Let Icarus Fly:
Multiple Measures, Assessment, and the Re-imagination of Student Capacity

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#LetIcarusFly
What I was expecting:
Perhaps something more like?
Overview

- Standardized assessment has led us to systematically and substantially underestimate student capacity
  - Particularly for students of color, low income students, first generation college students, women
- Evidence-based, multiple measures is one of four key cornerstones on which to rebuild the foundations of community college education
  - Demonstrates fundamental capacity of far more of our students to succeed if given the chance
  - Based powerfully both on basic principles of assessment and measurement as well as strong
  - Powerful completion, equity, and real world implications
First, Daedalus and Icarus

- Daedalus crafted the labyrinth of inescapable complexity for King Minos.

- To escape from Minos, Daedalus built wings of feather and wax for his son Icarus and himself.

- Don't fly too high, lest sun melt the wax and you plummet to your doom.
  - Dangers of innovation/invention, hubris,
  - Importance of knowing your limits, listening to your wiser elders.

- But most of us forget the rest of that story...
Transition to College: Assessment and Placement

• Community colleges are open enrollment institutions
  • Requires assessing and planning for educational needs of students.

• Goal
  • Effectively place student at most appropriate level for their skill – where challenge matches skill level
    • Zone of proximal development
    • Optimal performance, flow

• If you think you can catch the bus, you will run for it.”
  • Lee Peng Yee, Singapore National Institute of Education Mathematician
Current practice

- CCs rely nearly entirely on standardized assessment
- Majority of students placed below college-level
  - 68% of students in two year institutions take >=1 developmental education course (Scott-Clayton & Belfield, 2015). http://bit.ly/CCRCPlacementAccuracy
- Placement below transfer level is barrier to completion
  - ~30% never attempt a course in the sequence and ~10% fail to re-enroll after successfully completing at least one course in the sequence (Bailey, Jeong, & Cho, 2010) http://bit.ly/Bailey2010
  - 50-60% of equity gap in college completions occur during assessment and matriculation (Stoup, 2015)
What does this mean for students?

• First interaction is fundamentally a statement of our lack of trust in them
  • Communicates to students they don’t belong
  • Often the second and third interactions as well.

• Strongly implies most students not ready for college and likely to fail
  • Convinced nearly everyone
  • Including many of our students
Conventional Wisdom Explaining Assessment Results

• It is a problem with today’s students
  • Students are simply, vastly unprepared for college
  • Kids these days ....
That seems awfully familiar

The Whiny Generation

EVER SINCE THE PUBLICATION OF DOUGLAS COUPLAND’S book "Generation X," we've been subjected to a barrage of essays, op-ed pieces and feature articles blaming us baby boomers for the sad face of the twentysomething generation: the boomers took all the good jobs; the boomers are destroying the planet, the media is boomer-dominated and boomer-obsessed. The litany is never-ending. If you believe the Generation X essayists, all the troubles of the world can be traced to us fortysomethings.

Well, enough is enough. As a baby boomer, I'm fed up with the ceaseless carping of a handful of spoiled, self-indulgent, overgrown adolescents. Generation Xers may like to call themselves the "Why Me?" generation, but they should be called the "Whiny" generation. If these pusillanimous purveyors of pseudo-angst would put as much effort into getting a life as they do into writing about their horrible fate, we'd be spared the weekly diatribes that pass for reasoned argument in newspapers and magazines.

Let's examine for a moment the horrible fate visited on Generation X. This is a generation that was raised with the highest standard of living in the history of the world. By the time they arrived on the scene, their parents were comfortably established in the middle class and could afford to satisfy their offspring's every whim. And they did, in spades.
Too familiar
(Bye Bye Birdie – 1963)

Kids, I don’t know what’s wrong with these kids today
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/NAEPIInfo
NAEP Math and Reading Assessments

**NAEP Math Score Improvement, 1978-2012**
By race and age

**NAEP Reading Score Improvement, 1975-2012**
By race and age
What If the Conventional Wisdom is Wrong?

• 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 cut scores and 2-year colleges often use HIGHER cut scores than 4-year
  • 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 is not primarily with our students but with limitations in how we have assessed and understood 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?

• Imagine yourself arriving at college as a community college student…
But there’s good news...

• What if one of the key barriers to our students’ successful transition to and success in college is one that we fully control?
Cornerstone 1: Improving assessment through evidence-based multiple measures

Resources/references:
- http://www.lbcc.edu/PromisePathways
- http://cccassess.org
LBCC Multiple Measures Research

• Five cohorts tracking more than 7,000 HS grads who matriculate to LBCC directly

• Examined predictive utility of wide range of high school achievement data

• For predicting:
  • How students are assessed and placed
  • How students perform in those classes
  • (and alignment between them)
Alignment in English

Predicting Placement

<table>
<thead>
<tr>
<th>CST ELA (z)</th>
<th>Eng Grade (12)</th>
<th>GPA (other)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.34*</td>
<td>0.00</td>
<td>0.30**</td>
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</table>

Predicting Performance

<table>
<thead>
<tr>
<th>CST ELA (z)</th>
<th>Eng Grade (12)</th>
<th>GPA (other)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.17*</td>
<td>0.37***</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001, x = p < 1 x 10^-10
Alignment in Math

Predicting Placement

Predicting Performance

* p < .05 **, p < .01, *** p < .001, x = p < 1 x 10^-10
Key Takeaways

• Assessment *should* predict *how students will perform at our colleges*

• Instead:
  • Current standardized tests predict standardized tests
  • Classroom performance predicts *classroom performance*
  • More info tells us more about student capacity than less info
Re-imagined student capacity

• Starting in Fall 2012, students from LBUSD (now 6 districts covering >30 high schools and growing) were provided an alternative assessment
  • Reverse engineered the analysis to place students using:
    • Last high school course in discipline
    • Grade in last course in discipline
    • Overall HSGPA
    • Last standardized test in discipline (and level)
  • Placed students in highest course where projected success rate higher than average success rate for that course.
Implementing Multiple Measures Placement: LBCC Transfer-level Placement Rates F2012

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

- **Transfer Level Math**
  - F2011 First time students: 7%
  - F2011 LBUSD: 9%
  - F2012 Promise Pathways: 9%
  - F2012 Promise Pathways - Multiple Measures: 60%

Legend:
- F2011 First time students
- F2011 LBUSD
- F2012 Promise Pathways - Accuplacer Only
- F2012 Promise Pathways - Multiple Measures
SDCCD MMAP F2015 Pilot (N = ~1000)

But ...
... doesn’t that just flood transfer-level courses with unqualified students?
Comparison against traditional sequence: LBCC success rates in transfer-level courses

First Cohort, F2012

English
- Non-Pathways: 64%
- Promise Pathways: 62%

Math
- Non-Pathways: 55%
- Promise Pathways: 51%

Neither of these differences approach significance, \( p > .30 \)
LBCC Cohort 1 English 1 Success Rates by Placement (vs. 6 year completion)

F2012 Non-Pathways
- Transfer: 56%
- 1 Level Below: 65%
- 3 Levels Below: 67%

F2012 Promise Pathways
- Transfer: 68%
- 1 Level Below: 67%
- 3 Levels Below: 52%

F2008 English 1 Cohort Attempt Rate
- Transfer: 62%
- 1 Level Below: 43%
- 3 Levels Below: 12%

F2008 English 1 Cohort Complete Rate
- Transfer: 47%
- 1 Level Below: 35%
- 3 Levels Below: 9%
LBCC Cohort 3: Success rates in transfer-level courses

Most recent cohort, F2014

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

English difference, p < .001
LBCC Success Rate by Method of Qualification in Transfer Level English

- ENGL1 Success Rate:
  - Accuplacer Only: 56%
  - MM and Accuplacer: 73%
  - Multiple Measures Only: 69%

- Percentage of Transfer English Placements:
  - Accuplacer Only: 8%
  - MM and Accuplacer: 12%
  - Multiple Measures Only: 79%
Sierra College F2014 Transfer-Level English Success Rates by Placement

- Fall 2011: 72%
- Fall 2012: 73%
- Fall 2013: 70%
- Fall 2014 ALL: 73%
- Fall 14 - Accuplacer: 73%
- F14 HS Data: 79%
- F14 Other: 71%

… what about grade inflation/social promotion in HS?
Concerns about grade inflation and social promotion do not fit evidence

• Suggests that there should be little to no relation between HS grades and college grades because HS grades unrelated to performance
  • Everyone gets As and Bs would mean no variation to predict outcomes

• Yet, predictive utility strongly observed
  • Stronger than standardized tests
  • Even by standardized test companies

<table>
<thead>
<tr>
<th>Course</th>
<th>Compass Test</th>
<th>Compass</th>
<th>HSGPA</th>
<th>HSGPA + Compass</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1</td>
<td>Writing Skills</td>
<td>.31</td>
<td>.57</td>
<td>.62</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>Pre-Algebra</td>
<td>.57</td>
<td>.34</td>
<td>.66</td>
</tr>
<tr>
<td>Algebra</td>
<td>Pre-Algebra</td>
<td>.36</td>
<td>.65</td>
<td>.80</td>
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<tr>
<td>Intermediate Algebra</td>
<td>Algebra</td>
<td>.47</td>
<td>.66</td>
<td>.84</td>
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<tr>
<td>College Algebra</td>
<td>Algebra</td>
<td>.41</td>
<td>.76</td>
<td>.88</td>
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<tr>
<td>College Algebra</td>
<td>College Algebra</td>
<td>.51</td>
<td>.76</td>
<td>.94</td>
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</table>

<table>
<thead>
<tr>
<th>HSGPA</th>
<th>30</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00</td>
<td>23%</td>
<td>26%</td>
<td>28%</td>
<td>29%</td>
<td><strong>32%</strong></td>
</tr>
<tr>
<td>3.00</td>
<td>43%</td>
<td>47%</td>
<td>49%</td>
<td>51%</td>
<td><strong>55%</strong></td>
</tr>
<tr>
<td>4.00</td>
<td><strong>65%</strong></td>
<td><strong>69%</strong></td>
<td><strong>70%</strong></td>
<td>72%</td>
<td>75%</td>
</tr>
</tbody>
</table>
Evidence for grade inflation low at best

- Little evidence for grade inflation over last decade
- Earlier observations of grade inflation may have been partly artifactual
  - adjustments to GPA for AP/IB/Honors
Grades more robust predictor

- Controlling for SES, the utility drops meaningfully
... didn’t that work only because Long Beach is special/has special relationship between LBCC and LBUSD?
Not just Long Beach

• LBCC now spans multiple additional districts and individual high schools

• Long thread of research in the CCCs alone
  • 2008: Willett, Hayward, & Dahlstrom
    • 11th grade HS variables as early alert mechanism for discipline assessment
  • 2011: Martinez
    • self-reported HS variables as more powerful predictors of college completion
  • 2014: Willett & Karanjeff
    • replication of LBCC research with 12 additional colleges (STEPS)

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

• CCRC research (Belfield & Crosta, 2012; Scott-Clayton, 2012)

• MMAP Statewide Research & local replications:
Multiple Measures Assessment Project (MMAP)

- Examination of high school achievement data for predictors of successful completion of English & math in the CCCs
- Focus on predictive validity (success in course) and improving student completion of foundational skills
- Statewide support
  - Research base, predictive analytics, decision tree models
  - Pilot colleges and faculty/staff engagement
    - Webinars, convenings/summits, professional development
  - K-12 outreach and data population
  - Data warehouse and tool development
High school variables that predict college success

- **English**
  - **Cumulative HS GPA**
  - Grade in last HS English
    - C+ or better in AP English class
  - Score on English CST
  - Non-remedial status in HS English

- **Math**
  - **Cumulative HS GPA**
  - Enrollment and grades in Geometry, Algebra II, Trigonometry, Pre-calculus, Statistics, Calculus
  - Taking a more challenging CST
  - Score on math CST
  - Delay*
Examples of Phase 2 Transfer-level decision rules

<table>
<thead>
<tr>
<th>English</th>
<th>Math (Statistics)</th>
</tr>
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<tbody>
<tr>
<td>11th Grade High School</td>
<td>11th Grade High School</td>
</tr>
<tr>
<td>GPA ≥ 2.6</td>
<td>GPA ≥ 3.0</td>
</tr>
<tr>
<td></td>
<td>&amp; Algebra I C or better</td>
</tr>
<tr>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>11th Grade High School</td>
</tr>
<tr>
<td></td>
<td>GPA ≥ 2.3</td>
</tr>
<tr>
<td></td>
<td>&amp; Pre-calculus C or better</td>
</tr>
</tbody>
</table>
MMAP: Potential Transfer Level Placement

<table>
<thead>
<tr>
<th>Subject</th>
<th>Current</th>
<th>Disjunctive MM</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>38%</td>
<td>61%</td>
</tr>
<tr>
<td>Math</td>
<td>31%</td>
<td>42%</td>
</tr>
</tbody>
</table>

(n=103,510) (n=143,253)
MMAP: Projected impact on course success rates

Successful completion of transfer-level course

- **Transfer-level Math**
  - Historic success rate: 62%
  - Projected success rate: 62%

- **Transfer-Level English**
  - Historic success rate: 72%
  - Projected success rate: 71%

- **Legend**
  - Red: Historic success rate
  - Grey: Projected success rate
... we’re happy with our placement. Why should we change?
Powerful reasons for change:
1) Basic assessment theory and methods

- Self-reported satisfaction with assessment by instructors and students is most common measure and has grave methodological flaws:
  - Selection bias
  - Confirmation bias
  - Effort justification
  - System justification
  - Self-fulfilling prophecy effects and stereotype threat

- HSGPA is effectively gold standard of assessment/measurement theory
  - Triangulates capacity across assessment methods, content domains, evaluators, and time eliminating most sources of systematic and random error
Powerful reasons for change: 2) It’s poorly assessing students

- Systemic evidence of severe underplacement
  - placing students in deved who could get B or better in transfer level course
  - >35% of students placed in dev. English
  - >25% of students placed into dev. Math

- Relative invisibility of underplacement

- Using multiple measures reduces error and has clear potential to increase success rates and sequence completion
Powerful reasons for change: 3) Transformational impacts for students

- Potential for dramatic increases in rates and time to completion of
  - Transfer-level course in discipline
  - Subsequent courses in discipline
  - Other early educational milestones.
F2012 Promise Pathways vs. Fall 2011 2-year rates of achievement

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

Transfer Math Successful Completion: 4%, 12%, 21%, 18%
Transfer English Successful Completion: 13%, 25%, 24%, 2%
English 3 Successful Completion: 3%, 3%, 1%, 6%
Behavioral Intent to Transfer: 15%, 32%, 33%, 41%

F11 African Americans  F11 Hispanic  F11 Asian  F11 White
Equity impact LBCC: F2012 2-year rates of achievement

[Bar chart showing rates of achievement in various categories for different ethnic groups: Transfer Math Successful Completion, Transfer English Successful Completion, English 3 Success, Behavioral Intent to Transfer.]

- F12 African American
- F12 Hispanic
- F12 Asian
- F12 White
... what about students for whom high school transcript data aren’t available/easy to get?
Self-reported HSGPA appears to be reliable alternative

- College of the Canyons Research (Gribbons, 2014)
  - Self-report of last course and grade in Fall term very accurate
  - Errors that do occur in part because of timing

- University of California admissions
  - Uses self-report HSGPA but verifies after admission
  - 2008: 9 campuses, 60000 students. No campus had more than 5 discrepancies b/w reported grades and student transcripts:

- Much of the ACT research uses self-report GPA and finds it to be a more powerful predictor than students actual scores on the standardized tests
  - ACT, 2013: $r(1978) = .84$
## ACT, 2013:


<table>
<thead>
<tr>
<th>Actual HSGPA Level</th>
<th>N</th>
<th>Mean HSGPA</th>
<th></th>
<th>Mean diff.</th>
<th>Accuracy</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Actual</td>
<td>Student-reported</td>
<td></td>
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</tr>
<tr>
<td>3.50–4.00</td>
<td>599</td>
<td>3.79</td>
<td>3.75</td>
<td>–0.04</td>
<td>87%</td>
</tr>
<tr>
<td>3.00–3.49</td>
<td>451</td>
<td>3.24</td>
<td>3.23</td>
<td>–0.01</td>
<td>60%</td>
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<tr>
<td>2.50–2.99</td>
<td>408</td>
<td>2.81</td>
<td>2.76</td>
<td>0.05</td>
<td>47%</td>
</tr>
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<td>2.00–2.49</td>
<td>265</td>
<td>2.24</td>
<td>2.35</td>
<td>0.11</td>
<td>40%</td>
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<tr>
<td>1.50–1.99</td>
<td>172</td>
<td>1.77</td>
<td>2.04</td>
<td>0.27</td>
<td>30%</td>
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<tr>
<td>0.00–1.49</td>
<td>85</td>
<td>1.03</td>
<td>1.85</td>
<td>0.82</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,980</td>
<td><strong>2.95</strong></td>
<td><strong>3.02</strong></td>
<td><strong>0.07</strong></td>
<td><strong>58%</strong></td>
</tr>
</tbody>
</table>
… what about non-traditional students?
Multiple measures continues to have utility for delayed matriculants

• Delay in matriculation is a main effect
  • i.e., likelihood of success decreases somewhat

• HSGPA continues to be predictively useful up to the point where we have data we can meaningfully connect (delay of ~10 years).
How long is High School GPA good for?

**MMAP: Decay function for the predictive utility of HSGPA on English grade**

- **Linear (HS 11 GPA)**: $y = -0.0076x + 0.342 \quad R^2 = 0.62012$
- **Linear (HS 12 GPA)**: $y = -0.0116x + 0.3631 \quad R^2 = 0.83361$

**Correlation between HSPGA and 1st CC**

**Semesters of delay (approx. 6 months each)**

- HS 11 GPA
- HS 12 GPA
- Accuplacer
<table>
<thead>
<tr>
<th>Course</th>
<th>Compass Test</th>
<th>Student Type</th>
<th>Compass</th>
<th>HSGPA</th>
<th>Diff</th>
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</thead>
<tbody>
<tr>
<td>English 1</td>
<td>Writing Skills</td>
<td>Traditional</td>
<td>.25</td>
<td>.72</td>
<td>.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nontraditional</td>
<td>.21</td>
<td>.36</td>
<td>.15</td>
</tr>
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<td>Arithmetic</td>
<td>Pre-Algebra</td>
<td>Traditional</td>
<td>.67</td>
<td>.51</td>
<td>-.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nontraditional</td>
<td>.43</td>
<td>.08</td>
<td>-.35</td>
</tr>
<tr>
<td>Algebra</td>
<td>Pre-Algebra</td>
<td>Traditional</td>
<td>.43</td>
<td>.78</td>
<td>.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nontraditional</td>
<td>.32</td>
<td>.47</td>
<td>.15</td>
</tr>
<tr>
<td>Int. Algebra</td>
<td>Algebra</td>
<td>Traditional</td>
<td>.52</td>
<td>.76</td>
<td>.24</td>
</tr>
<tr>
<td></td>
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<td>Nontraditional</td>
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<td>.25</td>
<td>-.19</td>
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<td>Coll. Algebra</td>
<td>Algebra</td>
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<td>Coll. Algebra</td>
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<tr>
<td></td>
<td></td>
<td>Nontraditional</td>
<td>.26</td>
<td>.47</td>
<td>.21</td>
</tr>
</tbody>
</table>
... that doesn’t seem like enough evidence that I need to rethink student capacity. What else have you got?
Cornerstone 2: Reconsider cut scores

Resources/references:
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

- African American: 15% F2010, 37% F2012
- Asian American: 19% F2010, 35% F2012
- Hispanic: 19% F2010, 41% F2012
- White: 36% F2010, 58% F2012

Legend:
- F2010
- F2012
Butte College: Completion of Transfer-Level English in 1st Year

Percent successfully completing transfer level

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>F2010</th>
<th>F2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>8%</td>
<td>23%</td>
</tr>
<tr>
<td>Asian American</td>
<td>17%</td>
<td>35%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13%</td>
<td>27%</td>
</tr>
<tr>
<td>White</td>
<td>23%</td>
<td>37%</td>
</tr>
</tbody>
</table>

F2010 refers to the year 2010, and F2012 refers to the year 2012.
Developmental Math Reform – Virginia Community College System

- Introduced new assessment instrument
- Intentionally increased percentage assigned to college-level math

<table>
<thead>
<tr>
<th></th>
<th>Pre-Reform, Fall 2010</th>
<th>Post-Reform, Fall 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placement into College Math</td>
<td>19%</td>
<td>43%</td>
</tr>
<tr>
<td>Completion of College Math in 1 year</td>
<td>8%</td>
<td>18%</td>
</tr>
</tbody>
</table>
Additional bodies of work showing higher student capacity

- **Acceleration** (e.g., Hayward & Willett, 2014) [http://bit.ly/CAPEval](http://bit.ly/CAPEval)

- 2-4X transfer-level course completion
- Comparable or higher success rates
- Works across demographic group
- Reduces equity gaps substantially
Combining cutscore revision and corequisite expansion in English - VCCS

Pre-Reform, Fall 2010

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

Post-Reform, Fall 2013

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

<table>
<thead>
<tr>
<th></th>
<th>Pre-Reform, Fall 2010</th>
<th>Post-Reform, Fall 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>College English</td>
<td>25%</td>
<td>37%</td>
</tr>
<tr>
<td>Co-Requisite College English</td>
<td>3%</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>28%</td>
<td>48%</td>
</tr>
</tbody>
</table>
### 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>Uptfront Development of Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Measures</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>Substantial</td>
<td>Low</td>
</tr>
<tr>
<td>Acceleration</td>
<td>No change to higher</td>
<td>No change to higher</td>
<td><strong>Much Higher</strong></td>
<td>Substantial</td>
<td>High Moderate</td>
</tr>
<tr>
<td>Corequisite models</td>
<td>Higher</td>
<td>Higher</td>
<td><strong>Much Higher</strong></td>
<td>Substantial</td>
<td>High Moderate</td>
</tr>
<tr>
<td>Cutscore revision</td>
<td>Slightly lower</td>
<td>No change to slightly lower</td>
<td><strong>Much Higher</strong></td>
<td>Substantial</td>
<td>Low</td>
</tr>
</tbody>
</table>
What might this mean for students?

- Bakersfield College has saved over 3000 semesters in first two years
- LBCC saved students over 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 2012 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?

* These evidence-based cornerstones save students 1-2 semesters of developmental education that:
  * Evidence predicted and research demonstrated that they did not need
  * By law (in some places), fairness, and **basic educational practice** should not have been required to take
Sense of scale

- The Great Recession of 2008 took ~1,000,000 people out of CA workforce.

- Failure to correctly understand the capacity of California’s community college students may be costing those ~2,000,000 students a year or more of additional time out of the workforce.
... we’re not sure we can do this on our own?
You don’t have to!

- Multiple Measures Assessment Project Support

- MMAP Project Team
  - Webinars
  - In person convenings
    - Connection to peers

- Tools and support for research methodology and data analysis

- Outreach support for K-12 partnership improvement

- Provision of statewide model placement recommendations and/or data for local, evidence-based model
## Why start now?

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014</th>
<th>Spring 2015</th>
<th>Annual First Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>East LA Total</strong></td>
<td>35,905</td>
<td>35,248</td>
<td>7,940</td>
</tr>
<tr>
<td>First-Time Student</td>
<td>4,827</td>
<td>3,113</td>
<td></td>
</tr>
<tr>
<td><strong>LA City Total</strong></td>
<td>20,176</td>
<td>20,068</td>
<td>7,745</td>
</tr>
<tr>
<td>First-Time Student</td>
<td>4,323</td>
<td>3,422</td>
<td></td>
</tr>
<tr>
<td><strong>LA Harbor Total</strong></td>
<td>9,906</td>
<td>9,494</td>
<td>2,636</td>
</tr>
<tr>
<td>First-Time Student</td>
<td>1,724</td>
<td>912</td>
<td></td>
</tr>
<tr>
<td><strong>LA Mission Total</strong></td>
<td>10,707</td>
<td>9,941</td>
<td></td>
</tr>
<tr>
<td>First-Time Student</td>
<td>2,362</td>
<td>1,392</td>
<td>3,754</td>
</tr>
<tr>
<td><strong>LA Pierce Total</strong></td>
<td>22,239</td>
<td>21,310</td>
<td></td>
</tr>
<tr>
<td>First-Time Student</td>
<td>3,806</td>
<td>1,779</td>
<td>5,585</td>
</tr>
<tr>
<td><strong>LA Swest Total</strong></td>
<td>8,199</td>
<td>7,698</td>
<td></td>
</tr>
<tr>
<td>First-Time Student</td>
<td>1,899</td>
<td>1,402</td>
<td>3,301</td>
</tr>
<tr>
<td><strong>LA Trade Total</strong></td>
<td>15,282</td>
<td>14,909</td>
<td></td>
</tr>
<tr>
<td>First-Time Student</td>
<td>3,637</td>
<td>2,798</td>
<td>6,435</td>
</tr>
<tr>
<td><strong>LA Valley Total</strong></td>
<td>19,174</td>
<td>18,831</td>
<td></td>
</tr>
<tr>
<td>First-Time Student</td>
<td>3,317</td>
<td>2,075</td>
<td>5,392</td>
</tr>
<tr>
<td><strong>West LA Total</strong></td>
<td>9,988</td>
<td>9,472</td>
<td></td>
</tr>
<tr>
<td>First-Time Student</td>
<td>1,838</td>
<td>1,052</td>
<td>2,890</td>
</tr>
<tr>
<td><strong>Los Angeles CCD Total</strong></td>
<td>152,090</td>
<td>147,508</td>
<td></td>
</tr>
<tr>
<td>First-Time Student</td>
<td>27,733</td>
<td>17,945</td>
<td>45,678</td>
</tr>
</tbody>
</table>
What can be gained through assessment and placement reform

• A clarion call to better understand the true capacity of our students.
• The ability to transform student outcomes
• Powerful levers to address student equity gaps
• Renewed opportunities to collaborate with our K-12 educational colleagues
• The chance to stop meeting students at front door to tell them they don’t belong
• A far better future for our students and for us all

• A reminder of Daedalus’ second instruction to Icarus.
  • It’s just as important not to fly too low.
The Fierce Urgency of Now

• “We are now faced with the fact that tomorrow is today. We are confronted with the fierce urgency of now. In this unfolding conundrum of life and history, there "is" such a thing as being too late. This is no time for apathy or complacency. This is a time for vigorous and positive action.”

• Dr. Martin Luther King, Jr.