(RE)PRODUCING GOOD SCIENCE STUDENTS: GIRLS' PARTICIPATION IN HIGH SCHOOL PHYSICS

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ABSTRACT
In this ethnographic study, the author describes the meanings of science and science student in a physics classroom in an upper-middle-class high school and the ways girls participated within these meanings. The classroom practices reproduced prototypical meanings of science (as authoritative) and science student (as "dutiful"). The results highlight girls' embrace of prototypical school science. Yet at the end of the school year, the girls did not consider themselves "science people," nor did they want to pursue physics further. The author's interpretation of these results takes seriously girls' agency in producing the meaning of the physics class (as a way to polish one's transcript) and draws attention to the promoted identities (prototypical good student identities) in the classroom. The author argues that students' agency in resisting or accepting the practices, identities, and knowledge of school science is worth understanding for the improvement of science education.
(Re)producing good science students: Girls' participation in high school physics. Journal of Women and Minorities in Science and Engineering, 9(1), 17-34. Carlone, H.B. & Johnson, A. (2007). Gender ratios in high school science departments: The effect of percent female faculty on multiple dimensions of students' science identities. Journal of Research in Science Teaching, 44(7), 980-1009. Hay, K.E. & Barab, S.A. (2001). With relatively few high schoolers taking physics, few go on to major in physics in college, which limits the supply of physics teachers, which, in turn, limits the number of students who can take a physics course in high school. The problem is especially acute in high schools that serve predominantly low-income students and large black and Latino populations. The American Institute of Physics study found that a majority of the schools where physics isn't offered at all are attended primarily by students of “low socioeconomic status,” and that black and Latino students are far less likely to t