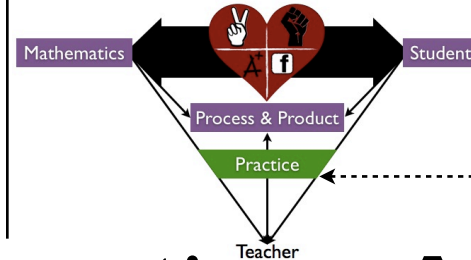


Teaching Mathematics as Agape: Articulating an Ideal Relationship

The Abstract

The realm of mathematics education has a few positions that most would not argue with: 1) mathematical practices are necessary for access to academic and economic opportunities and 2) not all students are given an equal chance at learning those practices (Diversity in Mathematics Education, 2007). Given the importance of providing students with access to the common (Callan, 1995) property of mathematical practices, and the influential role mathematics educators can have in promoting or denying access (Berry, 2008), the topic for study is how to teach mathematics more equitably. To organize and examine approaches to teach mathematics more equitably, agape (pronounced ä'gä,pä), or "unconditional love", is situated within a classroom community of practice (Lave & Wenger, 1991), to construct *teaching mathematics as agape*. *Teaching mathematics as agape* is partitioned into four facets (functional, communal, critical, and inspirational) that are defined and necessitated through the literature, and then studied through the teaching practice of the researcher.

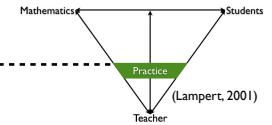
The Unified Framework



The Universal Design Process



The Problem Space of Teaching



What does Teaching Mathematics as Agape look like?

Or, what does it look like to promote a beneficial relationship between students and mathematics?

Relationship is Inspirational

To have a relationship with mathematics that is inspirational means students work with mathematics to vision and move toward a better world (Gutiérrez, 2007; Gutstein, 2006; North, 2009).

Relationship is Functional

To have a relationship with mathematics that is functional means students work with mathematics to achieve success as defined by society (Frankenstein, 1990; Gutiérrez, 2007; Gutstein, 2006; Ladson-Billings, 1994; Moses & Cobb, 2001).



Relationship is Critical

To have a relationship with mathematics that is critical means students work with mathematics to analyze and question the world (Frankenstein, 1990; Gutiérrez, 2007; Gutstein, 2006; Ladson-Billings, 1994).

Relationship is Communal

To have a relationship with mathematics that is communal means students work with mathematics in and with the contexts and practices of the students and their communities (Gonzales, Moll, & Amanti, 2005; Gutiérrez, 2007; Gutstein, 2006; Ladson-Billings, 1994; Moses & Cobb, 2001; Udvari-Solner, Thousand, & Villa, 2005).

The Problem

- Mathematics** Necessary for opportunities and not all students have access (DiME, 2007).
- Equity Pedagogies** Many ways to attempt to provide access: Teaching Mathematics for Social Justice (Gutstein, 2006), Culturally Relevant Pedagogy (Ladson-Billings, 1994), Inclusive Education (Udvari-Solner, Thousand, & Villa, 2005), etc.
- Guiding Principle** Agape, or unconditional love, as a guiding principle for organizing, examining, and enacting equitable mathematics pedagogy

The Methods

- Self Study** One high school class, one semester, everyday
- Setting** Rural high school, *Standards*-based curriculum
- Participants** Teacher/researcher, students, cooperating teacher
- Data** Student work, teacher journal, curriculum analysis
- Analysis** Holistic and Provisional coding (Saldaña, 2009)

The Findings

- Learning as Relationship** Changes the implementation and interpretation of products and processes within the mathematics classroom
- Turning** Practice of teaching mathematics of agape. Instances of struggle being "turned" into ways to promote (rather than obstruct) the relationship.