



## Culture and Early Childhood Learning

*MICHAEL COLE, PhD*  
*PENTTI HAKKARAINEN, PhD*  
*MILDA BREDIKYTE, PhD*

*University of California, USA*  
*University of Oulu, Finland*

*(Published online February 2, 2010)*

### **Topic**

*Culture*

### **Introduction**

During the period from birth to 5 years of age, children undergo massive transformations in size, biological organization, behavioral capacities, and the social organization of experience that greatly complicate our understanding of the relation between culture and their learning processes.

Examination of this complex topic requires provisional definitions of our basic terms. We adopt the following definitions:

*Culture* consists of the historically accumulated knowledge, tools and attitudes that pervade the child's proximal ecology, including the cultural “practices” of nuclear family members and other kin. These enculturated members of society are themselves subject to a variety of forces in both the natural ecology and society as they carry out their roles, such as care giving and earning a living.

*Learning* is understood as a relatively permanent change in behavior and understanding brought about by the child's experience.

*Development* entails qualitative changes in the functional organization of children's intra-individual brain, body and behavior and in accompanying changes in the relationship between children and their socio-culturally organized experiences.

### **Subject**

Culture plays an essential role in how children make sense of the world. A decisive difference between children's learning and any intelligent technical system is that technical systems can recognize and organize information, but cannot grasp its meaning. Development of signification and adoption of the appropriate cultural tools (symbols, meanings, scripts, goals etc.) of human activity are basic challenges of early learning.

### **Problems**

1. How are enculturation and individuation related in early learning? Each cultural context has unifying tendencies, but individuals are unique. What are the universal and the specific niches of learning in each culture?
2. What is the unit of learning? Early stages of human development demonstrate dependence of the child on adults and the reverse influence of infant on adults. Mother – child dyads are important units. How are dyads replaced as units of learning?
3. How does the role of culture in learning change during early childhood?<sup>1</sup>

### **Research context**

Learning mediated by culture requires consideration of a cultural context that cannot be reduced to laboratory conditions. “Natural experiments” are often-employed research settings using follow-up studies in one culture or collecting comparative data from several cultures. Michael Cole<sup>2,3</sup> has elaborated a specially-designed form of activity, called the “Fifth Dimension” environment as a sustainable subculture for learning. Its principles are used for the research of cultural learning in play settings.<sup>4,5</sup>

### **Key research questions**

What kinds of environmental organization promote children’s learning of their cultural heritage?

How do different cultural traditions shape children’s learning?

How are different modes of learning related in different cultural circumstances?

Are there “qualitative leaps” in early childhood related to culturally-related changes in modes of learning?

### **Recent research results**

#### *Universal features of culture*

It is necessary to remember that children do not make sense of the world consciously and analytically at this age. Meanings are grounded in bodily connections with things and are constantly bound up with the process of acting.<sup>6</sup> Nonetheless, from birth or shortly thereafter, children are extremely sensitive to contingencies among all kinds of events in their environment. These range from learning characteristic patterns of activity, to the differential responses of people in their environment, to the contingencies among the phonemes in the language they hear that will form the basis of the grammar of their native language.<sup>7</sup> Children are born already knowing the characteristic “tune” of their native language, learning that is displayed when different attention is given to vocalizations in that language.<sup>8</sup>

From birth onwards, children’s learning of a variety of universal concepts in such “privileged domains” as arithmetic, physics and psychology are present in a “skeletal” form that subsequent, culturally-mediated learning builds upon according to local circumstances.<sup>3</sup> For example, infants appear to recognize basic physical concepts associated with such phenomena as gravity (they are surprised if an object appears to fall

through a solid barrier) and mathematical concepts such as  $1+1=2$  (they are surprised if two objects are hidden behind a screen and when the screen is removed, only one object is to be seen), and are able to distinguish between intentional and mechanical causation, providing the scaffolding for learning the distinction between animate and inanimate objects.

Children also start to create their own “cultures” by about nine months and before the age of five the need for, and organization of, adult and peer cooperation radically change.<sup>9,10,11</sup> Early in development, children are incapable of regulating the social organization of their interaction, but as middle childhood approaches, greater autonomy of child groups becomes possible.

#### *Cultural constraints*

Many psychologists believe that children from different cultural groups learn a basic “cognitive style” characterized in somewhat different, but overlapping terms depending upon different scholarly traditions. One such “cognitive style” is said to privilege an initial attention to the context in which events occur followed by attention to the objects that participate in the event; a similar formulation is between cultures that foster individualism or collectivism.<sup>12</sup> It has been demonstrated, for example, that Japanese mothers asked to engage their 5-month-old child in an interaction involving an object, systematically orient the child to themselves first and to the object secondarily, whereas American mothers orient the child to the object first and themselves secondarily. At 5 months there is no difference discernable in the behavior of the children, but several months later, the children orient in the manner that has been shaped by repeated (differently-oriented) interactions with their parents in a wide variety of everyday events.<sup>13</sup>

#### *Cultural practices*

Different forms of play (object play, symbolic play, pretend role play) create different kinds of cultural environments for learning. However, there are wide cultural variations in the extent to which adults sanction different forms of play during early childhood.<sup>14</sup> In societies where play is a valued cultural practice at this age, Poddiakov<sup>15</sup> demonstrated how children carry out social experimentation with other persons in play and everyday life. Vygotsky<sup>16</sup> and other play researchers<sup>17,18,19</sup> emphasize the importance of mutuality and transcending the present situation in play by creating other (imaginative) worlds. Vygotsky argued that distorting reality in play paradoxically reinforces learning applied to real life by changing children’s understanding of the relation between objects and meanings.

Greenfield and her colleagues have documented a pattern of learning among traditional Mayan peasants girls learning to weave, in which mothers organize the girls’ learning by having them participate in changing roles from very early childhood to middle childhood and beyond.<sup>20</sup> Such learning involves very little verbal interaction. Similarly, Barbara Rogoff and her colleagues have shown that children from societies where schooling is either absent or very brief learn through a process of intent observation.<sup>21</sup>

### **Research gaps**

Pragmatism and cultural constraints guide decisions on what problems are central in the study of culture and early learning. For example, a recent review on the effects of creative drama on language learning states: “In this era of accountability and high-stakes testing, educators and administrators need tangible proof of drama’s benefits, and only the highest quality research can provide this type of evidence.”<sup>22</sup> From this viewpoint, high quality does not include cultural relevance. However, research based on strict isolation of causal variables obscures the experiential essence of learning and impedes combining research results in different domains (e.g. cognitive, affective and psychomotor). “A whole child approach” to the study of culture and early learning is a continuing challenge.

### **Conclusions**

The study of culture and early learning involves the interweaving of biological and cultural factors. Active development of subcultures aiming at expanding and enhancing learning is one promising current approach. But there is disagreement about what such subcultures should be. For example, play is only lately regaining the status of a legitimate form of learning activity.<sup>23,24,25</sup>

Very important is the sheer exposure to the material to be learned that is afforded by different cultural practices. It is a routine finding in research across many content domains that when children are asked to learn or solve problems based upon materials with which they are familiar, or in ways that make “human sense”<sup>26</sup> they learn more rapidly.

These relations between culture and learning do not fade away, but become even more pronounced as children move from early into middle childhood and adolescence. Consequently, those concerned with leveraging the power of culture to promote learning should take care to pay as much attention to the cultural enrichment of children as to their health and physical well-being, all of which play an especially important role during this period of extraordinarily rapid developmental change.

### **Implications**

Misunderstanding the cultural character of early childhood learning has resulted in a situation where effective forms of learning and sense making that take place in a play context are eliminated from children’s life. When learning is defined in terms of analytic understanding, children’s own subcultures and play forms are denied. A negative consequence of this view may be diminished impact of learning on child development.<sup>27,28</sup>

REFERENCES

1. Vygotsky LS. *Mind in society: the development of higher psychological processes*. Cole M, John-Steiner V, Schribner S, Souberman E, eds. Cambridge, UK: Harvard University Press; 1978.
2. Cole M. *Cultural psychology. A once and future discipline*. Cambridge, MA: Belknap Press of Harvard University Press; 1996.
3. Cole M, the Distributed Literacy Consortium. *The fifth dimension*. New York, NY: Russel Sage; 2006.
4. Bredikyte M. Play as an educational tool in early childhood. *Every Child* 2008;14(3):10-11.
5. Hakkarainen P. Narrative learning in the fifth dimension. *Outlines* 2004;1:5-20.
6. Johnson M. *The meaning of the body. Aesthetics of human understanding*. Chicago, IL: The University of Chicago Press; 2007.
7. Jusczyk PW. How infants adapt speech-processing capacities to native language structure. *Current Directions in Psychological Science* 2002;11(1):15-18.
8. Kuhl PK. A new view of language acquisition. In: Luria H, Seymour DM, Smoke T, eds. *Language and linguistics in context: Readings and applications for teachers*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2006:29-42.
9. Lisina MI. *Rebeñok, vzroslye, sverstniki* [Child, adults, peers: patterns of communication]. Judelson K, trans. Moscow, Russia: Progress Publishers; 1985.
10. Lobok AM. *Antropologiiia mifa* [The anthropology of myth]. Yekaterinburg, Russia: Bank Kul'turnoi Informatsii; 1997.
11. Trevarthen C, Aitken KJ. Infant intersubjectivity: research, theory and clinical applications. *Journal of Child Psychology and Psychiatry* 2001;42(1):3-48.
12. Kitayama S, Cohen D, eds. *Handbook of cultural psychology*. New York, NY: Guilford Press; 2007.
13. Bornstein MH, Tal J, Tamis-LeMonda CS. Parenting in cross-cultural perspective: The United States, France, and Japan. In: Bornstein MH, ed. *Cultural approaches to parenting*. Hillsdale, NJ: Lawrence Erlbaum Associates; 1991:69-90.
14. Göncü A, Gaskins S, eds. *Play and development: Evolutionary, sociocultural, and functional perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2007.
15. Podd'iakov NN. *Osobennosti psikhicheskogo razvitiia detei doshkol'nogo vozrasta* [Specific characteristics of psychological development of preschool children] Moscow, Russia: Pedagogika; 1996.
16. Vygotsky LS. Imagination and creativity in childhood. *Journal of Russian and East European Psychology* 2004;42(1):7-97.
17. Fein G. Pretend play in childhood: An integrative review. *Child Development* 1981;52(4):1095-1118.
18. Garvey C. *Play*. Cambridge, MA: Harvard University Press; 1977.
19. Sutton-Smith B. *The Ambiguity of play*. Cambridge, MA: Harvard University Press; 1977.
20. Greenfield P. *Weaving generations together: Evolving creativity in the Maya of Chiapas*. Santa Fe: School of American Research Press; 2004.

21. Mejía-Arauz R, Rogoff B, Paradise R. Cultural variation in children's observation during a demonstration. *International Journal of Behavioral Development* 2005;29(4):282-291.
22. Mages WK. Does creative drama promote language development in early childhood? A review of the methods and measures employed in empirical literature. *Review of Educational Research* 2008;78(1):124-152.
23. Singer D, Golinkoff R, Hirsh-Pasek K, eds. *Play = learning. How play motivates and enhances children's cognitive and social-emotional growth*. New York: Oxford University Press; 2006.
24. Hirsh-Pasek K, Golinkoff RM, Berk LE, Singer D. *Mandate for playful learning in preschool. Presenting the evidence*. New York, NY: Oxford University Press; 2009.
25. Hakkarainen P. Learning and development in play. In: Einarsdottir J, Wagner J, eds. *Nordic childhoods and early education: philosophy, research, policy, and practice in Denmark, Finland, Iceland, Norway, and Sweden*. Greenwich, CT: IAP-Information Age Pub; 2006:183-222.
26. Donaldson M. *Human minds: an exploration*. London, UK: Penguin; 1993.
27. Hakkarainen P, Bredikyte M. The zone of proximal development in play and learning. *Cultural - historical Psychology* 2008;4:2-11.
28. Zuckerman G. Child-adult interaction that creates a zone of proximal development. *Journal of Russian and East European Psychology* 2007;45(3):38-64.

To cite this document:

Cole M, Hakkarainen P, Bredikyte M. Culture and early childhood learning. In: Tremblay RE, Barr RG, Peters RDeV, Boivin M, eds. *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2010:1-6. Available at: <http://www.child-encyclopedia.com/documents/Cole-Hakkarainen-BredikyteANGxp.pdf>. Accessed [insert date].

Copyright © 2010

**This article is funded by the Centre of Excellence for Early Childhood Development (CEECD) and the Strategic Knowledge Cluster on ECD (SKC-ECD).**



CENTRES OF EXCELLENCE FOR CHILDREN'S WELL-BEING

Early Childhood Development

STRATEGIC KNOWLEDGE  
CLUSTER ON EARLY

*child development*