

RESEARCH ROUNDUP

EXPLORING THE LINK BETWEEN MATH AND CIVIC ENGAGEMENT

New exploratory research by Roderick Watts and Omar Guessous of Georgia State University investigates the link between math and civic engagement. The research is based on an evaluation of the Young People's Project (YPP)—a national program that recruits, trains, and deploys high school and college Math Literacy Workers for mentoring middle and elementary school students. For more on the Young People's Project see <http://thealgebraproject.org/>.

The program is based on a model of education developed during the Civil Rights movement that takes a holistic view of youth development. The goal of the YPP is to prepare young people for adult life and citizenship, as well as for their work as peer math educators. According to Dr. Watts, "One of the goals of our study was to better understand how the political and historical elements of the YPP influence the young people who participate, over and above whatever their experiences with the math education and workshops contribute." The findings from the research are contained in the CIRCLE Working Paper (#50) "Civil Rights Activists in the Information Age: The Development of Math Literacy Workers in the Young People's Project."

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RESEARCH DESIGN

The research was exploratory in nature, focusing on the Chicago branch of YPP. Dr. Watts notes, "Because of the limitations inherent in cross-sectional research and those associated with data collection and program operations, we view this study as exploratory, yet highly promising." The study attempted to examine whether "YPP contributed to the math, academic, sociopolitical, ethnoracial identity, and positive youth development of its participants." The researchers used a cross-sectional design, comparing YPP participants, peers of YPP participants, and a comparison group of students who participated in a different after-school program. Participants completed surveys at various points in time from November 2004 through August 2005.

MATH IS POWER

The research found mixed results concerning the effects of the YPP program on the outcomes of interest (math and academic confidence, sociopolitical development, ethnoracial identity and positive youth development). Some findings were disappointing. For example, veteran students (students who had completed at least one YPP program session before the research began) reported that they were actually *less* likely to use math in the future than their novice counterparts (students who were surveyed when they first entered the YPP program).

One promising finding from the research is that it appears many young people involved in the YPP program view "math as power." Analysis showed that there was a relationship between the participants' attitudes towards math and their own sociopolitical development. For example, students who reported they were confident in their math ability were also more likely to feel they could make a difference in their communities. On the other hand, those with a lot of self-doubt about their math abilities exhibited lower levels of commitment and involvement in community and political activities. Dr. Watts notes, "The relationship between sociopolitical development and math confidence was consistently stronger among YPP participants, as compared to the control group." This suggests that YPP contributed to a link between math knowledge and the feeling of empowerment necessary for social or political action. Looking back to the Freedom Schools of the civil rights era, the authors speculated that ". . . participants arrived there with a desire for liberation and gained literacy in the process, whereas YPP youth came to their program interested in math and their community. Soon after, they connected this to a sense of agency and a commitment to civic engagement."

The authors caution that while it is exciting to find a link between academic attitudes and a sense of political and social efficacy, more research needs to be done on the subject. They note, "What warrants more investigation is whether both math and sociopolitical development variables are a function of sense of agency [the feeling that one can make a difference] or whether civic engagement and sociopolitical development play a causal role in sense of agency, and perhaps intellectual and academic development as well." ❖