

World Education Research Association's International Research Network
School Segregation and Education Marketization

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Dr. Roslyn Arlin Mickelson (University of North Carolina at Charlotte, USA)
Racially Diverse Educational Pathways and STEM College Outcomes:
A Quantitative Analysis of Students in North Carolina

*** Recording available on YouTube: <https://youtu.be/XsZNF-eX2B4> ***

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Dr. Roslyn Arlin Mickelson is Chancellor's Professor and Professor of Sociology, Public Policy, and Women & Gender Studies at the University of North Carolina at Charlotte. She taught public high school social studies in Southern California for nine years. Mickelson received her Ph.D. from the University of California, Los Angeles in 1984. Prior to coming to the University of North Carolina at Charlotte in 1985, she completed a postdoctoral fellowship in public policy at the University of Michigan, Ann Arbor. Since the onset of her higher education academic career, Mickelson has examined the ways that race, ethnicity, gender, and social class shape the social context of educational opportunities, teaching and learning processes, and K-16 student outcomes. Currently, she and her research colleagues are examining the individual characteristics, family

background, and school organizational factors that foster or impede underrepresented college students' success in attaining STEM degrees.

Abstract

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This study investigates whether attending a sequence of racially diverse schools predicts STEM college outcomes. Such a relationship is important because increasingly the population of school-aged children is likely to attend racially segregated K-12 schools and colleges. STEM degrees position college graduates to enter interesting, high paying, prestigious, and socially useful occupations that offer opportunities for social mobility. Moreover, there is a projected shortage of people trained for future STEM workforce demands. To explore the possible relationship between attending a sequence of diverse schools and STEM success, we use a unique panel dataset (N=14,980) of University of North Carolina system graduates. Our main analytical approach is multilevel modeling to examine the relationship between attending a sequence of racially diverse educational institutions and the odds of declaring and/or graduating with a STEM major. We find evidence that students who attended a diverse sequence of schools are more likely to declare and graduate with a STEM major than those who did not. This is true for Black, White, and Asian college graduates. Our results from the small samples of Latinx and Native American graduates were inconclusive. We frame our results with theory of cumulative advantage. We offer science education policy reform recommendations that include fostering greater access to diverse K-12 schools and colleges. We conclude that narrowing the race/ethnic/gender/SES disparities in STEM graduation rates through greater access to diverse education is important for individual and societal advancement and is an issue of distributive justice.