Predicting Successful Remediation among Latina/o Students

2014 AIR Forum Presentation

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Need for Study

- Need to increase completion rates for Latino/a students is crucial for future workforce and societal needs
- Among other structural, economic, and cultural barriers, Latino/as are overrepresented in developmental courses.
  - One contributing factor: Lack of access to advanced mathematics courses in HS
- Developmental education are courses and support services provided to underprepared students to prepare them for college-level coursework.

Holes in Existing Literature

- More literature is needed on the role of remediation, particularly in mathematics, in shaping Latino/a students' postsecondary choices and outcomes.
- Little empirical research done to measure or predict successful math remediation or to model specific characteristics and experiences associated with successful remediation of Latino/a students.

Research Questions

1. What characteristics, behaviors and experiences describe Latina/o students who enroll in developmental mathematics courses?

2. What socio-demographic characteristics, pre-college experiences, academic goals, environmental pull-factors, college experiences, and institutional characteristics predict successful remediation among Latina/o students?

Method

- Data from BPS: 04/09, PETS, and IPEDS
- 640 Latina/o students, 290 institutions
- Measures of successful remediation as DVs:
  1. Earning a passing grade in all developmental math courses taken
  2. Enrolling in college-level math within 6 years
  3. Earning a passing grade in college-level math within 6 years

Model and Analysis

- **Conceptual Model**

  (1) socio-demographic and pre-college variables, (2) degree expectations, (3) academic experiences and pull-factors, and (4) institutional characteristics

- **Analysis**

  Descriptive statistics and hierarchical generalized linear modeling (HGLM)

Descriptive Findings

- 61% passed developmental math, 54% enrolled in college-level math, and 46% earned college-level math credit
- Majority of developmental students were first-generation (77%)
- 26% received no financial aid
- 44% enrolled in 1 course, 23% enrolled in 2, and 33% enrolled in 3 or more DE courses
- 68% began at a community college

HGLM Findings

- **Variables predicting remedial success**
  - ✓ Mixed heritage or other Latino origin (-)
  - ✓ Developmental math need (-)
  - ✓ Not working (-)
  - ✓ Receiving financial aid (+)
  - ✓ Academic support (+)
  - ✓ Attending a 4-year institution (-)
  - ✓ Attending a public institution (+)
  - ✓ Percentage of Latina/o students (+)
  - ✓ %of student body who received aid (-)

Discussion

- Institutional factors related to remedial math success for Latina/o students:
  - Academic support from faculty and peers.
  - Percentage of Latina/os on campus.
- Behaviors and experiences of Latina/o remedial math students:
  - Not all who successfully remediate go on to enroll in college-level math.
  - More than half enroll in more than one developmental math class.

Implications for Research

- There is a need to understand why these factors were found to have a negative relationship with successful remediation:
  - mixed or "other" Latina/o
  - not working
  - attending a four-year and/or private institution

Implications for Policy & Practice

- Financial aid needs to be available for Latina/os in remedial math
- Academic support must be provided to Latina/o remedial math students
  - In-classroom and out-of-classroom
  - Involving faculty, staff, and students
- Efforts must be made to provide support to Latina/os who place into lowest levels of math remediation
  - Targeting outreach and services
  - Considering alternative approaches to remediation

Discussion Questions

1. In what ways are the findings relevant or potentially useful to your institution/state?
2. What spaces or opportunities for academic support are available to Latina/o students on your campus? How does your institution encourage students to utilize academic support services?
3. What can institutions do to reduce the gap between students who complete developmental math and those who enroll in college-level math?

Discussion Questions

4. Where should we go from here? What information is needed to better support Latina/o students enrolled in developmental math courses?
5. While understanding that faculty members across institutional types have a variety of demands on their time, how can we highlight the importance of student support and encourage faculty to foster supportive relationships with their students?

Discussion Questions

6. What form do remedial math classes at your institution take? Are any accelerated or other innovative options available? If so, what do they look like? Do they seem to be working?
7. If more Latina/o students succeeded in developmental math, how would this impact your institution? What would be the impact if Latina/o students are left to fail in developmental math?

Discussion Questions

8. How can faculty, staff, and students be involved in supporting Latina/o developmental math students? Do any successful models exist at your institution?

Thank you

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