Gender Inequities in Science Education: Contributions from Recent Sociocultural Research in Science Education

Nancy W. Brickhouse, Professor University of Delaware Plenary paper for the Conference epiSTEME-2 Mumbai, India Feb. 2007

Scholarship on gender (in)equities in the 1990s suggested that in order to bring more girls into science, school science should be better connected to students' ideas and focused on developing their ideas toward more scientific understandings. If we focused less on having students repeat the ideas of the experts and more on developing students' ideas in ways that made sense to them, then we could make science more inviting to a broader range of students. Since this time, considerable sociocultural research has been carried out that challenge, reinforce, or extend these understandings. These studies suggest that curricular changes alone may not have much impact if cultural expectations regarding what the curriculum is supposed to do are not also challenged and alternatives constructed and accepted. Girls are not necessarily more attracted to science that is taught in ways that emphasize the usefulness of science and its connection to their everyday lives. Furthermore, school achievement is often insufficient for girls to identify with science. Understanding how girls perform identities outside the constrained context of schooling is also critical. We need to know more about girls who choose to do science when it is not required and the ways in which cultural features of science-related communities influence the choices girls make.