Building a bridge to the future of the California Community Colleges

Student Equity and the Re-imagination of Student Capacity
Overview

• Current practice has led us to systematically underestimate the capacity of our students
  – Particularly for students of color, low income students, first generation college students, women

• Evidence-based approaches to critical early aspects of student experiences in community colleges provide the foundation on which to rebuild community college education
  – Each demonstrate the fundamental capacity of our students to succeed if given the appropriate opportunity
  – Together they highlight substantial success/completion, equity, and real world implications
Community college student transition to college

• Community colleges rely nearly entirely on standardized assessment (WestEd, 2011)
• Majority of students placed below college-level
  – Significant barrier to completion (Bailey, Jeong, & Cho, 2010)
• What does this mean?
  – First interaction is to tell students they don’t belong
  – Imply most students are not ready for college and likely to fail
• Conventional wisdom: *It is a problem with today’s students*
  – Students are simply, vastly unprepared for college
  – Kids these days ....
What if that conventional wisdom is wrong?

• Substantial, long-term increase in IQ: [bit.ly/FlynnEffectIQ]
• National Assessment of Educational Progress: at all-time highs in virtually every demographic category: [bit.ly/NAEPInfo]
• Research increasingly questions effectiveness of standardized assessment for understanding student capacity
  – Little relation to college course outcomes
    • (e.g., Belfield & Crosta, 2012; Edgescombe, 2011; Scott-Clayton, 2012; Scott-Clayton & Rodriguez, 2012): [bit.ly/CCRCAssess]
  – Incredible variability in cutscores and 2-year colleges often use HIGHER cutscores than 4-year [bit.ly/NAGB2012]
  – Underestimates capability of students of color, women, first generation college students, low SES
    • Hiss & Franks, 2014; [bit.ly/DefiningPromise]
What if...

• What if the problem has not been primarily with limitations of our students but with limitations in how we have assessed their capacity to do college-level work?

• It gets worse
  – What if this flawed method of understanding and “remediating” student capacity has actually had the opposite effect?

• But there’s good news!
  – What if a key barrier to our students’ successful transition to and success in college is one that we fully control?
CORNERSTONE 1: IMPROVING ASSESSMENT THROUGH EVIDENCE-BASED RE-IMAGINATION OF STUDENT CAPACITY (MULTIPLE MEASURES)

Resources/references:
- http://www.lbcc.edu/PromisePathways
Multiple Measures at Long Beach City College

• Developed using multi-cohort longitudinal dataset built with help of Cal-PASS
• Alternative assessment that aligned placement with evidence of what predicted performance in English and Math classes using:
  – HSGPA
  – Last HS course in discipline and grade in that course
  – Level of last standardized test in discipline and score
• Placed students in highest course where projected success rate > success rate for that course.
• Embedded within Promise Pathways program
Implementing Multiple Measures Placement: Transfer-level Placement Rates F2012

Transfer Level English
- F2011 First time students: 11%
- F2011 LBUSD: 13%
- F2012 Promise Pathways - Accuplacer Only: 14%

Transfer Level Math
- F2011 First time students: 7%
- F2011 LBUSD: 9%
- F2012 Promise Pathways - Multiple Measures: 9%
Comparison against traditional sequence: Success rates in transfer-level courses

First Cohort, F2012

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Pathways</td>
<td>64%</td>
<td>55%</td>
</tr>
<tr>
<td>Promise Pathways</td>
<td>62%</td>
<td>51%</td>
</tr>
</tbody>
</table>

Neither of these differences approach significance, p > .30

Most recent cohort, F2014

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Pathways</td>
<td>67%</td>
<td>49%</td>
</tr>
<tr>
<td>Promise Pathways</td>
<td>79%</td>
<td>49%</td>
</tr>
</tbody>
</table>

English difference, p < .001
Success Rate of First-time Students by Method of Qualification in Transfer Level English

<table>
<thead>
<tr>
<th>Method of Qualification</th>
<th>English 1 Success Rate</th>
<th>Percentage of Total English 1 Placements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuplacer Only</td>
<td>56%</td>
<td>8%</td>
</tr>
<tr>
<td>MM and Accuplacer</td>
<td>73%</td>
<td>12%</td>
</tr>
<tr>
<td>Multiple Measures Only</td>
<td>79%</td>
<td>79%</td>
</tr>
</tbody>
</table>

(among first-time students with high school data available)
Two-year rates of achievement F2012 Promise Pathways vs. Fall 2011 LBUSD comparison

- Successfully Completed Transfer Math: 13% (F2011 LBUSD, N=1654) vs. 23% (F2012 Promise Pathways, N=933)
- Successfully Completed Transfer English: 24% vs. 52%
- Successful Completion of English 3: 3% vs. 20%
- Behavioral Intent to Transfer: 31% vs. 54%
Equity impact: F2011 Baseline Equity Gaps for 2-year rates of achievement
Equity impact: F2012 2-year rates of achievement

12% 39% 18%
51% 64%
21% 58%
36% 42%
26% 17%
12% 23%
18% 28%
12% 52%
21% 59%
36% 66%
Not just Long Beach

• Long thread of research in the CCCs
  – 2008: Willett, Hayward, & Dahlstrom (11th grade grades ➔ college grades)
  – 2011: Martinez (self-reported HS GPA ➔ college progress/completion)
  – 2014: Willett & Karanjeff (statewide replication of LBCC research – STEPS)

• Replication of implementation
  – Bakersfield College and Sierra College began similar implementation in 2014

• Multiple Measures Assessment Project (MMAP) – part of the California Common Assessment Initiative
  – Statewide research & support of local replications
  – E.g., Peralta Community College District, San Diego Community College District, and a few others in Fall 2015, more in Spring 2016 (http://rpgroup.org/system/files/MMAP_Fall2015_Examples_Webinar_Final.pdf)
MMAP Project Overview

• Collaborative effort of CCCCCO Common Assessment Initiative designed to develop, pilot, and assess implementation of placement tool using multiple measures through joint efforts of Educational Results Partnership, RP Group and 28 CCCs

• Develop multiple measures models for English, Mathematics, Reading and ESL

• Identify, analyze and validate multiple measures data, including high school transcript data, non cognitive variable data, and self-reported HS transcript data

• Develop data warehouse to store multiple measures including high school transcript and test data, MIS and placement test data, and application date for all community colleges

• Engage pilot colleges to conduct local replications, test models and pilot their use in placement, and provide feedback throughout the process
Intended Outcomes

• Improve accuracy of assessment of student capacity

• Where appropriate:
  – Lower remediation rates and increases in direct access to college-level courses
  – Reduce the amount of time students need to spend completing pre-collegiate courses
  – Reduce the cost of assessment-related activities
  – Lower the number of assessment tests issued
  – Increases in successful completion of course sequence
Level of and Success in First College Math for Students whose Last High School Course was Algebra 2 with Grade of B or Better (n=35,806)

<table>
<thead>
<tr>
<th>Level of First Community College (CC) Course</th>
<th>College Success Rate</th>
<th>Percent Enrolled at CC Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Algebra/Elementary Algebra (back one or more levels)</td>
<td>67%</td>
<td>24%</td>
</tr>
<tr>
<td>Intermediate Algebra (repeating same level)</td>
<td>63%</td>
<td>32%</td>
</tr>
<tr>
<td>Transfer Level (moved up 1+ levels)</td>
<td>65%</td>
<td>44%</td>
</tr>
</tbody>
</table>

URM=69% Male=37% CST=275 Acc=57
URM=58% Male=42% CST=301 Acc=84
URM=44% Male=49% CST=334 Acc=97
Variables That Predict Success

- English
- Cumulative HS GPA
- Grade in AP English class
- Score on English CST
- Grade in 12th grade English
- Delay
- Math
- Cumulative HS GPA
- Grades in Algebra II, Statistics, Trigonometry, Pre-calculus, etc.
- Taking a more challenging CST
- Score on math CST
- Delay
Transfer Level Placement

- **English**
  - Current: 38%
  - Disjunctive MM: 51%
  - Sample Size: n=103,510

- **Math**
  - Current: 31%
  - Disjunctive MM: 37%
  - Sample Size: n=143,253
Transfer Level Placement by Student Service

- **English DSPS**: 23% Current, 40% Disjunctive MM
- **English EOPS**: 26% Current, 39% Disjunctive MM
- **English Fin Aid**: 40% Current, 51% Disjunctive MM
- **Math DSPS**: 18% Current, 25% Disjunctive MM
- **Math EOPS**: 21% Current, 27% Disjunctive MM
- **Math Fin Aid**: 27% Current, 34% Disjunctive MM
Transfer Level English Placement
n=103,510

- Current
- Disjunctive MM

Afr Am: 24% Current, 32% Disjunctive MM
Latino: 32% Current, 41% Disjunctive MM
Pac Isl: 30% Current, 44% Disjunctive MM
Nat Am: 32% Current, 41% Disjunctive MM
Filipino: 39% Current, 40% Disjunctive MM
Asian: 60% Current, 63% Disjunctive MM
Multi: 57% Current, 53% Disjunctive MM
White: 65% Current, 65% Disjunctive MM
Transfer Level Math Placement
n=143,253

Current  Disjunctive MM

<table>
<thead>
<tr>
<th>Group</th>
<th>Current</th>
<th>Disjunctive MM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afr Am</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>Latino</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>Pac Isl</td>
<td>25%</td>
<td>29%</td>
</tr>
<tr>
<td>Nat Am</td>
<td>26%</td>
<td>30%</td>
</tr>
<tr>
<td>Am Filipino</td>
<td>36%</td>
<td>41%</td>
</tr>
<tr>
<td>Asian</td>
<td>39%</td>
<td>48%</td>
</tr>
<tr>
<td>Multi</td>
<td>41%</td>
<td>48%</td>
</tr>
<tr>
<td>White</td>
<td>51%</td>
<td>59%</td>
</tr>
</tbody>
</table>
Transfer Level Placement by Gender

<table>
<thead>
<tr>
<th>Subject</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>39%</td>
<td>49%</td>
<td>39%</td>
<td>53%</td>
</tr>
<tr>
<td>Math</td>
<td>34%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
</tr>
</tbody>
</table>

- Blue bars represent current placement.
- Orange bars represent disjunctive MM placement.
CORNERSTONE 2: ACCELERATION OF DEVELOPMENTAL EDUCATION

Resources/references
Statewide progression of students from three levels below transfer to transfer-level math from fall 2010 through spring 2013.
Evaluation of 2011-2012 pilot year of California Acceleration Project

• Summary of Findings (Hayward & Willett, 2014)
  – Large and robust effects of acceleration that work for
    • Students of all backgrounds
    • Students at all placement levels
  – Not a function of selection/cherry-picking
  – Examples from Math
Regression Adjusted Effects – Math

Comparison

<table>
<thead>
<tr>
<th>Transfer Level Completion within 2 years</th>
<th>Comparison</th>
<th>Acceleration</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥4 levels below</td>
<td>6%</td>
<td>21%</td>
</tr>
<tr>
<td>3 levels below</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>2 levels below</td>
<td>15%</td>
<td>41%</td>
</tr>
<tr>
<td>1 level below</td>
<td>25%</td>
<td>53%</td>
</tr>
</tbody>
</table>
Completion of transfer-level math for traditional and accelerated pathways by ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Traditional 2 years</th>
<th>Acceleration 2 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>10%</td>
<td>41%</td>
</tr>
<tr>
<td>Asian American</td>
<td>10%</td>
<td>39%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>14%</td>
<td>35%</td>
</tr>
<tr>
<td>White</td>
<td>18%</td>
<td>44%</td>
</tr>
</tbody>
</table>
How many more students would complete transferable math if acceleration were scaled?

Number of students completing math in current vs. scaled scenario

- Asian (current)
- Asian (at scale)
- Black (current)
- Black (at scale)
- Hispanic (current)
- Hispanic (at scale)
- White (current)
- White (at scale)

Legend:
- Traditional
- Accelerated
Placement and Education Plan Implications

• Accelerated English
  – Placement could be binary i.e. transfer level or pre-transfer level
  – Students may also be able to place beyond college composition with AP test, high school articulation, etc.

• Accelerated Math
  – Placement more complex with STEM and non-STEM pathways
  – However, placement into statistics could be binary i.e. stats or pre-stats
CORNERSTONE 3: COREQUISITE MODELS

Resources/references:

- [http://alp-deved.org](http://alp-deved.org)
Replication of CCBC ALP model

• ALP model involves:
  – Enrollment directly in college-level English (mainstreamed)
  – Concurrent enrollment in just-in-time companion developmental English course taught by same instructor

• Four early implementers at or near scale
Completion of College-Level English
(of those who take one-level below course)

Percent successfully completing transfer level

- College 1: 36% Baseline, 78% ALP Model
- College 2: 34% Baseline, 78% ALP Model
- College 3: 37% Baseline, 62% ALP Model
- College 4: 50% Baseline, 78% ALP Model
Completion of College-Level English
(of those who take one-level below course)

Percent successfully completing transfer level

College 1: Baseline B/H - 25%, Baseline W - 42%, ALP B/H - 70%, ALP W - 80%
College 2: Baseline B/H - 29%, Baseline W - 37%, ALP B/H - 66%, ALP W - 82%
College 3: Baseline B/H - 50%, Baseline W - 38%, ALP B/H - 58%, ALP W - 62%
College 4: Baseline B/H - 46%, Baseline W - 76%, ALP B/H - 55%, ALP W - 76%
CORNERSTONE 4: RECONSIDER CUT SCORES

Resources/references:
• http://bit.ly/LetThemIn (Henson & Hern, 2014)
Natural experiment at Butte College

• In 2011, switched from one placement test to another

• **Old test/cut scores:**
  – 23% of incoming students “college ready” in English

• **New test/cut scores:**
  – 48% of incoming students “college ready” in English
Butte College: Assessment of first-year students

Percent assessed at transfer level:

<table>
<thead>
<tr>
<th>Group</th>
<th>F2010</th>
<th>F2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>15%</td>
<td>37%</td>
</tr>
<tr>
<td>Asian American</td>
<td>19%</td>
<td>35%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>19%</td>
<td>41%</td>
</tr>
<tr>
<td>White</td>
<td>36%</td>
<td>58%</td>
</tr>
</tbody>
</table>
Butte College: Completion of Transfer-Level English in 1st Year

<table>
<thead>
<tr>
<th></th>
<th>Percent successfully completing transfer level</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>8% F2010, 23% F2012</td>
</tr>
<tr>
<td>Asian American</td>
<td>23% F2010, 17% F2012</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13% F2010, 27% F2012</td>
</tr>
<tr>
<td>White</td>
<td>23% F2010, 37% F2012</td>
</tr>
</tbody>
</table>
Developmental Math Reform – Virginia Community College System

- Introduced new instrument (VPT-MATH)
- Intentionally increased percentage assigned to college-level math
- Far larger percentage of first-time students successfully completed entry-level college math in first year
Combining cutscore revision and corequisite expansion in English - VCCS

Pre-Reform, Fall 2010

- College English: 43%
- Co-Enrolled: 10%
- Developmental English: 47%

Post-Reform, Fall 2013

- College English: 58%
- Co-Enrolled: 23%
- Developmental English: 19%
Completion of College English - VCCS

Pre-Reform, Fall 2010 | Post-Reform, Fall 2013
---|---
College English | 25% | 37%
Co-Requisite College English | 3% | 11%
Total | 28% | 48%
### Summary of impacts of approaches that re-imagine student capacity

<table>
<thead>
<tr>
<th></th>
<th>Transfer-level success rates (if taken)</th>
<th>Developmental Success Rates</th>
<th>Transfer-level completion (by entire cohort)</th>
<th>Meaningful equity impacts</th>
<th>Upfront Development of Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiple Measures</strong></td>
<td>No change to higher</td>
<td>Lower overall (but no change for students that remain)</td>
<td><strong>Much higher</strong></td>
<td><strong>Substantial</strong></td>
<td>Low</td>
</tr>
<tr>
<td><strong>Acceleration</strong></td>
<td>No change to higher</td>
<td>No change to higher</td>
<td><strong>Much Higher</strong></td>
<td><strong>Substantial</strong></td>
<td>High Moderate</td>
</tr>
<tr>
<td><strong>Corequisite models</strong></td>
<td>Higher</td>
<td>Higher</td>
<td><strong>Much Higher</strong></td>
<td><strong>Substantial</strong></td>
<td>High Moderate</td>
</tr>
<tr>
<td><strong>Cutscore revision</strong></td>
<td>Slightly lower</td>
<td>No change to slightly lower</td>
<td><strong>Much Higher</strong></td>
<td><strong>Substantial</strong></td>
<td>Low</td>
</tr>
</tbody>
</table>
What Could This Mean for Our Districts, Our Students, Our Communities?
What might this mean for our institutions?

- Improved outcomes across demographic groups
- Improved behavior from our students
- Better, more appropriately prepared students
- Higher quality data to better understand student performance
- Improved targeting of interventions
What might this mean for our students?

– LBCC saved students >10,000 semesters (5000 years) of unneeded remediation in first three years.
  • ~$250 per course for student (plus books!)
  • ~$750 per course for state

– Dramatic opportunity costs of college reduced
  • Median salary of “some college” is ~$30,000/year
  • Don’t lose their first year or median salary though, they lose their last year.
What might this mean for all of us?

– On average, thoughtful, evidence based changes save students 1-2 semesters of developmental education that evidence demonstrates they did not need.

– There are two million community college students in California who have potentially been taken out of the productive workforce for an additional year or more.

– The Great Recession, the worst economic downturn in any of our lifetimes only took one million people in California out of the workforce.
What we gain through reimaging student capacity based on the evidence

- A clarion call to reassess our understanding of student capacity and preparation as far greater than we’ve given them credit for for a generation

- The opportunity to go back to each of our colleges with that improved understanding to reduce equity gaps and transform student outcomes by adding one more of these cornerstones by Fall 2016.

- An opportunity to stop meeting students at the front door to work to convince them that they’re not actually college material
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Daniel Lamoree
Educational Results Partnership
dlamoree@edresults.org
I’m intrigued! How do we get started?

   - **Contact:** Mallory Newell: [newellmallory@fhda.edu](mailto:newellmallory@fhda.edu)

2. Convene a decision-making group(s) appropriate to local context (Workgroup, subcommittee, campus-wide committee...)

3. Identify & recruit key stakeholders/decision-makers as appropriate:
   - Discipline faculty in English, Math, ESL Reading
   - Members of Assessment committees/subcommittees
   - Counseling/Matriculation/SSSP Staff and Faculty
   - Student Success Staff and Faculty (Tutoring, Success Courses)
   - Academic Senate representation
   - Academic and Executive Administration
   - Institutional Research and Information Technology
   - Students

4. Plan kick off meeting (and invite the MMAP team if needed)
What’s next?

5. Begin discussing existing research and implementation efforts (Resources and pilot college discussion activities are available in pilot colleges resources section of the MMAP home page: http://bit.ly/MMAP2015)

6. Work with CalPASS Plus to:
   1. download retrospective data &/or upload new applicants
      • Identify college Institutional Research point of contact
      • Contact: Dan Lamoree, dlamoree@edresults.org
   2. improve K-12 data availability through updating MOUs and data uploads
      • Identify college point of contact for working w/K-12 partners
      • Contact: John Hetts, jhetts@edresults.org

7. Continue to meet regularly with team
   • Delineate roles and responsibilities, assign duties and report-out
   • Determine how model will be implemented (formulate an implementation plan)
   • Determine who will track the results and report them (develop an evaluation plan)