

Speaker:

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Position: Assistant Professor

Title: Students and their instructor co-developing the final exam (..... and hopefully other strategies 😊)

Intended Audience: All Levels

Type of Presentation

Preferred: Long Presentation (60 minutes)

Language(s) of

Presentation: English

Description:

Students and their instructor co-developing the final exam (..... and hopefully other strategies 😊)

A quick review of the news headlines following the recent release of the results of the Program for International Student Assessment (PISA) indicates a societal concern about the state of mathematics education in Canada. Some have accounted for the noticeable decline of students' mathematics scores by pointing to the adoption of 'inquiry-based' curricula and have called for a return to more traditional methods. I will share a strategy that fits within inquiry-oriented teaching, provides students with practice and supports growth of mathematical understanding.

This vignette will share the results of my study that examined the effects of students and their instructor co-developing the final exam in a Canadian college mathematics course. We will talk about students posing mathematics problems. Silver (1994) defines problem posing to be "both the generation of new problems and the re-formulation of given problems" (p.219). Problem posing is considered to fit well with inquiry-oriented classrooms. I will share a process, drawing on classroom video data, that the students from the study went through to pose a problem about finding roots of polynomials. I hope that you will also bring and share examples of students posing mathematical problems from your classrooms.

We may talk about the tensions we feel as teachers to fit our strategies within inquiry-oriented curricula, provide students with practice and support the growth of student understanding. In this light, I look forward to other educators sharing their own classroom strategies, which they feel fit within all three areas. I will share some of my other research projects that engage this dialogue. We might even be ambitious and try to develop (during the vignette time) a few teaching strategies that could be considered to be inquiry-oriented and simultaneously provide students with practice and support growth of mathematical understanding.

Silver, E. A. (1994). On mathematical problem posing. *For the Learning of Mathematics*, 14(1), 19-28.