

PLAY

Play's Potential in Early Literacy Development

Kathleen A. Roskos, PhD

John Carroll University, USA

April 2023, 2e éd. rév.

Introduction

Play in the preschool years has the potential to provide young children with a highly engaging and meaningful context for learning essential early literacy concepts and skills. The potential exists because theoretically, pretend play and literacy share higher order, cognitive processes such as symbolic thinking, imaging, and problem solving.^{1,2,3} Research interest in a play-literacy relationship appeared as early as 1974,⁴ but surged during the 1990s – most likely inspired by new insights into the foundations of literacy before schooling.^{5,6} Play, as a developmentally-appropriate activity, meshed perfectly with emergent literacy, a new insight on literacy development, and the play-literacy connection became one of the most heavily-researched areas of early literacy learning and instruction in the late 20th century.⁷ Research momentum was lost early in the 21st century,⁸ but soon re-energized in response to the standards movement which focused on early academics.⁹ Play-based learning (guided play) and book-play connections became fruitful new areas of research.

Subject

As in other areas of early childhood development, the “classic” theories of Piaget¹⁰ and Vygotsky¹¹ provide strong theoretical frameworks for investigating play-literacy relationships. Observations derived from a Piagetian view emphasize the value of social pretend play for practicing and consolidating broad cognitive skills, such as symbolic representation, and emerging literacy skills, such as print awareness. This perspective also focuses on interactions between individuals and the objects in the physical environment, leading to the development of literacy-enriched play centers as an intervention strategy.^{7,12} Vygotskian theory focuses attention on the role of adults and peers in acquiring social literacy practices during play. Arguing that literacy acquisition is a social, constructive process that begins early in life, this theory posits that children develop literacy concepts and skills through everyday experiences with others, including storybook reading and pretend play.^{5,13} Although singularly these classic theories do not explain the dynamics of the play-literacy relationship, i.e., how play activity influences literacy development and learning, they do offer behavioural categories apparently shared by play and literacy, such as pretend transformations, narrative thinking, meta-play talk, and social interaction.¹⁴

Key Research Questions

Research on play’s role in early literacy development and learning centers on two fundamental questions:

1. Does socio-dramatic play activity (language, pretense, narrative) influence emerging literacy skills (phonological awareness, alphabets, vocabulary, story comprehension)?
2. What are the effects of the play environment—both physical and social—on developing early literacy concepts and skills?

Research Results

Play Process. A critical cognitive connection between play and literacy is rooted in the theoretical premise that representational abilities acquired in pretend transformations (“this stands for that”) transfer to other symbolic forms, such as written language. Some research evidence supports this premise. Pellegrini,² for example, found that children’s level of pretend skill predicted their emergent writing status. In a related study Pellegrini and his associates found positive, significant relationships between three-year-old children’s symbolic play and their use of meta-linguistic verbs (i.e., verbs that deal with oral and written language activity such as talk, write, speak, read), which suggests transfer of abstract, socially defined language uses between play and literacy.¹⁵

Guided play studies^{16,17,18,19} show significant effects of book-play facilitation (pretend play; game play) on vocabulary learning.

Other researchers have pursued a narrative link between play process and literacy development. Thematic-fantasy play (TFP) research in particular reveals the isomorphism between pretend play talk and oral language narrative that undergirds story comprehension.²⁰ TFP training improves story comprehension, both the more specific understanding of the enacted story and a more generalized understanding of other stories. Williamson and Silvern,²¹ for instance, probed the benefits of TFP on story comprehension and found that children who engaged in more meta-play talk to negotiate play comprehended the story line better than those less so engaged. Other researchers have found evidence of structural parallels between play narratives and more general narrative competence. For example, Eckler and Weininger²² observed a structural correspondence between Rummelhart's²³ story grammar scheme (narrative stories have a predictable structure in which main characters set goals, encounter problems and attempt to overcome these obstacles and achieve their goals) and children's pretend play behaviours, leading them to infer that play narratives may help children develop the building blocks of story. Correlational and descriptive evidence also indicate a positive relationship between symbolic play talk and the literate language of books (e.g., syntactic awareness), not only through live, but also virtual play with electronic apps.^{24,25}

Play Environment. A large body of research has focused on the literacy-enriched play center strategy in which play areas are stocked with theme-related reading and writing materials. For example, a pizza parlor play center might be equipped with wall signs ("Place Your Order Here"), menus, pizza boxes, employee name tags, discount coupons, a pencil and notepad for taking orders. Data indicate that this type of manipulation of the physical environment is effective in increasing the range and amount of literacy behaviours during play.^{26,27} Evidence also indicates that literacy-enriched play settings can result in at least short-term gains in young children's knowledge about the functions of writing,²⁸ ability to recognize play-related print,²⁹ and use of comprehension strategies such as self-checking and self-correction.¹²

Research has also shown that the social environment has an impact on play-literacy connections. Several investigations have reported that teacher scaffolding increased the amount of literacy activity during play.³⁰ Other research has focused on the peer interaction in literacy-enriched play settings.^{31,32} Results indicate that children use a variety of strategies such as negotiating and coaching, to help each other learn about literacy during play.

Research Gaps

Play-literacy research continues to struggle with problems of definition, particularly in defining the salient characteristics of play influential in literacy learning.³ For example, the linguistic features of play talk that matter in emergent literacy remain uncharted, i.e., what are the preparatory syntactic and semantic features that map to written language and bridge play and the early-reading stage? Per Vygotsky a “profound analysis” is needed to describe the intersect of decontextualized language in play and early reading. Non-linear growth models may offer more powerful lens for observing these intersections than traditional stage models.³³

Research on play and literacy also faces serious methodological issues. The line of inquiry lacks longitudinal studies, newer theoretical frameworks, design studies, implementation research and mixed methods designs for observing the complexities of play-literacy relationships.³⁴ The difficult work of controlled experimental studies to test the value-added of play in preschool language and literacy curricula is yet to be undertaken, and limited progress has been made in investigating the play-literacy connection in communities and homes. Innovative, creative studies are also needed to examine links between play process and print concepts in multimodal, electronic texts. How app software and e-books, for example, tutor a play-literacy relationship remains largely unknown.

Conclusions

Research has provided some evidence that play processes (e.g., the language, symbolic representation, and narratives used in play) are related to early literacy skills. In addition, research on literacy-enriched play centers indicate play environments can be engineered and enriched to enhance the literacy experiences of young children. However, we still lack evidence on the “big” question: Does play directly contribute to literacy development and learning? This research gap persists perhaps because the science of play study has not kept pace with advances in developmental and implementation research paradigms. Most play-literacy research, for example, remains loyal to the classic theories of Piaget and Vygotsky, even though cognitive science has moved on to more dynamic and integrated perspectives.^{34,35} In addition, researchers are also using well-worn data collection and analysis procedures. Pellegrini and Van Rizen¹⁴ argue that the use of modern statistical techniques would be very helpful in teasing out causal relationships between play and learning. These new theoretical and methodological approaches have the potential to sustain momentum in play-literacy research.

Implications

Credible evidence supports the claim that play can serve literacy by providing settings that promote literacy activity, skills, and strategies. Therefore, ample opportunities to engage in dramatic play and literacy-enriched play settings should be standard features in early childhood programs. However, firm evidence is lacking that play activities, with or without literacy-enrichment, make lasting contributions to literacy development. It follows that print-rich play centers should be just one component of the pre-K curriculum. Effective curriculums should also include age-appropriate direct instruction in core early literacy skills and teaching strategies, such as shared reading and shared writing, which provide rich opportunities for children to learn these skills in non-play settings. Evidence also suggests that teachers make direct connections between literacy-enriched play centers and the academic parts of the curriculum, rather than relying on play experiences as a “stand alone” activity. This play-based integration with curriculum increases the likelihood that play experiences offer opportunities for children to practice and perfect important literacy skills and concepts.³³ Lastly, we encourage more research on the play-literacy relationship in electronic media, especially with e-books.³⁶ A new generation of digital storybooks enriched with digital storytelling techniques may even be more profitable to young children’s literacy development than playful regular storybook reading.

References

1. Bruner J. *Beyond the information given: Studies in the psychology of knowing*. New York, NY: Norton; 1973.
2. Pellegrini AD. Relations between preschool children's symbolic play and literate behavior. In: Galda L, Pellegrini AD, eds. *Play, language, and stories: The development of literate behavior*. Norwood, N.J.: Ablex Pub. Corp.; 1985:79-97.
3. Smith PK. Pretend play and children’s cognitive and literacy development: sources of evidence and some lessons from the past. In: Roskos K, Christie J, eds. *Play and literacy in early childhood: Research from multiple perspectives*. 2nd ed. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2007:3-19.
4. Wolfgang C. An exploration of the relationship between the cognitive are of reading and selected developmental aspects of children's play. *Psychology in the Schools*

1974;11(3):338-343.

5. Ferreiro E, Teberosky A. *Los Sistemas de Escritura en el Desarrollo del Nino* [Literacy before Schooling]. Goodman Castro K, trans. Exeter, NH: Heinemann; 1982.
6. Jacob E. Learning literacy through play: Puerto Rican kindergarten children. In: Goelman H, Oberg A, Smith F, eds. *Awakening to literacy: the University of Victoria Symposium on Children's Response to a Literate Environment: Literacy before Schooling*. Portsmouth, NH: Heinemann; 1984:73-86.
7. Yaden D, Rowe D, MacGillivray L. Emergent literacy: a matter (polyphony) of perspectives. In: Kamil M, Mosenthal P, Pearson PD, Barr R, eds. *Handbook of Reading Research*. Vol. 3. Mahwah, NJ: Erlbaum; 2000:425-454.
8. Roskos K, Christie J, Widman S, Holding A. Three decades in: priming for meta-analysis in play-literacy research. *Journal of Early Childhood Literacy* 2010;10(1):55-96. [Zigler, 2006].
9. Zigler EF, Bishop-Josef S. The cognitive child versus the whole child: lessons from 40 years of Head Start. In: Singer D, Golinkoff RM, Hirsh-Pasek K. eds. *Play=Learning: How play motivates and enhances children's cognitive and social-emotional growth*. New York, NY: Oxford University Press; 2006.
10. Piaget J. *Play, dreams, and imitation in childhood*. Gattegno C, Hodgson FN, trans. New York, NY: W.W. Norton & Company; 1962.
11. Vygotsky L. *Play and its role in the mental development of the child*. In: Bruner J Jolly A, Sylva K, eds. *Play: Its role in development and evolution*. New York: Basic Books; 1976:537-554.
12. Neuman S, Roskos K. Literacy knowledge in practice: contexts of participation for young writers and readers. *Reading Research Quarterly* 1997;32(1):10-32.
13. Teale W, Sulzby E. Emergent literacy as a perspective for examining how young children become writers and readers. In: Teale W, Sulzby E, eds. *Emergent literacy: Writing and*

reading. Norwood, NJ: Ablex; 1986:vii-xxv.

14. Pellegrini AD, Van Ryzin M. Commentary: cognition, play and early literacy. In: Roskos K, Christie J, eds. *Play and literacy in early childhood: Research from multiple perspectives*. 2nd ed. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2007:65-80.
15. Pellegrini AD, Galda L, Dresden J, Cox S. A longitudinal study of the predictive relations among symbolic play, linguistic verbs, and early literacy. *Research in the Teaching of English* 1991;25(2):215-235.
16. Dickinson DK, Turner KA, Collins MF, Nicolopoulou A, Golinkoff RM, Hirsh-Pasek K, ... Rivera BL. More word learning occurs when book reading is followed by teacher- supported play. April. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. April 2013.
17. Hassinger-Das B, Ridge K, Parker A, Golinkoff R, Hirsh-Pasek K, Dickinson D. Building vocabulary knowledge in preschoolers through shared book reading and gameplay. *Mind, Brain and Education* 2016;10(2):71-80.
18. Lenhart LA, Roskos KA, Brueck J, Liang X. Does Play Help Children Learn Words?: Analysis of a book play approach using an adapted alternating treatments design. *Journal of Research in Childhood Education* 2019; 33(2):290-306. doi:10.1080/02568543.2019.1577776
19. Weisberg DS, Hirsh-Pasek K, Golinkoff RM. Guided play: Where curricular goals meet a playful pedagogy. *Mind, Brain, and Education* 2013;7(2):104-112.
20. Roskos K. Play-literacy knowns and unknowns in a changing world. In: Smith PK, Roopnarine J, eds. *Cambridge handbook of play: Developmental and disciplinary perspectives*. Cambridge: Cambridge University Press; 2018:528-545.
21. Williamson P, Silvern S. Thematic-fantasy play and story comprehension. In: Christie J, ed. *Play and Early Literacy Development*. Albany, NY: State University of New York Press; 1991:69-90.

22. Eckler J, Weininger O. Structural parallels between pretend play and narrative. *Developmental Psychology* 1989;25(5):736-743.
23. Rummelhart D. Understanding and summarizing brief stories. In: LaBerge D, Samuels SJ, eds. *Basic processes in reading: Perception and comprehension*. Hillsdale, NJ: Erlbaum Associates; 1977:265-303.
24. Nicolopoulou A, Cortina KS, Ilgaz H, Cates CB, de Sá AB. Using a narrative and play-based activity to promote low-income preschoolers' oral language, emergent literacy, and social competence. *Early Childhood Research Quarterly* 2015;31:147-162.
doi:10.1016/j.ecresq.2015.01.006
25. Wohlwend KE. One screen, many fingers: young children's collaborative literacy play with digital puppetry apps and touchscreen technologies. *Theory Into Practice* 2015;54:154-162.
doi:10.1080/00405841.2015.1010837
26. Morrow L, Rand M. Preparing the classroom environment to promote literacy during play. In: Christie J, ed. *Play and early literacy development*. Albany, NY: State University of New York Press; 1991:141-165.
27. Neuman S, Roskos K. Literacy objects as cultural tools: effects on children's literacy behaviors during play. *Reading Research Quarterly* 1992;27(3):203-225.
28. Vukelich C. Play: a context for exploring the functions, features, and meaning of writing with peers. *Language Arts* 1993;70(5):386-392.
29. Vukelich C. Effects of play interventions on young children's reading of environmental print. *Early Childhood Research Quarterly* 1994;9(2):153-170.
30. Neuman S, Roskos K. Access to print for children of poverty: differential effects of adult mediation and literacy-enriched play settings on environmental and functional print tasks. *American Educational Research Journal* 1993;30(1):95-122.

31. Christie J, Stone S. Collaborative literacy activity in print-enriched play centers: exploring the "zone" in same-age and multi-age groupings. *Journal of Literacy Research* 1999;31(2):109-131.
32. Neuman S, Roskos K. Peers as literacy informants: a description of young children's literacy conversations in play. *Early Childhood Research Quarterly* 1991;6(2):233-248.
33. Fischer KW, Rose LT, Rose SP. Growth Cycles of Mind and Brain: Analyzing Developmental Pathways of Learning Disorders. In: Fischer KW, Bernstein JH, Immordino-Yang MH, eds. *Mind, brain and education in reading disorders*. Cambridge: Cambridge University Press; 2007: 101-123.
34. Fischer K, Bidell T. Dynamic development of psychological structures in action and thought. In: Lerner RM, ed. *Handbook of Child Psychology*. 5th ed. New York: Wiley; 1998:467-561. *Theoretical Models of Human Development*. Vol 1.
35. Peters DH, Tran NT, Adam T. Implementation research in health: a practical guide. Alliance for Health Policy and Systems Research, World Health Organization, 2013.
36. Bus AG, Roskos K, Burstein K. Promising interactive functions in digital storybooks for young children. In: Rohlfing KJ, Müller-Brauers C, eds. Johns Benjamin Publishing Co. 2020: *(Early) Literacy and (digital) Media*, chapter 1.