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The Impact of Service-Learning on Degree Completion

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The Impact of Service-Learning on Degree Completion

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Graduation Crisis Nationwide

50% of students who begin college in the U.S. as freshmen DO NOT complete a bachelor's degree in 6 years (Nelson Laird, Chen, & Kuh, 2008; Tinto, 2003).

Other Industrialized Countries
- Higher percentage of students who graduate
- Higher percentage of young adults with degrees

PRESSURE IN THE U.S. TO COMPETE GLOBALLY

National push to increase graduation rates
Institutional efforts to understand practices that positively affect the likelihood of graduating

Kelly Lockeman & Lynn Pelco
Virginia Commonwealth University
Research Questions

1. How do students who complete service-learning classes differ from students who do not participate in service-learning classes?

2. Is service-learning class participation a significant predictor for degree completion?

Population

- Large public urban research university
- Total enrollment = 29,349 (Fall 2005)
  - 18,691 degree-seeking undergraduates
    - 59% White, non-Hispanic
    - 40% Male
    - 35% Receive need-based aid
- Institutional mission includes a focus on community engagement
Service-Learning at the University

- Service-learning initiated in 2001
- Courses in many disciplines, but the majority are:
  - Upper-level undergraduate
  - Arts, Humanities, Social Sciences

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<th>Course Level</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
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<td>89</td>
<td>94</td>
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<td>105</td>
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</tbody>
</table>

Methods and Analysis

- Quantitative, nonexperimental, *ex post facto* design, secondary data analysis using existing university data
- Sample: Full-time freshmen who matriculated Fall 2005 (*N* = 3,458). 24% took at least one service-learning course
- Six-year longitudinal analysis (Fall 2005 – Summer 2011):
  - Descriptive comparisons between service-learning (SL) and non-SL students for complete cohort
  - Discrete-time survival analysis with SL participation as a *time varying predictor* for degree completion among students retained to the third year (*n* = 2,295)
Data and Variables

- Demographic and academic characteristics at admission (gender, race/ethnicity, high school GPA, and SAT scores)
- Courses completed each semester of college enrollment and which courses were designated service-learning
- Academic progress indicators (credits earned and GPA) for each semester
- Financial aid data (need, aid, and Pell grant status) for each semester
- Degree earned and date awarded

Results

Distribution of Students

- 24% Took at least one SL course while enrolled
- 76% Took NO service-learning courses at all
Similarities: SL & Non-SL Students

Similar pre-college academic credentials:

- No significant difference in average SAT scores (verbal or mathematics)
- Average high school GPA for SL students was higher than non-SL students, but the effect size for the difference was small

Differences: SL & Non-SL Students

- Demographics: SL students more likely to be...
  - Female
  - Black/African American or Asian
  - Financially needy
  - Recipients of aid, particularly Pell grant support

- Academic progress: SL students had...
  - Higher cumulative GPA in college
  - Earned more credit hours per year
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The Crucial Difference

Graduation Rates

Overall Graduation Rate: 54%

73% 48%

SL Students Non-SL Students

Survival Analysis Model Tested

Hazard Function

Time-Varying Predictors

\( X_{u1} = \text{Amount of Financial Need in Year } n \) (in Dollars)

\( X_{u2} = \text{Amount of Financial Aid Awarded in Year } n \)

\( X_{u3} = \text{Number of semesters of Pell support in Year } n \)

\( X_{u4} = \text{Number of Service-Learning Credits Earned during Year } n \)

\( X_{u5} = \text{Non-SL Credits Earned during Year } n \)

\( X_{u6} = \text{Cumulative GPA at the end of Year } n \)
Conclusions

- Differences in graduation rates between SL and non-SL students are dramatic and significant.

- Survival analysis demonstrated the independent and significant statistical contribution of completing service-learning coursework on subsequent college graduation.

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