ENCYCLOPEDIA
on Early Childhood
Development

Culture and Early Childhood Learning

[1]Milda Bredikyte, PhD, [2]Michael Cole, PhD, [3]Pentti Hakkarainen, PhD

[1]Vytautas Magnus University, Lithuania, [2]University of California, USA, [3]University of Oulu, Finland

June 2023, Éd. rév.

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. The *developmental* niche framework[1,2] is relevant when discussing the child's early development and cultural learning. The developmental niche comprises three interacting subsystems: *physical* and *social settings*, *customs* and *practices of child rearing*, and the *psychology of the caretakers*, particularly parental ethnotheories of child development and parenting.

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 cultural niches of learning in each society?
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 in later development?
3. How does the role of culture in learning change during early childhood?[3,4]

Research context

Learning mediated by culture requires consideration of a cultural context that cannot be reduced to laboratory conditions. "Natural experiments" are frequently used to take advantage of naturally occurring variations in different cultural groups. Such studies are often supplemented by collecting comparative data from several cultures.[5] Michael Cole has elaborated a specially-designed form of activity, called the "Fifth Dimension" environment, as a sustainable subculture

for learning. Its principles are used to research cultural learning in play settings[6,7] Play research laboratories were established in Finland and later in Lithuania to study child development and learning in play settings.[8,9,10] Research carried out in university research laboratories does not always reach the public discourse and is not always appropriately interpreted. Several centers are being created in countries (e.g., The Center on the Developing Child at Harvard University[11], The MEHRIT Centre[12], etc.) to initiate, disseminate, and communicate research on early development reliably and constructively to the public, thereby increasing the understanding of children's development and education, which can be used as a basis for making informed decisions about changes in policy and practice.

Recent research with very young babies often includes family members as co-researchers for data collection from their baby's activities at home and in research laboratories equipped with modern technologies.[3,14,15] Increasingly, researchers tend to conduct research projects in playgrounds, Children's Centres, and other environments where children and families spend a large part of their time. Digital technologies allow researchers to capture children in a variety of settings.[16]

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 young 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.[17,18] Children are extremely sensitive to contingencies among all kinds of environmental events from birth or shortly thereafter. 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.[19] 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.[20,21]

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.[3] 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.[22,23,24] 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.[25] 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.[26]

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.[27] In societies where play is a valued cultural practice at this age, Poddiakov[28] demonstrated how children carry out social experimentation with other persons in play and everyday life. Vygotsky[29] and other play researchers[30,31,32,33,34,35] emphasize the importance of mutuality and transcending the present situation in play by creating other (imaginative) worlds. Lotman pointed out that through playing, the child doubles their life and tries to comprehend it emotionally, ethically, and cognitively.[36] 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. Similarly, El'konin pointed out that through pretend role play, children assimilate the content of human moral norms and social relations.[37]

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.[38] 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.[39]

There has been a historical, world-wide shift from local parenting traditions (ethnotheories) of child development and learning to globalized/universal culture in raising young children. The of deliberate instruction during the preschool years is one of the defining features of this universality. This approach to early learning is realized through deliberately designed instructional toys and games and the social networks often imposing 'educational' activities for families with young children much earlier before entering ECEC institutions. Early childhood is no longer imaginable without digital/modern technologies embedded in the cultural contexts of today's childhood through everyday practices transforming and reorganizing them.[40]

Research gaps

The "whole child approach" to studying culture and early learning is an ongoing challenge. Political and cultural constraints in countries often guide decisions on the central problems in studying culture and early learning. Pragmatic and formal adherence to the methodological requirements of disciplinary research cannot encompass all the contexts of the child's cultural

development. As a result, much research remains within the framework of separate scientific/disciplinary fields. It must be acknowledged that there is a constant search for new research tools and methods, but above all, for an overarching theoretical approach/framework that can interpret and explain the wide range of interdisciplinary and cross-cultural data researchers generate today.

Conclusions

The study of culture and early learning involves the interweaving of biological and cultural factors over time. A promising approach is the active development of new forms of educational activities designed to expand and enhance learning. But there is disagreement about what such forms of activity include. For example, independent children's play is constantly questioned as a legitimate and vital developmental and learning activity in early years.[41,42,43,44,45]

Very important to organize instruction that considers the kinds of prior, home-based learning that each child comes to school with. It is a routine finding in research across many content domains that children learn more rapidly when asked to learn or solve problems based upon materials with which they are familiar or in ways that make "human sense".[46]
These relations between culture and learning do not fade 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. The exaggerated emphasis on schooling and the targeted cultivation of narrow skills starting in early childhood through specific toys and games, including digital games, is also becoming a feature of today's childhood culture. When learning is defined in terms of analytic understanding, children's own subcultures and play forms are excluded. A negative consequence of such an approach can be that the child's natural motivation for learning is reduced or even eliminated, and the child's further development might be

disrupted/hindered/impaired.[47,48,49]

References

1. Super CM, Harkness S. The developmental niche: A conceptualization at the interface of child and culture. *International Journal of Behavioral Development*. 1986;9(4):545-569.

2. Super CM, Harkness S. Culture structures the environment for development. *Human Development.* 2002;45(4):270-274.

3. Vygotsky LS. *Mind in society: the development of higher psychological processes.* Cole M, John-Steiner V, Scribner S, Souberman E, eds. Cambridge, MA: Harvard University Press; 1978.

4. Vygotsky LS. Problems of Child (Developmental) Psychology. In: Rieber R, ed. *The Collected Works.* Vol. 5. New York: Plenum Press; 1998:97-119.

5. Balmès T, Chabat A, Billot A, Rouxel C, Alméras J, Bradshaw F, Petittevile S, Turpin E, Bertrand R, McKay C, Coulais B. Babies. [Anamorphic widescreen]. Universal City, CA: Universal Studios Home Entertainment; 2010. [see also: Babies movie review by Betsy Sharkey : https://www.youtube.com/watch?v=FVzTJX-VWZs]

6. Cole M. *Cultural psychology. A once and future discipline.* Cambridge, MA: Belknap Press of Harvard University Press; 1996.

7. Cole M and the Distributed Literacy Consortium. *The Fifth Dimension.* New York, NY: Russel Sage; 2006.

8. Hakkarainen P. Narrative learning in the fifth dimension. *Outlines.* 2004;1:5-20.

9. Bredikyte M. *The zones of proximal development in children's play*. [Doctoral dissertation, Acta Universitatis Ouluensis]. E 119; 2011.

10. Hakkarainen P, Brėdikytė M. How play creates the zone of proximal development. In: Robson S, Quinn SF, eds. *The Routledge International Handbook of Young Children's*

Thinking and Understanding. Abingdon: Routledge; 2015:31-42.

11. The Center on the Developing Child at Harvard University website. https://developingchild.harvard.edu/. Accessed May 31, 2023.

12. The MEHRIT Centre website. https://self-reg.ca/our-mission-values/. Accessed May 31, 2023.

13. Babies | Sleep | Full episode | Netflix [Video]. YouTube. April 17, 2020. Accessed May 31, 2023. https://www.youtube.com/watch?v=KJCL9LR6rJI

14. Babies | Crawling | Full episode | Netflix [Video]. YouTube. April 17, 2020. Accessed May 31, 2023. https://www.youtube.com/watch?v=1T3RHuPB_cg

15. Babies | First Steps | Full episode | Netflix [Video]. YouTube. April 17, 2020. Accessed May 31, 2023. https://www.youtube.com/watch?v=p1otGt99Rec

16. Babies. Their Wonderful World. [Video]. BBC; 2018-2021. https://www.bbc.co.uk/programmes/b0bt7v0x

17. Greenspan SI, Shanker SG. *The first idea. How symbols, language, and intelligence evolved from our primate ancestors to modern humans*. Cambridge, MA: Da Capo Press; 2004.

18. Johnson M. *The meaning of the body. Aesthetics of human understanding*. Chicago, IL: The University of Chicago Press; 2007.

19. Jusczyk PW. How infants adapt speech-processing capacities to native language structure. *Current Directions in Psychological Science*. 2002;11(1):15-18.

20. Babies | First Words | Full episode | Netflix [Video]. YouTube. April 17, 2020. Accessed May 31, 2023. https://www.youtube.com/watch?v=BFtbXwnBRg8&t=171

21. 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.

22. Lisina MI. *Rebenok, vzroslye, sverstniki* [Child, adults, peers: patterns of communication]. Judelson K, trans. Moscow, Russia: Progress Publishers; 1985.

23. Lobok AM. *Antropologia mifa* [The anthropology of myth]. Yekaterinburg, Russia: Bank Kul'turnoi Informatsii; 1997.

24. Trevarthen C, Aitken K.J. Infant intersubjectivity: research, theory and clinical applications. *Journal of Child Psychology and Psychiatry.* 2001;42(1):3-48.

25. Kitayama S, Cohen D, eds. *Handbook of cultural psychology*. New York, NY: Guilford Press; 2007.

26. 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.

27. Göncü A, Gaskins S, eds. *Play and development: Evolutionary, sociocultural, and functional perspectives.* Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2007.

28. Podd'iakov NN. *Osobennosti psikhicheskogo razvitiia detei doshkol'nogo vozrasta* [Specific characteristics of psychological development of preschool children] Moscow, Russia: Pedagogika; 1996.

29. Vygotsky LS. Imagination and creativity in childhood. *Journal of Russian and East European Psychology.* 2004;42(1):7-97.

30. Fein G. Pretend play in childhood: An integrative review. *Child Development.* 1981;52(4):1095-1118.

31. Garvey C. *Play*. Cambridge, MA: Harvard University Press; 1977.

32. Sutton-Smith B. The Ambiguity of play. Cambridge, MA: Harvard University Press; 1977.

33. The Greenspan Floortime Approach website. https://stanleygreenspan.com/. Accessed May 31, 2023

34. Fragkiadaki G, Fleer M, Rai P. Collective Imagining: the early genesis and development of a sense of collectiveness during infancy. *Cultural-Historical Psychology.* 2021;17(3):84-94.

35. Ridgway A, Quinones G, Li L, eds. Peer play and relationships in early childhood. *International Research Perspectives.* Springer; 2020.

36. Lotman, YuM. Kukly v sisteme kul'tury [Puppets in the system of culture]. In: *Ob iskusstve* [About Art] Sankt-Petersburg: Iskusstvo-SPB; 1998:645-649.

37. El'konin DB. *Izbrannye psikhologicheskie trudy* [Collected Psychological Works]. Moscow: Pedagogika; 1989.

38. Greenfield P. *Weaving generations together: Evolving creativity in the Maya of Chiapas.* Santa Fe: School of American Research Press; 2004.

39. 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.

40. Digital guidelines: Promoting healthy technology use for children. https://www.apa.org/topics/social-media-internet/technology-use-children. Accessed May 31, 2023.

41. 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.

42. 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.

43. 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.

44. Elkind D. *The Power of Play*. Da Capo Press; 2007.

45. Brown St. *Play*. Penguin Group; 2009.

46. Donaldson M. *Human minds: an exploration.* London, UK: Penguin; 1993.

47. Hakkarainen P, Bredikyte M. The zone of proximal development in play and learning. *Cultural - historical Psychology.* 2008;4:2-11.

48. Zuckerman G. Child-adult interaction that creates a zone of proximal development. *Journal of Russian and East European Psychology.* 2007;45(3):38-64.

49. Frost JL. The Value of Play and the Consequences of Play Deprivation. In: Frost JL. *A history of children's play and play environments. Toward a contemporary child-saving movements*. Routledge; 2010: 198-235.