METHODS AND MODELS FOR PROMOTING STUDENT PERSISTENCE:
THE EMERGING NATIONAL PICTURE

AIR Annual Forum, 2010
Grappling With Questions

The limits of current theories and research on student persistence provide the backdrop.

- How and to what extent do institutions organize themselves to promote student persistence?

- What policies and practices do institutions enact to try to enhance student persistence?
Focal Points of Our Inquiry: Actionable Implications

- Understanding the role of campus policies and practices
- Identifying actionable practices and policies
- Providing useful benchmarks of normative and effective policies and practices
Utility of Benchmarking

- The empirical base for understanding how practices and policies affect student persistence is still developing.
- In the meantime, comparative data are an important resource for institutions
  - Recommendations from institutional policy-makers
Survey of
Institutional Retention Practices

2009: Survey of 4-year institutions nation wide

- Web-based administration
  - 1484 institutions surveyed
  - Response rate of 30% (ca. 441 responding institutions)

- Findings focus on:
  - Coordination of Retention Efforts
  - Actionable Institutional Policies/Practices
    - Orientation
    - Academic Advising
    - Early Warning
    - Faculty-Student Interaction
    - Research and Assessment
Institutional Characteristics

- Mean scores on select variables
  - Fall-to-fall retention rate for first time 1st year students 75.73% (national mean =72.65%)
  - 40% of the institutions have a requirement for full-time, first-time degree/certificate-seeking students to live on campus

- Median revenue figures
  - Instructional expenses per FTE $5,802
  - Tuition and fee revenues $4,846/per FTE
  - Total revenue $49,588,399

- Mean SAT (Critical Reading & Math) scores:
  - 978 (25th percentile)
  - 1196 (75th percentile)
Coordination of Retention Efforts: Structures in Place

- 75% reported having a retention coordinator
  - Based on two definitions
    - “an administrator charged with coordinating efforts”
    - “an administrator acting as a central resource”
    - Most reported that the position entails both functions
  - Mean FTE reported for the position was .35

- 62% reported having a retention committee

- 27% reported coordinating retention program to “a great extent”
Percentage of an FTE Devoted to the “Retention Coordinator” Role
65% reported that more than three quarters of first-year students participated in entire orientation program.

- 76% reported that more than half participated in entire orientation program.

40% reported that their general orientation programs for entering first-year students last 2 days or less.
Policies for Early Warning

- 60% report they collect **mid-term grade** information for first-year students
- 58% report they ask faculty to complete **Early Alert** forms for first-year students
- 45% report they regularly flag specific courses with high percentages of **Ds, Fs, or Withdrawals**
- 39% report they offer voluntary weekly sessions to deepen student learning in courses with traditionally high D, F, & W rates.
Policies for Faculty Interaction

- 56% report that more than half of 100-level classes were taught by full-time faculty

- 54% report average class size for courses primarily taken by 1st year students is between 1-30 students

However...

- 70% report that incentives for full-time faculty to teach first-year classes were non-existent or small
Academic Advising

Advising Practices

- 69% require first-year students to meet with an academic advisor at least once per term

- 78% report that full-time faculty act as academic advisors to undergraduates

Advising Roles

- 52% estimate that more than three-quarters of their first-year students were advised by full-time faculty

- 28% estimate that more than three-quarters of first-year students were advised by professional advisors
Proportion of 1st Year Students Advised by Full-Time Faculty in the 2007-2008
Summary of Descriptive Findings

- Institutions are, in fact, organizing for retention. However,…

- Resources (e.g. FTE, funding and programming authority) devoted to the enterprise may not be equal to the task.

  - Differences in structures across institutional type:
    - Research institutions rely on professional advisors more than faculty for advising first-year students
    - Research institutions show a lower FTE for retention coordinator positions, and emphasize committee efforts vs stronger coordination
Inferential analysis: Part I Calculating Predicted Retention Rate

- An institution's retention rate may be a “misleading indicator of its capacity to retain students” (Astin, 1997, p. 648)

- More than half of the variance in institutional retention rates can be explained by differences in student background characteristics rather than by institutional practices (Astin, 1997)
Inferential analysis: Part I Calculating Predicted Retention Rate (continued)

- **Solution:**
  - Calculate an expected retention rate for each institution in the sample based on the characteristics of an institution's entering students.
  - Compare the expected retention rate with the actual retention rate (Astin, 1997; Engle & O’Brien, 2007; Muraskin & Lee, 2004).
Placing results in context: Method

OLS model variables:
- Institution Type (bacc., master’s, research)
- % minority students
- SAT 75th percentile score
- % receiving federal grant aid
- % of students 25 and older

- Building on analyses conducted by the Pell Institute (Muraskin & Lee, 2004; Engle & O’Brien, 2007)
- Calculated predicted 1st-to-2nd-year retention rates, using OLS regression and controlling for institutional and student characteristics
- Identified institutions that had higher-than-predicted retention rates.
Equation 1:

Institution’s retention rate = $\alpha + \beta_1$ (research) + $\beta_2$ (master’s) + $\beta_3$ (% minority students) + $\beta_4$ (% receiving federal grant aid) + $\beta_5$ (% students 25 and older) + $\varepsilon$. 
Inferential analysis: Part II Logistic regression

Dependent variable: Institution's actual retention rate is higher than its predicted retention rate

- Availability of an administrator coordinating efforts to improve student success
- Authority of the retention coordinator
- Availability of credit-bearing courses specifically designed to help students adjust to college
- Communications with families
- Institution collects midterm grade information
- Institution collects attendance information at institutional level
- Requirement for first-year students to meet with an academic advisor
- Extensiveness of structures to improve retention of students of color
### Logistic Regression Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Odds ratio</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>An administrator charged with coordinating efforts to improve student success</td>
<td>0.786</td>
<td></td>
</tr>
<tr>
<td>Authority of the retention coordinator</td>
<td>1.624 **</td>
<td></td>
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<tr>
<td>Availability of credit-bearing courses specifically designed to help students adjust to college</td>
<td>1.432</td>
<td></td>
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<tr>
<td>Communications with families</td>
<td>1.005</td>
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<tr>
<td>Institution collects midterm grade information</td>
<td>1.422</td>
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<tr>
<td>Institution collects attendance information at institutional level</td>
<td>0.587</td>
<td></td>
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<tr>
<td>Requirement for first-year students to meet with an academic advisor</td>
<td>0.851</td>
<td></td>
</tr>
<tr>
<td>Extensiveness of structures to improve retention of students of color</td>
<td>1.381 *</td>
<td></td>
</tr>
</tbody>
</table>

Nagelkerke = 0.136

N = 189

**p<0.01, *p<0.05**
Discussion and Future Research

Implications for future research

- Multiple imputation of missing values
- Multinomial regression
- Two-stage modeling

- Preliminary analyses highlight issues for further exploration:
  - May illuminate the range (and limits) of what institutional practices currently influence
  - Missing data limiting the preliminary analyses
  - Conflating lower than predicted and those that are at or near predicted rates
Concluding Remarks

- Results may reflect the early stages of coordination and/or of institutional recognition that organization is needed.
  - Federal and State agencies are increasingly focused on outcomes, so the organizing trend is likely to continue.
  - Economic factors causing families to consider "value" may also contribute to the continuance of the trend.
- The need to continue analyses that contextualize student outcomes and look carefully at the role of institutional policy and practice in student retention.
- The need for longitudinal research
Reports

- Pilot Survey 2006
  - Pilot Report available at [www.collegeboard.com/retention](http://www.collegeboard.com/retention)

- Survey 2009
  - Report to be released at the College Board website in Summer 2010

- SCCESS 2-year to be administered 2010-2011
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