

## **Bridging Multiple Worlds: How African American and Latino Youth in Academic Outreach Programs Navigate Math Pathways to College**

**Catherine R. Cooper**

*University of California, Santa Cruz*

**Robert G. Cooper, Jr.**

*San Jose State University*

**Margarita Azmitia and Gabriela Chavira**

*University of California, Santa Cruz*

**Yvette Gullatt**

*University of California, Berkeley*

*Universities have launched outreach programs to enhance their ethnic diversity, yet little developmental research examines students' pathways to college. This study compares capital models (highlighting family background) with challenge models (highlighting students' challenges and resources) in predicting pathways to college. The Bridging Multiple Worlds Model frames this longitudinal study of 120 African American and Latino youth in outreach programs. We examined students' family backgrounds; challenges and resources across family, school, peer, and community worlds; and high school math pathways as predictors of college eligibility and enrollment. African American students more typically had U. S. born, college-educated parents, and Latino students, immigrant parents with high school education or less. Second, students saw parents as greater resources than teachers, siblings, and themselves; peers and teachers were their greatest challenges. Youth distinguished resources and challenges more by their source than form. Third, high school math and English grades rose and fell together, with early math grades predicting college eligibility. Five math pathways emerged: steady, slowly declining, rapidly declining, increasing, and "back on track" toward college, but pathways did not always predict college choices. Fourth, although family background predicted few outcomes, parents' and teachers' help and siblings' challenges predicted grades, eligibility, and admission to prestigious colleges. Findings highlight both capital and challenge models for science, policy, and programs involving diversity and equity.*

---

This investigation was supported by a Grant ### to C. R. Cooper, J. F. Jackson, and M. Azmitia from the University of California Linguistic Minority Research Institute. The project was also supported by the Institute of Human Development at the University of California, Berkeley; the Bilingual Research Center and the National Center for Research in Cultural Diversity and Second Language Learning at the University of California, Santa Cruz; and the John D. and Catherine T. MacArthur Foundation Research Network on Successful Pathways through Middle Childhood.

We thank our colleague Jacquelyne F. Jackson; our research staff, including Edward M. Lopez, Nora Dunbar, July Figueroa, Zena Mello, Teri Henson, Edna Rosales, Christine Smallwood, Jayme Barrett, David Cooper, Renee Ferigo Marshall, Lisa Fonseca, Conrad Amba, Christiane Gauthier, Karen Godfredsen-Gomez, Alma Lopez, Mary Lucero, Laura Mayorga, Kate Perry, and Jennifer Selke; consultants Diana Baumrind and William Meredith; and colleagues Ron Gallimore, Patricia Gándara, Bud Mehan, and Barbara Rogoff. We also thank the students, families, and outreach program leadership, including Ben Tucker, Liz Chavez, and Tara Henry.

Requests for reprints should be sent to C. R. Cooper, Department of Psychology, Social Sciences 2, University of California, Santa Cruz, CA 95064. E-mail: ccooper@cats.ucsc.edu

In the United States, as each cohort of students moves through secondary school to college, the percentage of African American and Latino adolescents shrinks, a pattern that has become known as the *academic pipeline problem* (Gándara, Larson, Mehan, & Rumberger, 1998; Geiser, 1996). A key indicator of college eligibility, revealed in studies of nationally representative samples, is the sequence of math classes students take in high school. Asian American students take more advanced college-preparatory math than European American students, and both groups take more college-prep math than African American or Latino students (Catsambis, 1994; Davenport, Davidson, Kuang, Ding, Kim, & Kwak, 1998). Research is moving beyond ethnic group differences to map variation within groups and similarities across them in conditions that enhance college and career choices of ethnically diverse students (Gándara, 1995).

