
Modeling a Multilevel Perspective on Latino Students' College Participation

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Problem

- U.S. economic advantage – higher educational attainment (Goldin & Katz, 2008)
- However, other countries now surpass U.S. in overall educational attainment
- Educational attainment must be maintained or increased (College Board, 2008)

Background

- Latinos largest non-White, youngest, fastest-growing population
- Lower educational attainment and college-going rates
- Independent negative effect of being Latino on college enrollment
- Limited research on students who do not attend college or who attend less selective colleges

Conceptual Framework

- Three levels of college access (Perna & Thomas, 2008)
 - 1) Individual (demographic, family, preparation)
 - 2) High school (structural, cultural, teachers)
 - 3) Social, historical, political context
(state policies, economic conditions, history)
- Application of multilevel statistical framework to test three levels' influence on Latinos' college enrollment (participation)

Student-, School-level data

- Educational Longitudinal Study: 2002
- Sophomores in 2002, follow-up in 2004 and 2006
- Student, parent, teacher, administrator
- Demographics, family, academic, school experiences, postsecondary
- School demographics, academic/social environment, teacher characteristics

State-Level Data

- Digest of Education
- US Census
- NASSGAP Annual Report
- Sample: 1,570 students
 - 200 schools
 - 15 states

Analysis

- Nested nature of data: students, schools, states
- Three-level Hierarchical Generalized Linear Modeling (HGLM)
- Binary dependent variable = whether or not students enrolled in college
- Studies tend to examine school *or* student-level effects, but not both (Perna & Titus, 2004, 2005)

Conceptual Model: Levels and Independent Variables

INDIVIDUAL

Gender

Ethnicity

Immigration status

Family income

Parental education

Parent's educational expectations

Parental involvement

Educational expectations

Math course taking

SCHOOL

Urbanicity

% Free lunch

Student: teacher ratio

School size

Learning Hindrance

Absenteeism

Percent going to 4 yr college

Mean math score

Mean teachers' expectations

Proportion certified teachers

Teachers' lowest salary

STATE

Proportion of direct appropriations to higher education

Amount of need-based financial aid per student

State average teacher salary

State exit exam

Proportion of teachers with graduate degree

Unemployment rate

Proportion of children below poverty level

Percent of state population with bachelor's degree

Student-level Results

Female

Ethnicity (Mexican, Puerto Rican, Cuban, Central/South)

Immigrant Generational Status (first-generation)

Higher Income

Higher Parental Education (continuing-generation)

Higher Parental Involvement (composite measure)

Higher Parental Expectations

Higher Student Expectations

Advanced Math Coursetaking

School-level Results

Urbanicity (Urban, Suburban, Rural)

% Free Lunch

Student-teacher ratio

School Size

Learning Hindrance

Absenteeism

% Graduates in College

Mean Math Score

Mean Level Teacher's Expectation

% Certified Teachers

Lowest Teacher Salary

State-level Results

Proportion direct-appropriations to higher education

Proportion need-based aid per student

Average teacher's salary

Exit Exam

Proportion teachers with graduate degrees

Unemployment Rate

Proportion Children below Poverty Level

Proportion BA degree holder

Student-level Implications

Gender – psychosocial, family, macro-level

First-gen immigrants - cultural capital, undocumented

Income – financial aid, information

Parental expectations & involvement – information,
encouragement

Student expectations – encouragement

Math course taking – information, resources

School-level Implications

Academic/social/cultural environment

Absenteeism – policies, incentives

% Graduates in college – socialization, outreach

Math performance – peer group, resources

General Implications

- Most significant variables at student level
- Fewer school and state level variables were significant than anticipated
- Speculating why few school and state level variables were significant

Limitations

- Limited proxies for college-going culture, cultural and social capital
- Limited comparable data on states
- Model only measured direct effects

Conclusions

- Departure point: quantitative test of holistic conceptual model of college access
- Important role of gender
- Family involvement
- Financial aid, Information about college planning
- College preparatory courses

Conclusions (con't)

- School norms
- Academic and social climate
- Commitment to school attendance
- Peer group/outreach (students, families)
- High academic expectations

Future Research

Racial/ethnic group comparisons

Indirect effects (hidden relationships) – multilevel models employing Structural Equation Modeling

Other state-level variables

Web Site for Paper

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