

## Message from President-Elect Florence Glanfield

I identify as an Indigenous person, a citizen of the Métis Nation of Alberta; a mathematics teacher, educator, researcher; a university administrator; and as President-Elect of TODOS.

In May 2021 I had the honour of moderating a [panel discussion](#) around equity, diversity, and Inclusion (EDI) in mathematics, science, and technology education. The panel included two high school students who were involved in an EDI club at a local high school. The club was student-led and formed to uplift the diverse voices of students in the school. The two students were also a part of a Student Senate that meets and works with the school trustees of the School Division. In 2020 - 2021 the Student Senate chose to focus on “Amplifying the Voices of BIPOC Students” through curating a magazine, recording a podcast series, creating workshops to build awareness of racism with junior high and senior high school students, presentations at school board meetings, and developing 10 resources packages for their school division. (retrieved, November 14, 2021 from <https://sites.google.com/epsb.ca/studentsenate/2020-2021-senate>).

The experiences of the two high school students were inspiring. They spoke eloquently about the role that teachers and administrators play in building equitable and inclusive spaces of all diversity and they spoke about the value of teachers demonstrating the ways in which diverse individuals participate in mathematics, science, and technology education throughout Black History Month (recognized in February in both the US and Canada). I thought a lot about this experience when I, like so many others, viewed the video of a California teacher mimicking a Native American dance to teach a mnemonic device to remember three primary trigonometric ratios in October 2021. I understand that it was a high school student in the class that recorded and posted the video online.

In the span of 5 months I was inspired by youth twice in their public pronouncements. Firstly, I was able to observe the ways in which youth, supported by teachers and school and school division administrators could contribute to building awareness of, and teaching about, racism, diversity, equity, and inclusion; and secondly, I was inspired by the California youth who posted the video of the teacher. These youth are making their voices known and I believe asking mathematics educators, and educators generally, to listen.

In weaving these two experiences together, I also wondered how might teachers, educators, and administrators learn to listen, and learn to acknowledge Indigenous / Native American / Aboriginal individuals engaged in mathematics, science, and technology? Where might the sources be for teachers, and youth, to learn about the contributions of Indigenous peoples to these fields?

There are sources to learn about the histories of Indigenous peoples in these lands now called Canada and the United States. Here are some examples:

November is known as National American Indian Heritage month or Native American Heritage Month. The US National Congress of American Indians writes that the month “is commonly referred to as American Indian and Alaska Native Heritage Month. The month is a time to celebrate rich and diverse cultures, histories, and traditions, and to acknowledge the important

contributions of Native people.” (retrieved November 14, 2021 from <https://www.ncai.org/initiatives/native-american-heritage-month>).

September is known as Hawaiian History Month. “The original purpose was to advocate for education **of and** cultural awareness about the overthrow and illegal annexation of the Hawaiian Kingdom. The September celebrations and events honoring the Queen are also making clear to Hawaiians, and to those who visit Hawai’i from around the world that as a Lāhui, or nation, we have been working steadily to improve our situation from Lili’uokalani’s time until our own. And especially in the last forty years advocacy for preserving and building upon this legacy has accelerated.” (retrieved November 14, 2021 from <https://www.hawaiiponoi.info/>).

June is known as National Aboriginal History Month (now National Indigenous History Month) in Canada since 2009. June 21 has been celebrated as National Aboriginal or Indigenous Peoples Day since 1996. (retrieved November 14, 2021 from <https://www.rcaanc-cirnac.gc.ca/eng/1100100013785/1529102490303>). The Canadian Constitution recognizes three distinct groups of Aboriginal peoples: Indians (now regularly called First Nations, Inuit, and Métis).

But what about the contributions of Indigenous peoples to mathematics, science, and technology more specifically? Here are some places to begin to explore:

SACNAS: The Society for Advancement of Chicanos/Hispanics and Native Americans in Science: <https://www.sacnas.org/>

AISES: American Indian Science and Engineering Society: <https://www.aises.org/>

More recently a new international collective, Indigenous Mathematicians, has emerged: <https://indigenoumathematicians.org/>

I invite each of you to recognize diversity in all its forms and to include First Peoples of these lands now known as the United States and Canada in your image of diversity, equity, and inclusion. We must challenge ourselves to recognize the colonial structures that exist within our living, our practices, and our discourse. To quote a colleague, Dr. Dwayne Donald, “we must unlearn colonialism.”

I encourage you to journey with TODOS as we navigate the spaces where we, as individuals and as a collective, unlearn colonialism - in order to create opportunities in mathematics where humans, in all of their diversity, have access to, and are successful in, high quality mathematics education programs.

Post Script:

On a personal note, the video was a stark reminder for me of my high school experiences when the mnemonic device shared in the video was one that I remembered hearing in my high school mathematics class. Secondly, viewing the video reminded me of another mnemonic device I learned in elementary school, about how to spell arithmetic. These experiences were 40 - 50 years ago and stay with me today.