"I don't write in math, I just do it": Emphasizing communication in mathematical practice 'Je n'écris pas en mathématiques, je le fais tout simplement" : mettre l'accent sur la communication dans la pratique mathématique (Org: Kseniya Garaschuk and/et Vanessa Radzimski (University of Fraser Valley))

CINDY BLOIS, University of Toronto

Experiential Learning Hives in an Introductory Math Course

We will discuss a course design for an introductory math course, in which students collaborate in small groups on real-world projects and communicate their findings through reports and presentations to their "hive" of twelve peers. After each project, students complete a written reflection on their experiences, to articulate what they've learned and how they've grown as collaborators, communicators, and mathematicians.

This model is currently being implemented in a first-year calculus and linear algebra course, for students interested in commerce and the social sciences. We will outline the overall goals, community structure, project tasks and reflections, as well as some of the administrative challenges of implementing this model in a large (> 1000 student) multi-section course.

FOK-SHUEN LEUNG AND PAM SARGENT YORK, University of British Columbia

Successors to assessments in a language-enriched program

Teaching students in an English language-enriched program, we had the mandate to teach mathematics in a way that emphasized students' language learning, specifically in the genre of mathematical communication, which contains unique conventions. While we designed assignments that had communication components focused specifically in this context, we came to realize that any and all opportunities for students to communicate were valuable. The experience of teaching in that program inspired us to include different types of communication elements in assessments in our current courses. In this talk, we will give examples of these assessments and outline some of the observed benefits to students.

ASIA MATTHEWS, Quest University

Forms of dialog in the mathematics classroom

How do we make their mathematics education useful and relevant for our students? How do we make mathematics education useful and relevant for the changing world (and for changing the world)?

We are currently educating students to be ready for problem-solving in a future that will have problems we cannot yet imagine. I believe that we have a responsibility, in each of our own mathematics classes, to encourage creativity and open-mindedness in these developing citizens.

I will argue in this talk how dialog, a tangible practice that can be developed in a mathematics classroom, can have positive, holistic repercussions within and without the classroom.

COSTANZA PICCOLO AND MATTHEW COLES,

Reflective writing in a graduate course on Mathematics teaching

Math 599 is a seminar course for graduate students interested in teaching Mathematics at the university level. Typical of this kind of courses is to have students write a teaching statement by the end of the course. To help our students formulate their own ideas around teaching, we introduced a series of weekly written assignments where the students had to reflect on some aspect of teaching they found particularly interesting. A qualitative analysis of the student submissions revealed some common themes about what novice instructors find important in teaching.

VANESSA RADZIMSKI AND KSENIYA GARASCHUK, University of the Fraser Valley

Learning Journals for Community and Communication

In recent years, the Mathematical Association of America has recommended that "mathematics faculty should deliver an unambiguous message concerning the importance of mathematical reasoning and communication skills and adopt instructional methods and curriculum content that develop these skills." In this session, we present the idea of online learning journals as a low-stakes, small-scale assessment for learning that offers students an opportunity to distill and communicate their mathematical learning, with their peers as the target audience of their writing. In these journals, students are prompted to give an objective discussion of the mathematical content, a description of how the concepts are useful, as well as the aspects they have found challenging. We argue that these journals not only support the development of communication skills in mathematics, but also serve as a space for students to gain different points of view through the insights of their peers, especially in a remote learning environment. These benefits are supported through student feedback and perceptions of the use of learning journals in their courses.

TARA TAYLOR, St. Francis Xavier University

Helping Students Connect Math to Their Own Lives

This talk will present some observations and details about student projects in a first year math concepts course. The course is for students planning on going into elementary education or as an elective for arts students, so many of them do not see themselves as mathematical thinkers. The goal of the project is to help them connect math to their own lives in a meaningful way. The project has evolved over the years from a written paper to an in-person math fair to a virtual math fair with many different forms of communication.