compared to no direct instruction or incidental word learning (d=0.86)	18 pre-k children; 5 ELL	8 weeks Say-tell-do Say-tell-do-play
Schmidt et al. (2024)	OBS	Listening comprehensi	Story Recall Measures: Free	Drama-based strategies were significantly	196 pre-k children; 28%	Teachers Use of Story Time

		on; concepts of print	Recall and Cued Recall	and positively correlated with student story retell: Frequency of directed pantomime (r[62] = .29) directed imagination (r[62] = .25) teacher pantomime (r[62] = .26) were associated with cued recall during Time 2. Quality of directed pantomime was also positively correlated with cued recall at Time 2, r(62) = .31) Frequency of directed pantomime (r[45] = .43) directed imagination (r[45] = .39) were related to students freely recalling story components during Time 3; Teachers' quality of directed imagination was also positively associated with free recall (r(45) = .31). Quality of character development positively correlated with student free recall of the story, (r(45) = .31) Teacher's frequency of facial expressions was positively correlated with student responses to cued recall, r(45) = .34). Unexpectedly, the quality of questions teachers asked was negatively associated with both free recall (r[45] = − .49) and cued recall (r[45] = − .35)	bilingual; 10% SWD	Strategies for Drama (TUSSD); 3 read alouds, Fall, Winter, Spring
Shea et al. (2025)	SUR	Oral language; listening comprehensi	TOPEL Print Knowledge; Quick Letter Name	Teacher-reported use of literacy-focused curricula in classrooms was positively associated with preschool children's gains in phonological	571 pre-k children; 2% SWD; 281 identified as	Literacy-Focused vs. Non-Literacy

		on; phonological awareness; concepts of print; alphabet knowledge	Knowledge Assessment; Letter Sound Short Forms; TOPEL Phonological Awareness, Alliteration IGDI; Rhyming IGDI; Narrative Assessment Protocol; Woodcock–Johnson Oral Comprehension; Picture Naming IGDI; Picture Naming IGDI; IRT (Rasch)-based W; Gerde Writing Measure (Name Writing; Letter Writing; Invented Spelling)	awareness (β = 0.77); no significant associations for print and letter knowledge (β = 0.22); language and comprehension (β = 0.15); emergent writing (β = 0.20); Risk status of participant was significantly associated with gains for print and letter knowledge β = 0.12), phonological awareness (β = 0.10), language and comprehension (β = 0.11) when literacy-focused curricula was implemented. Risk did not moderate gains for lit-focused curricula for emergent writing β = 0.06)	at risk for later reading difficulties	Focused Curricula
Toub et al. (2018)	QED	Vocabulary development	Receptive vocabulary (Peabody Picture Vocabulary Test-PPVT); Expressive vocabulary (New Word Definition	Study 1: Children in any of the intervention groups had statistically significant scores for target words (receptive d=1.34; expressive d=1.34); Receptive and expressive measures indicated that children in Guided Play (d=-0.39) made significantly larger gains than did children in Free Play (d	249 pre-k children; economically disadvantaged families; 37 ELL	Study 1: shared-book reading followed by free play, guided play, or directed play

			Test – Modified NWDT-M)	=−0.26); Posthoc scores, Directed Play had significantly larger gains (d=-0.34) than Free Play (d=0.32) for both measures; no diff between directed and guided play Study 2: Read + Play had greater gains for expressive scores than Read + Picture Cards (expressive d=0.41)	101 pre-k children; economically disadvantaged families; 14 ELL	8 intervention days Study 2: play (Read+Play) vs non-play (Read+Picture Card Words) vocabulary review 2-week intervention, 4 book-reading sessions, 4 small group play sessions, 6 picture card review sessions
Vaisarova & Reynolds (2022)	SUR	Oral language; listening comprehension; concepts of print; alphabet knowledge; phonological awareness;	TS Gold for School Readiness; Classroom Activity Report (CAR)	No main effect on child-initiated practices and school readiness; 4-year-old group had small associations, as child-initiated practices increased so did their school readiness (partial Cohen's f2 = .034)	1289 pre-k children, 7.4% SWD, 88.7% free/reduced lunch eligible	Child-initiated practices and their association with school readiness

		emergent writing				
Vatalaro et al. (2018)	QED	Vocabulary development	Receptive Vocabulary: PPVT-4 and iPad Receptive Vocabulary Assessment Expressive Vocabulary: EVT-2 and iPad Expressive Vocabulary Assessment	PPVT-4: The I-SL group performed significantly higher than I-OE group (d=.86) iPad Receptive: The I-SL group performed significantly higher than the C-1 group (p = .026, SE = 0.443) and the C-2 group (p = .013, SE = 0.472) EVT-2: Examination of the plot of the data indicated a large increase in EVT GSV scores across time for the I-SL group and a slight increase for the I-OE group. The C-1 and C-2 group scores remained relatively the same. iPad Expressive: Examination of the plot of the data indicated the largest increases in iPad Expressive Vocabulary Correct Word scores across time occurred in the I-SL and I-OE groups. Slight increases occurred for both comparison groups, with the C-1 group having a higher increase than the C-2 group.	63 pre-k children in Head Start classrooms; economically disadvantaged families; 28 ELL	Scaffolding-like apps vs. open-ended/creative apps vs. Head Start-chosen apps

Out of the 10 studies included in the second research question, four them included students with a disability (SWD), one of them included students identified as at risk, seven of them included English learners (EL) or dual language learners (DLL), and one of them included general education populations. Some of the studies included multiple categories of students (e.g., both SWD and DLL).

Eight of the 10 studies involved teacher-initiated, teacher-moderated, or knowledgeable other-moderated instruction. The instruction could have occurred prior to play, after play, or during play. For example, Vatalaro, Culp, Hahs-Vaughn, and Barnes (2018) used a series of scaffolding-like vocabulary apps on iPads to teach vocabulary. These interactive apps included letters, words, and pictures and defined and animated vocabulary terms to scaffold the learning to build word knowledge. They write, “In a sense, these apps acted like a ‘more knowledgeable peer’ in supporting children’s vocabulary learning” (p. 455). As another example of teacher-initiated instruction, Dempsey (2020) assigned children to an event-exposure group where an adult modeled how to make pizza using toys, props, and picture cards and then the children tried to match the steps for how to make a pizza. Another group of children were assigned to a free-play group where they played with toys unrelated to pizza making and without an adult. Prior to engaging in their assigned group activity, children were read a story about a boy making a pizza, and they were asked to retell the story and answer questions about the characters and plot. After their assigned group, the children were asked to retell the story and answer the comprehension questions. In this study, an adult initiated a form of instruction (e.g., reading a book) and then allowed children to engage in free play or a form of guided play.

The remaining two studies involved child-centered or child-initiated play (Deris et al., 2020; Vaisarova & Reynolds, 2022). Deris et al. (2020) studied the literacy behaviors of 9 pre-k students receiving special education services in an inclusive classroom. These behaviors were observed during the free choice centers that occurred 30 minutes each day in a four-day instructional week with each day being a half day. Vaisarova and Reynolds (2022) examined the effects of child-initiated instruction versus teacher-directed instruction. Using self-reported data from teachers that specified their allocation of child-initiated instruction time and teacher-directed instruction time, in percentages, the researchers explored whether child-initiated instruction was associated with an increase in school readiness. They did not report the findings for the association between teacher-directed instruction and school readiness.

All 10 studies reported outcomes on one or more of the seven emergent literacy domains. Those outcomes are presented in the next section, starting with phonological awareness outcomes.

Discussion

Discussion of How Teachers Integrate Emergent Literacy Instruction into Classroom Activities

Using play-based classroom activities to integrate emergent literacy instruction in preschool-age groups can have profound impacts on students' later literacy success. The seven emergent literacy domains included in the 26 reviewed studies, align with The Simple View of Reading (Gough & Tunmer, 1986) and Scarborough's Reading Rope (Scarborough, 2001). In both reading models, the outcome is reading comprehension, which is not an expected benchmark for three-, four-, and five-year-olds; however, the components and skills that result in reading comprehension include word recognition and language comprehension. The emergent literacy skills of phonological awareness, alphabet knowledge, and emergent writing contribute to the word recognition domain (Scarborough, 2001; Moats & Tolman, 2019). Further, the emergent literacy skills of oral language, vocabulary development, concepts of print, and listening comprehension fall within the language comprehension strand (Scarborough, 2001; Moats & Tolman, 2019). Across the 26 studies reviewed, oral language and concepts of print occurred the most, which support the development of background knowledge, language structures, and literacy knowledge, all which Scarborough (2001) suggests can help to build a solid foundation of language comprehension. Similarly, alphabet knowledge and emergent writing were found to be frequently integrated across the studies, which can help to develop word recognition skills (Scarborough, 2001).

One surprising finding across the studies was the lower frequency of phonological awareness integration, which includes rhyming, instruction at the phoneme level (e.g., blending, segmenting, isolation, etc.), or practicing sound skills at the syllable level (e.g., compound words). Across the studies, more attention was given to learning letters, including letter names and how to write letters (e.g., letter formation) than to work with letter sounds. According to Moats and Tolman (2019), "Alphabetic learning requires progressive differentiation of both sounds in words and the letter sequences in print. Phonemic awareness is the foundation upon which letter-sound association can be constructed" (p. 43). The most effective approach to building the foundation for the word recognition domain for preschool children is to teach alphabetic knowledge in tandem with phonological and phonemic awareness to ensure children understand the connection of print to sounds.

Across the reviewed studies, one key finding was the frequency of teacher-supported play or guided play, which occurred more than two times more frequently than child-initiated play or free choice centers. Much of the research on emergent literacy skills and classroom activities shows that adult or teacher facilitation or mediation is effective to literacy learning outcomes (Burchinal et al., 2022). Recent research on literacy instruction points to the effectiveness of implementing explicit and systematic instruction; and that while children learning to speak is a natural process, learning to read, understanding how print and sounds work, and building knowledge of print concepts requires instruction by a knowledgeable other (Moats & Tolman, 2019). Integrating both explicit instruction with play and time to explore and practice the taught literacy skills can

combine the developmentally appropriate pedagogy for preschool children that simultaneously lead to key literacy outcomes, which will set them up for success when they enter kindergarten.

Discussion of Classroom Activities Effectiveness

Across the 10 studies that measured effectiveness based on student outcomes, the activity components that integrated emergent literacy that were found to be the most effective included: more time on task and in small groups (Bratsch-Hines et al., 2019), less time in large groups (Bratsch-Hines et al., 2019; DeBaryshe, 2023), teacher or other scaffolds (Deris et al., 2020; Schmidt et al., 2024; Vatalaro et al., 2018), play-based and literacy-focused curricula or activities (Shea et al., 2025; Dempsey, 2020; Lenhart et al., 2019; Toub et al., 2018); and less only child-initiated activities (Vaisarova & Reynolds, 2022).

Essentially, the findings support the implementation of intentionally-planned play-based activities with an intended emergent literacy skill as an outcome in small group settings that includes brief instruction from a teacher, adult, or knowledgeable other. Finding the “sweet spot” of blending short instructional modeling sessions from a teacher with hands-on, multisensory learning activities where children can play and practice is shown to have positive outcomes. The findings from the 10 studies with student outcomes align with the types of teacher support found across the full corpus of the 26 studies, specifically, that adult or teacher facilitation alongside explicit and systematic instruction (Burchinal et al., 2022; Moats & Tolman, 2019) is key to children developing early literacy skills in developmentally appropriate ways.

Implications for Practice

The findings from this systematic review address the barriers discussed in the introduction: a) policy shifts that emphasize emergent literacy outcomes for preschool children; b) teachers not feeling confident to integrate play-based learning and emergent literacy instruction; and c) preschool curricula finding a balance between play and literacy and not overemphasizing a constructivist approach to literacy learning that relies on children exploring their environment as the primary way to learning.

When play-based activities that integrate emergent literacy skills were facilitated by an adult, teacher, or knowledgeable-other, the studies found effective outcomes for literacy learning. Even with policy shifts toward expected academic outcomes for preschool children, the pendulum does not have to swing the other direction to only include explicit and direct instruction void of play and activities in preschool classrooms. Findings from many studies support the use of short, small group lessons, book readings, storytelling alongside the integration of free choice centers, play with props and toys, and teacher-facilitated play practice that can lead to emergent literacy outcomes. The main takeaway for teachers may be the importance of intentional planning for instruction and play. For example, a teacher may read a book about sea animals and their habitats and then intentionally integrate sea-themed props and toys in the dramatic play center, use picture cards with sea animals to teach vocabulary

words and then allow children to make a story with the picture cards, or ask children to identify the beginning sounds for toys or objects that are sea-creature themed.

One key theme that emerged throughout this review was the importance of supporting teachers with professional development. It would be beneficial for schools and districts to ensure teachers have the materials and training necessary to support them in their planning and delivery of play-based literacy learning. This would address the second barrier of teachers not feeling confident in integrating play and literacy in an effective manner and they tend to dominate in one of the areas (e.g., integrate too much play opportunities with limited literacy instruction or implement too much direct instruction with limited opportunities to practice or explore through play).

Another key barrier to effectively implementing play and emergent literacy instruction in classroom activities involved the preschool curricula. Most preschools implement a broad curriculum that emphasizes child-centered exploration where their learning is constructed through engaging with their environment (e.g., centers, blocks, environmental print, being exposed to books, etc.). However, these curricula often do not go far enough in terms of teaching emergent literacy skills. School leaders and districts may choose to implement literacy-focused curricula, which most of the time already include forms of play-based learning such as hands-on activities, manipulatives, multisensory learning, and guided play. If choosing literacy-focused curricula is not an option, professional development or instructional coaching could be implemented for preschool teachers to find ways to thoughtfully teach and integrate emergent literacy in more purposeful ways into the existing curricula.

Limitations

There were some limitations in this review. First, some of the studies that were included in the corpus to answer the first research question of how preschool teachers integrate emergent literacy instruction across classroom activities involved self-reports from teachers using surveys, interviews, and / or focus groups. Using these methods, the accuracy and description of the classroom activities and / or the emergent literacy domain(s) integrated may not have been specific or in depth enough to have a clear picture of exactly how each activity was implemented. For example, some studies may have mentioned sand trays, centers, use of puppets, singing alphabet / phonics songs, focusing on phonics for a month, guessing what is in a basket, or labeling pictures of items on a bulletin board. In some of these studies, naming the activity, although helpful, did not always include a clear description of when or how long the activity was implemented during the school day (e.g., small group, center, whole group, structured literacy time or random incidental learning), how the activities were planned (e.g., intentionally planned by the teacher in connection with other content and skills, happenstance in free play, etc.), the clear connection to literacy learning, or a detailed description of the exact role of the teacher or the child. The lack of specificity and description in some of the studies limited the information needed to present a clear picture of how teachers integrated emergent literacy instruction across classroom activities.

Second, there were only ten studies that included student outcomes based on the integration of emergent literacy integrated into classroom activities. Because these studies were intentionally investigating a play-based activity that integrated literacy skills, the details of the activities were inevitably more robust, detailed, and descriptive. The limitation was only having ten studies to include resulting in a small sample size to analyze for patterns.

Future Research

For the frequency of emergent literacy domains across the classroom activities, the lower frequency of phonological awareness may warrant more investigation in future research. While many teachers in the studies did in fact integrate phonological awareness into classroom activities, it was one of the emergent literacy domains that was integrated the least. The only other domain that was integrated less frequently was vocabulary development, which is another area to be considered for future research. However, it is important to note that phonological awareness and vocabulary development were among the domains to be measured the most in the 10 studies reviewed in the second research question. In those 10 studies, eight of them included teacher-direction or scaffolding in some capacity. One possible reason for the discrepancy could be that preschool teachers do not systematically include phonological awareness and vocabulary development in their daily classroom activities and view oral language and concepts of print as more prominent domains because those can be more easily developed in peer-play, book / library centers, and read alouds.

To address one of the limitations, future research that examines student learning outcomes based on literacy-based classroom activities would be helpful to add to the knowledge base of *how* preschool teachers integrate emergent literacy into the classroom activities. To build a more robust research base of the literacy activities that connect to student outcomes in preschool would help to provide clear recommendations for teachers and schools. Knowing what teachers are doing to teach literacy through play is an important first step, however, if the ways they are implementing literacy activities are not shown to be effective, it is important to know that, and to know what is in fact effective for children's learning of emergent literacy skills.

Lastly, there is a fine line between play-based classroom activities and guided practice. In this review, play was defined broadly and included a range of activities that were child-initiated (e.g., free play centers), teacher-mediated, scaffolded games on iPads, or teacher directed (e.g., explicit instruction followed or preceded by a type of play). It would be helpful to examine how guided play / structured play is different from guided practice (e.g., explicit instruction followed by students practicing the taught concept / skill – I do, we do, you do) and if student outcomes vary for the instructional practice.

Conclusion

The findings from this review demonstrate that preschool teachers integrate the seven emergent literacy domains across their classroom activities through teacher-guided play, intentionally-planned literacy centers, and in short, small group activities that include explicit instruction and forms of play. According to preschool teachers, oral language and concepts of print are among the most common domains of emergent literacy integrated into their classroom activities. Across the 26 studies, there were more examples of activities that involved teacher or adult support in play-based literacy learning than child-initiated free play with little to no teacher support. Centers were among the top types of activities implemented in preschool classrooms, but teacher-mediation was still heavily present in the choice center time (e.g., engagement, modeling, playing together, etc.).

In addition to the findings that answer how preschool teachers are integrating emergent literacy into classroom activities, the ten studies with measurable student outcomes found that time on task, small group instruction, and scaffolded teaching were effective practices. Time in large groups and mostly child-initiated activities were not found to be effective for learning outcomes. Integrating forms of play through hands-on activities, use of manipulatives, multisensory learning, and structured play into literacy-focused curricula had higher effect sizes than non-literacy-focused curricula that used similar forms of play.

Lastly, it is not surprising that teaching early literacy skills through play was found to be an effective technique. For preschool teachers, it may be daunting to design activities that allow children to tap into both the forms of play that are fun and keep them engaged while also intentionally planning for literacy outcomes. Starting small with short lessons that demonstrate a concept (e.g., rhyme recognition) and then offering a playful activity that is also brief (e.g., matching pictures that rhyme) can be a relatively small shift with a large impact. School leaders can also support teachers in providing a research-based, skills-based curriculum that integrates play through hands-on activities and manipulatives which can take the burden to plan every classroom activity off the teachers. A key takeaway from this systematic review is that forms of play and hands-on activities, when integrated intentionally with literacy outcomes, are effective and developmentally appropriate pedagogical tools to support preschool children’s emergent literacy outcomes.

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**Denotes one of the 26 studies reviewed*

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