Central to development are questions of self-concept, identity and possible selves. Identity development has received limited attention in research on early childhood education and cognitive development. Nationally, the conversation about child development has focused on school related achievement. Increasing academic performance and school readiness among young children from non-dominant and low-income communities is a concern for many researchers. While increasing academic achievement among Indigenous youth is important, the conversation around schooling and testing should not direct our attention away from other concerns that are equally important. There is a real need to develop early education programs that are community-based and grounded in theories of development and methodologies that arise from Indigenous knowledge systems.

Human development is a dynamic and relational process of becoming and being over the life course and is supported by education across contexts. It also involves recognizing and caring for our gifts in order to skillfully contribute to the communities to which we belong in ways where we feel competent and productive.

**ENROLLMENT RATES** in WA Public Schools for American Indian, Alaska Native, Pacific Islander, and Native Hawai’ian

| # PACIFIC ISLANDER/NATIVE HAWAI’IAN STUDENTS IN WA PUBLIC SCHOOLS ’13-'14 | 10,099 |
| # AMERICAN INDIAN/ALASKAN NATIVE IN WA PUBLIC SCHOOLS ’13-'14 | 16,417 |
| # AVAN & PACIFIC ISLANDER/NATIVE HAWAI’ANS IN STATE KINDERGARTEN ’14-'15 | 1,919 |

**CRITICAL REFLECTION AND QUESTIONS**

Development is transactional and includes multiple pathways. Interactions shape our identities and our identities shape our interactions and participation in activities.

- What narratives do young Indigenous children encounter about possible selves?
- What kinds of learning ecologies support the development of Indigenous identities?
- What supports do teachers’ need so that they can better understand parents’ and young children’s cultural ways of knowing and doing?
- What structures need to be in place so that teachers and schools can gain a more nuanced understanding of cultural pathways for development?
- What structures need to be in place so that teachers and schools can effectively collaborate with families and tribes in order to design learning spaces that support cultural ways of doing and knowing?
INDIGENOUS IDENTITY DEVELOPMENT

There is a small but growing body of research on Indigenous identity and development among young children. Recently, scholars have worked to document existing knowledge about trends across research studies on Indigenous child development. Researchers have found that young American Indian and Alaska Native children (AI/AN) fall below national norms across various domains.

It is important to remember that research findings, such as those to the below are nested within particular contexts. For many Indigenous communities, traditional methods of education and child rearing have been altered by “a long history of government policies designed to disrupt tribal lands, cultural practices, language and family relationships”.

→ In one study, when tested with standardized assessments for visual reception, fine motor, and gross motor skills, AI children fell below the national norm at the age of 15 months and their performance in these areas did not significantly increase by 36 months. This finding is of particular concern because of the impact disparities in these areas may have for cognitive development and performance in school.

→ Studies have found a strong relationship between a mother’s behavior and child’s internalizing and externalizing behavior.

While research has identified disparities in health, development and academic achievement, there has also been a turn to investigate competencies and community-based models for development and intervention.

→ Children who were perceived by their teachers as exhibiting positive approaches to learning also had higher baseline scores in reading and math.

→ A positive relationship has also been found between a mother’s American Indian identity and a child’s socio-emotional competence.

Marks & Garcia Coll note that the findings about teacher perceptions have important implications for both childrearing practices and schooling practices. The cognitive skills necessary for success in schooling may not map onto the skills that are promoted during the early developmental years within Indigenous communities. This means that the transition to school may be especially difficult for Indigenous children and present additional developmental demands. Additionally, programs and interventions designed to support a mother’s participation in cultural practices may facilitate development growth.

AREAS FOR FUTURE RESEARCH

Increasingly, Indigenous scholars are raising questions about development and socialization in regard to cultural survivance, cultural revitalization and educational self-determination. Findings from research on AI/AN child development raises important questions about the transactional nature of development, as well as the role of identity and experience in cognitive development. Emerging areas for research in the field include:

→ The examination of assessments and measures from a cultural lens. This includes working with tribal communities to determine the cultural appropriateness of measures.

→ Engaging in descriptive research of families’ everyday practices and socialization processes. Research in this area, may help us to identify more nuanced measures for American Indian identity and develop culturally-based programming.

→ Assessing teachers’ perceptions of AI/AN student’s classroom behavior and their views on culture and development.

→ The iterative design and evaluation of programs, interventions and pedagogical supports.

As we continue to understand the cultural nature of cognitive, social, and emotional development, a crucial step in translating research to educational settings will require creative and multi-disciplinary collaborations. Utilizing tribal methodologies and engaging parents and tribal communities, at the both the curricular design and implementation stages, will not only support the healthy development of Indigenous children, but the healthy development of teachers and schools as well.

THINGS TO CONSIDER

→ Many of the standardized instruments that are used to study development are not culturally neutral and are often designed to measure skills that are important for performance in activities related to school readiness rather than the activities or that families and tribes hold as vital and life-sustaining.
“CULTURAL METAPHORS” FOR EDUCATION

Metaphors or frameworks for education impact the organization of schooling and opportunities for learning, as well as models of development\textsuperscript{16}. Indigenous scholars have called attention to differences in Western versus Tribal education. For example, unlike Western education, Tribal education has tended to focus on relationships, particularly, inter-relationships between humans and nature\textsuperscript{17-18}. Each viewpoint impacts the socialization process and has cognitive, as well as academic, consequences.

Cross-cultural work in folk biology demonstrates the importance of experience and cultural frameworks (i.e., what is worthy of attention and explanation), for understanding biological and physical processes in the natural world\textsuperscript{19}.

For example, in an analysis of interview data from a reasoning task where young children were asked to generalize about properties from one kind of animal to another, Bang, Medin, & Atran report that Menominee children, unlike their rural European American counterparts were less likely to say that “people are not animals”\textsuperscript{20}, p. 13869. This work raises key questions about:

→ How young children are socialized to view themselves in relation to other kinds and the natural world (e.g., a part of or a part from)

→ How research can inform instructional design and early science learning programs

In work with colleagues from the Menominee Nation and the American Indian Center\textsuperscript{21} in Chicago, IL, we engaged community members in designing and building “culturally sustaining/ revitalizing pedagogy”\textsuperscript{13}. It meant developing culturally appropriate strategies for pedagogy, building and maintaining relationships, and a firm understanding of learning processes:

| CULTURALLY APPROPRIATE STRATEGIES FOR PEDAGOGY | BUILDING AND MAINTAINING RELATIONSHIPS | LEARNING PROCESSES |
| → Develop culturally appropriate processes for gathering community input | → Rethink power relationships (parent-teacher, school-community, researcher-community) and the identification and positioning of decision makers | → Remember that instructional design is a learning process that strengthens and refines over time |
| → Design and implement culturally sustaining and revitalizing routines (songs, nature/observing walks, learning games, invite community members to share stories) | → Continually reflect on the role of building relationships with place and land and the impacts of these for cognitive, socio-emotional, and spiritual development | → Collectively reflect on children’s thinking and our own teaching practices (we can use video in the classroom to examine moment-to-moment unfolding interactions) |
| → Use material resources created by Indigenous peoples (books, murals, toys) | | |

FOR MORE INFORMATION

ALSO SEE INDIGENOUS TEACHING TOOLS:
RESEARCH BRIEFS
→ #1 Culture and Learning
→ #2 Indigenous Evaluation
→ #4 Seeing Students’ Learning

FOR MORE RESOURCES:
→ “Wakanyeja “Sacred Little Ones” Early Childhood Education Initiative”\textsuperscript{22}
→ “Becoming Jemez: The Early Childhood of Jemez Children”\textsuperscript{23}
→ STEM Teaching Tools

CONNECT WITH US ON SOCIAL MEDIA
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→ Email- indigenouseducationtools@gmail.com
REFERENCES


Images courtesy of EMMAS Project: Native Science, Technology, Engineering, Art, and Math Summer Youth Program

BUILDING CAPACITY AND CULTIVATING INNOVATION-
BCCI is designed to develop resources and practices that will have exponential impacts on efforts to improve Native student success across a variety of sectors.

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