MATHEMATICAL ROMANCE: ELEMENTARY TEACHERS' AESTHETIC ONLINE EXPERIENCES

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We explore the aesthetic as an integral dimension of mathematics education and we report on our study of elementary school teachers' experiences with the aesthetic dimension of mathematics in an online mathematics teacher education course. The study examines the online transcripts of the thoughts and discussions of 20 teachers participating in the online course. We look primarily at the first of six modules of the course, which offered teachers the opportunity to reflect on the nature of mathematics and mathematics pedagogy. The readings for the first module included three interviews with mathematicians who related their love for mathematics, two articles on the value of children inventing personal algorithms for arithmetic operations, and a text reading of problem-based mathematics activities. In the online discussion for the first module, teachers shared their personal views of mathematics, to describe the methods they used to mentally solve the arithmetic problems 16 x 24 and 156 + 78 + 9, and to reflect on the implications for teaching.

Our research depends on teachers' stories about mathematics, particularly their romantic stories. How they came to love math, or hate it, and in some cases, how an old passion was sparked and re-ignited. We rely on the idea of romantic story with its ideas of overcoming difficulty and finding happiness (or wholeness) at the end of the day. We suggest that research on the dialectic relationship between teachers' beliefs and practice may be expanded to include their stories about childhood and other experiences of mathematics. As well, we look for the mathematics stories embedded or perceived by teachers in curriculum documents, in classroom practice, and in mathematics activities. Learning about, and being in tune with our aesthetic sensibilities, may in part guide and bind us to stories of mathematics and to our underlying beliefs and practice.

The stories of mathematics articulated by teachers in our study were based on personal experiences with mathematics that were aesthetically informed. This was manifested in statements such as "I LOVE math. I always have. I, like many of you, had many problem-solving car trips. I still get excited when I see a licence plate that I can make ten with (using any means)." Note the teacher's verbal expression of delight and the use of capital letters to convey her emphasis. Teachers appear to have been affected by the online course experiences with mental arithmetic in conjunction with the journal article readings. As their personal views and beliefs were enlarged some teachers interpreted curriculum through 'new spectacles'. These new insights into mathematics and mathematics teaching were aesthetically informed and story-based. The interplay between the various stories that were available in the online course is a first step in incorporating new--hopefully romantic--plots.