Partnership for Research with African Newcomers

AFRICAN INDIGENOUS KNOWLEDGE & MATHEMATICS LEARNING:
Sub-Saharan Immigrant Parents' Perspectives

Research Brief

WHAT THIS RESEARCH IS ABOUT

Imagine a community growing fivefold in just twenty years, surging from 39,955 to 174,655 residents, yet its unique cultural strengths remain largely invisible within the school systems it enters. Since the early 1990s, Sub-Saharan African (SSA) immigration to Canada has surged, with Alberta experiencing the country's fastest-growing Black population. Despite this rapid growth, the specific mathematical experiences of Sub-Saharan African immigrant (SSAI) families in regions like the Greater Edmonton area are often overlooked or lost in more generalized research. This research uses African Indigenous Knowledge to challenge common deficit-based assumptions that mistake a parent's unfamiliarity with the Canadian system for a lack of involvement. Instead, it highlights how families actively support their Grade 6–9 students as they navigate a new education system during the high-stakes transitioning period of their first five years in Canada (Schellenberg & Maheux, 2007).

During this time, families demonstrate significant resilience by creating third spaces that merge the beliefs and practices of their home countries with Canadian requirements to foster a safe learning environment. This research argues that SSAI families possess a wealth of cultural knowledge and community cultural wealth regarding their children's mathematics learning (Yosso, 2005). This means a student's academic success depends largely on how effectively families balance these multiple cultural contexts to form a strong mathematical identity.

WHAT YOU NEED TO KNOW

This research explores how Sub-Saharan African immigrant (SSAI) parents in Alberta support their children's mathematics learning during their critical first five years in Canada. Researchers interviewed 12 parents from Kenya, Ghana, South Sudan, Somalia, and Ethiopia, using an Afrocentric lens and Positioning Theory to identify cultural strengths. The study found seven key storylines, suggesting that these families use communal responsibility and ancestral brilliance as vital educational assets. Educators should use these findings to challenge deficit-based assumptions with asset-based practices and remove systemic barriers, such as age-based grade placement.

WHAT THE RESEARCHERS DID

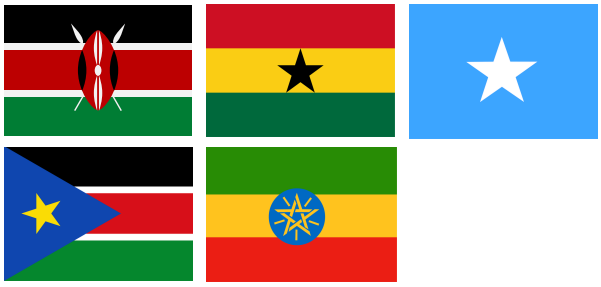
To understand newly arrived SSAI parents' experiences of mathematics learning, the researchers conducted interviews with 12 parents who immigrated to Canada from sub-Saharan Africa within the last 5 years. All participants had children enrolled in schools in Grades 6-9 in the Greater Edmonton region. Participants, who had lived in Canada for less than five years, took part in either a one-hour individual interview or a 100-minute focus group. Discussions explored parents' views on mathematics learning and their relationship with their children's school and teachers.

75% of parent participants opted for the hour-long individual interview over focus groups.

Interviews were analyzed using African Indigenous Knowledge (AIK/ Afrocentricity) and Positioning Theory.

1. **African Indigenous Knowledge:** This framework centers Africans as knowledge keepers and key players rather than victims, emphasizing African histories, experiences, and communal values. It challenges dominant narratives by highlighting Indigenous African perspectives (Asante, 1990, p. 172; Dei, 1994, p. 5).
2. **Positioning Theory:** This framework examines how cultural narratives shape the roles, rights, and responsibilities of parents, teachers, and students. It highlights how these positions are negotiated through interactions and influenced by individuals' experiences and cultural knowledge (Harré, 2012; Herbel-Eisenmann et al., 2015, 2016, 2024).

Interviewed Parents' Country of Origin



LOOKING MORE CLOSELY

The study identified seven storylines parents use to understand and support their children's mathematics education:

Ubuntu: "*I Am Because You Are*" Communal Mathematics Learning:
Families view mathematics learning as a shared responsibility through Homework Clubs and community learning. In Canada, long work hours and limited support networks make these practices harder to sustain.

Multilingual Students Excel in Mathematics:
The research challenges deficit views of African Immigrant students, showing that multilingualism is an asset that supports mathematical reasoning and success in regular classrooms.

> *"...With mathematics, you can go to the college to be an engineer, doctor, or something like that. Is the only way to run out of poverty..."*
> (Denise, Interviewed Parent)

Mathematics as a Pathway to Success:
For SSAI families, mathematics is positioned as the primary tool for upward social mobility and as a way out of poverty, or to reach success.

Knowledge, Not Age:
The study challenges age-based grade placement, arguing that it can create academic gaps and social isolation for students with interrupted schooling. It advocates for cohorts based on mathematical knowledge and expertise.

> *"...Trying to engage [our children] in math is like reclaiming our identity in math education..."*
> (Emma, Interviewed Parent)

African Mathematical Legacy:
African mathematical excellence, rooted in civilizations like Egypt, Mali, and Timbuktu, predates European mathematics. Learning mathematics is framed as reclaiming cultural identity rather than acquiring a foreign skill.

Teachers as a Mirror for Morality
Mathematics teachers are seen as second parents responsible for the general upbringing and moral conformity of the child alongside academic content.

Respect for Teachers:
Parents expect their children to hold teachers in high esteem, often viewing them as people of authority endowed with wisdom (Dei, 2020).

KEY TAKEAWAY:
Centring African Indigenous Knowledge challenges deficit-based narratives about immigrant families. Culturally-affirming approaches to education honour the identities of SSAI students and their families.

KEY POINTS

Grade Placement System:

Age-based grade placement can create academic gaps and alienation for newcomer students. This research advocates for placement based on mathematical knowledge and experience rather than age, allowing students to learn at an appropriate level.

Countering the Bilingualism Deficit:

High-achieving multilingual students are often placed into English Language Learning classes due to racial and linguistic biases. This research reframes multilingualism as a mathematical asset, showing that brilliance is independent of English proficiency.

Uninvolved Parent Myth:

This research rejects the dominant Western myth of the uninvolved Black parent by recognizing SSAI families' cultural strengths and active educational support.

Reclaiming Identity:

For SSAI students, mathematics is not a foreign Western discipline but part of an African intellectual heritage. Recognizing these historical contributions strengthens students' identity, belonging, and engagement with mathematics.

Second Parent Conflict:

SSAI parents view teachers as moral guides who help shape students' character alongside academic learning. They value nurturing discipline and relationship-building over exclusionary practices such as suspension.

AFRICAN INDIGENOUS KNOWLEDGE & MATHEMATICS LEARNING

ACTION ITEMS

POLICYMAKERS

- Enable knowledge-based cohorts through policy reform to reduce academic gaps and newcomer student alienation.
- Recognize multilingualism as an asset and prevent misplacement of high-achieving Black students in English Language Learning programs.
- Fund third-space programs that leverage immigrant families' community cultural wealth.

EDUCATORS

- Use asset-based, culturally responsive teaching.
- Integrate AIK/Afrocentric perspectives in teacher education.
- Embrace diverse mathematical perspectives.
- Value bilingualism as an asset rather than a deficit.
- Recognize Ubuntu through collaborative learning.

SETTLEMENT WORKERS & COMMUNITY ORGANIZATIONS

- Expand community-led homework clubs.
- Support culturally responsive third spaces.
- Bridge families and schools.
- Advocate for inclusive school practices.
- Empower parents to lead as key players in their children's educational journey.

RESEARCHERS

- Expand AIK and Positioning Theory research.
- Move beyond Western research frameworks.
- Examine teacher and student storylines.
- Strengthen home–school research partnerships.
- Center immigrant and minority perspectives.

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ABOUT PRAN

PRAN is a partnership of universities, community-based organizations, and government organizations interested in the experiences of Sub-Saharan African immigrants and refugees (SSAIs) in Canada. PRAN members are posing new questions and approaches grounded in non-Western ways of knowing to develop valuable evidence-based resources to support SSAIs to thrive in Canada. PRAN is co-funded provided by SSHRC & PRAN partners. www.pran-network.ca