

DEVELOPING CARING AND SOCIO-POLITICALLY AWARE BEGINNING TEACHERS OF MATHEMATICS

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Given the diverse world in which we live and the myriad factors that impact the lives of students, prospective secondary mathematics teachers need to 1) understand what it means to achieve equity, access, and empowerment in a mathematics classroom; 2) examine barriers related to student engagement and achievement; 3) develop equitable pedagogical strategies; 4) examine their beliefs about students from different race /ethnicity, socio-economic status, gender, ability; and sociolinguistics groups and confront negative beliefs; and develop an advocacy stance (Strutchens, 2000; National Council of Teachers of Mathematics, 2014; Association of Mathematics Teacher Educators, 2017).

Teacher candidates need to think about the meaning of equity from different perspectives. They should understand that “equity does not mean that every student should receive identical instruction; instead, it demands that reasonable and appropriate accommodations be made as needed to promote access and attainment for all students” (NCTM 2000, p. 12). Equity means “being unable to predict students’ mathematics achievement and participation based solely upon characteristics such as race, class, ethnicity, sex, beliefs, and proficiency in the dominant language” (Gutiérrez, 2007, p. 41). Also, according to a joint position statement of the National Council of Supervisors of Mathematics and TODOS (2016), “a social justice stance requires a systemic approach that includes fair and equitable teaching practices, high expectations for all students, access to rich, rigorous, and relevant mathematics, and strong family/community relationships to promote positive mathematics learning and achievement. Equally important, a social justice stance interrogates and challenges the roles power, privilege, and oppression play in the current unjust system of mathematics education—and in society as a whole (p. 1).”

These conceptions of equity are made concrete to teacher candidates when they actually experience equitable pedagogy as students in their methods classes and then practice implementing equitable pedagogy in their field experiences (Conway, Strutchens, Kenney, & Martin, 2018). In this session, a variety of strategies, vignettes, cases, videos, and other tools which are used in a secondary mathematics teacher education program to help teachers develop equitable pedagogy are shared. For example, in the middle school methods course, student cases (Berry, 2008; Chval & Davis, 2008; Aguirre, Mayfield-Ingrams, & Martin, 2013) are used to discuss students’ mathematics identities. Moreover, student video cases are used to help prospective teachers examine micromessages and the impact that these messages have on students’ beliefs in themselves.

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