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President's Message

Jennifer Chauvot

Me? Oh yeah, that's me.
That was my first thought when I received the email from Emma Bullock asking me for an AMTE-TX President Message for JMTET. I am in awe that I have been selected to serve as the President of this great organization. Thank you for this honor!

So what did I do to draft my President's Message? I cheated - I perused the JMTET website (https://amte-tx.com/online-journal-2/) and looked at the previous Presidents' messages. Then I was in awe again - have you browsed the past issues of our journal recently? If not, I encourage you to do so. We are doing a lot of great work in Texas, and our own journal is a venue for sharing and learning about this work. Our work is impactful!

I will start with kudos to all who contributed to a great conference at Texas A & M University - Corpus Christi. The student volunteers, the hospitality, the presentations, the accommodations, and the food is just a start of a list of the features of the conference that made attendees feel welcomed. It was a wonderful experience to reconnect with my Texas colleagues.

Continued…

What's Inside…

President's Message

As I shared at the business meeting, my vision in this role is to build from the fantastic work of the Presidents before me. Thank you for your service! I have two goals for this upcoming year. One goal involves networking - Texas is big, and our members are spread across the state! In the coming year, I will work with the our Board and the membership to seek out innovative ways we can stay connected between our yearly conferences. It was so comforting to reconnect in a face-to-face environment, but let's capitalize on what we learned about using technology during the pandemic to stay connected. A second goal I have for this upcoming year is to work with our Board and the membership to bring explicitness around AMTE-TX's positions around diversity, equity, and inclusion in mathematics education and how our membership contributes to advancing these constructs in our courses, in our programs, and within the systems we work in. Mathematics is often described as a gatekeeper, but it is not the mathematics doing the gatekeeping; it is the structures and policies that do so; and structures and policies are created by … us. I leave you with the question: What can AMTE-TX and our members do to promote structures and policies that open the gates?

As we wrap up the fall 2022 semester, I wish you all peace and happiness. And remember, "Whatever you are working on, it is not more important than your family or your health."

I would love to hear what you are doing to make a difference. Feel free to call out @AmteTX and tweet your thoughts! Follow on Facebook and Twitter to view what your colleagues have to say. Let's find ways to continue spreading joy and hope all year long. I look forward to connecting with you soon!

A Message from the Editor

It is with gratitude that I thank Cody Patterson for all he did as the editor of JMTET. He is a hard act to follow! In this issue we are privileged to explore how coursework is associated with TExES Math Core-Subject exam results in **Mathematics Courses Matter: Preparing PSTs for Certification** by Cooper, Crowley, Matsuo, and Donham. This article offers insight into how mathematics teacher educators can anticipate ways in which pre-service teachers can be better supported in their preparation to pass the TExES Core-Subject exam. We are also please to present several AMTE conference summaries focused on advocacy and equitable practices.

This is the first year we have a 3-year rotation of Editor, Associate Editor (Matt Switzer—TCU), and Copy Editor (Rebecca Dibbs—TAMUC). My main efforts for 2022-2023 is to ensure regular publication of three issues per year: Fall/Winter in December, Spring in May and Summer in August and to streamline the submission/ review process. We welcome full length articles (4 pages), AMTE conference summaries (2 pages), and AMTE-TX conference summaries (1 page) on a rolling basis. Please submit your manuscripts here: https://docs.google.com/forms/d/1soEVFzOLb10Am0kfsN9GmArJkaNT35GQ3arUDKkWwgs/edit. If you are interested in reviewing, please submit your interest here: https://docs.google.com/forms/d/10SAOtvZH-Z4SuP3lGmi2_7YQrTcX--1e_u2qxX6GBV8/edit.

We look forward to your submissions!

Emma Bullock
Sam Houston State University

Upcoming Conferences

Upcoming

February 2-4, 2023	AMTE Annual Conference	New Orleans, LA
February 15-17, 2023	SERA Annual Meeting	San Antonio, TX
June 26-28, 2023	CAMT Conference	Fort Worth, TX
September 15-16, 2023	AMTE-TX Conference	Denton, TX
October 18-21, 2023	SSMA Annual Meeting	Colorado Springs, CO
October 25-28, 2023	NCTM Annual Meeting	Washington, DC
October 28-31, 2023	NCSM Annual Conference	Washington, DC

Mathematics Courses Matter: Preparing PSTs for Certification

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Introduction

To become a certified teacher in the state of Texas, you are required to pass the Texas Examinations of Educator Standards (TExES) exam. Those interested in becoming a certified elementary teacher (EC-6) are required to complete Pedagogy and Professional Responsibility (PPR) and Core-Subject areas on the TExES exam, which includes math. Teacher education programs across Texas approach the preparation of their preservice teachers (PSTs) in different ways, but how might we determine an effective strategy for new teachers to be successful on this exam? In particular, what evidence can support the best preparation for the TExES Core Subjects exam in math for those seeking EC-6 certification?

Context of Study

As part of the elementary teacher education program at [a Texas] University, PSTs are required to take three math courses: [COURSE #1] Patterns, Relationships, and Number Concepts, [COURSE #2] Geometry and Measurement, and [COURSE #3] Data and Chance. Each of these courses were specifically designed to align to several of the content-specific competencies found in the TExES Core Subjects EC-6 exam, as seen in Table 1.

Table 1
Correlation Between Competencies and Courses

TExES Math Competencies	[University] Math Classes	Course Description
Competency 002- Number Concepts and Operations and Competency 003- Patterns and Algebra	[COURSE #1] - Patterns, Relationships, and Number Concepts	Advanced perspectives on topics taught in grades EC-6 including number concepts, patterns, and functions.
Competency 004- Geometry and Measurement	[COURSE #2] - Geometry and Measurement	A continuation of [COURSE #1]. Topics in [COURSE #2] include geometric figures, motions of geometry, and measurement.
Competency 005- Probability and Statistics	[COURSE #3] - Data and Chance	Core ideas from probability and statistics, including collection of data, patterns in data, and inference from data.

The math courses are offered from the math department and taught by faculty who specialize in math education. These courses are designed specifically for education students and the curriculum is organized to correlate with the Texas Essential Knowledge and Skills (TEKS) for EC-6. Each of these courses is taught in a way that allows for the deep exploration of topics that are strongly rooted in the curriculum of the EC-6 classroom. An overarching goal is to promote the

learning of math as a “journey” and not just a “destination,” and that math is something to be “understood” as opposed to just “memorized.” Specific content objectives include, for example, students being able to explain why “invert and multiply” works when dividing by a fraction (in Course #1), students being able to demonstrate why the area of every parallelogram is determined by multiplying the base and height of the figure (in Course #2), and students using the concept of “distance to the mean” to show how the mean of a data set can be interpreted as the “balance point” of the data (in Course #3). Although there are no field experiences associated with these math courses, there are discussions about pedagogical applications of these math concepts.

After PSTs have completed these math courses, they take their elementary math methods course in the School of Education and, during the time leading up to their senior internship year, the PSTs are required to complete a TExES PPR and Core Subject practice exam. To better understand the preparedness of PSTs for this practice exam, the data collection included the final grades of 95 PSTs in the three math courses and results from their practice Core Subject exam in math. It should be noted that not all of these PSTs took all three of the required courses at the university; some had transfer credit for one or two of the courses from other institutions, or they still needed to take one more course.

Methods

In this study, a Kendall’s tau-b correlation test was first employed to investigate the relationship between final grades in the form of letter grades received in three required math courses and the scores PSTs received on their practice Core Subject exam in math. Then, one-way ANOVAs were conducted individually for each math course to examine mean differences in exam scores between their letter grades (A, B, and C). Finally, a Tukey Honestly Significant Difference (HSD) test with a 95% confidence interval was used for a post-hoc analysis to analyze the pairwise comparisons of means for each grade received in the math courses. All the analyses were conducted using IBM SPSS statistics software Version 28 for Mac.

Results

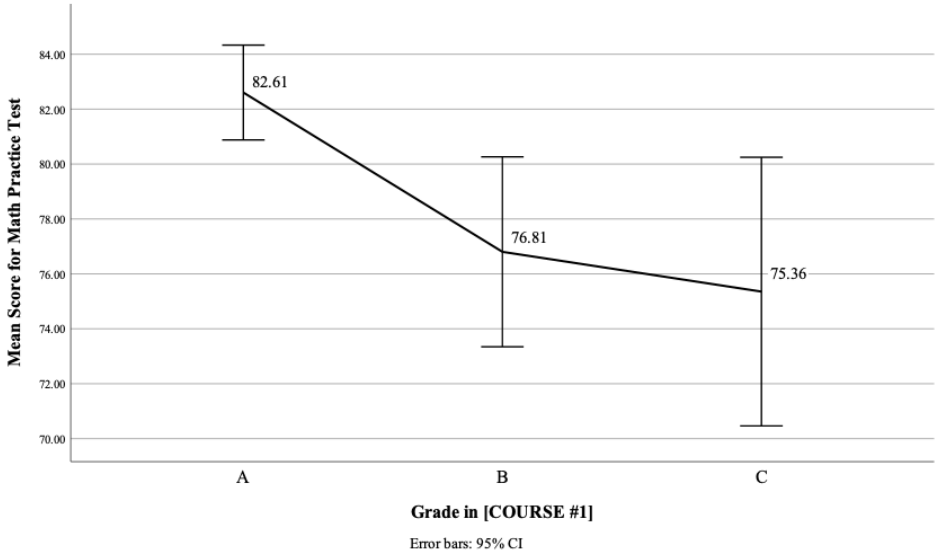
The Kendall’s tau-b correlations showed that there is a moderate to strong, positive relationship between their exam scores and letter grades in math courses (τ_b = .327, p < .001 for [COURSE #1], τ_b = .226, p = .010 for [COURSE #2], τ_b = .331, p < .001 for [COURSE #3]). The better grades students received in their required math courses, the higher test scores they obtained in their practice Core Subject exam in math.

Kolmogorov-Smirnov and Shapiro-Wilk tests of normality indicated that students’ scores mostly follow a normal distribution at each level of course grade. Visual inspections of normal Q-Q plots also suggests that the assumption of normality was not violated. Based on the Levene’s test of homogeneity of variances, the assumption of equal variances was not violated. Each student only obtained one letter grade for each math course and one exam score. Thus, observations were all independent.

Three one-way ANOVAs were conducted to analyze the differences between the grades in [COURSE #1], [COURSE #2], and [COURSE #3] on the scores PSTs receive on the Core Subject math practice exam. The first results showed there was a significant difference between the grades in [COURSE #1] on the scores PSTs received on the Core Subject math practice exam (N = 95, F (2,92) = 7.190, p = .001, η^2 = *.135*). A Tukey post hoc test showed that the students that made an A

in [Course #1] (n = 70, M = 82.61, SD = 7.24) made statistically higher scores on the math practice test than those that made a B (n = 18, M = 76.81, SD = 6.96 p = .007) or C (n = 7, M = 75.36, SD = 5.29 p = .030). While the means for each grade on the practice test decreased as the grade in the course decreased, as seen in Figure 1, there was no statistical difference between those that made a B or C in the course (p = .890).

Figure 1
Mean Score of Math Practice Exam Compared to Grade in [COURSE #1]

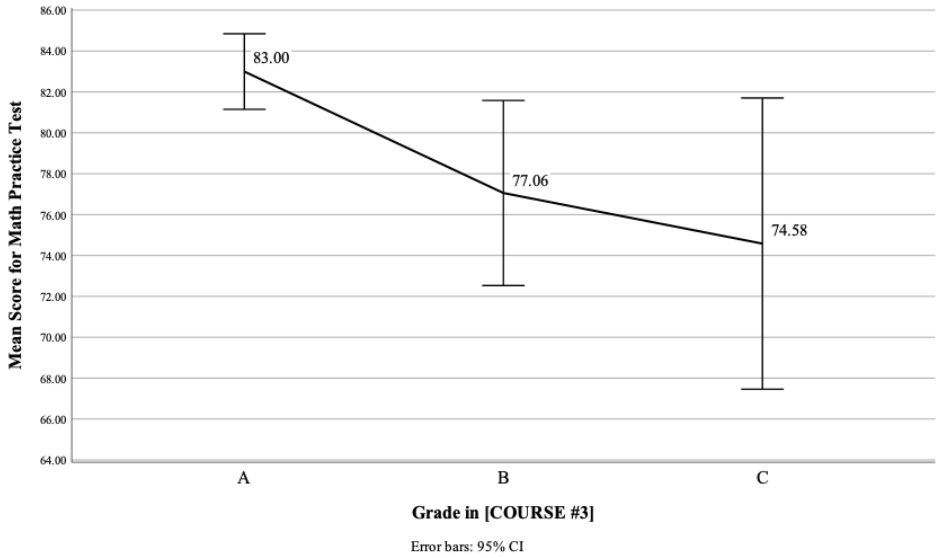


The second results showed there was a significant difference between the grades in [COURSE #2] to the scores PSTs received on the Core Subject math practice exam (N = 90, F (2,87) = 3.124, p = .049, η^2 = .067). However, a Tukey post hoc test showed there were no significant differences among those that made a (n = 55, M = 82.59, SD = 7.25), a B (n = 20, M = 79.38, SD = 6.97), and a C (n = 15, M = 78.00, SD = 7.45). This discrepancy of results could be explained by the nature of Tukey's test being more conservative than overall ANOVA test based on their distributions.

The third results showed there was a significant difference between the grades in [COURSE #3] to the scores PSTs received on the Core Subject math practice exam (N = 73, F (2,70) = 7.015, p = .002, η^2 = .167). A Tukey post hoc test showed that the students that made an A in [Course #3] (n = 50, M = 83.00, SD = 6.51) made statistically higher scores on the math practice test than those that made a B (n = 17, M = 77.06, SD = 8.81, p = .011) or C (n = 6, M = 74.58, SD = 6.79, p = .021). While the mean score for the Core Subject math practice exam decreased as the grade in [COURSE #3] decreased, there was no statistical difference between those that made a B or C in the course (p = .745).

Figure 2

Mean Score of Math Practice Exam Compared to Grade In [COURSE #3]



Discussion and Implications

Based on the results of this study, higher grades in math courses can be associated with more successful results/outcomes of the TExES Math Core-Subject exam. Through an examination of final grades from the math courses, we can anticipate which students may need more intervention to prepare for the TExES Core Subject exam in math. As part of the elementary math methods course, we have incorporated a series of practice items for each class session, presented to PSTs to work individually, but then open for discussion. PSTs keep a journal of these items along with notes from these discussions. In addition, PSTs take a Math Core-Subject practice assessment as part of the math methods course, timed in the same way, with the same number of items, as the actual exam. The correct/incorrect responses are correlated with an item analysis of the competency tested, so that PSTs can determine which areas they need to focus on in their preparation. In addition, the teacher education program offers review sessions for PSTs in each of the core subject areas. These intervention strategies, along with a continuous monitoring of final grades in the math courses, serves as a strategy to offer beneficial support to PSTs in order to promote success toward certification.

Advocacy in Mathematics Education: An Essential Element in the Preparation of Teachers of Mathematics

Trena L. Wilkerson
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Baylor University

What are our responsibilities as mathematics teacher educators (MTEs) in preparing, nurturing, and supporting the development of future and practicing teachers of mathematics to advocate for themselves and their students to impact the development of a positive mathematics identity? This was a significant question we explored at the Association Mathematics Teacher Educators (AMTE) 2022 Annual Conference understanding we have a responsibility to instill this notion of advocacy in preservice (PSTs) and inservice teachers (ISTs) with whom we work. What does it mean to us as MTEs to advocate in mathematics education? See Figure 1 for responses shared.

Figure 1. What it means to advocate in mathematics education (www.mentimeter.com)

We explored questions such as *Why should MTEs support PSTs and ISTs in being advocates for themselves and their students? In what ways can we support PSTs and ISTs in being advocates for themselves and their students?* and *What are the challenges/barriers and benefits related to advocacy in teacher preparation and support?*

In the session we reviewed the four recommendations from the National Council of Teachers of Mathematics (NCTM) *Catalyzing Change* series (2018, 2020a, 2020b) and portions of AMTE's Standards for Preparing Teachers of Mathematics that address advocacy (2017). Teacher educators, which includes math coaches, professional development facilitators, university faculty, classroom teachers, and many others should engage in advocacy work collaboratively to support mathematical learning for all students across early childhood, elementary, middle and high school. We must engage in ongoing, critical conversations with all stakeholders to improve the mathematics learning experiences and outcomes of each and every learner, including our PSTs and ISTs and engage both our PSTs and ISTs in advocacy work to support.

A major take-away of the group was that advocacy is and must be a collaborative effort and that as MTEs in organizations such as AMTE or AMTE-TX, we should collaborate, share ideas and learn from each other with regard to advocacy.

As we closed the session, we acknowledged barriers and challenges in this work. Examples related to time, resources, opportunity, structures, practices and beliefs that are embedded that inhibit the work, lack of collaborative environments, and being the only MTE at our institution. But we are not alone in this work. We have our colleagues in our professional organizations such as NCTM and AMTE (and AMTE-TX) and many others! Let's work together on developing ways to prepare, nurture, and support the development of future and practicing teachers of mathematics to advocate for themselves and their students to ensure high-quality mathematics teaching and learning for each and every student, supporting each and every teacher (NCTM Mission). How will you take action?

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Call for Manuscripts

How do you incorporate **mathematical processes and practices** into content and methods courses for preservice teachers, and professional development for inservice teachers? Examples include reasoning and justification, generalization, using representations, and modeling. Of particular interest are courses and programs that help teachers develop pedagogical knowledge of mathematical processes and practices.

We want to hear about your work! Submit a 4-page double-spaced manuscript to the *Journal of Mathematics Teacher Education in Texas.*

Submission guidelines available at https://amte-tx.com/online-journal-2/.

Exploring Enacting Open Tasks from a Cultural Perspective

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Although some studies have shown that standards-based mathematics instruction improves student achievement outcomes for all students (e.g., Boaler & Staples, 2008; Silver & Stein, 1996) others have shown student experiences are inequitable when specifically attending to racial, socioeconomic, and gendered differences (e.g., Shah, 2017; Esmonde et al., 2009; Lubienski, 2002; Murrell, 1994). In a recent study, Melhuish, et al. (2022) showed that even in classroom settings that reflect best practices and standards-based mathematics instruction, student achievement outcomes differed along racial lines, particularly for Black students. Why does research continue to identify harmful results despite repeated and long-standing rhetoric in mathematics education reform movements touting a "Mathematics for All" agenda (Martin, 2019, 2003)? Our AMTE 2022 presentation goal was to explore ways in which open-ended tasks that still reflect the dominant culture of mathematics education, that is largely a white male, exclusionary space (Martin, 2009; Ladson-Billings, 1997; Leyva, 2017), continue to permeate classroom cultures in ways that exclude Black children.

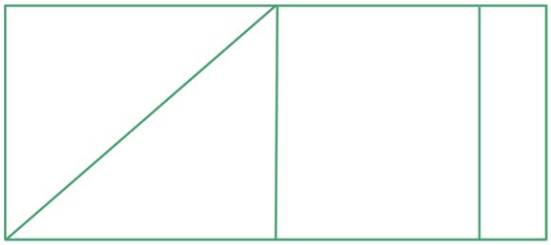
Implicit assumptions that mathematics classrooms are "culture-free" or "racially neutral" can perpetuate existing racist structures and mechanisms through racialized ideologies that negatively impact students of color (e.g., mathematics is culture-free, 'colorblindness'). Examining mathematics classroom cultures without attending to broader issues of power and race is insufficient for supporting students from non-dominant cultural backgrounds (Martin et al., 2017; Ladson-Billings, 1995, 1997). Moreover, implicit assumptions relative to mathematics classroom cultures, combined with demographics of education (e.g., White teachers of increasingly diverse student populations) and cultural discontinuity (e.g., cultures of students of color misaligning with the dominant school culture; Blakeney, 2005), implies a need for teacher education that is informed by anti-racist pedagogy (Blakeney, 2005).

Using open tasks (e.g. tasks with multiple solution pathways and/or answers) is one way teachers might promote more equitable student collaboration in (racially) heterogeneous classroom spaces (Cohen et al., 1999). However, inherently "open" tasks may still be enacted in ways that are relatively closed to students from non-dominant cultural backgrounds. At AMTE 2022, we presented the case of one 4th grade classroom that exemplifies how the enactment of open tasks without a critical perspective can perpetuate a culture of exclusion with respect to Black learners in mathematics spaces. Thus, there is a need to challenge the notion that open tasks are inherently inclusive by attending to cultural contexts and asking critical questions about the nature of tasks as they are enacted in diverse classroom settings.

In our presentation, we explored a possible expansion of an existing framework for analyzing mathematics classroom culture (Louie, 2017) to illustrate ways teachers and teacher educators can engage in critical task analysis and connect practices to principles from culturally relevant pedagogy (Ladson-Billings, 1995). Louie's (2017) framework includes specific practices that evidence inclusionary and exclusive ways of framing mathematics activity and ability.

Regarding the nature of mathematics, we included the exclusionary culturally neutral frame: *Mathematics is a culture-free domain that reflects abstract, deductive reasoning*, and the inclusive culturally relevant frame: *Mathematics is a human endeavor intricately tied to culture and situated in social contexts*.

The case we shared in our presentation illuminates a classroom culture that is in some ways inclusionary while remaining exclusive, particularly regarding the culturally neutral frame. The teacher asked students whether they thought a shape below was divided into fractional pieces, and to prove why or why not. The task, as written and presented by the teacher, is presumably an open task; students could answer affirmative or not, as long as they defend their reasoning. The class was split and a debate unfolded. It quickly became clear that there was one expected "right" answer. Thus, it became the responsibility of those students that aligned with the teacher's perspective to convince the others. Amari, a Black girl, who responded in a mathematically brilliant way was subsequently positioned as needing help from others to be "convinced" of the dominant perspective.



Is this shape divided into fractional pieces? Why or why not?

The ultimate goal of our presentation was to engage the teacher education community in conversations about the relationships between racial ideologies that are harmful to Black children and tasks that reflect mathematics as a culture-free domain. We encourage readers to think deeply about the relative openness of tasks as they are enacted in diverse classrooms. In particular, we offer questions for critically thinking about and acting on the ways of framing mathematics and mathematical ability. For example, when deciding on how to engage students in "open" tasks, teachers and teacher educators might ask: *Are there implicit assumptions embedded in the task, and if so, what are they? Who does the author of the task have in mind? Whose culture is (not) represented? What are the long-term effects of being shut down for traditionally excluded students? How might tasks be enacted in ways that are relatively closed to students from non-dominant cultural backgrounds? How might different students' responses be honored?* In an effort to bridge research and practice, it was our hope to challenge perspectives that White middle class culture is the "norm" by providing opportunities for the community to think about the culture of mathematics classrooms from a critical perspective.

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MEMBERSHIP

The AMTE-TX official membership cycle is from July 1 through June 30. Typically, members join or renew memberships at CAMT or at the AMTE-TX Fall Conference. Encourage your colleagues to join!

You can easily join or renew your membership at https://amte-tx.com/join-or-renew/
For any membership questions, please contact our Membership Coordinator, Nirmala Naresh at nirmala.naresh@unt.edu.

Using Data Investigations to Interrogate Systemic Issues in Representation in Congress and School Discipline

Anita Sundrani
University of Houston

Travis Weiland
University of Houston

Introduction

Given the current state of society during the COVID-19 pandemic, understanding and interpreting data has become increasingly important for all citizens. The daily barrage of data visualizations and statistics in the media associated with the pandemic has highlighted the importance of people being able to consider, analyze, and interpret data for themselves and to evaluate the data-based arguments of others. There have been efforts to improve statistical literacy, which recently included the American Statistical Association's (ASA) recent release of their second iteration of the Guidelines for Assessment and Instruction in Statistics Education (GAISE II; Bargagliotti et al., 2020) report aimed at supporting student's development of statistical literacy in preK-12 schooling. To implement such efforts though, requires teachers of mathematics to be well prepared to teach statistics concepts and practices, which can be different from mathematics (Cobb & Moore, 1997; Groth, 2007). This issue is exacerbated by a relative dearth of research on preparing teachers to teach statistics. The ASA in their Statistical Education of Teachers (Franklin et al., 2015) report and AMTE in their Standards for Preparing Teachers of Mathematics (AMTE, 2017) provide suggestions on the preparation of mathematics teachers for teaching statistics. However, often absent from these studies and policy documents is a critical or social justice orientation, which "includes identifying and interrogating social structures and discourses that shape and are reinforced by data based arguments" (Weiland, 2017). The aim of our workshop at the 2022 Annual Association of Mathematics Teacher Educators Conference was to address these issues by discussing ways of incorporating critical perspectives and issues of social justice into the statistical education of teachers.

2022 Annual AMTE Presentation

This workshop focused on participants engaging in two data investigations implemented with teachers in a statistics and probability methods class for an online master's program in mathematics education. The data investigations were framed by the GAISE II report recommendations to position students to formulate questions, consider data, analyze data, and interpret data and through a critical literacy lens. The U.S. Congress data investigation is driven by the question, "How representative is the U.S. House of Representatives of the population they represent?" Participants then explored a dataset on the current congress using CODAP (see https://codap.concord.org/) to see what variables are available and carry out exploratory data analysis in the dynamic environment. In the discipline data investigation, participants explored if students have differential opportunities to learn based on out of school suspension (OSS) rates between racial groups. Using ProPublica's Miseducation database (see https://projects.propublica.org/miseducation/) participants were able to look up data on schools they were familiar with and interrogate how the data might be collected and considered given they personal experiences in those locations. A copy of the slides from the presentation can be found at https://bit.ly/AMTE22DIWS.

Participants discussed the issues, their use in teacher education, and provided feedback to

the authors. One suggestion was a deeper investigation into local student discipline policies and how administrators may collect discipline-related data. Also, another participant asked the presenters to consider providing a disclaimer to denote the complexity of social identities, such as race, gender, and sexual orientation in the U.S. Congressional dataset that may be absent from publicly sourced datasets. Connected to this problematization of datasets, the participants in the session recommended the addition of metadata around the operationalization of each dataset, the source of the data, and how each dataset is coded. At the end, next steps were shared.

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Teaching About Equity Pedagogy in a Geometry and Algebra Methods Course for Beginning Middle Grades Pre-Service Teachers

Anita Sundrani
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Introduction

Equity pedagogy includes “teaching strategies and classroom environments that help students from diverse racial, ethnic, and cultural groups attain the knowledge, skills, and attitudes needed to function effectively within, and help create and perpetuate a just, humane, and democratic society” (McGee Banks & Banks, 1995, p. 152). Research on equity pedagogy spans a variety of orientations, including social justice, culturally responsive pedagogy, multiculturalism, critical pedagogy, and anti-racist pedagogy. There has been extensive research done on each of these approaches within the mathematics classroom (Brantlinger, 2014; Kokka, 2020; Strutchens, 2002). Similarly, scholars have explored how to prepare pre-service and in-service mathematics teachers to embed equity pedagogies into their curriculum and instruction when they enter the classroom (Felton-Koestler, 2020; Gutierrez, 2002; Shah & Coles, 2020; Yow, 2012). Additionally, institutions and policy documents specifically reference the need to incorporate equity principles within teacher preparation programs, including the Standards for Preparing Teachers of Mathematics (AMTE, 2017). However, much of this work has focused on prospective and in-the-

field teachers' beliefs and attitudes toward teaching for equity.

Mathematics teacher educators are tasked with supporting pre-service teachers (PSTs) in developing deeper understandings of the various mathematics topics they will teach and the corresponding pedagogical content knowledge that will inform this teaching. There is a need to understand how to intertwine the development of mathematics and pedagogical content knowledge, and equity pedagogy within methods courses for beginning PSTs. The purpose of our presentation at the 2022 Annual Association of Mathematics Teacher Educators Conference was to address these issues by discussing a course we co-taught, *Teaching Geometry and Algebra Concepts in the Middle Grades.* This course one of four mathematics methods courses in the 4-semester program, and our 16 students were in their 1st semester. This course was taught in a synchronous online environment and met for three hours, once a week, for 15 weeks.

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We began our presentation by briefly introducing the context for the course, including the setting of the university and information about the PSTs' demographics and course objectives. From there, we shared the equity strand objectives and trajectory envisioned at the beginning of the course, as well as activities designed to achieve these objectives. Our goal here was to detail the curriculum we implemented and the corresponding learning outcomes that represented our intentionally sequenced course activities to intertwine our content, pedagogical content knowledge and equity pedagogy goals in the course. Following this part of the presentation, participants were given one of these activities to engage with during the session in partner pairs, and then discussed them in the order of implementation. One example of an activity centered on a mathematical task called "Design a town" that middle grades students are asked to complete in a geometry unit. Our PSTs identified the learning objectives using the mathematics standards of our state, identified high quality task characteristics (Crites et al., 2018), and identified ways to make the task more equitable using readings and other activities from the course. The participants shared some interesting insights about our tasks and pushed us to consider how our equity-based tasks could be improved upon in subsequent course implementations.

We also shared PSTs responses on both formative and summative items that we used, what we learned from their responses, and how it informed our envisioned trajectory for subsequent iterations of the course. Lastly, we engaged in a discussion with participants around what had to share and what they have learned in their practices particularly around equity pedagogy goals in their teaching.

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