

PALOMAR COLLEGE MATCH



Math Across the Curriculum Holistically

Join us for a FREE active and engaging two day conference on Quantitative Reasoning and Numeracy. The conference is facilitated by the National Numeracy Network (<http://www.nnn-us.org/>).

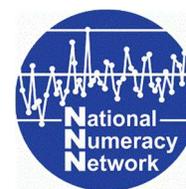
Date And Time

Fri, Sep 20, 2019, 7:30 AM –
Sat, Sep 21, 2019, 3:00 PM PDT

Location

Palomar College, 1140 West Mission Road
San Marcos, CA 92069

Attendees will learn to incorporate quantitative reasoning (QR) and numeracy into their curriculum in order to develop critical thinking in students, provide students with foundational skills, and to help close equity gaps. Participants will interact with the concepts of QR in real-world scenarios and discuss incorporating QR into their classes.



At the end of each day, you will be MATCHed into cross-discipline groups and actively work with colleagues to update or create new lessons for your courses. Together, we can **explore the possibilities** of quantitative literacy and numeracy within our disciplines!

Registration

Registration is limited to the first 200 people, and we will have a waitlist if we reach capacity. As the workshop date approaches, we will send you a brief pre-workshop survey, campus map and parking information. After registration, if you are no longer able to attend, please email Shelbi Mayo Smayo@palomar.edu and/or Luis Guerrero LGuerrero@palomar.edu so we may adjust our catering headcounts. Park in Lots 1 or 2. Sign in at the Student Union. Workshop overview at 7:45 AM. Continental breakfast (7:15-8:00), lunch and beverage service will be provided. Register here: www.eventbrite.com/e/match-with-national-numeracy-network-conference-tickets-64268385471

Palomar MATCH goals:

1. Support faculty in creating projects and/or courses that make the mathematical /quantitative reasoning/numeracy dimensions of their disciplines more explicit.
2. Support faculty in choosing the degree to which they want to infuse math/quantitative reasoning/numeracy into their curricula.
3. Provide students with experiences that demonstrate the utility, beauty and value of mathematics/quantitative reasoning/numeracy in their studies and everyday lives.
4. Make mathematics/quantitative reasoning/numeracy welcome and indispensable across the entire curriculum.
5. Make the methods and materials designed to further the above goals available, accessible, and friendly to the broad audience.
6. Collaborate with other projects or initiatives at Palomar and improving quantitative or symbolic reasoning or numeracy at large.

Eric Gaze: NNN President

Rhetorical Numbers: Using Quantitative Evidence in Writing and Argumentation: This workshop will focus on identifying the core elements that underlie effective communication with numbers. This will lead to thinking about course materials that incorporate quantitative reasoning (QR) and argumentation. The American Association of Colleges and Universities (AACU) has identified quantitative literacy "as one of the few key outcomes that all students, regardless of major or academic background, should achieve during undergraduate study." Contemporary argument increasingly relies on quantitative information and reasoning, yet humanists neglect to include QR as part of the rhetorical arts. We will explore how to address these issues in our assignments.

Spreadsheets for Quantitative Reasoning: An Excel-lent Way to Engage Your Students with Mathematics:

This interactive session will explore how to use spreadsheets to engage students in Quantitative Reasoning (QR) classes. The ultimate goal for these courses is to produce quantitatively literate students capable of actively participating as citizens and workers in the 21st century, and to make informed decisions in their personal, public, and professional lives. Context rich problems will provide the material for this session, including financial and statistical applications. If we truly want to empower our students to actively participate in today's data driven society, then we need to provide them with the requisite skills.

Milo Schield, NNN Vice-President

Statistical Literacy as Rhetoric: Rhetoric studies effective communication and persuasion. Historically, rhetoric was primarily qualitative. With the advent of computers, social statistics are everywhere. Today, statistical literacy is an important component of modern rhetoric. Statistical literacy studies statistics in arguments. This workshop reviews the foundational elements of statistical literacy: 1) Defining statistics as numbers in context. 2) Distinguishing association from causation. 3) Understanding different kinds of associations. 4) Understanding the role of confounding in arguments involving statistics. 5) Distinguishing and evaluating different kinds of studies. The only math is arithmetic (no algebra).

Analyzing Numbers in the News: Numbers are everywhere in the news. These numbers are typically used as evidence in arguments. Workshop attendees will read short news stories and identify whether they contain an argument. If so, participants will identify the point and analyze the strength of evidence these numbers provide.

Marc Isaacson: NNN Secretary/Treasurer

Data Literacy: #s for the Professions: As the world becomes increasingly digital, the demand for individuals and organizations to become number savvy is growing. While some students will go on to careers in math, computer science and analytics, all individuals are going to require a set of skills to read, work with, analyze and argue with data of all sorts. This workshop will provide an overview of current data literacy initiatives in education and industry and the implications for higher education. Developing a habit of mind for thinking critical with numbers is crucial for students. This workshop will include some hands-on demonstrations of activities that can be transferred and applied to a variety of different classrooms.

Data Visualization: Charts and Graphs for Consumers and Producers: Communicating information visually and telling stories with data is a key skill for individuals and organizations in the digital age. Many students are taught the mechanics of charting and graphing from an early age. Often this instruction is focused on the mechanics of chart production. This workshop will address some of the overlooked implications for communication with chart type selection and issues at the intersection of words and numbers. In this workshop, participants will do a 30-minute classroom tested activity using survey data on fishing, hunting, and wildlife that illustrates some of the struggles and challenges of being a literate consumer of data visualizations. The provided examples can easily be adapted a variety of classroom settings.

Luke Tunstall: NNN Vice-President Elect

Quantitative Reasoning and Social Justice: A quantitative lens can provide powerful insights into social issues that matter to our students. Nonetheless, broaching issues of social justice in a class can be challenging for any instructor. In this dialogue-centered workshop, we will discuss example activities and projects that connect quantitative reasoning with social justice issues, as well as challenges that often arise for students and faculty when engaging with these topics.

Assessing Quantitative Reasoning: Our students' interests aren't the same, and nor are the opportunities they have had to access mathematics in prior courses. Whenever possible, our assessments of quantitative reasoning should embrace and grapple with that diversity. In this interactive workshop, we will discuss affordances and limitations of various means of assessing quantitative reasoning. We will also explicitly consider how we can promote access for all students to our assignments, regardless of their prior opportunities to learn mathematics.