The Potential of Transcript-Based Placement

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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
• 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>English CST Scores</td>
<td>Coefficient</td>
<td>Number of Students</td>
</tr>
<tr>
<td>English Grade</td>
<td>Coefficient</td>
<td>Number of Students</td>
</tr>
</tbody>
</table>

0.49** 4700 0.23** 4700 0.23** 4700 0.34** 4700

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

<table>
<thead>
<tr>
<th>11th Grade CST Score (Proficiency Level)</th>
<th>11th Grade Course Grade</th>
<th>11th Grade High School Course Taken</th>
<th>Probability of Success</th>
<th>Summative Math</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>
</tr>
<tr>
<td>375</td>
<td>B</td>
<td>Pre-Calculus</td>
<td>&gt;90%</td>
<td>Pre-Calculus</td>
<td>85%</td>
</tr>
<tr>
<td>375</td>
<td>C</td>
<td>Transferable General Education</td>
<td>79%</td>
<td>Pre-Calculus</td>
<td>73%</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>
</tr>
<tr>
<td>375</td>
<td>F</td>
<td>Intermediate Algebra</td>
<td>58%</td>
<td>Transferable General Education</td>
<td>&lt;50%</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>
</tr>
<tr>
<td>275</td>
<td>B</td>
<td>Intermediate Algebra</td>
<td>78%</td>
<td>Transferable General Education</td>
<td>78%</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

Predictor Variable Category

CST's A-G Courses HS Course Level HS Course Grade HS GPA*

Count of Colleges Showing Significance

- Coolest
- Intermediate
- Strongest

The Potential of Transcript-Based Placement: CCCLLI, January 2013
In English, tests predict tests, grades and courses matter but vary by college.
Cox & Snell pseudo R-square ~ 0.50

### Predicting College Math Level

<table>
<thead>
<tr>
<th>Predictor Variable Category</th>
<th>Count of Colleges Showing Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST's</td>
<td>11</td>
</tr>
<tr>
<td>A-G Courses</td>
<td>10</td>
</tr>
<tr>
<td>HS Course Level</td>
<td>8</td>
</tr>
<tr>
<td>HS Course Grade</td>
<td>7</td>
</tr>
<tr>
<td>HS GPA*</td>
<td>5</td>
</tr>
</tbody>
</table>

**Legend:**
- Weakest
- Intermediate
- Strongest
In math, the tests predict tests most consistently among colleges but high school level also strongly predictive.
Predicting College English Success

Cox & Snell pseudo R-square ~ 0.20
In English, grades predict grades.
Predicting College Math Success

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—that’s why high school math level is most important
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
• 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 relative predictive value of other measures such as EAP level?
  • What is the influence of race/ethnicity or other student level factors?
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

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