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Title: Canadian Math Education Forum
Event Type: Conference-Workshop

Location:

Simon Fraser University, Vancouver Campus, 515 West Hastings Street, Vancouver, BC.

Dates:

April 30 to May 3, 2009

Topic:

"Curriculum" in its many dimensions emerged as a recurring theme in the previous CMEFs. With a view to address some of the main concerns and challenges that were expressed then, it was decided to have the 2009 Forum focus on the ways in which resources and assessments define, inform and mould curriculum.

Methodology:

All plenary talks, panel discussions, and working groups session. A primary purpose of the 2009 Forum is the production of concrete materials and resources (booklets, modules, examples, web-pages) to support mathematics education at all levels. To facilitate this, a call went out in early 2007 for project proposals. In response, more than 40 proposals were received, some already well developed and ongoing, and others at the idea or design stage. With the objective of promoting collaboration of participants with like interests and complementary perspectives, these projects were grouped into a total of thirteen working groups.

Scientific Highlights:

Working Groups: * Assessing for Problem Solving Development * Mathematics for Elementary Teaching * Rethinking Assessment * Online Learning * Transition to University * Mathematical Modeling and Science * Psychology and Philosophy of Mathematics * Relating Indigenous knowledges and teaching mathematics * Problem Solving in Secondary Mathematics * Problem Solving in Elementary Mathematics * Significant Statistics * Early Childhood Geometry * Textbook Design --- For further information on each group go to:
<http://www.mast.queensu.ca/cmef2009/>

Organizers:

Forum Committee ---Co-chairs: Malgorzata Dubiel, Dept of Mathematics, Simon Fraser University; Viktor Freiman, Universite de Moncton; Peter Taylor, Dept of Math & Stats, Queen's University; --- Provincial Representatives: BC: Peter Liljedahl, Simon Fraser University; AB: Elaine Simmt, University of Alberta; SK: Karen Campbell, Sask. Math Teacher Soc; MB: Ralph Mason, University of Manitoba; ON: Kathryn Stewart, York Region DSB; Luis Radford, Laurentian University; QC: Andre Deschenes, Association Mathematique du Quebec; Annie Savard, McGill University; NB:

Eric Robert, Leo Hayes High School; Viktor Freiman, Universite de Moncton; PE: Michael J. Cassidy, UPEI; NS: Keith Taylor, Dalhousie University; NL: Mary Cameron, Memorial University; Sherry Mantyka, Memorial University; --- Advisory Committee: Melania Alvarez-Adem, PIMS; France Caron, Universite de Montreal; Stewart Craven, Toronto District School Board; Brent Davis, UBC; Florence Glanfield, University of Alberta; Frederic Gourdeau, Universite Laval; John Grant McLoughlin, University of New Brunswick; Denis Tanguay, UQAM; Maureen Tingley, University of New Brunswick; Harley Weston, University of Regina; Walter Whiteley, York University;

Speakers:

* Plenary 1 - Thursday, April 30, 16:30 - 17:30 (joint with Changing the Culture conference)
Reconsidering Basic Mathematical Assumptions in Teacher Education Rina Zazkis, Faculty of Education, Simon Fraser University My focus is on examples that increase teachers' mathematical understanding and their pedagogical sensitivity. I suggest that examples that persuade teachers to reconsider 'basic assumptions' used in teaching and learning of mathematics, or to become explicitly aware of these assumptions, serve as a means toward this end. By 'basic assumptions' I refer to assumptions related to mathematical content, rather than those related to the nature of learners or learning processes. That is, 'basic assumptions' are parts of information used in mathematical activity, but not mentioned explicitly in statements or tasks. I distinguish between different kinds of assumptions: mathematical conventions, shared understandings, and assumptions that present unintended constraints to problem solving. I exemplify and discuss each of these kinds in relation to the goals of teacher education.

* Plenary 2 - Friday, May 1, 14:00 - 15:00
Making School Mathematics Functional: A Stool Needs Three Legs Hugh Burkhardt, Shell Center for Mathematical Education, University of Nottingham Hugh Burkhardt has been at the Shell Center for Mathematical Education at the University of Nottingham since 1976, as Director until 1992. Since then he has led a series of international projects, notably Balanced Assessment and MARS (Math Assessment Resource Service). Hugh takes an 'engineering' view of educational research and development -- that it is about making a complex system work better, with empirical evidence the ultimate guide. His core interest is in the dynamics of curriculum change, seeing assessment as one important 'tool for change' among the many that are needed to help achieve some resemblance between goals of policy and outcomes in practice. Thus he is an ideal person to bring his own experience to bear on our two principal resource themes, curriculum and assessment. We have asked him to be provocative and thereby to set the stage for a fruitful discussion of his ideas.

* Plenary 3 - Saturday, May 2, 11:00 - 12:00 The Vantage Point of Publisher: One View of Curriculum Development Steven Rasmussen, Key Curriculum Press Steve was a leader of The Geometer's Sketchpad geometry software development team and also the editor of Discovering Geometry: An Inductive Approach. He has served as the principal investigator on two National Science Foundation projects: one to support teachers using technology in teaching geometry and the other to promote discovery and cooperative learning through professional development. Steve has a bachelor's degree in mathematics and a master's degree in mathematics education from Temple University. He taught secondary mathematics for seven years in Philadelphia, Pennsylvania, and Emeryville, California. Steve is a past secretary and board member of Women and Mathematics Education, an NCTM affiliate, and has served on the board of the California Mathematics Council - Northern Section. He is currently vice president of the Emery Education Foundation and a member of the Education Department Advisory Board of the University of California Berkeley Extension. He has given hundreds of workshops on geometry and other topics at local, state, regional, national, and international professional meetings. In his address, Steve will observe that constraints imposed both on and by publishers often operate to thwart innovation and limit the availability and market success of new programs particularly ones that move us away from what one of our speakers has described as the "white-knuckle grip on traditional mathematics teaching." Steve will propose some alternative "publishing" models that may, in the future, enable innovative mathematics programs to thrive.

* Panel I - Friday, May 1, 8:45 -

10:00 What did I need then? What do I need now? Chair: Egan Chernoff - University of Saskatchewan Panelists: Ann Arden - Osgoode Township High School Ottawa, ON Cindy Clarke - Prairie View School, SK Michael Finnigan - Yale Secondary, Abbotsford, BC Darien Shannon - New Westminster Secondary School, BC Shannon Sookochoff - Victoria School of Performing & Visual Arts, Edmonton, AB This strategically placed presentation will set the tone for the meeting. We are here to listen to the voice of the teachers. We want to better understand both their years of education and their years of service. What is the nature of the community, the support and the resources that they need at both stages of their professional growth and work. This voice will inform our future research agenda and will guide the formation of collegial support structures, both personal and web-based. We anticipate 40-50 minutes of presentation followed by 30 minutes of discussion and response from researchers. * Panel II - Friday, May 1, 19:00 - 20:30 Presentation and Discussion of the Burkhardt Plenary Chair: France Caron - Universite de Montreal Panelists: Frederic Gourdeau - Universite Laval, QC Philippe Labrosse - Commission scolaire Marguerite-Bourgeoys, QC Katie Pirquet - Teacher, SD 62 Sooke, (retired), BC Eric Robert - Leo Hayes High School, Fredericton, NB Christine Suurtamm - University of Ottawa A panel consisting of researchers, teachers and students will have been given a copy of the Burkhardt paper and each will have prepared a response, though current circumstances will certainly lead to significant updates and modifications. In this 90 minute session we will have time for an extended plenary discussion. * Panel III - Saturday, May 2, 16:00 - 17:30 Presentation and Discussion of the Rasmussen Plenary Chair: Harley Weston - University of Regina Panelists: Lorraine Baron - K-12 Mathematics Curriculum Coordinator, Kelowna, BC Richard DeMerchant - British Columbia Ministry of Education, Victoria, BC Mathieu Gauthier - Ecole Mathieu-Martin of Dieppe, Dieppe, NB Miroslav Lovric - McMaster University, Hamilton, ON Nick Nielsen - Delphi secondary alternative, TDSB, Toronto, ON Again a panel consisting of researchers, teachers and students will have been given a copy of the Rasmussen paper and will have a chance to respond. In this 90 minute session we will have time for an extended plenary discussion at which a wide range of publishing models can be compared. This discussion is critical to the programme of the 2009 Forum as one of its objectives is to be an effective generator of teacher resources.

Links:

<http://www.cms.math.ca/Events/CMEF2009/index>
