

Welcome to

the 2025 National Numeracy Network Annual Meeting

November 7th, 2025 - November 9th, 2025

Trinity University, San Antonio, Texas







Table of Contents

1.	20	25 NNN Annual Meeting Schedule	3
	A.	Friday, November 7th	3
	В.	Saturday, November 8th	3
	C.	Sunday, November 9th	. 6
2.	Pre	esentation and Facilitated Discussion Abstracts	. 7
	A.	Keynote Presentations	7
		Facilitated Discussions and Workshops	
	C.	Lightning Talks	8
	D.	Presentations	9

2025 NNN Annual Meeting Organizers

Andie Burazin (University of Toronto Mississauga)
Weixing Ford (Texas A&M University)
Marc Isaacson (Augsburg University)
Luke Tunstall (Trinity University)

https://thenationalnumeracynetwork.wildapricot.org/Annual-Meeting



1. 2025 NNN Annual Meeting Schedule

All times listed in Central Daylight Time (CDT) – Local time in San Antonio, Texas.

All events located at Trinity University.

A. Friday, November 7th

CDT	Keynote Presentation and Discussion	
	Location: Chapman Center 233	
5:00 - 5:40 pm	Registration, free drinks & snacks.	
5:40 - 5:50 pm	m Welcome	
5:50 - 6:50pm	Keynote Presentation: Why the Word "Lies" Will Never Appear in My QR Talk Title	
	(In Person)	
	Neil Lutsky (Carleton College)	
7-8:30pm	Dinner (to immediately follow keynote presentation)	

B. Saturday, November 8th

Coffee

Location: Chapn	nan Center, Second Floor
8:30-9am	Coffee & bakery items

Morning Session 1 (November 8th)

CDT	Presentation	Presentation
	Location: Chapman 233	Location: Chapman 251
9-9:25am	Quantitative Reasoning Support is Not	Transforming Quantitative Reasoning: A
	just for Students (In Person)	Data-Driven and Student-Centered
	Melissa Brandon (Bridgewater	Approach (In Person)
	State University)	Kadron Johnson (UT Austin Dana
		Center) and Tina Vega (UT San
		Antonio)
CDT	Presentation	Presentation
	Location: Chapman 233	Location: Chapman 251
9:35-10am	Testing the "Dual Burden Hypothesis"	Ten Years of Survey of Math (MA-105):
	Used to Explain the Dunning-Kruger	What Corequisite and Dual Enrollment Can
	Effect (In Person)	Teach Us About Math Readiness at
	Ed Nuhfer and Steve Fleisher	Worcester State University? (Online)
	(Cal State University)	Hansun To, Eileen Perez, and Jason
		Hardin (Worcester State
		University)



Morning Session 2 (November 8th)

CDT	Facilitated Discussions		
	Room: Chapman 233		
10:15-11:15am	QR Centers: Tutoring Logistics (In Person)		
	Kaitlyn Gingras and Preston Walker (Trinity College)		
CDT	Facilitated Discussions		
	Room: Chapman 251		
10:15-11:15am	The Pathway from QR to STEM (In Person)		
	Katie Cerrone (The University of Akron)		

Morning Session 3 (November 8th)

CDT	Presentation	Presentation
	Location: Chapman 233	Location: Chapman 251
11:30-11:55am	Contextualizing Quantitative	Building a Hispanic-Serving Institution's STEM
	Reasoning: What Can Students	Hub for Innovations in Numeracy Education
	Learn in an Introductory Psychology	(HSI-SHINE) (In Person)
	Course? (In Person)	Toni Watt (Texas State University),
	Neil Lutsky (Carleton	Esther Isabelle Wilder (Lehman
	College)	College and the Graduate Center,
		CUNY), Gregory Broberg (Arizona
		State University), Eduardo Vianna
		(LaGuardia Community College and
		the Graduate Center, CUNY)
CDT	Presentation	Presentation
	Location: Chapman 233	Location: Chapman 251
12:05-12:30pm	The Role of Confirmation Bias in	Taking Math into the Community (Online)
	Interpreting Political Graphs (Online)	Kim Walters (Mississippi State
	Debasmita Basu and	University)
	Hoyeon Lee (The New	
	School)	

Lunch

LUNCH BREAK	
12:30-1:30pm	Box lunches (included with registration)
	Location: Chapman Hall, First Floor

.....



Lightning Talks (November 8th)

CDT	Lightning Talks		
	Location: Chapman 233		
1:30-2:30pm	Lightning Talks, facilitated by Marc Isaacson (Augsburg College)		
	Gizem Karaali (Pomona College)		
	Kadron Johnson and Tammie Perez-Rice (UT Austin, Dana Center)		
	Kathryn Appenzeller Knowles (UT San Antonio) and Kenneth Sweet (Sam		
	Houston State University)		
	Calvin Cochran (Wellesley College)		
	Katie Cerrone (The University of Akron)		

Afternoon Session 2 (November 8th)

CDT	Presentation	Presentation
	Location: Chapman 233	Location: Chapman 251
2:45-3:10pm	Making Decisions with Data Using a	Building Scientific Reasoning Through Data
	Game (Online)	Literacy Skill Development (Online)
	Shonda Kuiper (Grinnell	Andrea Drewes, Kathy Browne,
	College)	Gabriella Smalley, and Sage
		Lichtenwalner (Rider University)
CDT	Presentation	Presentation
CDT	Presentation Location: Chapman 233	Presentation Location: Chapman 251
3:20-3:45pm		
	Location: Chapman 233	Location: Chapman 251
	Location: Chapman 233 Statistical Literacy: Numeracy Meets	Location: Chapman 251 A Saturation of Ideas for Students' Transition
	Location: Chapman 233 Statistical Literacy: Numeracy Meets Literacy (Online)	Location: Chapman 251 A Saturation of Ideas for Students' Transition to Becoming Learners through Intentional,
	Location: Chapman 233 Statistical Literacy: Numeracy Meets Literacy (Online) Milo Schield (New College of	Location: Chapman 251 A Saturation of Ideas for Students' Transition to Becoming Learners through Intentional, Creative, and Fun Practices (In Person)

Afternoon Keynote Presentation (November 8th)

CDT	Keynote Presentation and Discussion Location: Chapman 233	
4-5pm	Keynote Presentation: Improving Quantitative Skills Support Across an Institution Using an Ecosystem Framework (In Person)	
	Laura Muller (The Jackson Laboratory) and Melissa Eblen-Zayas (Carleton College)	



C. Sunday, November 9th

Coffee

Location: Chapman Center, Second Floor			
8:30-9am	Coffee & bakery items		

Morning Session 1 (November 9th)

CDT	Presentation	Presentation
	Location: Chapman 233	Location: Chapman 251
9-9:25am	Exploring Numeracy Demands embedded in Alberta High School Mathematics Curriculum (In Person) Asia Majeed (University of Toronto) and Kwesi Yaro	Quantitative Reasoning for Mathematically Proficient Learners: Insights from Singapore (Online) Rebecca M. Nichols (Nanyang Technological University)
CDT	(University of Alberta) Presentation	Presentation
CD1	Location: Chapman 233	Location: Chapman 251
9:35-10am	Changing Curriculum to Meet Modern Issues (Online) Daniel Jelsovsky, Susan Serrano, Susan McLoughlin (Florida Southern College)	Establishing a Quantitative Literacy Framework for Postsecondary Mathematics Courses: A Delphi Study (Online) Emily Elrod (Florida Institute of Technology)

Morning Session 2 (November 9th)

CDT	Workshop
	Location: Chapman 251
10:15-11:15am	QuantNet's 5C Approach to Quantitative Reasoning (In Person)
	Greg Foley (Ohio University)

Board Meeting (November 9th)

SUNDAY AFTERNOON	
CDT	NNN Board Meeting
	Location: Chapman 233
11:30am-1pm	Agenda to be shared ahead of meeting

2. Presentation and Facilitated Discussion Abstracts

A. Keynote Presentations

FRIDAY, NOVEMBER 7TH

Why the Word "Lies" Will Never Appear in My QR Talk Title (In Person)

Neil Lutsky (Carleton College)

Would you buy an argument from people who suggest their field is saturated with lies, misrepresentations, and misuses? This talk will consider consequences of negative framings of quantitative reasoning and statistics, as represented, for example, in the titles of these prominent works: How to Lie with Statistics (Huff, 1954), Damned Lies and Statistics (Best, 2001), The Numbers Game (Blastland & Dilnot, 2009) and A Field Guide to Lies (Levitin, 2016). I'll suggest misrepresentations of numbers in argument, from the perspective of the psychology of human reasoning, reflect a tendency to which we are all prone—confirmation bias—and which can even be seen in a self-critical assessment of my own argument. A take-home message of the presentation will be that we should, in contrast, highlight and promote ways in which quantitative reasoning offers significant and illuminating insights for the lives we navigate and share.

SATURDAY, NOVEMBER 8TH

Improving Quantitative Skills Support Across an Institution Using an Ecosystem Framework (In Person)

Laura Muller (The Jackson Laboratory) and Melissa Eblen-Zayas (Carleton College)

We will introduce our framework for considering four domains of an institution's quantitative skills/reasoning support ecosystem (bridge programs with a quantitative component, approaches to assessing readiness and advising, curricular on-ramps, and supplementary support). This ecosystem framework has the potential to help campus leaders coordinate institutional efforts around student success in areas connected to students' quantitative preparation. We will provide a roadmap for attendees to use this framework to analyze the strengths and weaknesses of the ecosystem at their institutions, to identify collaboration partners to maximize the effectiveness of the ecosystem, and to leverage ones' skills and experiences in STEM classrooms or support centers to work towards institutional change.

B. Facilitated Discussions and Workshops

SATURDAY, NOVEMBER 8TH

QR Centers: Tutoring Logistics (In Person)

Kaitlyn Gingras and Preston Walker (Trinity College)

This presentation explores the logistics of QLR Centers, with a focus on optimizing scheduling, training, tutor monitoring, and student engagement. As academic support becomes increasingly critical to student success, effective logistical planning ensures that tutoring services are accessible, efficient, and responsive to diverse student needs. Key topics include tutor recruitment and training, demand forecasting, integration with academic departments, and the use of digital tools for appointment management and progress tracking. Attendees will be invited to share experiences, identify challenges, and collaboratively brainstorm strategies for improving tutoring center logistics across diverse institutional settings.

2025 NNN Annual Meeting -- Nov 7-9, 2025 -- San Antonio

The Pathway from QR to STEM (In Person)

Katie Cerrone (The University of Akron)

Developmental math courses have shown that they do not prepare students for STEM-track courses. Corequisites are proving to be successful but is there a way to use QR courses to also prepare students for the STEM-track by improving their mathematical reasoning skills? Come to this round table to discuss how you and others are using QR to prepare students for algebra and calculus.

SUNDAY, NOVEMBER 9TH

QuantNet's 5C Approach to Quantitative Reasoning (In Person)

Greg Foley (Ohio University)

The U.S. National Science Foundation—supported QuantNet project has created a growing network of instructors who teach gateway courses in Quantitative Reasoning (QR). This project employs the 5C model of student engagement in quantitative reasoning. The 5 Cs are (1) Critical thinking, (2) real-world Contexts, (3) mathematical and statistical Concepts, (4) QR Competencies, and (5) student Collaboration. Critical thinking is the heart of quantitative reasoning. QR Competencies and Collaboration support students to use critical thinking to make connections between real-world Contexts and associated mathematical and statistical Concepts. This student-centered approach helps student develop confidence and capabilities in making decisions about personal and professional issues.

C. Lightning Talks

SATURDAY, NOVEMBER 8TH - AFTERNOON SESSIONS

Student Concerns About Artificial Intelligence: Activities for the QL Classroom

Gizem Karaali (Pomona College)

Since the arrival of ChatGPT in November 2022, Al-based tools, platforms, and agents have become hot topics for educators and students alike. There are various concerns these new technologies arouse. In this talk I focus on the labor and environmental impacts of these new technologies. These topics can be the basis of an effective learning activity for the QL classroom.

Practical Strategies to Strengthen Student Success in STEM

Kadron Johnson and Tammie Perez-Rice (UT Austin, Dana Center)

This session equips educators with practical, research-based strategies to strengthen student success in STEM. Participants will explore easy-to-integrate activities that foster engagement with peers and course content. Focused on building academic confidence, time management, and collaboration, attendees will learn techniques to promote persistence, create inclusive learning environments, and improve student outcomes in STEM.



Evolving Math Education to Prepare Students for Learning in a World of Intelligent Machines Kathryn Appenzeller Knowles (UT San Antonio) and Kenneth Sweet (Sam Houston State University)

We will tackle a critical question facing mathematics educators: How can we prepare students for a future where artificial intelligence excels at computation and problem-solving, potentially rendering previous math education practices obsolete? We'll explore this question with a focus on strategies for developing quantitative reasoning that enable students to understand, interpret, and engage with the output of increasingly sophisticated machines.

Placement and Preparedness in an Intro QR Course

Calvin Cochran (Wellesley College)

Wellesley College places students into Intro to Quantitative Reasoning based on a QR assessment. The lowest scorers often struggle with basic algebra. Some STEM faculty have proposed a separate, extra-support section for this group. Would such a course improve outcomes or risk further stigmatizing already vulnerable students? This short talk invites reflection on pedagogy, equity, and student experience.

No More College Algebra!

Katie Cerrone (The University of Akron)

This talk will briefly describe how we've gotten rid of college algebra (mostly) and moved students into pathways that will help them be successful in their math classes and majors.

D. Presentations

SATURDAY, NOVEMBER 8TH - MORNING SESSIONS

Quantitative Reasoning Support is Not just for Students (In Person)

Melissa Brandon (Bridgewater State University)

This talk will detail how Bridgewater State University takes a faculty driven approach to supporting quantitative reasoning (QR) on campus. We do not have a QR center as many other college and universities. We have a faculty lead board that provides programing, resources, teaching grants, and an annual conference to enhance faculty's QR knowledge and pedagogy across all disciplines. This approach allows for direct faculty input on what they need and want to support the challenges of increasing quantitative understanding in our students and ourselves. One of the highlights of our approach is our teaching grants, which have direct impact in the classroom by supporting the design of courses and lesson content with clear QR learning goals. The advantages and disadvantages of this approach will be highlighted and discussion welcomed.



Transforming Quantitative Reasoning: A Data-Driven and Student-Centered Approach (In Person)

Kadron Johnson (UT Austin Dana Center) and Tina Vega (UT San Antonio)

In this session, participants will explore a Quantitative Reasoning (QR) course developed by the Dana Center at The University of Texas at Austin, which emphasizes data literacy and integrates social-emotional learning (SEL). The course promotes critical thinking and data-driven decision-making, helping students recognize patterns and apply quantitative reasoning to real-world situations. The curriculum includes 25-minute active learning activities, paired with preview and practice assignments, to ensure mastery and retention of key concepts. A key feature is its focus on building student confidence, engagement, and resilience through interactive lessons and self-assessment. Participants will experience the course firsthand by engaging in the same activities students do, gaining a deeper understanding of the course structure, its impact on student learning, and the role of SEL in fostering a growth mindset and long-term success.

Testing the "Dual Burden Hypothesis" Used to Explain the Dunning-Kruger Effect (In Person)

Ed Nuhfer and Steve Fleisher (Cal State University)

The Dunning-Kruger effect (D-K) claims most people overestimate their competency but are unaware of it, with the least competent people being the most extreme overestimators. Psychologists claim the "dual-burden hypothesis" explains the effect's occurrence: that content incompetence deprives people of the skills needed to recognize their deficits. Showing that engaged people with low test scores cannot self-assess accurately would support this explanation, but showing that engaged low-scorers self-assess reasonably well would refute it. We compared measures of cognitive competence and metacognitive self-assessment on a study populace of over 11,000 and a simulation of the same size populace as all randomly guessing. In 25 years of peer-reviewed papers on D-K, none assessed effects of random guessing. After removing disengaged random-guessers within the low-scorers, we determined that the remainder self-assess as well as their high-scoring counterparts. Whether scoring high or low on a test, most people are reasonably aware of their performance.

Ten Years of Survey of Math (MA-105): What Corequisite and Dual Enrollment Can Teach Us About Math Readiness at Worcester State University? (Online)

Hansun To, Eileen Perez, and Jason Hardin (Worcester State University)

In this talk, we will share what ten years of data from Worcester State's Survey of Math course reveal about the impact of corequisite and dual enrollment models on student success. We will look at how these formats compare to traditional sections, how the pandemic disrupted performance trends, and what's happened since. The data show promising results for corequisite support—but also a post-pandemic dip that raises new questions. Whether you're designing math pathways or supporting underprepared students, this session offers practical takeaways for strengthening readiness and retention.



Contextualizing Quantitative Reasoning: What Can Students Learn in an Introductory Psychology Course? (In Person)

Neil Lutsky (Carleton College)

Teaching psychological science offers opportunities for introducing quantitative concepts and for involving students in using QR. This presentation will review (a) strategies for promoting QR in introductory psychology in regular lectures and assignments, and (b) evidence for the efficacy of those strategies. Special attention will be given to two research modules, which in one case assigns students to analyze a data set and in another has students review a web-based literature review and subsequently propose their own study. Students asked what they "better understand because of this course" volunteer meta-analysis, t-tests, and correlation as three common outcomes. Students listing what they learned from the research modules highlighted "the difference between correlation and causation", "how to alter a study to test a related factor", and "how to design an experiment". Rating data reinforce the course's impact on students' understanding of "how data are analyzed statistically" and "how research is conducted".

Building a Hispanic-Serving Institution's STEM Hub for Innovations in Numeracy Education (HSI-SHINE) (In Person)

Toni Watt (Texas State University), Esther Isabelle Wilder (Lehman College and the Graduate Center, CUNY), Gregory Broberg (Arizona State University), Eduardo Vianna (LaGuardia Community College and the Graduate Center, CUNY)

This presentation will provide an overview of the Hispanic-Serving Institutions STEM Hub for Innovations in Numeracy Education (HSI-SHINE), a five-year NSF-funded initiative to strengthen numeracy skills among faculty and students at two- and four-year HSIs. HSI-SHINE includes faculty development, an online numeracy training program with gamification, a community-based Data Analysis Research Program (DARP), and a digital resource hub connecting students to STEM opportunities. Targeting HSIs in Arizona, New York, and Texas, SHINE will train 50 faculty and engage 100 students directly in DARPs, with broader reach through workshops and classroom instruction. Building on prior NSF-funded efforts, SHINE fosters communities of practice that support liberatory, data-driven educational practices. Mixed-methods assessment will evaluate the initiative's impact on faculty capacity, student outcomes, and institutional change. SHINE ultimately aims to enhance quantitative reasoning, improve STEM retention and graduation rates, and expand equitable access to STEM fields through a sustainable and replicable national model.

The Role of Confirmation Bias in Interpreting Political Graphs (Online)

Debasmita Basu and Hoyeon Lee (The New School)

While students' graph interpretation skills are often assessed through a quantitative lens, their prior knowledge and beliefs about the underlying issue also play a crucial role. Interpreting graphs - especially those tied to sociopolitical topics - requires more than just numerical reasoning; it involves individual's qualitative reasoning and their ability to ask critical questions. In this presentation, we share conversations with two undergraduate students, Luke and Lara, to examine how their interpretations of a politically charged graph on gas prices were shaped by their understanding of inflation and their views on government responsibility in gas price surge. While both students drew on personal perspectives, only Luke consistently questioned the graph's design and underlying message. Lara's interpretation, in contrast, was more influenced by surface-level cues and personal experiences.



Taking Math into the Community (Online)

Kim Walters (Mississippi State University)

Our Quantitative Reasoning course is an alternate pathway for students who do not need or want to take College Algebra. The projects in the course are designed to help students see uses of math in their world. Through one project we partner with a local organization so that my students see and use simple math to help this community partner. I got the idea for this project from a previous NNN meeting so I thought it appropriate to share.

SATURDAY, NOVEMBER 8TH - AFTERNOON SESSIONS Making Decisions with Data Using a Game (Online)

Shonda Kuiper (Grinnell College)

This freely available online activity, https://dataspace.sites.grinnell.edu/statspital1, uses simple interactive graphs to help students determine which medicine is best. Without explicitly discussing hypothesis testing, students can use the game to explore the complexities of making decisions with data. Initially, students use graphs and calculate averages to compare medicines. However, issues such as variability, confounding variables, and interaction terms naturally arise within the gaming environment, allowing students to understand complex ideas without advanced calculations. While the initial levels of the game are accessible for anyone who can play computer games, more advanced levels, interactive apps, and additional readings make this activity relevant for more advanced college courses.

Building Scientific Reasoning Through Data Literacy Skill Development (Online)

Andrea Drewes, Kathy Browne, Gabriella Smalley, and Sage Lichtenwalner (Rider University) With support from an NSF IUSE grant, we investigated how scaffolding data literacy skills can enhance scientific reasoning in introductory oceanography courses. Our instructional framework guides students, most of whom are non-science majors, to describe patterns in interactive datasets, connect those observations to scientific concepts, and construct evidence-based explanations. Across six semesters, students in intervention sections consistently outperformed those in comparison groups on exam essay questions, particularly in data description, use of evidence, and reasoning. They also demonstrated statistically significant greater gains in ocean science content knowledge. This session will present our instructional approach, share key findings, and engage participants in sample activities. Our results suggest that integrating data literacy into undergraduate science instruction not only improves reasoning and explanation skills but also supports deeper content learning. Our approach is content neutral and adaptable across all STEM disciplines.

Statistical Literacy: Numeracy Meets Literacy (Online)

Milo Schield (New College of Florida)

Statistical Literacy studies how everyday statistics are constructed and manipulated. Everyday statistics are numbers in context, numbers that are socially constructed. Statistical Literacy combines numeracy with literacy. Statistical Literacy is now required for all incoming students at New College of Florida (and for statistics majors at the U. of New Mexico). The first part of the talk reviews how the choice of words influences the size of a statistic or a statistical comparison. The statistic is the conclusion (The percentage of the world's population that is malnourished is 30%). The second part shows how a crude, misused or disputable statistic can be treated as given to support a disputable claim. Here the statistic is used as a premise. (The best US public non-military liberal arts college is New College of Florida). Students should know how to read, interpret and evaluate both usages. [145 words]



A Saturation of Ideas for Students' Transition to Becoming Learners through Intentional, Creative, and Fun Practices (In Person)

Stephanie Andrews (Lone Star College-Kingwood)

In this presentation, I'll share information:

- from tutoring sessions I have with our campus math tutors including powerpoint slides, handouts, and the underlying philosophy for helping students with processes over QR content.
- on social and emotional learning lessons scattered throughout the semester that are timed to be relevant for student understanding (metacognition) and provide timely application within my QR
- on how we tailored our QR class for fire science majors to increase belonging, relationships, success, and completion.

I'll ask in turn that participants share their ideas, beliefs, technology, philosophy, and/or tricks with me for better aligning their face-to-face class experience with their asynchronous online class experience for me to potentially include in my sabbatical creations during spring 2026.

SUNDAY, NOVEMBER 9TH

Establishing a Quantitative Literacy Framework for Postsecondary Mathematics Courses: A Delphi Study

Emily Elrod (Florida Institute of Technology)

The need for quantitative literacy (QL) has spurred educational reform in post-secondary mathematics course offerings. However, the lack of clear guidelines has led to wide variability in the content and outcomes of math courses meant to address QL. The purpose of this study was to establish a framework, based on expert consensus, for incorporating QL in undergraduate mathematics courses to help advance the quantitative literacy initiative in higher education.

The Delphi method, an established methodology based on expert opinions, was employed to aid in developing a framework. Three rounds of iterative surveys, each modified based on the results and feedback of the previous round(s), were analyzed to establish consensus. The result of this study is a research-based framework that faculty and institutions can use as a resource for QL math courses.

Exploring Numeracy Demands embedded in Alberta High School Mathematics Curriculum (In Person)

Asia Majeed (University of Toronto) and Kwesi Yaro (University of Alberta)
In recent years, numeracy has gained prominence as a cross-curricular priority in many global and
Canadian education systems, reflecting its role as a key life competency beyond basic math skills. In
Alberta, the Teaching Quality Standard (TQS) #3 mandates that all educators foster both literacy and
numeracy across disciplines. This presentation draws on Goos et al.'s (2019) 21st Century Numeracy
Model to examine how Alberta's Math 30-1 (Grade 12) curriculum integrates numeracy. Our analysis
focused on the rationale, specific objectives, and mathematical processes outlined in the curriculum.
Strengths include the emphasis on real-world contexts, diverse representations, and problem-solving.
However, we identified a lack of attention to the critical dimension of numeracy, such as analyzing the
societal consequences of mathematical applications. This shortcoming highlights an ongoing challenge in
curriculum design—mathematics is often framed as objective and neutral, rather than as a tool for
questioning assumptions and engaging in social transformation.



2025 NNN Annual Meeting -- Nov 7-9, 2025 -- San Antonio

Quantitative Reasoning for Mathematically Proficient Learners: Insights from Singapore (Online)

Rebecca M. Nichols (Nanyang Technological University)

Singapore's students regularly top global mathematics rankings, but strong test scores don't always translate into confident, adaptable quantitative thinkers. This presentation shares lessons learned from teaching Quantitative Reasoning (QR) to high-achieving first-year undergraduates at a top university in Singapore. While mathematical fluency abounds, there are distinct opportunities for QR training. I'll share key observations, including how structured ambiguity, interdisciplinary projects, and an emphasis on communication—not just computation—help build the QR "habit of mind" students require to engage uncertainty, skillfully work with data, and communicate evidence effectively. These reflections offer practical takeaways for anyone working to bridge the gap between technical ability and real-world quantitative skill, no matter the educational context.

Changing Curriculum to Meet Modern Issues (Online)

Daniel Jelsovsky, Susan Serrano, Susan McLoughlin (Florida Southern College)
Increasingly, students and more importantly parents of students are viewing college as a commodity, where majors are chosen by job prospects and not academic interest. In this environment, it is getting more and more difficult to convince students at a small, liberal arts college to major in pure mathematics. At the same time, mathematics and statistics are increasingly important in the modern workplace. In order to try to resolve this contradiction, and attract new majors, we have developed new majors aimed at students (and parents) who are primarily focused on direct career paths. We will detail developing our new majors and their implementation, as well as discussing results in terms of enrollment.