

# Proceedings of the Forty-Fourth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education

## Critical Dissonance and Resonant Harmony

Nashville, TN USA

November 17 – 20, 2022

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## Citation:

Lischka, A. E., Dyer, E. B., Jones, R. S., Lovett, J., Strayer, J., & Drown, S. (2022). *Proceedings of the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Middle Tennessee State University.

**ISBN:** 978-1-7348057-1-0

**DOI:** 10.51272/pmena.44.2022

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## Land Acknowledgement:

The PME-NA 44 Conference is held on unceded Indigenous land including the traditional homelands of the Cherokee, Shawnee, and Yuchi. The connections of Indigenous Peoples to this land continues to the present day. As we begin our conference it is important to acknowledge our place, both geographically and historically, paying tribute to the land and our ancestors—and honoring both. We note that just speaking the word Tennessee is a tribute to a first nations' word for “where the river bends.” The genocide, forced displacement, and cultural erasure of indigenous peoples resulting from the colonization of this land is particularly felt here, where the Trail of Tears cut through Middle Tennessee. In the midst of this history, Native American Indians tell their story today—including the joy of return. Founded in 1980, the Native American Indian Association of Tennessee is working to improve the quality of life for Indigenous People in this state. This includes raising funds to one day build the Circle of Life Indian Cultural Center, which will showcase a research library, exhibit halls, emergency relief support, job training, and education. These efforts help to close the circle of hatred and prejudice so that all Tennesseans can come together in freedom and pride.

An important goal of land acknowledgments is to increase support of local Indigenous communities. You can support the work of the Native American Indian Association of Tennessee by donating at [naiatn.org](http://naiatn.org). You can also learn more about the history of Tennessee's Indigenous communities by visiting the First Peoples exhibit at the Tennessee State Museum, which is about 3 miles from the conference site. More information is at [tnmuseum.org](http://tnmuseum.org).

This statement was created in conversation with local Indigenous leaders and informed by the Native Governance Center's Guide to Indigenous Land Acknowledgment.

# HOW ALGEBRA TEACHERS' PERCEPTIONS OF THE ILLUSTRATIVE MATHEMATICS CURRICULUM EVOLVED OVER THREE YEARS

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Keywords: Curriculum, High School Education

## Background

The instructional materials that mathematics teachers use impact student learning (Remillard et al., 2014; Lloyd et al., 2017). However, purchasing instructional materials are expensive, hence districts are turning to open source materials such as Illustrative Mathematics (IM). Unlike many other free online resources for instructional materials (e.g. Pinterest (Shapiro et al., 2019)), IM is a comprehensive curriculum with a scope and sequence and is aligned with Common Core content and practice standards (Ed Reports, 2022). The high school IM curriculum became available in 2019 and the elementary curriculum in 2021, so little research has been done on teacher perceptions of the curriculum. This poster aims to address this by sharing teacher perceptions of the IM curriculum using data from teacher interviews from year 1 and year 3 of their implementation of IM.

## Methods

All Algebra 1 teachers throughout an urban district began using IM in 2019-2020 (year 1) and it continued to be the primary instructional resource provided by the district in 2021-2022 (year 3). We interviewed 22 Algebra 1 teachers in year 1 and 13 in year 3 about their perceptions of the IM curriculum using an interview protocol. The protocol ranged from open-ended questions, such as “What do you think about the Illustrative Mathematics curriculum?” to more specific, e.g. “How does IM support your ELL students?” The interview transcripts were read to uncover themes that emerged, common themes were grouped when appropriate, and then the interviews were reread to code for the emergent themes. Finally, we recorded how many teachers expressed an idea represented by each emergent theme.

## Findings

Some themes stayed the same from year 1 to year 3. For example, over 50% of the teachers in both years noted the benefit of IM's use of real-world contexts for Algebra 1 topics. Over 50% both years also noted a challenge in not enough time for teaching everything. Other themes changed over time. In year 1, teachers appreciated having ready-to-use materials (in previous years they had to create their own teaching resources), however, in year 3, teachers were more likely say the appreciated the design of the curriculum, for example, how it spiraled the content.

## Conclusion

As the districts move to open-source instructional materials such as IM it is important to understand how teachers are perceiving the curriculum so that curriculum designers, researchers, and district decision makers can use the information to better support teachers.

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305H190058 to Iowa State University. The opinions expressed here are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

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