
Indigenizing University Mathematics
'Indigénisation' des mathématiques universitaires
(Org: **Dr. Naomi Borwein** (Windsor), **Dr. Florence Glanfield** (Alberta) and/et **Dr. Veselin Jungic** (Simon Fraser))

MELANIA ALVAREZ, UBC Department of Mathematics/PIMS
Breaking cycles and Barriers

We discuss how to provide real mathematical support for Indigenous teacher candidates, in-service teachers working with Indigenous students and Indigenous students. preparing for post secondary education.

I will mention some possible solutions like the creation of learning modules to support and enhance the mathematical knowledge of teachers and students and the decolonization of math.

FINAL PANEL: NAOMI BORWEIN, EDWARD DOOLITTLE, FLORENCE GLANFIELD, AND VESELIN JUNGIC,
Simon Fraser University
Looking Forward: Imagining Indigenizing University Mathematics

We will offer a brief summary of the session, invite the audience for additional comments, and share some of our thoughts about the future developments in the process of Indigenizing university mathematics.

BRODERICK CAUSLEY, McGill University
Weaving Indigenous Pedagogy and Heutagogy into a Mathematics Course

Course outlines are oftentimes created in a way that leaves little to no room for change based on the needs of the students. Indigenous pedagogy and heutagogy can offer a student-centered (agentic) approach. In this talk, I will discuss the differences between the two, and what this can look like in a math course.

KORI CZUY,
Protocols of Indigenous Mathematics

Mathematics, most recently, has been done, passed on, and promoted through a worldview that is standardized and universal, leaving behind a mathematics that is experienced, relational, relevant, and even spiritual. Reconnecting with Indigenous mathematics requires revisiting the protocols and processes of coming to know mathematics, what has been left behind or pushed aside, and what can be woven together.

SHAWN DESAULNIERS, University of Alberta
It Takes A Community To Raise A Scholar

In this talk, we will discuss the importance of providing support to Indigenous Teacher Education Programs (ITEPs) throughout Canada and a math content knowledge course being designed at the University of Alberta for Indigenous students in rural communities.

MICHAEL DONOVAN, Macquarie University
What does it mean to Indigenize university mathematics?

My presentation will examine from an Indigenous man's perspective the meaning of Indigenisation of university math. These examinations are guided from the perspective of my Indigenous pedagogical foundations and why these understandings need to

be considered to better develop our future mathematical directions and understandings. The key focal points for my discussion on what it will mean to Indigenous university math curriculum will be the significance of highlighting Indigenous Knowledges to better engage Indigenous students and inform all students about other standpoints of examining math concepts, this will include the importance of using context and place in math teachings. I will also discuss the overall benefit of why introducing Indigenous Knowledges to university math. I see the significance of introducing various standpoints such as Indigenous Knowledge when examining any knowledge concept can increase the possibility of extending that field due to other knowledge standpoints can be engaged into that field.

HENRY FOWLER, Navajo Institute for Technology

INTRO: EDWARD DOOLITTLE, HANNES EDINGER, ROBERT MEGGINSON, WITH FLORENCE GLANFIELD,
University of Alberta

Themes and Conversations: Indigenizing University Mathematics

The panel will provide an introduction to the themes and conversations for the Indigenizing University Mathematics session. This panel will share their experiences as Indigenous peoples around the connections between Indigenous knowledges and academic mathematics; what it means to Indigenize university mathematics, and the roles of non-Indigenous and Indigenous peoples in the processes.

BELIN TSINNAJINNIE, Santa Fe Community College

Identifying and Disrupting Settler Colonialism in Mathematics

In this talk, I discuss ways in which settler colonialism is evident and prevalent in mathematics and mathematics education. I call for a shift in the ways that we frame efforts towards Indigenizing mathematics, including initiatives that purport to serve Indigenous communities by addressing the question: How do diversity and inclusion efforts in mathematics and mathematics education directly empower Indigenous communities?

KAMUELA YONG, University of Hawaii - West Oahu

Incorporating Hawaiian knowledge, way of life, and language in math

A precalculus course was redesigned to incorporate 'ike Hawai'i (knowledge), nohona Hawai'i (way of life), and 'olelo Hawai'i (language) into the curriculum. We will discuss strategies used to implement these changes as well as study how it was used to redesign a precalculus course through the perspective of Polynesian navigation.