Establishing and Fostering a Mathematical Community Online
Établir et entretenir une communauté mathématique en ligne
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ROSA CENDROS ARAUJO, Western University
Online collaborative mind mapping for mathematics teacher education

The inclusion of alternative and multimodal methods for online interaction and knowledge construction in mathematics teacher education is still an incipient field. In this paper, we present a multiple case study of three blended courses in an elementary mathematics teacher education program at Western University. In these blended courses, the online component included the construction of collaborative mind maps. Through constructivist grounded theory methods, we analyzed teacher candidates' mind maps as (a) final products, and (b) interaction processes. The resulting theory describes how pre-service mathematics teachers interact and construct knowledge while they engage in online collaborative mind mapping. The study provides insights into how collaborative and multimodal technologies affect mathematics teacher education, and in turn, how to improve its implementation.

ROBERT BORGERSEN, University of Manitoba
From Flops To Fortunate And Flourishing: Expeditions to Facilitate Community Using Technology

In my experience, being a member of an active and engaged community of learners can contribute to success in post-secondary mathematics, and using online tools to connect is second nature to our students today. After all, when the students who began university this fall entered their teenage years, Instagram had over 300 million users and Facebook had over a billion. In this talk, I will share some of my experiences using technology to facilitate community among and with my students, including successes, failures, and lessons learned.

EMILY BRALEY, Harvard University
A community of practice within the CoMInDS project

CoMInDS is an NSF funded MAA project that supports faculty who are preparing graduate students to teach undergraduate mathematics. The faculty who have participated in CoMInDS workshops and activities frequently interact with community members online - through a listserv, zoom/skype follow ups to in person workshops, and through the MAA's new community platform. In this session I will discuss (1) how the new platform can help promote a community of practice and (2) a model for in person workshops for experienced providers that uses a distributed leadership model.

RICHARD DLIN, TanenbaumCHAT
Reflections of Online Learning, From 3 Sides of the Fence

Rich has been an educator for over 25 years, as a high school teacher, a university lecturer and a one-on-one tutor. A typical Gen X'er, Rich's life and career have straddled the pre- and post-online worlds, and when technology arrived on our cultural doorstep, he embraced it. In addition to working in education, Rich worked for 10 years as a software developer, was an early graduate of the fully online MMT program at Waterloo, has worked on developing online courseware for secondary school students, and has observed firsthand the experiences of young high school and university students learning via online course delivery. In this talk, Rich will discuss his experiences and observations from all three perspectives, and analyze strategies for optimal development, implementation and delivery of online mathematics curricula.

BRIAN FORREST, University of Waterloo
Lessons Learned From Two Decades Teaching Online

In this talk I will try to highlight some of the key lessons I have learned from nearly two decades of involvement with online teaching. In addition to outlining what I see as some key components for a successful online mathematics course, I will also talk about some of the myths and realities of teaching mathematics online.

JENNIFER FRENCH, Massachusetts Institute of Technology
Lessons learned: An introvert's guide to establishing community in a MOOC forum

I will give an overview of what MOOCs are, the types of MOOCs I teach, how we developed the content, and what our audience looks like.

Then I will then discuss techniques I've established and abandoned over 4 years of running MOOCs with thousands of learners, what I've done wrong (and why), how I've course corrected over time, and how we've developed a community of learners.

We will end up with a collection of best practices, and their connection to promoting inclusivity and growth mindset.

NEHA GUPTA, Georgia Tech
Lessons Learnt- Challenges in Teaching a Hybrid (online & in-person) Class

I taught a hybrid (online with the option of taking it in person) class at Harvard. It was an experience that highlighted to me some of the challenges that come with teaching hybrid classes.

I will happily share the ways in which I failed, and the experiences of some experienced online educators at Georgia Tech on ideas for how to potentially scale those challenges.

Time permitting, I will also share successes from the beautiful online community my calculus students have created for our in-person calculus class at Georgia Tech.

VESELIN JUNGIC, Simon Fraser University
The LMS Discussion Board: Instructor's Little Helper

In this presentation, I will discuss my use of the Learning Management System (LMS) discussion board in teaching first year university math classes. In particular, I will address the main challenge: How to engage students in discussions on their course LMS? To do so, I will use examples and statistics from two of my recent calculus classes.

A very brief overview of the relevant literature will be provided.

CAROLINE JUNKINS, Harvard University
The Math Fluency Initiative: an online summer program designed to build community alongside mathematical proficiency

This summer, the Mathematics Department at Harvard University piloted a 4-week online program called the Math Fluency Initiative (MFI). The MFI was designed to help incoming first-year students strengthen their algebra and pre-calculus skills as preparation for college-level STEM courses. Alongside the mathematical content, the MFI aimed to prepare students for our courses by engaging them with active learning, facilitating group work, and discussing metacognitive learning strategies. In this talk, I will discuss how the MFI was structured to build and support community by: 1. incorporating both synchronous and asynchronous components, 2. leveraging the experience of near peer instructors, 3. addressing the hidden curriculum of college classes.

HAYNES MILLER, MIT
The Electronic Seminar on Mathematics Education: Creating an online community of educators

I will describe the idea behind the Electronic Seminar on Mathematics Education, http://math.mit.edu/seminars/esme, and how it has been used to foster an online community of educators. I hope to illustrate with some highlights of the seminar in action.

REBECCA NOONAN HEALE, University of Utah
Is Anybody Out There? Strategies for Communication in Online Courses

Communication is fundamental to any course, but can be particularly challenging in an online course. In this talk I will discuss different strategies to encourage student-teacher and student-student communication, and monitor whether this is happening.

I will cover using the quiz format to give announcements, opportunities to tweak content-quizzes to help students see the nuances in the materials, and techniques to encourage students to read the feedback they are given. I will also describe a pilot to bring real-time, small-group discussions to an asynchronous online class.

At the end, I will talk about setting up online course shell and ways to mentor online teachers to pass on successful communication strategies.

MIKE PAWLIUK, University of Toronto - Mississauga
Using discussion boards in university math courses, small and large

Online discussion boards serve many roles in math course: they are a place to connect, ask questions, practice mathematical communication, study, and many other things.

I will give examples of how I have integrated discussion boards into courses, and what I have learned from them. Courses include: Introduction to Proofs, Calculus (at various levels), and a graduate course for primary and secondary school teachers.