The Potential of Transcript-Based Placement

Terrence Willett, RP Group
A BRIEF OVERVIEW

The Student Transcript-Enhanced Placement Project (STEPS)
What Are We Trying to Do?

- Examine the value of using transcripts as part of the assessment process
- Funded by the Walter S. Johnson and Gilbert Foundations and the California Community College Chancellor’s Office with support from the California Partnership for Achieving Student Success (Cal-PASS)
- Create predictive models using Cal-PASS data to study students who had already taken community college courses
- Use models to analyze how well transcript data predicts the first English & math courses students take and how well they do in them
- Recruit colleges to do local analyses to generate campus-specific insights and trigger CCC/K-12 conversations
Related Work

• Willett, Hayward, & Dahlstrom. (2007). Leveraging the CSTs.
• English Curriculum Alignment Project (ECAP) between Grossmont College and Grossmont UHSD.
### Table 3. Spearman Rho correlation coefficients between 11th grade English CST and level of and grade in first attempted community college English course

<table>
<thead>
<tr>
<th>11th Grade English Outcome Measure</th>
<th>College Course Level</th>
<th>College Course Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Number of Students</td>
</tr>
<tr>
<td>English CST Scores</td>
<td>0.49**</td>
<td>4700</td>
</tr>
<tr>
<td>English Grade</td>
<td>0.23**</td>
<td>4700</td>
</tr>
</tbody>
</table>

**p ≤ .01  *p ≤ .05  Note: Darker cell shadings indicate stronger correlations.**

### Table 5. Example Math “Cut Score” Guide for High School Advising and Community College Placement

<table>
<thead>
<tr>
<th>11th Grade CST Score (Proficiency Level)</th>
<th>11th Grade Course Grade</th>
<th>Predicted Community College Level</th>
<th>Probability of Success</th>
<th>11th Grade High School Course Taken</th>
<th>Predicted Community College Level</th>
<th>Probability of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>375 (Proficient)</td>
<td>A</td>
<td>Pre-Calculus</td>
<td>&gt;90%</td>
<td>Pre-Calculus</td>
<td>&gt;90%</td>
<td></td>
</tr>
<tr>
<td>375</td>
<td>B</td>
<td>Pre-Calculus</td>
<td>&gt;90%</td>
<td>Pre-Calculus</td>
<td>85%</td>
<td></td>
</tr>
<tr>
<td>375</td>
<td>C</td>
<td>Transferable General Education</td>
<td>79%</td>
<td>Pre-Calculus</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>375</td>
<td>D</td>
<td>Transferable General Education</td>
<td>67%</td>
<td>Transferable General Education</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>375</td>
<td>F</td>
<td>Intermediate Algebra</td>
<td>58%</td>
<td>Transferable General Education</td>
<td>&lt;50%</td>
<td></td>
</tr>
<tr>
<td>275 (Below Basic)</td>
<td>A</td>
<td>Intermediate Algebra</td>
<td>88%</td>
<td>Transferable General Education</td>
<td>&gt;90%</td>
<td></td>
</tr>
<tr>
<td>275</td>
<td>B</td>
<td>Intermediate Algebra</td>
<td>78%</td>
<td>Transferable General Education</td>
<td>78%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Willett, Terrence; Hayward, Craig; Dahlstrom, Eden. (2008).
What Is Happening Now?

• Missing data weakened the first set of predictive models (this highlights the value of strengthening data sharing among segments)
• Some colleges are still working on their analyses
• Updated file management module and analysis scripts has been released
• Bottom line: So far, high school performance is partially predictive of college performance
Cox & Snell pseudo R-square ~ 0.35
In English, tests predict tests, grades and courses matter but vary by college.
Cox & Snell pseudo R-square ~ 0.50
In math, the tests predict tests most consistently among colleges but high school level also strongly predictive.
Cox & Snell pseudo R-square ~ 0.20
In English, grades predict grades.
Cox & Snell pseudo R-square ~ 0.20
In math, success predictors vary by college
What’s Going on Here?

CST tests for English and math are different

- English is less complex to examine as there is generally only one 11th grade CST test form and most students are taking the same types of classes

- In math, CST tests are based on the specific course you took (e.g., Algebra II, Pre-Calc) and so analyses are more complex
What’s Going on Here?

Math: It’s a question of articulation

- It’s more straightforward to articulate math than English because there is a clear sequence of courses—the question is whether we are examining the math level that students reached—\textit{that’s why high school math level is most important}

\[ a^2 + b^2 = c^2 \]
What’s Going on Here?

English: It’s a different question of articulation

• For English, there is a disconnect between the literary emphasis in high school and the expository emphasis in college—non-English high school GPA is more predictive than grades in high school English of college success, which implies that other skills are supporting positive outcomes.
What Happens Next?

- Colleges beginning to incorporate findings into policy and planning discussions
  - Logistics of managing transcripts an early concern
  - Articulation and multiple measures
- More colleges working on their analysis
- Large scale analysis underway
- New research questions have emerged about using transcripts for assessment
  - For how long are transcripts valid?
  - What is the predictive value EAP level and other tests?
  - What is the influence of student level characteristics?
Discussion

• For those of you that have reviewed transcript data, have you used this information in your placement process?
• How did you get this information?
• What could colleges do to increase their access to transcript information?
• What factors seem most important for successfully using transcripts?
• How important would it be at your institution to link shifts in course offerings with changes in assessment processes?
Find Out More

Primary Contact:
Terrence Willett, RP Group
twillett@rpgroup.org
(831) 461-4586
http://www.rpgroup.org/projects/STEPS

Team Members
All participating colleges
Andrew Fuenmayor, Long Beach City College Developer/Researcher
John Hetts, Long Beach City College Researcher
Craig Hayward, RP Researcher
Dan Lamoree, Lead RP Developer
Emily Lawrence, CalPASSplus Researcher
Nathan Pellegrin, RP Researcher
Ken Sorey, CalPASSplus Manager
Nick Wade, CalPASSplus Developer
Alex Zakharenkov, CalPASSplus Developer

Special Thanks to Dustin Tamashiro of Pasadena City College