Kaua‘i Community College

Math Placement
Via High School Transcript

Dr. Jonathan Kalk
Institutional Researcher
Kaua‘i Community College
kalk@hawaii.edu
Studies on Placement

We find that placement tests do not yield strong predictions of how students will perform in college. Placement test scores are positively—but weakly—associated with college grade point average (GPA). When we control for high school GPA, the correlation disappears.

Predicting Success in College: The Importance of Placement Tests and High School Transcripts

Belfield and Crosta, 2012
Studies on Placement

In contrast, high school GPAs are useful for predicting many aspects of students’ college performance.

• Severe error rate in placement cut in half by using HS GPA instead of placement results.

Predicting Success in College: The Importance of Placement Tests and High School Transcripts

Belfield and Crosta, 2012
The State of Developmental Education

% of Students Completing College-Level Math:
Kauai CC vs. National Data

Completion Rate:

<table>
<thead>
<tr>
<th>Initial Placement:</th>
<th>1 level below college (M25)</th>
<th>2 levels below college (M24)</th>
<th>3 levels below college (M22)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kaua’i CC</td>
<td>AtD National Data</td>
<td>Kaua’i CC</td>
</tr>
<tr>
<td></td>
<td>29%</td>
<td>19%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Kaua’i CC vs. AtD National Data
Too Many Exit Points

For students placing two levels below college level, there are 5 “exit points” where they could fall away:

1) Do they pass the first course?
2) If they pass, do they enroll in the next course?
3) If they enroll, do they pass the second course?
4) If they pass, do they enroll in the college-level course?
5) If they enroll, do they pass the college-level course?

Students placing three levels below have 7 exit points.
Too Many Exit Points

Sample pipeline data for students beginning two levels below:

1) Do they pass the first course? 55%
2) If they pass, do they enroll in the next course? 76%
3) If they enroll, do they pass the second course? 79%
4) If they pass, do they enroll in the college-level course? 86%
5) If they enroll, do they pass the college-level course? 83%

\[(0.55)(0.76)(0.79)(0.86)(0.83) = 23\%\]
Low Completion Rates are a Natural Consequence of Long Sequences

Percentage of students passing college-level math, supposing that all success and persistence rates were fixed at 70, 80, or 90%:

<table>
<thead>
<tr>
<th>Initial Placement</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 level below college</td>
<td>34%</td>
<td>51%</td>
<td>73%</td>
</tr>
<tr>
<td>2 levels below college</td>
<td>17%</td>
<td>33%</td>
<td>59%</td>
</tr>
<tr>
<td>3 levels below college</td>
<td>8%</td>
<td>21%</td>
<td>48%</td>
</tr>
</tbody>
</table>
Logistics

At advising session

- Student enrolls
- Takes Compass placement
- Name on placement list
- From Hawai‘i DOE?
  - Yes: Student signs waiver
  - No: Student brings transcript
- Given MPAG test code
- Registers for course
Size of Impact:
Raw numbers

Fall 2013 Enrollment: 1530
Math Sections Closed Quickly!

Bars show dates where section was open for enrollment

Enrollment begins

First day of instruction
Size of Impact:
Beginning college level vs developmental

- 2008: ~30% Beginning college level, ~70% Developmental level
- 2009: ~30% Beginning college level, ~70% Developmental level
- 2010: ~30% Beginning college level, ~70% Developmental level
- 2011: ~30% Beginning college level, ~70% Developmental level
- 2012: ~30% Beginning college level, ~70% Developmental level
- 2013: ~40% Beginning college level, ~60% Developmental level

Legend:
- Blue: Beginning college level
- Green: Pilot participants
- Gray: Developmental level
Average Placement Level

Percent testing college-level: 33% 9%
Participation by Placement Level

- Basic Math & PA: 44%
- Prealgebra: 40%
- Elem. Algebra: 39%
- Inter. Algebra: 32%
Mahalo!

Jean Osumi  Kauaʻi CC Counselors

Todd Ikenaga  Hawaiʻi DOE

Anita Huang