The Influence of School Contexts on Acculturation and Math Competence among Mexican-American Children: Implications for Policy Changes
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Abstract
Considerable attention has been paid to the educational fate of Latino children and youth due to mounting evidence that their educational progress has been stagnant. Using a sample of 193 Mexican-American children, this study investigated the direct and indirect effects of school contexts on acculturation and math competence. The study findings indicated that Mexican-American children who received bilingual/bicultural education fared well educationally and psychologically. How Mexican-American children interact with their surroundings, this study shows, is the key element in understanding their acculturation, psychological well-being, and educational achievement.

Background
- Substantial evidence suggests that Latino youth are one of the nation’s most educationally disadvantaged groups.
- Longitudinal data suggests that Latino youth have had the highest dropout rate for the last two decades compared to other ethnic/racial groups (Current Population Survey, 1994–2007).
- Some states (e.g., California, Connecticut and Rhode Island) have had larger achievement gaps than the national gap in both math and reading achievement, while other states have fared better (e.g., Florida) (Hemphill, Vanman, & Rahman, 2011).
- Thirty-five percent of all Latino fourth-graders were identified as a language minority (U.S. Department of Education, 2011).
- Latino children have a great likelihood of suffering cultural conflict (Pew Hispanic Center, 2009).

Educational Achievement Gaps

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<th>Table 1</th>
<th>Math achievement score gaps between Latino and White public school students in grade 4, 1992–2009 (U.S. Department of Education, 2011)</th>
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<th>Table 2</th>
<th>Reading achievement score gaps between Latino and White public school students in grade 4, 1992–2009 (U.S. Department of Education, 2011)</th>
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The Influence of Education Policy on Acculturation and Achievement

- Eleven percent of Latino children are foreign-born, and a majority (52%) of Latino children are second generation, meaning that they are the U.S.-born offspring of at least one foreign-born parent (U.S. Census Bureau, 2010).
- Latino students reported a higher level of acculturative stress and perceived discrimination than other racial/ethic student groups, and such psychological stress negatively influenced Latino students’ academic performance (Huynh & Fuligni, 2008).

Research Question and Methods

- Research question: How different aspects of education policies affect acculturation, acculturative stress, and educational achievement?
- A secondary data set was obtained from a prior study by Lopez (2009) that surveyed 193 third-to fifth-grade students of Mexican descent in Texas bilingual schools (n = 130) and Arizona English immersion schools (n = 63).
- Measures: Math Competence Scale, General Social Stress and Acculturative Stress Subscales of the SAFE-C (The Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale for Children). Things About Me (TAM) index to measure Mexican cultural patterns.
- Demographics: gender, child’s language use at home, and parental residence time in the U.S.

Research Findings

- The model fits the data well. S-Bd2 (17, N=193) = 5.96, p=.91, CFI = .95 and RMSEA = .05.
- Arizona English Immersion decreased the levels of math competence and Mexican patterns and increased acculturative stress.
- Intervening paths were tested by using EQS 6.1 and SPSS macro with 1000 bootstrapping samples drawn:
  - There was a significant intervening path from policy → acculturative stress → general social stress to math competence (95% CI: [.10, .01])
  - There was a significant intervening path from time in the U.S. → acculturative stress → general social stress to math competence (95% CI [.001, .006]).

Implications

- Bilingual education appears to create a positive educational outcomes for Mexican-American children because the bilingual education pedagogy is compatible with their home and segregated school environments.
- Policy makers, teachers, and school social workers need to make concerted efforts to build an environmentally and developmentally appropriate school context, considering the potential impact of English-only instruction and acculturative stress.