

Candidate Work Samples

Sample Slides for Individual Sessions

Are We Still Solving for X?

Gloria Ladson Billings

Big Ideas

"Unless we have teachers who understand importance of context, of culture and are competent in math, we will continue to have students who unsuccessful in mathematics classrooms, who should be shining. And we will still have students scratching their heads wondering if we are still solving for x"

What are the essential elements needed to create inclusive and accessible mathematics classrooms?

- ❑ **Culture:** Students need to be represented and the content we provide them needs to take into consideration the cultural differences existing in our classroom environment. Mathematics is a cultural artifact, and the study of culture needs to be more than ethnomathematics (avoid stereotypical math problems). Ultimately, numbers mean nothing to students until they are given cultural context that is relevant to the students in the classroom.
- ❑ **Context:** We need to make pedagogical adjustments to benefit our students. All the information in problems we present students is relevant to them. Context shapes students entire learning experiences, and we need acknowledge that students may be stumped by the context that we present them within problems, and how this impacts their ability to succeed in our classrooms. David Kirkland proposed in an analogy regarding students that, there is not something wrong with the fish (students), but there is something wrong with the environment (our classrooms) in which the fish is trying to survive.
- ❑ **Competence of teachers:** Even teachers with right credentials might not have the competencies to successfully teach all students. The content is not difficult but the way it is taught is problematic. The teacher should allow students to seek out own interests and content in order to create students who are 'invested in the outcomes'.

Influences

The ideas that I have presented have influenced me to take culture, context, and my own competence into consideration when creating an inclusive mathematics classroom for a diverse population of students I will serve. I now realize that when I am providing students with mere equations that say 4-3-?, I am keeping a key part of their success in solving the problem away from them- the context. As Gloria Ladson Billings suggests, "... context shapes students entire learning experiences, and in order to best benefit them, we need to provide context that is relevant to their lives, and engages them in ways that makes them want to learn and become invested in their outcomes and mathematical identity. Regarding competency, I realize that competent teachers are unevenly and unfairly distributed, which ultimately puts students at a disadvantage, especially students of color and low socio-economic

Future Practices

This virtual conference has opened my eyes to just how inequitable my past math practices were, and how inaccessible the mathematics classrooms were that I had once been a part of (in both teaching and as a student). Because of this, I intend on finding ways to incorporate students interests and cultural/ethnic backgrounds into the content and delivery of the instruction I provide my students. I intend on incorporating contemporary data into my classroom practices, in order to engage students and make the learning opportunities I provide my students more relevant and important to them. Such examples of this contemporary data includes disease statistics (COVID-19), school closures and budget issues (financial), sports statistics, and other forms social justice issues that accumulate data in the world around them that impacts them outside the walls of the classroom (e.g. black lives lost as result of police brutality). I hope to provide students with opportunities that engage, interest, and encourage them to learn, while including culture, context, and inclusive mathematical teaching practices.

Remaining Inquires

I am left with the following questions after viewing this virtual conference:

- ❑ How do we ensure that all students feel represented in the materials we use in our classrooms, aside from cultural context?
- ❑ What routines or methods can I use in my classroom to gather data about student interests and ways to make sure that their mathematical education is relevant to them?
- ❑ What kinds of PD should I attend in order to become a more competent teacher of mathematics?

Session Three: Ignite! We'll Enlighten You and Make it Quick!

Matt Larson, Laila Nur, Greg Tang, Robert Berry III, Diane Briars, Juli Dixon, and Paul Kelley

Big Ideas?

In this session, eight mathematics educators describe the teacher/teaching/educator moment that significantly impacted them. These discussions ranged from a variety of topics such as: this profession being difficult (but worth it), the issues that are within the mathematics content, the importance of an equitable education for all students, discussing unproductive practices by teacher, and ways to continue to improve and learn.

Influence on Teaching Mathematics?

This session highlighted that this profession is no easy task, but it is worthwhile. The session pointed out issues and practices that we need to address within mathematics such as analyzing the questions we are giving students. I also learned the importance of providing access, equity, power, and identity to each learner through participation, tasks, multiple sources, and using students understanding, and that we need to become aware of the messages we send to our students. The session also pointed out a practice that could be used to make learning visible, videos. Teachers are able to use videos to access and determine what might be going wrong, and the teacher could also use this to reflect and learn from their instructional practices.

Actions I'll take?

- Provide students with appropriate and meaningful mathematical questions and activities
- Try to be more aware of the micro-messages I send to students both verbal and nonverbal
- Reflect on my teaching practices

SESSION 2: MAKING MOMENTS THAT MATTER PODCAST EPISODE 64: ARE YOU MISSING THE MARK WITH 3- ACT MATH TASKS?



GUEST:
GRAHAM
FLETCHER

BIG Ideas

- How **coaching** relates to teaching
- Math tasks should be **purposeful** and intentionally placed
- In Latin, assess means to **sit beside**
- **60,000 feet** planning
- Math classroom is a **dynamic space**



Personal Impacts

I have been coaching for years and have never considered bringing that practice into my classroom. Because of this session I will **view my classroom with a coach's eye**, let the daily practice inform my planning and put my students in their best positions to learn. I plan to implement tasks that are challenging and cover a range of standards. I will make my classroom a dynamic space where students can experience mathematics. Because of this session I will be more intentional with my assessments and **seek opportunities to sit beside my students and actively listen**.

Questions

- How often can bigger math tasks be done?
- What does an effective math interview look/sound like?
- How often should math interviews be done?
- How do they not subtract from instructional time?



From Knowns to Unknowns: A Journey into Teaching Mathematics

Description:

- Trena Wilkerson discusses how teaching is a journey and not a destination. The journey is all about the knowns and the unknowns when it teaching.. These knowns and unknowns are what shapes us as individuals, as learning communities, and especially as teachers of mathematics.

How this influenced me:

- "You will get nowhere unless you start somewhere". All I have to do is start somewhere. I will always be on a journey and it is good to make mistakes, because I am learning and growing as an educator.

What Actions Will I Take:

- I will assess myself and my direct colleagues on my mathematical practice. This assessment will focus on the mistakes I made in my instruction and how I can improve based on students/colleagues feedback to hold myself accountable for my mistakes

Question(s):

- How do I cope with making mistakes when teaching mathematics?



Sample Reflection Slides

Reflection: Big Takeaways & Experiences

Takeaways	Experiences
<p>It is essential that educators provide all students with a safe, inclusive, and high quality classroom environment in which provides them opportunities to access to higher order thinking and reasoning, in addition to engaging mathematical experiences.</p> <p>Inclusive mathematics classrooms provide students with varying opportunities to express their understandings, using multiple forms of expression (e.g. written, drawing, verbal expression, etc.).</p> <p>Three of the many ways that educators can take as first steps into changing mathematics for students in positive ways are the incorporation of culture, context, and effective teaching practices in order to benefit a diverse population of students.</p> <p>The learning opportunities and experiences that we create for our students are reflective of our competency and ability to be a successful and inclusive teacher of mathematics.</p>	<p>My experience through this assignment has made me realize how important it is to be an inclusive math educator, and the ways in which previously existing curriculum and classroom routines that I was a part of were quite the opposite of that. I enjoyed the weekly opportunity to dive deeper into a topic, and it opened my eyes to new viewpoints surrounding high quality mathematical instruction that I wasn't aware of before this experience.</p> <p>I felt that the more relatable each virtual conference was to what I am interested in, made it easier to comprehend and it felt less like an assignment and more like an experience. In the future, I hope to attend more conferences, however I hope that they will be in person- in order to feel a deeper connection between myself, others, and the content being delivered.</p>

Reflection

- My Biggest Takeaway from this experience was that no teacher is an expert in all areas of instruction. Professionals rely on best practices and collaboration because it is helpful for continuing to love what we do and also become more effective in what we do. Stressing and overworking ourselves will never get us there. This is what we must do to also model what we expect from our students.
- I enjoyed the last session the most because there was so much variety in the presentations. I also specifically enjoyed listening to the first presentation because listening to Linda Gojak discuss fluency represented the principles of mathematics and standards for mathematical practices in a new way to me that I had not considered before. I also enjoyed the presentation from Matt Larson because it reminded me that no teacher is perfect and will always say something that is offensive to someone. Creating a safe space helps us to mend these mistakes and standing up for our students' needs is another way to show them that we care and form a more perfect educational society for our students to grow in. We should have the same sense of agency that we hope to see out of them!
- My overall experience with the online conference was positive because of the information I gleaned from all of the professionals who presented. I gained a variety of information that came from a variety of perspectives, which is always fantastic. I wish I could have attended one in person so that I could have participated more; however, now I know that there is a way to acquire professional development when I do not have the time to attend in person. I would absolutely attend a virtual conference again if I need to. I would really love to attend one in person!

Reflection

Big Takeaways?

My big takeaways from the virtual conference is the need for teachers to reflect on their mathematics instruction especially in terms of access, equity, and empowerment, and also the need for us as educators to identify and remove barriers to providing all our students with access to high-quality mathematics instruction.

Overall experience?

Overall, I found this virtual conference to be a very insightful and positive experience. The conference highlighted many issues that are in the education system today that we must address and take action to change. The first session that I watched virtually addressed the need for us as teacher to help our students reach fluency in mathematics through reasoning and sense making. Another session pointed out that we must take action to better serve students that have been marginalized. Finally, the last session, was super interesting to hear eight different mathematics educators discuss moments that significantly impacted them. These individuals discussed a variety of topics such as an equitable education for all students and unproductive practice that undermine efforts to increase students achievement.