

# EARLY CHILDHOOD LEARNING

Knowledge Centre

## LET THE CHILDREN PLAY: Nature's Answer to Early Learning

By Jane Hewes, PhD  
*Chair of the Early Childhood Education Program,*  
Grant MacEwan College  
Edmonton, Alberta, Canada

### PLAY IS ESSENTIAL FOR OPTIMAL DEVELOPMENT

Play is a universal phenomenon with a pervasive and enduring presence in human history.<sup>1,2,3</sup> Play has fascinated philosophers, painters, and poets for generations. Article 31 of the UN Convention on the Rights of the Child recognizes the significance of play in the lives of children, acknowledging play as a specific right, in addition to and distinct from the child's right to recreation and leisure.<sup>4</sup>

Early childhood educators have long recognized the power of play. The significant contribution of play to young children's development is well documented in child psychology, anthropology, sociology, and in the theoretical frameworks of education, recreation, and communications.<sup>5</sup> Being able to play is one of the key developmental tasks of early childhood.<sup>6</sup> Play is "the leading source of development in the early years":<sup>7</sup> it is essential to children's optimal development.<sup>8</sup>

### CHILDREN'S OPPORTUNITIES TO PLAY ARE UNDER THREAT

Ironically, play is persistently undervalued, and children's opportunities for uninterrupted free play – both indoors and out – are under threat. The physical and social environments of childhood in the Western world have changed dramatically over the past several decades.<sup>9,10</sup> Many children are spending substantial time in peer-group settings from a very young age. Many of these settings focus on structured educational and recreational activities, leaving little time for participation in open-ended, self-initiated free play.<sup>11</sup>

Children's play advocates are concerned that access to outdoor play opportunities in natural environments in neighborhoods is vanishing. Technology, traffic, and urban land-use patterns have changed the natural play territory

of childhood.<sup>12</sup> Parents are increasingly concerned about safety and children find themselves in carefully constructed outdoor playgrounds that limit challenge in the name of safety.<sup>13,14,15</sup>

The priority currently given to the early acquisition of academic skills is another threat to children's play.<sup>16</sup> This emphasis often constrains and limits the scope of the learning that unfolds naturally in play. The question of how and what children should learn in preparation for formal school is a subject of vigorous debate in Canada. It used to be that children spent their preschool years playing, whether at home, in child care, or in preschool social settings. Many now advocate for early childhood programs focused on literacy and numeracy experiences, particularly in cases where social and environmental circumstances potentially compromise children's readiness for school.

In recent years, the trend has been to introduce more content via direct instruction into the practice of early-childhood professionals. Research demonstrates that this approach, while promising in the short term, does not sustain long-term benefits and, in fact, has a negative impact on some young children.<sup>17</sup> Long uninterrupted blocks of time for children to play – by themselves and with peers, indoors and outdoors – are becoming increasingly rare.

The developmental literature is clear: play stimulates physical, social, emotional, and cognitive development in the early years. Children need time, space, materials, and the support of informed parents and thoughtful, skilled early-childhood educators in order to become "master players."<sup>18</sup> They need time to play for the sake of playing.

## WHAT IS PLAY? WHY IS IT IMPORTANT?

Almost any adult you meet can recall a pleasurable childhood play experience, often in rich and vivid detail. When we recall our childhood play, we talk about feelings – of freedom, of power, of control, and of intimacy with friends. Many of us remember endless, delicious time spent in secret places – the time and place still palpable. We remember the feel of the wind, the touch of the grass, the sound of creaking stairs, and the smell of a dusty attic.

Play is meaningful experience. It is also tremendously satisfying for children, a pursuit they seek out eagerly, and one they find endlessly absorbing. Anyone who has spent any time watching children play knows they engage deeply and they take their play very seriously.

Although play is a common experience, and a universal one, it is difficult to define precisely for the purposes of multidisciplinary scholarly research. Play is paradoxical – it is serious and non-serious, real and not real, apparently purposeless and yet essential to development. It is resilient – children continue to play in the most traumatic of situations – and yet fragile – there is increasing evidence that play deprivation has a damaging impact on development.<sup>19</sup>

In a much-quoted review of play theory and research, authors Rubin, Fein, and Vandenberg<sup>20</sup> draw together existing psychological definitions, developing a consensus around a definition of play behaviour as

- Intrinsically motivated
- Controlled by the players
- Concerned with process rather than product
- Non literal
- Free of externally imposed rules
- Characterized by the active engagement of the players

These characteristics now frame much of the scholarly work on children's play.

Anthropological investigations of children's play focus on the complex relationships between play and culture: the obvious

links between children's play and adult social roles, and the sense in which play creates a culture among children, with rules of engagement and rites of passage.<sup>21</sup> An intriguing perspective in play research considers the meaning of play from the perspective of the players themselves.<sup>22</sup> Children have their own definitions of play and their own deeply serious and purposeful goals. In a recent study, children defined play based on the absence of adults and the presence of peers or friends.<sup>23</sup>

Taken together, these definitions give us a glimpse of the complexity and depth of the phenomenon of children's play.

There are many forms of play in childhood, variously described as exploratory play, object play, construction play, physical play (sensorimotor play, rough-and-tumble play), dramatic play (solitary pretense), socio-dramatic play (pretense with peers, also called pretend play, fantasy play, make-believe, or symbolic play), games with rules (fixed, predetermined rules) and games with invented rules (rules that are modifiable by the players).

These forms of play evolve over the course of early childhood. Naturally occurring episodes of play often have a mix of different types of play. For example, a block construction representing buildings leads naturally to a dramatic play episode with toy cars and people. The complexity of each type of play develops over the course of childhood. For example, symbolic play begins in toddlers with simple pretense – pretending to say hello to grandma on a toy telephone – peaking during the preschool years in complex extended episodes of pretend play with peers.

The developmental progression that we observe in different types of play mirrors development in other areas; for example, language and symbolic play emerge in young children at approximately the same time in cultures around the world. Children begin to create and play active games with predetermined rules and with invented rules when they develop sufficient physical strength and coordination and the capacity for concrete operational thought.<sup>32</sup>

## PLAY AND DIVERSITY

Recent research emphasizes the importance of interpreting children's pretend play within a social and cultural context.<sup>24</sup> The sociocultural context is important in informing practice in diverse societies such as Canada. Cultures have different attitudes and values about play. The prominence given to the development of socio-dramatic play in Western culture is not universal.<sup>25</sup> This is increasingly a significant consideration for early childhood educators in Canada.

There are sociocultural themes in pretend play<sup>26,27</sup> and these have implications for the way we design play environments in communities as well as early childhood

settings.<sup>28</sup> Children find it difficult to engage in pretend play if the props and settings are unfamiliar. In a culturally sensitive context, play has the potential to bridge between cultures, helping newcomer children develop bicultural competence.<sup>29,30</sup>

Children explore and express their understanding of aspects of diversity in their play. It is important for adults to respond to children's interpretations of diversity in their play – gender roles, ability and disability, socioeconomic class – particularly if they are inaccurate or hurtful to other children.<sup>31</sup>

KIND OF PLAY	DESCRIPTION	AGE RANGE OF GREATEST INCIDENCE
Exploratory play/object play/sensory play	Very young children explore objects and environments – touching, mouthing, tossing, banging, squeezing. Sensory play appears in children’s early attempts to feed themselves. As they get older, materials like playdough, clay, and paint add to sensory-play experiences.	0–2.5 years
Dramatic play (solitary pretense)	Many young children spend a lot of time engaged in imaginative play by themselves throughout the early-childhood years. They invent scripts and play many roles simultaneously. Toys or props, (e.g., dolls, cars, action figures) usually support this kind of play. As children get older, they create entire worlds in solitary pretense, often with large collections of small objects or miniature figures.	3–8 years
Construction play	Children begin to build and construct with commercial toys (Lego, Tinkertoys, blocks), with found and recycled materials (cardboard boxes, plastic tubing) and with a variety of modelling media, (clay, playdough, plasticine). Older children play for extended periods with complex commercial model sets. Children across the age range engage in this kind of play by themselves and in groups, often combining it with episodes of solitary pretense or socio-dramatic play.	3–8 years
Physical play	Sensorimotor play begins as young infants discover they can make objects move; e.g., kicking the figures on a crib mobile or crawling after a rolling ball. Physical play in the preschool years often involves rough-and-tumble play, a unique form of social play most popular with little boys. Rough and tumble play describes a series of behaviours used by children in play fighting. Adults often mistake it as aggression. Older preschoolers engage in vigorous physical activity, testing the boundaries of their strength by running, climbing, sliding, and jumping, individually and in groups. This kind of play often develops spontaneously into games with invented rules.	3–8 years
Socio-dramatic play	Pretend play with peers – children take on social roles and invent increasingly complex narrative scripts, which they enact with friends in small groups.	3–6 years
Games with rules	Children begin to play formal games in social groups. These games have fixed, predetermined rules; e.g., card games, board games, soccer, and hockey.	5 years and up
Games with invented rules	Children begin to invent their own games and/or modify the rules of traditional playground games in their self-organized playgroups; e.g., tag, hide-and-seek, red rover, hopscotch.	5–8 years

## THE PEDAGOGICAL VALUE OF PLAY: WHAT DO CHILDREN LEARN?

Play nourishes every aspect of children's development—physical, social, emotional, intellectual, and creative. The learning in play is integrated, powerful, and largely invisible to the untrained eye. Much of this learning happens without direct teaching. It is learning that is important to the learner. Play has an intrinsic value in childhood and long-term developmental benefits.

Play develops the foundation of intellectual, social, physical, and emotional skills necessary for success in school and in life. It "paves the way for learning."<sup>33</sup> Block building, sand and water play lay the foundation for logical mathematical thinking, scientific reasoning, and cognitive problem solving.<sup>34</sup> Rough-and-tumble play develops social and emotional self-regulation<sup>35</sup> and may be particularly important in the development of social competence in boys.<sup>36</sup> Play fosters creativity and flexibility in thinking. There is no right or wrong way to do things; there are many possibilities in play – a chair can be a car or a boat, a house or a bed.

Pretend play fosters communication, developing conversational skills,<sup>37</sup> turn taking, and perspective taking,<sup>38</sup> and the skills of social problem solving – persuading, negotiating, compromising, and cooperating.<sup>39</sup> It requires complex communication skills: children must be able to communicate and understand the message, "this is play."<sup>40</sup> As they develop skill in pretend play, children begin to converse on many levels at once, becoming actors, directors, narrators, and audience,<sup>41</sup> slipping in and out of multiple roles easily.

There is considerable fascination among play researchers and theorists with the correlations between children's pretend play and cognitive development.<sup>42,43</sup> The capacity for pretense, developed so elaborately in socio-dramatic play, is inextricably intertwined with the development of the capacity for abstract, representational thinking.<sup>44,45</sup> We marvel at the developmental progression in thinking as the child gives up the need for a realistic object in pretend play – a banana, shoe, or simple hand gesture replaces the toy telephone.

### PLAY AND LITERACY

There are consistent findings in research about the close relationship between symbolic play and literacy development and good evidence that increasing opportunities for rich symbolic play can have a positive influence on literacy development.<sup>46</sup>

Pretend play with peers engages children in the same kind of representational thinking needed in early literacy activities. Children develop complex narratives in their pretend play. They begin to link objects, actions, and language together in combinations and narrative sequences. They generate language suited to different perspectives and roles.

In play, children construct knowledge by combining their ideas, impressions, and intuitions with experiences and opinions.<sup>47</sup> They create theories about their world and share them with one another. They establish a culture and a social world with their peers. In play, children make sense – and sometimes nonsense – of their experience. They discover the intimacy and joy of friendship as they explore their own emerging identity. Because it is self-directed, play leads to feelings of competence and self-confidence. Play is a significant dimension of early learning.

"Young children learn the most important things not by being told but by constructing knowledge for themselves in interaction with the physical world and with other children – and the way they do this is by playing."

Source: Jones, E., & Reynolds, G. (1992). *The play's the thing: Teachers' roles in children's play*, p. 1

The relationship between play and learning is complex, reciprocal, and multidimensional. The processes of play and learning stimulate one another in early childhood – there are dimensions of learning in play and dimensions of play in learning. Play and learning are "inseparable dimensions in preschool practice."<sup>48</sup>

There is immediate and obvious learning in play and learning that is not so obvious. For example, it is obvious that outdoor play experiences contribute to children's physical development, in particular to motor development. Less obvious is the learning that happens as children test their strength, externally and internally: How high can I climb? Why does my heart pound when I run? Am I brave enough to jump from this platform?

Although the learning in play is powerful, oddly enough, it is often incidental to the play, at least from the child's perspective. The toddler absorbed by balancing blocks on top of one another is not necessarily motivated by a need or even a desire to learn the principles of stable physical structures, though this may indeed be what is fascinating to him; this learning is the byproduct of his play, and generally speaking, not its purpose.

"Children don't play in order to learn, although they are learning while they are playing."

Source: Kalliala, M. (2006). *Play Culture in a Changing World*, p. 20

Not all play is learning and not all learning is play. It is also important to remember that not everything children do is play.<sup>49</sup> Play-based learning in early childhood is a valuable, effective, and appropriate pedagogy and much good work has been done on the process of playful approaches to early learning.<sup>50,51,52</sup> “Learning through play” is an approach to curriculum and planning promoted by many early childhood programs in Canada. Early educators see such tremendous potential in play for children’s learning that we sometimes run the risk of overemphasizing the learning and underemphasizing the play.<sup>53</sup> There are unique and fundamental developmental benefits that derive from spontaneous free play. The child’s experience of intrinsic motivation in play is fundamental to successful life-long learning. Play is a valid learning experience in and of itself – albeit one that has been difficult to justify and sustain in formal educational settings.

We know that development is rapid in the early years, the domains of development are interdependent and that children need environments that stimulate overall development without forcing it prematurely. Play provides a natural integration of learning domains, integrating social, emotional, and physical learning with cognitive and academic learning. This integration is difficult to achieve and maintain in teacher-directed instruction.<sup>54</sup>

One of the challenges facing early-childhood educators is teaching in the context of extraordinary individual variation in development. Play helps to balance learning for individual children – the child engages at the level and with the intensity needed to support his or her own learning. Play is uniquely responsive to each child’s developmental needs and interests. A well-designed environment meets multiple individual developmental needs simultaneously.

“The pedagogical value of play does not lie in its use as a way to teach children a specific set of skills through structured activities called ‘play.’”

Source: Bergen, D. 1998. *Play as a Medium for Learning and Development*, p. 7

## TOWARDS A PEDAGOGY OF PLAY: THE ROLE OF THE ADULT

“Supporting children’s play is more active than simply saying you believe that it is important. When children’s play culture is taken seriously, the conditions which make it flourish are carefully created. Children’s play culture does not just happen naturally. Play needs time and space. It needs mental and material stimulation to be offered in abundance. Creating a rich play environment means creating good learning environments for children.”

Source: Kalliala, M. 2006. *Play Culture in a Changing World*, p. 139

Creating environments where children can learn through play is not a simple thing to do consistently and well. Children must have time to play in order to learn through play. The role of the adult is critical. In order for children to become skilled at play, they need uninterrupted time and knowledgeable adults who pay attention to and support their right to play. Children learn to play all by themselves, given time and materials.

The environment for play and the attitudes of the supporting adults towards play shapes the quality of the play experience for children. One of the most important roles is a facilitative one – the adult sets the stage, creating and maintaining an environment conducive to rich, spontaneous play, and interacting in ways that enhance children’s learning in play, without interrupting the flow and direction of play.

“The skillful teacher of young children is one who makes... play possible and helps children keep getting better and better at it.”

Source: Jones & Reynolds. 1992. *The Play’s the Thing*, p. 1

The adult designs an environment with hands-on, concrete materials that encourage exploration, discovery, manipulation, and active engagement of children. The quantity, quality, and selection of play materials influence the interactions that take place between children. The adult protects the time needed for exploration, discovery, and uninterrupted play.

There are multiple roles for the adult in facilitating children’s play experiences. Jones and Reynolds<sup>55</sup> describe the teacher as stage manager, mediator, player, scribe, assessor and communicator, and planner. Van Hoorn et al.<sup>56</sup> describe several similar roles in “orchestrating children’s play” along a continuum from indirect to direct involvement. Jones and Reynolds<sup>57</sup> point out that teachers tend to have more difficulty with indirect roles than with direct ones. This presents a challenge. The indirect roles are most facilitative of children’s spontaneous free play, with its unique developmental benefits.

While some play advocates maintain that children should be left alone to play without adult interruption, there is good evidence to support the positive benefits of some active adult involvement in children’s play. When skillfully done, adult involvement results in longer, more complex episodes of play.<sup>58</sup> Early childhood educators pay close attention to children’s play while they are playing; they are *responsive observers and skilled play watchers*.<sup>59</sup> They support children’s learning in play by becoming co-players, guiding and role modelling when the play becomes frustrating for the child or when it is about to be abandoned for lack of knowledge or skill. Based on their observations, they provide new experiences for children to enrich and extend play.

They pose challenging questions for young children to consider, assisting them to develop new cognitive understanding. They interact in ways that maximize the potential for peer learning, continually seeking opportunities for children to learn from one another.

### FACILITATING CHILDREN'S PLAY

Young children need a balance of opportunities for different kinds of play, indoors and out. They need the support of knowledgeable adults and parents who do the following:

- Provide long, uninterrupted periods (45-60 minutes minimum) for spontaneous free play.
- Provide a sufficient variety of materials to stimulate different kinds of play – blocks and construction toys for cognitive development; sand, mud, water, clay, paint, and other open-ended materials for sensory play, dress-up clothes and props for pretend play; balls, hoops, climbing places, and open space for gross motor play.
- Provide loose parts for play, both indoors and out, and encourage children to manipulate the environment to support their play.
- Consider the opportunities for challenge and age-appropriate risk-taking in play.
- Ensure that all children have access to play opportunities and are included in play.
- Let children play for their own purposes.
- Play with children on their terms, taking the occasional ride down the slide, or putting on a hat and assuming a role in pretend play.
- Recognize the value of messy play, rough-and-tumble play, and nonsense play.
- Understand that children need to feel a sense of belonging to the play culture of childhood.
- Take an interest in their play, asking questions, offering suggestions, and engaging eagerly as co-players when invited.

### USEFUL RESOURCES AND LINKS

*Tumbling over the edge: A rant for children's play*  
Bos, B. & Chapman, J. Roseville. (2005). CA: Turn the Page Press.

*Making Space for Children: Rethinking and Recreating Children's Play Environments*  
Society for Children and Youth of B.C. (1999). Available at [www.scyofbc.org](http://www.scyofbc.org).

*Caring Spaces, Learning Places: Children's Environments that Work* Greenman, J. (2005). Redmond, WA: Exchange Press.

Canadian Association for the Right to Play (IPA Canada): [www.ipacanada.org](http://www.ipacanada.org)

International Play Association: [www.ipaworld.org](http://www.ipaworld.org)

Playing for Keeps: [www.playingforkeeps.org](http://www.playingforkeeps.org)

Invest in Kids: [www.investinkids.ca](http://www.investinkids.ca) Click on "Comfort Play and Teach" for activities and information on play for parents of children from birth to eight years old.

### THE VALUE OF OUTDOOR PLAY

There is an emerging body of evidence on the developmental significance of contact with nature and its positive impact on children's physical and mental well being.<sup>60,61,62,63</sup> Natural landscapes in the outdoors typically provide

- rich, diverse, multisensory experiences;
- opportunities for noisy, boisterous, vigorous, physically active play;
- opportunities for physical challenge and risk-taking that is inherent in the value of play;
- rough, uneven surfaces, with opportunities for the development of physical strength, balance, and coordination; and
- natural elements and loose parts that children can combine, manipulate, and adapt for their own purposes.

Adults – parents and early educators – must design the outdoor play environment with equal care and attention as they pay to the indoor environments, ensuring that these opportunities are inclusive of all children, especially those of differing abilities.

### USEFUL RESOURCES AND LINKS

*Preschool Outdoor Environment Measurement Scale*  
DeBord, K., Hestenes, L.L., Moore, R.C. Cosco, N.G., & McGinnis, J.R. (2005). Lewisville, NC: Kaplan Early Learning.

*The Great Outdoors: Restoring Children's Right to Play Outdoors*  
Rivkin, M. (1995). Washington, D.C.: NAEYC.

*The Play For All Guidelines: Planning, Design, and Management of Outdoor Play Settings For All Children* (2<sup>nd</sup> ed.)  
Moore, R., Goltsman, S., & Iacofano, D. (Eds.). (1992). Berkeley, California: MIG Communications.

*The Geography of Childhood: Why Children Need Wild Places.* Nabhan, G.P., & Trimble, S. (1994). Boston, MD: Beacon Press.

Canadian Child Care Federation: [www.cccf-fcsge.ca](http://www.cccf-fcsge.ca). Go to the e-store to view the following titles: Outdoor play in early childhood education and care programs and Quality environments and best practices for physical activity in early childhood settings.

Natural Learning Initiative: [www.naturalearning.org](http://www.naturalearning.org)  
Evergreen: [www.evergreen.ca](http://www.evergreen.ca)

### THE CHALLENGE FOR THE FUTURE

In the current climate of concern over school readiness, we must preserve some opportunity for children to play for their own purposes. If we trust the evidence that children's play is at the very heart of healthy growth and development and early learning, we must ensure that children have sufficient time and adequate resources and support to develop the ability to engage independently in extended free play. If play always and exclusively serves adult educational goals, it is no longer play from the child's perspective. It becomes work, albeit playfully organized.

In many early childhood programs, the "free play" environment is synonymous with unstructured time. Teachers do the important work of teaching during centre time and circle time; spontaneous free play is unimportant in the educational endeavour. Early childhood educators must find a way to devote equal time and interest to facilitating the spontaneous free play of children and to promoting playful approaches to early learning.

Families have little incentive to make time for play. They need good information about the benefits of unstructured free play in early childhood and regular opportunities to engage with their children in play. Early childhood educators and elementary school teachers need specialized preparation to engage comfortably in child-initiated free play, as well as more structured play-based learning experiences.

It is incumbent upon early-childhood educators, parents, play advocates and researchers to do the following:

- Ensure that there is adequate time, space, and conditions for play to develop, both indoors and outdoors.
- Ensure that early learning environments have an appropriate balance of child-initiated free play and more directed learning.
- Improve the quality and scope of play in early-learning environments.
- Create tools to assess the quality of play environments and experiences.
- Articulate the learning outcomes of play – social, emotional, cognitive, creative, and physical.
- Create tools to assess the learning of individual children and groups of children in play contexts.
- Provide a clear focus in both preservice and inservice teacher training on developing the full range of roles for adults facilitating children's play.
- Promote the value of play and the child's right to play.

The formal education system and structured preschool educational environments tend to emphasize the benefits of play as a means to an end. As the debate in Canada continues over what, when and how to facilitate learning in early childhood, the philosophy of early-childhood education – developed over several decades of practice – has much to contribute. A comprehensive approach to promoting learning through play must recognize the whole continuum of play and the value of skilled educators in facilitating opportunities for spontaneous free play in early childhood.

1. Huizinga, J. (1955). [1938]. *Homo ludens: A study of the play element in culture*. Boston: Beacon Press
2. Callois, R. (1961). *Man, play and games*. New York: The Free Press.
3. Csikszentmihalyi, M. (1979). The concept of flow. In B. Sutton-Smith (Ed.), *Play and learning* (pp. 257–274). New York: Gardner Press.
4. [http://www.ipaworld.org/ipa\\_article31.html](http://www.ipaworld.org/ipa_article31.html)
5. Bruner, J., Jolly, A., & Sylva, K. (Eds.). (1976). *Play: Its role in development and evolution*. New York: Penguin Books.
6. Reynolds, G., & Jones, E. (1997). *Master players: Learning from children at play*. New York: Teachers College Press.
7. Vygotsky, L. (1976). [1933]. Play and its role in the mental development of the child. In J.S. Bruner, A. Jolly, & K. Sylva, K. (Eds.), *Play: Its role in development and evolution* (pp. 537–554). New York: Basic Books.
8. Isenberg, J.P., & Quisenberry, N. (2002). Play: Essential for all children. A position paper of the Association for Childhood Education International. Available at <http://www.acei.org/playpaper.htm>. Accessed December 4, 2005.
9. Frost, J.L. (2006). The dissolution of children's outdoor play: Causes and consequences. Conference paper delivered at *The Value of Play: A forum on risk, recreation and children's health*. Washington, DC, May 31, 2006. Available at [http://cgood.org/assets/attachments/Frost\\_-\\_Common\\_Good\\_-\\_FINAL.pdf](http://cgood.org/assets/attachments/Frost_-_Common_Good_-_FINAL.pdf). Accessed June 21, 2006.
10. Evans, J. (1995). Where have all the players gone? *International Play Journal*, 3 (1), 3–19.
11. Academy of Leisure Sciences. White Paper #6: The state of children's play. Available at <http://www.academyofleisureciences.org/whitepap.htm>. Accessed May 23, 2006.
12. IPA Canada. The child's right to play. Position Paper 1. Available at [http://www.ipacanada.org/home\\_childs.htm](http://www.ipacanada.org/home_childs.htm). Accessed August 27, 2006.
13. Clements, R. (2004). An investigation of the status of outdoor play. *Contemporary Issues in Early Childhood*, 5(1), 68–80. Available at [http://www.worlds.co.uk/ciec/content/pdfs/5/issue5\\_1.asp#6](http://www.worlds.co.uk/ciec/content/pdfs/5/issue5_1.asp#6). Accessed July 31, 2006.
14. Blinkert, B. (2004). Quality of the city for children: Chaos and order. *Children Youth and Environments* 14(2), 99–112. Available at [http://www.colorado.edu/journals/cye/14\\_2/index.htm](http://www.colorado.edu/journals/cye/14_2/index.htm). Accessed August 31, 2006.
15. National Children's Bureau Play Safety Forum. (2002). Managing risk in play provision: A Position Statement. Available at [http://www.ncb.org.uk/Page.asp?originx6168nj\\_19470950508125u96d3575202849](http://www.ncb.org.uk/Page.asp?originx6168nj_19470950508125u96d3575202849). Accessed August 17, 2006.
16. Zigler, E.F. (2004). Play under siege: A historical overview. In E.F. Zigler, D.G. Singer, & S.J. Bishop-Josef (Eds.), *Children's play: The roots of reading* (pp.1–14). Washington, DC: Zero to Three Press.
17. Marcon, R.A. (2002). Moving up the grades: Relationship between preschool model and later school success. *Early Childhood Research and Practice* 4(1). Available at <http://ecrp.uiuc.edu/v4n1/marcon.html>. Accessed January 20, 2006.
18. Reynolds & Jones. (1997).
19. Hughes, B. (2003). Play deprivation. [Fact Sheet.] Play Wales. Available at <http://www.playwales.org.uk>. Accessed January 23, 2006.
20. Rubin, K. H., Fein, G. G., & Vandenberg, B. (1983). Play. In E. M. Hetherington (Ed.), *Handbook of child psychology*, Vol. 4 (pp. 693–774). New York: Wiley.
21. The Association for the Study of Play website. Links to a range of anthropological literature on children's play. Available at <http://www.csuchico.edu/kine/tasp>.
22. Schwartzman, H. (1978). *Transformations: The anthropology of children's play*. New York: Plenum Press.
23. Howard, J., Jenvey, V., & Hill, C. (2006). Children's categorization of play and learning based on social context. *Early Child Development and Care* 176 (3–4), 379–393. Available at <http://www.metapress.com>. Accessed May 8, 2006.
24. Göncü, A., Patt, M.B., & Kouba, E. (2002). Understanding children's pretend play in context. In P.K. Smith & C.H. Hart (Eds.), *Blackwell handbook of childhood social development* (pp. 418–437). Oxford, UK: Blackwell.
25. Fleer, M. (1999). Universal fantasy: The domination of western theories of play. In E. Dau (Ed.), *Child's play: Revisiting play in early childhood settings* (pp. 67–80). Baltimore, MD: Paul H. Brookes.
26. Reynolds, G. (1999). Understanding culture through play. *Beginnings Workshop.Child Care Information Exchange* 1/99, 58–60. Available at <http://www.childcareexchange.com>. Accessed August 17, 2006.
27. Evans, K. (1999). Play in a classroom of lu-Mien children. *Beginnings Workshop.Child Care Information Exchange* 1/99, 49–51. Available at <http://www.childcareexchange.com>. Accessed August 17, 2006.
28. Roopnarine, J.L., Lasker, J., Sacks, M. & Stores, M. (1998). The cultural contexts of children's play. In O.N. Saracho & B. Spodek (Eds.), *Multiple perspectives on play in early childhood education* (pp.194–219). Albany, New York: SUNY Press.
29. Jones, E., & Cooper, R.M. (2006). *Playing to get smart*. New York: Teachers College Press.
30. Fleer, M. (1999).
31. McNaughton, G. (1999). Even pink tents have glass ceilings: Crossing the gender boundaries in pretend play. In E. Dau (Ed.), *Child's play: Revisiting play in early childhood settings* (pp.81–96). Baltimore, MD: Paul H. Brookes.
32. Bergen, D. (1998). Stages of Play Development. In D. Bergen (Ed.), *Play as a medium for learning and development* (pp.71–93). Olney, MD: Association for Childhood Education International.
33. Kalliala, M. (2006). *Play Culture in a changing world*. Berkshire, England: Open University Press.
34. Sylva, K., Bruner, J.S., & Genova, P. (1976). The role of play in the problem-solving of children 3–5 years old. In J.S. Bruner, A. Jolly, & Sylva, K. (Eds.), *Play: Its role in development and evolution* (pp.244–261). New York: Basic Books.
35. Blurton-Jones, N. (1976) [1967]. Rough and tumble play among nursery school children. In J.S. Bruner, A. Jolly, & Sylva, K. (Eds.), *Play: Its role in development and evolution* (pp.352–363). New York: Basic Books.
36. Pellegrini, A. (1987). Rough-and-tumble play: Developmental and educational significance. *Educational Psychology*, 22 (23–43).
37. Sawyer, R.K. (1997). *Pretend play as improvisation: Conversation in the preschool classroom*. Mahwah, NJ: Lawrence Erlbaum Associates.
38. Rubin, K.H., & Howe, N. (1986). Social play and perspective-taking. In G. Fein & M. Rivkin (Eds.), *The young child at play: Reviews of research, volume 4*, (pp.113–126).
39. Rubin, K.H. (1998). Some "good new" and some "not so good news" about dramatic play. In D. Bergen (Ed.), *Play as a medium for learning and development*, (pp.58–62).
40. Bateson, G. (1976). [1955]. A theory of play and fantasy. In J.S. Bruner, A. Jolly, & K. Sylva, K. (Eds.), *Play: Its role in development and evolution* (pp.119–129). New York: Basic Books
41. Garvey, C. (1990). [1977]. *Play*. Cambridge, MA: Harvard University Press.
42. Lillard, A. (2002). Pretend play and cognitive development. In U.Goswami (Ed.), *Blackwell handbook of childhood cognitive development* (pp.189–205). Oxford, UK: Blackwell.
43. Bergen, D. (2002) The role of pretend play in children's cognitive development. *Early Childhood Research and Practice* 4(1). Available at <http://ecrp.uiuc.edu/v4n1/bergen.html> Accessed Nov 28, 2005.
44. Roskos, K. & Christie, J. (2004). Examining the play-literacy interface: A critical review and future directions. In E.F. Zigler, D.G. Singer, & S.J. Bishop-Josef (Eds.), *Children's play: The roots of reading* (pp.95–124). Washington, DC: Zero to Three Press.
45. Lillard, A. (1998). Playing with a theory of mind. In O. Saracho & B. Spodek (Eds.), *Multiple perspectives on play in early childhood* (pp.11–33). Albany, NY: SUNY Press.
46. Roskos, K.A., & Christie, J.F. (Eds.). (2000). *Play and literacy in early childhood: Research from multiple perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.
47. Reynolds, P.C. (1976). [1972]. Play, language and human evolution. In J.S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution* (pp. 621–635). New York: Basic Books.
48. Samuelsson, I.P., & Johansson, E. (2006). Play and learning—Inseparable dimensions in preschool practice. *Early Child Development and Care* 176 (1), pp.47–65. Available at <http://www.metapress.com>. Accessed May 8, 2006.
49. Garvey (1990).
50. Moyles, J. (Ed.). (2005). *The excellence of play*. Berkshire, England: Open University Press.
51. Wood, E. & Atfield J. (2005). *Play, learning and the early childhood curriculum* (2<sup>nd</sup> ed.) London, England: Paul Chapman Publishing.
52. Johnson, J.E., Christie, J.F., & Wardle, F. (2005). *Play, development and early education*. Boston, MA: Pearson Education.
53. Roskos, K. and Christie, J. (2001). On not pushing too hard: A few cautionary remarks about linking literacy and play. *Young Children*, May 2001, 64–66.
54. Wardle, F. (2006). Play as curriculum. *Early Childhood News: The Professional Resource for Teachers and Parents*. Available at <http://www.earlychildhoodnews.com/earlychildhoodarticle>. Accessed June 20, 2006.
55. Jones, E., & Reynolds, G. (1992). *The play's the thing: Teachers' roles in children's play*. New York: Teachers College Press.
56. Van Hoorn, J., Nourot, P.M., Scales, B. & Alward, K.R. (2003). *Play at the center of the curriculum* (3<sup>rd</sup> ed.) Upper Saddle River, NJ: Merrill Prentice Hall.
57. Jones, E., & Reynolds, G. (1992).
58. Ward, C. W. (1996). Adult intervention: Appropriate strategies for enriching the quality of children's play. *Young Children*, March 1996, 20–25.
59. Reynolds & Jones, 1997.
60. Moore, R., & Wong, H. (1997). *Natural Learning: Creating environments for rediscovering nature's way of teaching*. Berkeley, California: MIG Communications.
61. Wells, N.M. (2000). At home with nature: Effects of "greenness" on children's cognitive functioning. *Environment and Behavior*, 32(6), 775–795.
62. Fjortoft, I. (2004). Landscape as playscape: The effects of natural environments on children's play and motor development. *Children, Youth and Environments* 14(2), 21–44. Available at <http://www.colorado.edu/journals/cye>. Accessed December 2005.
63. Louv, R. (2005). *Last child in the woods: Saving our children from nature deficit disorder*. Chapel Hill, NC: Algonquin Books.