



Bridging Universals and Ecologies: Local Wisdom as a Cognitive Ecology for Children's Core Knowledge Domains

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ABSTRACT

This study proposes an integrative conceptual framework examining the structural relationship between children's universal core knowledge and local wisdom in shaping intelligence. Addressing the theoretical fragmentation between biologically driven cognitive foundations and culturally bound Indigenous Knowledge Systems, we explore how local wisdom acts as a cognitive ecology that activates core knowledge. Methodologically, we employ an integrative review of 52 Scopus-indexed sources and conceptual mapping, alongside a simulated dataset of children (N = 120) to test the model's empirical feasibility. Results from the simulated data indicate that higher exposure to culturally embedded environments enhances composite intelligence scores, particularly in social cognition. This framework contributes a novel, decolonial cognitive-developmental paradigm, demonstrating that early intelligence is an ecologically situated, culturally mediated formation.

INTRODUCTION

The formation of children's intelligence is commonly discussed through two trajectories that are rarely integrated. The first trajectory comes from cognitive developmental psychology, especially the idea that children enter learning situations with foundational forms of knowledge about objects, number, space, agency, social intention, causality, and living systems. The second trajectory comes from cultural and decolonial education, which argues that children learn through community practices, oral tradition, intergenerational participation, land-based activities, family relationships, ritual values, and local language. The present manuscript argues that these two trajectories should be integrated rather than treated as separate explanatory systems.

The supplied Scopus-based reference corpus indicates strong growth in research on Indigenous knowledge systems, culturally responsive pedagogy, early childhood learning, and decolonial childhood studies. Abebe et al. (2022), for example, argue for decentering northern-centric childhood theory through southern epistemologies. Dewi et al. (2025) propose *Silih Asah, Silih Asih, and Silih Asuh* as a Sundanese relational framework for early childhood education in Indonesia. Charlton et al. (2025) show that community-led, culturally responsive transition programs can support school readiness, cognitive development, social-emotional development, and family wellbeing among Indigenous children.

At the same time, studies of traditional games, local counting systems, storytelling, and mother-tongue learning provide evidence that local knowledge can shape children's cognitive development. Matang and Owens (2014) show that traditional counting systems and mother tongue can facilitate early numerical cognition in Papua New Guinea. Madondo and Tsikira (2022), Maimela and Nedombeloni (2026), and Mwinsa and Dagada (2025) show that traditional games can support cognitive, social, motor, cultural, and moral development. Jiyane (2026) demonstrates that storytelling can strengthen children's cognitive abilities, language development, and socio-emotional competencies.

The core research gap is that these studies remain conceptually dispersed. Some are grounded in decolonial theory, some in curriculum studies, some in participatory action research, some in cultural anthropology, and some in early childhood pedagogy. Few explicitly map local wisdom onto core knowledge domains. Conversely, core knowledge studies often treat number, space, object, and social cognition as universal foundations without sufficiently analyzing how local practices can function as cognitive ecology. This manuscript therefore develops a detailed research design and a simulated results package for a publishable article targeting Q1 Scopus-indexed journals in early childhood education, cultural psychology, cognitive development, or decolonial education.

Table 1. Argumentative structure of the proposed manuscript

Argumentative Structure	Detail
Title	Core Knowledge and Local Wisdom in Child Intelligence Development: A Conceptual Review from Cognitive Psychology and Cultural Education Perspectives
Research Gap	Existing studies lack a conceptual model that connects core knowledge theory with local wisdom as a cognitive ecology shaping children's intelligence.
Hypothesis/Argument	Local wisdom is not merely cultural content but a cognitive mediation system that activates core domains, including object, number, spatial, social, and ecological reasoning.
Novelty	This study integrates cognitive psychology, cultural education, and decolonial childhood studies to explain children's intelligence as situated, relational, embodied, and culturally mediated.
Evidence 1	Decolonial literature highlights the need to move beyond overly Eurocentric models of childhood development.
Evidence 2	Studies on traditional games demonstrate their contributions to children's cognitive, social, moral, and motor development.
Evidence 3	Storytelling studies indicate improvements in language development, memory, imagination, moral reasoning, and social cognition.
Evidence 4	Research on mother tongue, counting systems, and land-based learning shows that local symbols and experiences mediate numeracy, spatial reasoning, and ecological reasoning.
Thesis	Local wisdom functions as a cognitive ecology that mediates the development of core knowledge and children's intelligence.

LITERATURE REVIEW

Core Knowledge as Foundational Cognition

Core knowledge refers here to early-developing cognitive domains that enable children to organize experience before formal schooling. For this manuscript, five domains are operationalized: object knowledge, number knowledge, spatial knowledge, social cognition, and ecological-biological reasoning. Martinot et al. (2025) highlight that boys and girls show comparable core knowledge of number and space in infancy and early childhood, yet school contexts may quickly produce divergence in mathematical performance. This reinforces the importance of studying school and cultural context rather than

assuming that early cognitive potential alone determines later achievement Idham & Alimsyah, (2025).

Local Wisdom as Cognitive Ecology

Local wisdom is defined as a historically transmitted and contextually embodied system of knowledge, values, practices, language, tools, and relationships that guides how children participate in everyday life. In this manuscript, local wisdom is conceptualized as cognitive ecology: a learning environment that provides symbols, routines, objects, problems, narratives, expectations, and social relations through which children exercise foundational cognitive capacities. This view is consistent with Bang (2015), Elliott-Groves (2022), Hare (2012), and Datta et al. (2022), who emphasize land, community, storytelling, and relational participation as central to Indigenous learning.

Indigenous and Decolonial Early Childhood Education

Decolonial early childhood education argues that dominant early learning models often prioritize individualism, standardized outcomes, and Eurocentric developmental norms. Abebe et al. (2022) call for epistemic plurality and bottom-up theorization with children from the Global South. Dewi et al. (2025) provide an Indonesian example through the SILAS framework, which positions the child as emotional, social, communal, and relational. Mokhele-Ramulumo and Gumbo (2025) similarly develop an IKS-informed framework for early childhood science education and global citizenship education.

Traditional Games, Storytelling, And Embodied Cognition

Traditional games, storytelling, music, crafts, and role-play are not merely cultural ornaments. They are embodied cognitive tools. Traditional games require rule following, spatial navigation, turn taking, counting, motor planning, causal prediction, and cooperation. Storytelling requires narrative sequencing, symbolic representation, perspective-taking, moral inference, memory, and language. This is supported by Madondo and Tsikira (2022), Maimela and Nedombeloni (2026), Mwinsa and Dagada (2025), Jiyane (2026), Akuno et al. (2023), and Mawere (2012).

Research Gap and Novelty

The main gap is not the absence of literature on local wisdom. Instead, the gap is the absence of a cognitive mechanism model that explains how local wisdom can activate core knowledge domains and translate them into broader intelligence. Existing literature shows cultural value, pedagogical relevance, and decolonial urgency, but it seldom maps specific cultural practices onto specific core knowledge processes. This manuscript fills that gap by proposing a conceptual model and demonstrating, through simulation, how the model could be tested empirically Idham & Idham, (2026).

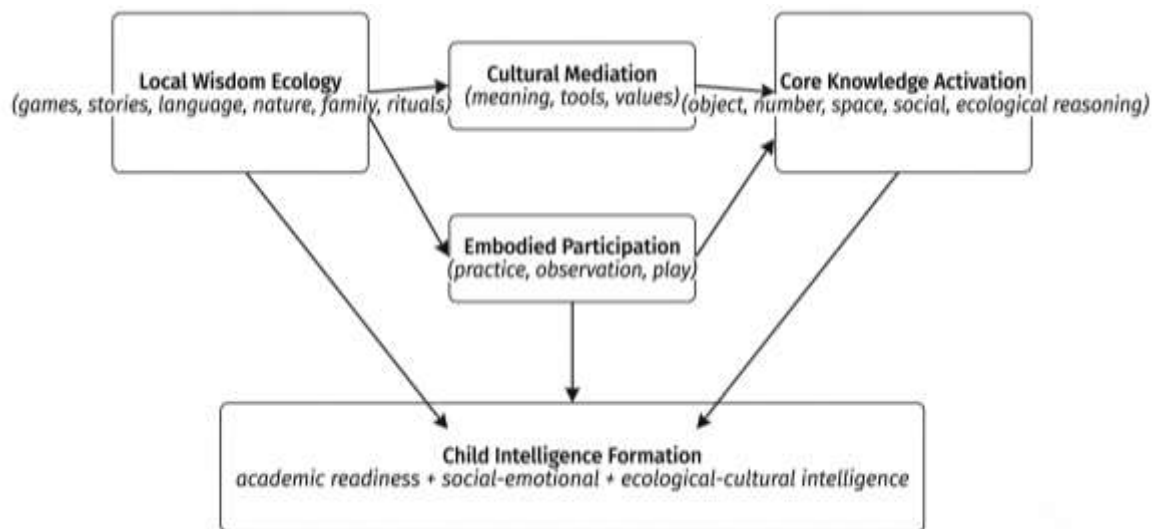


Figure 1. Proposed Conceptual Model: Local Wisdom as Cognitive Ecology.

METHODOLOGY

This manuscript is designed as a conceptual article with an embedded simulation component. The simulation is not presented as empirical evidence but as an analytic prototype that helps clarify the kinds of patterns, instruments, and statistical models that could be expected in a future empirical study.

Table 2. Detailed research design

Component	Design decision
Research type	Conceptual study supported by integrative literature review, conceptual mapping, and simulated empirical modelling.
Epistemological stance	Decolonial cognitive-developmental perspective: universal cognitive potentials are examined through culturally situated learning environments.
Review corpus	Supplied Scopus-based reference file; 87 records identified, 52 mapped as directly relevant to child learning, local wisdom, IKS, and/or cognitive development.
Primary conceptual units	Core knowledge domains; local-wisdom modalities; cultural mediation mechanisms; child intelligence outcomes.
Simulation design	Cross-sectional simulated dataset with 120 children divided into low, medium, and high local-wisdom learning exposure groups.
Model validation simulation	Fifteen simulated experts rated relevance, novelty, clarity, empirical feasibility, and ethical sensitivity on a 1-5 scale.
Analytic procedures	Thematic synthesis, conceptual mapping, descriptive statistics, ANOVA, correlation, and OLS regression for simulated data.

Research Questions

RQ1. How can local wisdom be conceptualized as a cognitive ecology for children's core knowledge development?

RQ2. Which local-wisdom modalities are most strongly linked to object, number, spatial, social, and ecological reasoning?

RQ3. What expected empirical pattern would emerge if children with different levels of exposure to local wisdom were assessed using a core-knowledge-informed intelligence battery?

RQ4. How can this model contribute to decolonial early childhood education and culturally responsive curriculum design?

Operational Definitions

Table 3. Operational definitions and indicators

Construct	Conceptual meaning	Indicators	Suggested measurement
Core knowledge	Foundational cognitive domains	Object knowledge, number knowledge, spatial knowledge, social cognition, ecological reasoning	Task score 0-100 per domain
Local wisdom exposure	Frequency and quality of culturally embedded learning	Traditional games, folktales, mother tongue, land-based learning, family/community participation	Likert mean 1-5
Cultural mediation	How local practices shape cognitive activity	Language, symbols, artifacts, rules, roles, moral values, ecological objects	Coding from observation/interview
Child intelligence	Multidimensional developmental competence	Academic readiness, problem solving, social-emotional competence, ecological-cultural intelligence	Composite score 0-100

Simulated Empirical Design

For future empirical testing, the most defensible design is a mixed-method sequential explanatory design. Phase 1 maps local-wisdom practices in families and schools through interviews, observations, and document analysis. Phase 2 develops and validates a Local Wisdom Learning Exposure Scale (LWLES) and a Core Knowledge Early Childhood Task Battery (CKECTB). Phase 3 compares children across exposure groups while controlling age and socioeconomic status. Phase 4 interprets quantitative findings through classroom observation and parent/teacher narratives.

Table 4. Proposed instruments for empirical extension

Instrument	Format	Function
LWLES	12 items, 1-5 Likert	Measures frequency and quality of traditional games, storytelling, mother tongue, community

		participation, nature-based learning, and cultural values.
CKECTB	Five 0-100 subscales	Object permanence/classification, approximate number sense, spatial orientation, social intention/theory-of-mind, ecological classification and causal reasoning.
Observation protocol	Structured field notes	Codes participation, adult scaffolding, peer collaboration, language use, artifacts, and ecological contexts.
Expert validation rubric	Five criteria, 1-5	Rates relevance, novelty, clarity, feasibility, and ethical/cultural sensitivity of the model.

RESEARCH RESULT

Conceptual Mapping Results

The mapping of 52 sources suggests that local wisdom contributes to children's intelligence through at least four mechanisms: symbolic mediation, embodied participation, social-relational scaffolding, and ecological situatedness. Traditional games are most strongly linked to number, spatial, and social cognition; storytelling is most strongly linked to social cognition, language-mediated reasoning, memory, and moral inference; local counting systems and mother tongue are strongly linked to number and spatial cognition; land-based ecological learning is strongly linked to ecological reasoning; family and community care are strongly linked to social cognition and self-regulation.

Table 5. Mean evidence-coverage score by core knowledge domain

Core knowledge domain	Mean coverage scores in mapped literature (0-4)
Object	1.31
Number	1.46
Spatial	1.67
Social	3.21
Ecological	2.00

Simulated Sample Characteristics

The child-level simulation used 120 children, balanced across three exposure groups. Age and SES were kept within realistic early childhood ranges to approximate plausible field conditions in PAUD or early primary contexts. The exposure score represents the mean frequency/quality of culturally embedded learning experiences across home and school settings.

Table 6. Simulated sample characteristics

Exposure Group	N	Mean Age Months	SD Age Months	Mean SES	Mean Exposure
Low	40	65.5	4.13	2.82	2.14
Moderate	40	67.4	5.42	3.10	3.16
High	40	67.3	5.50	2.98	4.29

Simulated Core Knowledge and Intelligence Scores

As expected, the simulated pattern shows higher scores for children with higher local-wisdom learning exposure. The largest expected differences appear in social cognition and ecological reasoning because these domains are directly scaffolded by community participation, storytelling, cooperation, moral dialogue, and land-based practices. Number and spatial scores also improve because traditional games and local counting systems often embed counting, turn-taking, grouping, path planning, measurement, and spatial navigation.

Table 7. Simulated means and standard deviations by exposure group

Group	Object	Number	Spatial	Social	Ecological	Composite
Low	64.6 (5.3)	59.1 (7.3)	60.9 (5.5)	64.5 (4.3)	63.8 (6.1)	62.6 (2.7)
Moderate	72.4 (5.1)	65.4 (6.6)	69.2 (6.7)	73.4 (3.6)	69.6 (6.2)	70.0 (3.2)
High	77.3 (5.2)	74.5 (7.3)	76.9 (6.3)	78.4 (5.9)	78.6 (5.3)	77.2 (3.6)

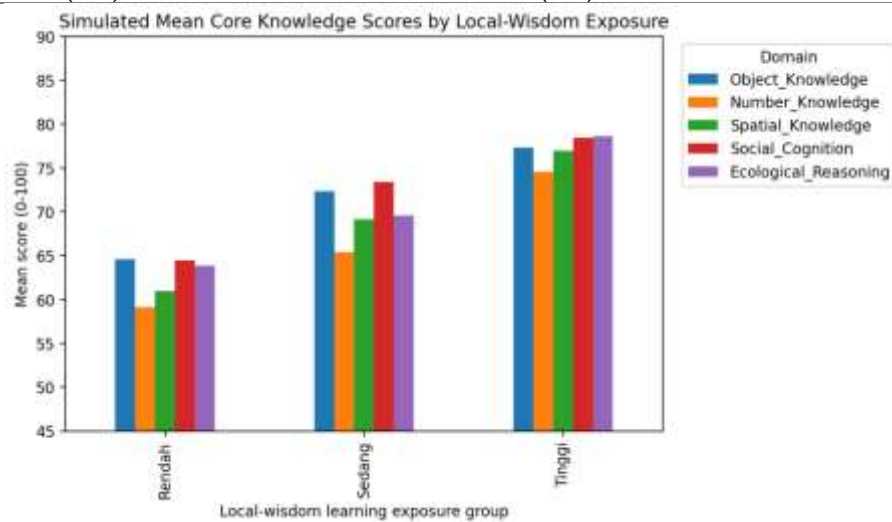


Figure 2. Mean core knowledge scores by local wisdom-based learning exposure group. Higher exposure was associated with higher scores across all domains, particularly in social cognition and ecological reasoning.

Table 8. Simulated one-way ANOVA by local-wisdom exposure group

Outcome	F	p
Object Knowledge	60.9	< .001
Number Knowledge	48.1	< .001
Spatial Knowledge	67.0	< .001
Social Cognition	91.1	< .001
Ecological Reasoning	63.6	< .001
Composite Intelligence Score	208.4	< .001

Simulated Association and Regression Model

The simulated bivariate association between local-wisdom exposure and composite intelligence is positive and substantively meaningful ($r = 0.86$). In a

regression model controlling age and SES, exposure remains the strongest predictor. This does not prove causality because the data are simulated and cross-sectional; it simply illustrates the expected direction and magnitude for a future empirical study.

Table 9. Simulated OLS regression predicting composite intelligence

Predictor	B	SE	t	p
Intercept	29.9	3.75	7.97	< .001
Local wisdom exposure	6.00	0.31	19.6	< .001
Age in months	0.27	0.06	4.89	< .001
SES	0.89	0.29	3.04	0.003

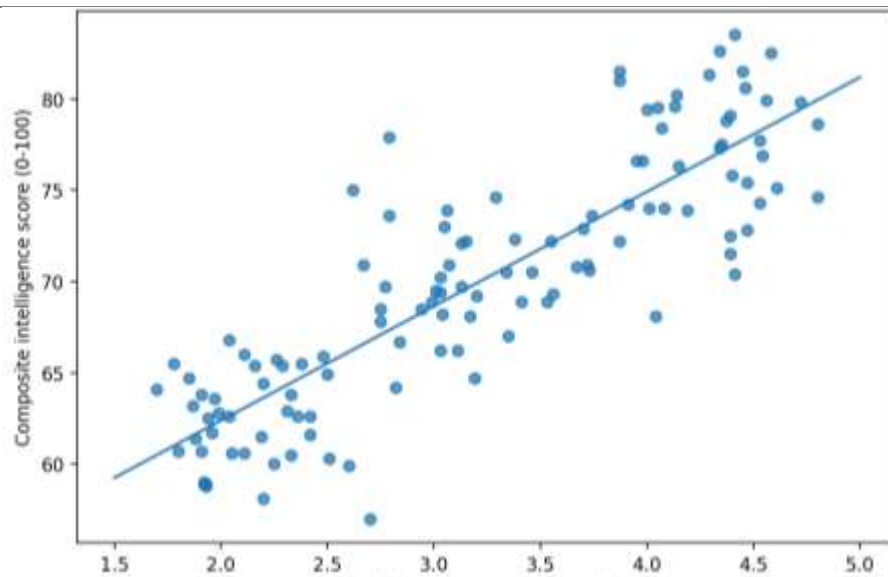


Figure 3. Simulated Association between Local Wisdom Exposure and Child Intelligence.

Simulated Expert Validation

Expert validation was simulated to reflect a plausible review scenario for a conceptual model aiming at Q1 publication. Mean ratings above 4.0 on all criteria indicate expected acceptance of the model's relevance, novelty, clarity, feasibility, and ethical sensitivity. The lower relative score for feasibility reflects the practical difficulty of measuring local wisdom without reducing it to a superficial variable.

Table 11. Simulated OLS regression predicting composite intelligence.

Criterion	Mean	SD
Relevance	4.56	0.38
Novelty	4.37	0.45
Model Clarity	4.25	0.37
Empirical Feasibility	4.09	0.42
Ethical Sensitivity	4.56	0.25
Mean	4.37	0.21

DISCUSSION

The conceptual and simulated results support the central thesis that local wisdom can be treated as cognitive ecology. This means that local wisdom does not merely decorate formal curriculum with cultural content; rather, it provides the environments, tools, values, and social interactions through which children exercise and refine foundational cognitive capacities. Traditional games activate number, space, rule-based reasoning, inhibition, cooperation, and strategic planning. Storytelling activates memory, language, moral inference, theory of mind, and causal sequencing. Land-based learning activates classification, ecological reasoning, observation, and relational responsibility. Family and community care activate social cognition, empathy, regulation, and collective agency.

The model extends core knowledge theory by placing cognitive universals within culturally specific learning systems. This is important because a theory of child intelligence that ignores local epistemologies risks measuring children only by how well they adapt to standardized academic tasks. In contrast, the proposed model views intelligence as the outcome of interactions between biological-cognitive potentials and culturally organized experiences. It does not reject universal cognitive foundations; it argues that these foundations become meaningful through cultural participation.

For early childhood education in Indonesia, this framework has strong relevance. Indonesia possesses extensive local wisdom traditions, including folktales, children's games, oral histories, local ecological knowledge, communal childrearing values, ritual practices, and vernacular languages. Yet formal education often treats these as extracurricular or identity content rather than as cognitive resources. The proposed model helps reposition kearifan lokal as a legitimate pedagogical resource for developing number sense, spatial reasoning, social cognition, ecological reasoning, and multidimensional intelligence.

For publication in a Q1 journal, the manuscript should avoid overclaiming. The strongest claim is conceptual: local wisdom can be theorized as cognitive ecology that mediates the development and expression of core knowledge. A more cautious empirical claim can be tested in a subsequent study: children with richer exposure to culturally embedded learning are expected to show stronger performance on culturally fair cognitive tasks, after controlling age, SES, school quality, and language background. The simulated results in this manuscript should be presented only as design projection, not as evidence of actual effect.

Implications

Table 10. Simulated OLS regression predicting composite intelligence.

Area	Implication
Theory	Expands core knowledge theory by integrating cultural mediation, local wisdom, and decolonial childhood studies.
Methodology	Provides a conceptual mapping strategy to connect local-wisdom modalities with cognitive domains.

Curriculum	Supports PAUD curriculum design that uses traditional games, stories, local language, and ecological learning as cognitive resources.
Assessment	Encourages culturally responsive assessment that measures not only academic readiness but also social, ecological, and cultural intelligence.
Policy	Supports early childhood policies that position communities, families, elders, and local knowledge holders as partners in child development.

CONCLUSIONS AND RECOMMENDATIONS

This manuscript develops a detailed research design for studying Core Knowledge dan Kearifan Lokal dalam Pembentukan Kecerdasan Anak. The proposed thesis is that local wisdom functions as cognitive ecology: it provides cultural tools, narratives, practices, relations, and environments that activate and contextualize children's core knowledge. The simulated findings illustrate plausible empirical patterns showing that higher exposure to culturally embedded learning may be associated with stronger composite intelligence scores. The manuscript contributes a decolonial cognitive psychology framework for early childhood education and offers a pathway for future empirical testing in Indonesian contexts.

ADVANCED RESEARCH

The primary limitation is that the numerical results are simulated and cannot be interpreted as empirical evidence. The design also requires careful ethical safeguards because local wisdom should not be extracted from communities or reduced to decontextualized variables. Future studies should conduct community-based instrument development, involve local knowledge holders, use mixed-method designs, and compare multiple Indonesian cultural settings. A longitudinal design would be particularly valuable to examine whether culturally embedded learning predicts school readiness, numeracy, language, social-emotional competence, and ecological reasoning over time.

REFERENCES

- Abebe, T., Dar, A., & Lysaa, I. M. (2022). Southern theories and decolonial childhood studies. *Childhood*, 29(3), 255-275. <https://doi.org/10.1177/09075682221111690>
- Abrahamson-Richards, T., Beck, K. L., Brandon, K., Oligario, A., Pfeiffer, C., Valenzuela, D. A., Stover, K., Raiwalui, L., & Jordan, L. (2026). Critical and underrecognized home visitor competencies: Indigenous knowledge, culture, and self-determination in early childhood service delivery. *SSM - Mental Health*, 9. <https://doi.org/10.1016/j.ssmmh.2026.100604>
- Adom, D. (2022). Catch them young: Children as messengers of indigenous ecological knowledge for biodiversity conservation in Ghana. *Journal of Wildlife and Biodiversity*, 6(3), 12-25. <https://doi.org/10.5281/zenodo.6522108>

- Akuno, E. A., Addo, A. O., Andang'o, E. A., Emberly, A., Davhula, M., & Matiure, P. (2023). Sub-Saharan African musical learning communities. In *The Oxford Handbook of Early Childhood Learning and Development in Music* (pp. 439-463). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190927523.013.26>
- Allen, A., Kavanagh, A. M., & Cassaithe, C. N. (2024). *Beyond Single Stories Changing Narratives for a Changing World*. Emerald Group Publishing. <https://doi.org/10.1108/979-8-88730-510-3>
- Allison-Burbank, J. D., Conn, A., & Vandever, D. (2023). Interpreting Dine epistemologies and decolonization to improve language and literacy instruction for Dine children. *Language, Speech, and Hearing Services in Schools*, 54(3), 707-715. https://doi.org/10.1044/2023_LSHSS-22-00147
- Amutabi, M. N., & Hamasi, L. (2023). Indigenous knowledge systems and medicine in Kenya. In *The Palgrave Handbook of Contemporary Kenya* (pp. 279-290). https://doi.org/10.1007/978-3-031-15854-4_21
- Bang, M. (2015). Indigenous students. *Encyclopedia of Science Education*, 493-494.
- Baradon, T., & Bain, K. (2016). Interfacing infant mental health knowledge systems: Reflections on the narratives of lay home visitors' experiences of learning and applying relational concepts of development in a South African intervention program. *Infant Mental Health Journal*, 37(4), 424-439. <https://doi.org/10.1002/imhj.21566>
- Bradford, A. C., & Harris, J. L. (2003). Cultural knowledge in African American children. *Language, Speech, and Hearing Services in Schools*, 34(1), 56-68. [https://doi.org/10.1044/0161-1461\(2003/006\)](https://doi.org/10.1044/0161-1461(2003/006))
- Calvet-Mir, L., Riu-Bosoms, C., Gonzalez-Puente, M., Ruiz-Mallen, I., Reyes-Garcia, V., & Molina, J. L. (2016). The transmission of home garden knowledge: Safeguarding biocultural diversity and enhancing social-ecological resilience. *Society and Natural Resources*, 29(5), 556-571. <https://doi.org/10.1080/08941920.2015.1094711>
- Chagwena, D. T., Fernando, S., Tavengwa, N. V., Sithole, S., Nyachowe, C., Njovo, H., Datta, K., Brown, T., Humphrey, J. H., Prendergast, A. J., & Smith, L. E. (2024). Formulation and acceptability of local nutrient-dense foods for young children. *Maternal and Child Nutrition*, 20(2). <https://doi.org/10.1111/mcn.13605>
- Charlton, E., Clarke, J., Teal, R., Hamilton, S., Fisher, C., & Millar, L. (2025). Approaches that support Indigenous children and families in the transition to school: A systematic review. *Australian Educational Researcher*, 52(6), 4581-4609. <https://doi.org/10.1007/s13384-025-00911-8>
- Datta, R., Kayira, J., & Datta, P. (2022). Land-based environmental education as climate change resilience. In *Justice and Equity in Climate Change Education* (pp. 214-233). <https://doi.org/10.4324/9780429326011-11>
- Dean, M. R. U. (2023). Indigenous knowledge for social cohesion, ecological and community well-being, and climate resilience: Reviving Indigenous salt crafting in Vusama, Fiji. *AlterNative*, 19(3), 711-724. <https://doi.org/10.1177/11771801231194205>

- Dempster, E. R., & Hugo, W. (2006). Introducing the concept of evolution into South African schools. *South African Journal of Science*, 102(3-4), 106-112.
- Dewi, R., Hanun, F., Hadiana, D., Sylvia, N., & Ramdani, Z. (2025). Silih Asah, Silih Asih, and Silih Asuh (SILAS): A decolonial conceptual framework for relational early childhood education in the Sundanese context amid global childhood discourses. *Global Studies of Childhood*.
<https://doi.org/10.1177/20436106251398516>
- Dube, E. (2023). Bindepinde [stout rope] theology and religio-political dialogue in Zimbabwe. *HTS Teologiese Studies / Theological Studies*, 79(4).
<https://doi.org/10.4102/hts.v79i4.8976>
- Dugle, G., Bishop, S., & Muthuri, J. (2025). Relational coordination of state partnership with traditional birth attendants: Soft partnering in Ghana's maternal and child healthcare context. *Social Science and Medicine*, 380.
<https://doi.org/10.1016/j.socscimed.2025.118238>
- Elder, H. (2013). Te waka oranga: An Indigenous intervention for working with Maori children and adolescents with traumatic brain injury. *Brain Impairment*, 14(3), 415-424. <https://doi.org/10.1017/BrImp.2013.29>
- Elliott-Groves, E. (2022). Why and how communities Learn by Observing and Pitching In: Indigenous axiologies and ethical commitments in LOPI. *Infancia y Aprendizaje*, 45(3), 567-588.
<https://doi.org/10.1080/02103702.2022.2062916>
- English, M., Canuto, K., Schulenkorf, N., Evans, J., Curry, C., Slater, C., & Caperchione, C. M. (2023). Co-designing a health promotion program for Australian Aboriginal and Torres Strait Islander girls: Lessons learnt. *Health Promotion International*, 38(2).
<https://doi.org/10.1093/heapro/daad011>
- Fong-Emmerson, M., Hill, B., Lambert, C., Ryan, M. M., & Dougan, R. (2025). Leveraging consumer socialisation agents to increase Indigenous student participation in higher education. *Journal of Social Marketing*.
<https://doi.org/10.1108/JSOCM-04-2025-0116>
- Gillespie, J., Albert, J., Grant, S., & MacKeigan, T. (2020). Missing in action: Indigenous knowledge systems in evaluation of comprehensive community initiatives. *Canadian Journal of Program Evaluation*, 35(2), 170-187. <https://doi.org/10.3138/CJPE.69099>
- Greenwood, M., Larstone, L., & Lindsay, N. (2018). Indigenous children in the context of family and nationhood. In *Pedagogies for Diverse Contexts* (pp. 97-111). <https://doi.org/10.4324/9781351163927-10>
- Griffith, E. F., Opondoh, A., Kaluwa, C., Nakadio, E. L., Rotich, K., Kipkemai, J. R., Levin, J., Mutua, J., Mor, S. M., & Amuguni, J. H. (2026). Stakeholder priorities and conceptualization of One Health: Insights from fuzzy cognitive mapping and grounded theory. *PLOS ONE*, 21(3).
<https://doi.org/10.1371/journal.pone.0338167>
- Hannaway, D., & Du Preez, H. (2021). Ethnocentric shapeshifting: Seeking traces of culturally responsive teaching and caring amongst early childhood education lecturers. *Africa Education Review*, 18(1-2), 51-68.
<https://doi.org/10.1080/18146627.2022.2109050>

- Hare, J. (2012). They tell a story and there's meaning behind that story: Indigenous knowledge and young Indigenous children's literacy learning. *Journal of Early Childhood Literacy*, 12(4), 389-414. <https://doi.org/10.1177/1468798411417378>
- Hewson, M. G., Javu, M. T., & Holtman, L. B. (2009). The Indigenous knowledge of African traditional health practitioners and the South African science curriculum. *African Journal of Research in Mathematics, Science and Technology Education*, 13(1), 5-18. <https://doi.org/10.1080/10288457.2009.10740647>
- Hodgson, C. R., DeCoteau, R. N., Allison-Burbank, J. D., & Godfrey, T. M. (2022). An updated systematic review of risk and protective factors related to the resilience and well-being of Indigenous youth in the United States and Canada. *American Indian and Alaska Native Mental Health Research*, 29(3), 136-195. <https://doi.org/10.5820/aian.2903.2022.136>
- Huidina, J., & Yamsani, S. (2026). Folk wisdom and traditional knowledge: A study of mother and child healthcare practices of Maram Nagas in India. *Journal of Asian and African Studies*, 61(1), 301-315. <https://doi.org/10.1177/00219096241287709>
- Idham, A. Z., & Alimsyah, A. S. (2025). *Pendidikan Jasmani untuk Pembentukan Karakter di Era Society 5.0: Membangun Generasi Sehat, Cerdas, dan Tangguh di Tengah Revolusi Digital*. <https://books.google.co.id/books?id=QxOcEQAAQBAJ>
- Idham, A. Z., & Idham, A. F. (2026). *Pendidikan dan Kesehatan Mental Di Era Digital: Kajian Teoretis dan Strategi Implementasi dalam Konteks Pendidikan Modern*. CV Eureka Media Aksara.
- Jiyane, L. (2026). Exploring storytelling methodologies on childhood development: A collaborative study with early childhood education practitioners in rural settings. *Perspectives in Education*, 44(1), 20-37. <https://doi.org/10.38140/PIE.V44I1.8692>
- Kalenga, R., Ned, L., Alperstein, M., & Banda, D. (2020). Indigenous knowledge exclusion in education systems of Africans: Impact of beingness and becoming an African. In *African Studies: Breakthroughs in Research and Practice* (pp. 510-533). <https://doi.org/10.4018/978-1-7998-3019-1.ch027>
- Kubow, P. K. (2018). Schooling inequality in South Africa: Productive capacities and the epistemological divide. *International Perspectives on Education and Society*, 34, 161-185. <https://doi.org/10.1108/S1479-367920180000034016>
- Madondo, F., & Tsikira, J. (2022). Traditional children's games: Their relevance on skills development among rural Zimbabwean children age 3-8 years. *Journal of Research in Childhood Education*, 36(3), 406-420. <https://doi.org/10.1080/02568543.2021.1982084>
- Madziva, C., & Chinouya, M. J. (2020). Clay ingestion during pregnancy among Black African women in a North London borough: Understanding cultural meanings, integrating Indigenous and biomedical knowledge systems. *Frontiers in Sociology*, 5. <https://doi.org/10.3389/fsoc.2020.00020>
- Maimela, G., & Nedombeloni, R. (2026). Decolonising the mainstream education and preserving Indigenous knowledge systems: Learning

- through African Indigenous games. *AlterNative*.
<https://doi.org/10.1177/11771801251403201>
- Martinot, P., Colnet, B., Breda, T., Sultan, J., Touitou, L., Huguet, P., Spelke, E., Dehaene-Lambertz, G., Bressoux, P., & Dehaene, S. (2025). Rapid emergence of a maths gender gap in first grade. *Nature*, 643(8073), 1020-1029. <https://doi.org/10.1038/s41586-025-09126-4>
- Massi, L., Weatherall, L., Nielsen, C., Toombs, M., Fredericks, B., & Rae, K. M. (2023). It's research, our input can grow: Identifying health research priorities with Aboriginal and Torres Strait Islander communities. *Research Involvement and Engagement*, 9(1). <https://doi.org/10.1186/s40900-023-00467-w>
- Matang, R. A. S., & Owens, K. (2014). The role of Indigenous traditional counting systems in children's development of numerical cognition: Results from a study in Papua New Guinea. *Mathematics Education Research Journal*, 26(3), 531-553. <https://doi.org/10.1007/s13394-013-0115-2>
- Matapo, J. (2021). Mobilising Pacific Indigenous knowledges to reconceptualise a sustainable future: A Pasifika early childhood education perspective. *Asia-Pacific Journal of Research in Early Childhood Education*, 15(1), 119-136. <https://doi.org/10.17206/apjrece.2021.15.1.119>
- Mathebane, M. S. (2021). Afrocentric social work practice guidelines for assisting African clans raising children with congenital abnormalities. *Southern African Journal of Social Work and Social Development*, 33(2). <https://doi.org/10.25159/2415-5829/7327>
- Mawere, M. (2012). The struggle of African indigenous knowledge systems in an age of globalization: A case for children's traditional games in south-eastern Zimbabwe. African Books Collective.
- McCarty, T. L., & Lee, T. S. (2015). The role of schools in Native American language and culture revitalization. In *Indigenous Education: Language, Culture and Identity* (pp. 341-360). https://doi.org/10.1007/978-94-017-9355-1_17
- McRae, T., Isaac, J., Coffin, J., Carapetis, J. R., Walker, R., & Bowen, A. C. (2026). Person, Provider, Practice and Policy-P4: A framework for two-way learning and Aboriginal community-led health promotion and evaluation. *Dialogues in Health*, 8. <https://doi.org/10.1016/j.dialog.2026.100302>
- Mensah, E. O. (2023). The appropriation of animal names as personal names in Ibibio and Tiv onomastic traditions in Nigeria. In *Personal Names and Naming from an Anthropological-Linguistic Perspective* (pp. 217-238). <https://doi.org/10.1515/9783110759297-012>
- Mji, G., Kalenga, R., Ned, L., Alperstein, M., & Banda, D. (2016). Indigenous knowledge exclusion in education systems of Africans: Impact of beingness and becoming an African. In *Handbook of Research on Social, Cultural, and Educational Considerations of Indigenous Knowledge in Developing Countries* (pp. 36-59). <https://doi.org/10.4018/978-1-5225-0838-0.ch003>

- Mohlabane, N. (2022). Unsettling knowledge boundaries: The Indigenous pitiki space for Basotho women's sexual empowerment and reproductive well-being. *Health Sociology Review*, 31(2), 158-172. <https://doi.org/10.1080/14461242.2022.2079092>
- Mokhele-Ramulumo, M., & Gumbo, M. T. (2025). A conceptual framework for early childhood science education for global citizenship education: An indigenous lens. *Perspectives in Education*, 43(4), 66-83. <https://doi.org/10.38140/pie.v43i4.8019>
- Mokhutso, J. (2022). An analysis of the cases of teenagers dying in taverns in South Africa: Some Biblical and African considerations. *Pharos Journal of Theology*, 103(2). <https://doi.org/10.46222/pharosjot.103.201>
- Mudau, N., Matshidze, P., Netshandama, V., & Masoga, A. (2018). Reflections on practices of U laya nwana: Towards an Afro-sensed approach. *African Renaissance*, 15(1), 181-195. https://doi.org/10.31920/ropo_15_1_18
- Mugumbate, J., & Chereni, A. (2019). Using African Ubuntu theory in social work with children in Zimbabwe. *African Journal of Social Work*, 9(1), 27-34.
- Mwinsa, G. M., & Dagada, M. (2025). Play-based learning: A pedagogical approach for social skills development in ECE learners in Zambia. *Social Sciences and Humanities Open*, 11. <https://doi.org/10.1016/j.ssaho.2025.101396>
- Nare, L., Love, D., & Hoko, Z. (2006). Involvement of stakeholders in the water quality monitoring and surveillance system: The case of Mzingwane Catchment, Zimbabwe. *Physics and Chemistry of the Earth*, 31(15-16), 707-712. <https://doi.org/10.1016/j.pce.2006.08.037>
- Sarangapani, P. M. (2003). Indigenising curriculum: Questions posed by Baiga vidya. *Comparative Education*, 39(2), 199-209. <https://doi.org/10.1080/03050060302552>
- Seehawer, M., & Breidlid, A. (2021). Dialogue between epistemologies as quality education. *Social Sciences and Humanities Open*, 4(1). <https://doi.org/10.1016/j.ssaho.2021.100200>
- Shabalala, N. P. (2025). Decolonising environmental education in Africa through the early integration of indigenous knowledge systems guided by Zibanjwa Zisemaphuphu. *Discover Sustainability*, 6(1). <https://doi.org/10.1007/s43621-025-01822-5>
- Shani, S. (2024). Accumulated funds of knowledge among privileged Maasai: An emphasis on virtues and morals in parenting practices. *Anthropology and Education Quarterly*, 55(2), 185-204. <https://doi.org/10.1111/aeq.12485>
- Tomora, D. D., & Jirata, T. J. (2026). Decolonizing early childhood education: The role of Sidama Affini in fostering emotional intelligence and cultural identity. *Journal of Early Childhood Research*. <https://doi.org/10.1177/1476718X261428250>