

How Socially Deviant and Socially Agreeing Stereotypes of Computer Scientists Contribute to Middle School Boys' Identity and Career Intentions

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Like other STEM fields, computer science (CS) lacks representation of minority groups both in the number of bachelor's degrees obtained and the number of individuals in the CS workforce. Out-of-school CS programs are often designed with the intent to inspire young people to pursue careers in CS. Much of this programming focuses on developing student interest in CS and CS careers. Nevertheless, it is not well understood how the stereotypes that children hold about computer scientists contribute to CS interest and career choice. In this study we set out to examine the complex relationships between CS interest, held stereotypes, and CS career choice. We surveyed minority male participants in an after-school CS program (N = 91). We tested structural equation models and confirmed that CS interest and socially divergent stereotypes of computer scientists play unique and contrary roles in young boys' career decision-making process. The model with best fit suggests informal CS programs should include curriculum to disperse participants' socially divergent stereotypes about computer scientists rather than targeting CS interest alone, particularly if a goal is to inspire diverse young people to pursue careers in CS.