Student Success and Support Program
West Los Angeles College
Math and English Department Meeting

Assessment and Multiple Measures
Agenda
May 20, 2015

Welcome: Patricia Banday-Coordinator of Student Success and Support Program

WLAC Placement: Rebecca Tillberg-Dean of Institutional Research and Planning / Sarah Doerrer-Research Assistant

Guest Speakers:

John J. Hetts, Ph.D., is the Senior Director of Data Science at Educational Results Partnership. Building on twenty years of experience in instruction and research in higher education, his work focuses on identifying untapped potential in educational data. His work on predictive modeling of student placement into and performance in foundational courses as the Director of Institutional Research at Long Beach City College won the 2012 RP Group Best College Research and the 2014 ACCCA Mertes awards. He received his doctorate from UCLA in Social Psychology with a specialization in Measurement and Psychometrics and holds a B.A. with Distinction and Honors from Stanford University.

Dr. Deborah L. Harrington is the Dean of Student Success for the Los Angeles Community College District (LACCD) and the Executive Director and Project Administrator for the California Community Colleges' Success Network (3CSN). She serves on several statewide committees including the Advisory Committee on Legislation, the Futures Commission, and the Basic Skills Advisory Committee. Dr. Harrington is the Founding Director of the Faculty Teaching and Learning Academy (FTLA) and the Founding Director of the statewide Basic Skills Initiative Leadership Institute (BSILI), 3CSN's leadership community, which is one of ten finalists for the 2015 Bellwether Award in the category of Planning, Governance, and Finance. 3CSN's other communities of practice, including its Reading Apprenticeship Project and California Acceleration Project, have also been recognized as research-driven initiatives resulting in significant increases in student achievement.

Questions & items from the floor.

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Student Success and Support Program
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Sign In Sheet

1. H. Feiner
2. J. Lomie
3. Rebecca Taka
4. Matt Robertson
5. Manushak Movsisyan
6. William J. Bick
7. Clare Norris
8. Luis Company
9. Sarah Doerfer
10. Jeremy Jenkins
11. D. Harrington
12. Susan Fong
13. _(signature)_
14. _(signature)_
15.
16.

17. _____

18. _____

19. _____

20. _____

West Los Angeles College

English and ESL Placement Model: Multiple Measures
2015

Multiple Measures

How many units do you plan to take?	Answer	Less than 3 units	3-5 Units	6-8 units	9-11 units	12 units or more	
	Points	0	0	0	-1	-2	
How many hours per week do you plan to work at your job?	Answer	0 hours per week	1-9 hours per week	10-19 hours per week	20-29 hours per week	30-39 hours per week	40 hours or more per week
	Points	0	0	-.5	-1	-1	-2.5
What grade did you receive in your last English or ESL class?	Answer	A	B	C	D	F	
	Points	+3	+2	0	0	0	
How often do you read books or novels?	Answer	Never	Sometimes	Once a year	Once a month	Once a week	
	Points	0	0	0	0	+2	
(ENL Only) What was your high school G.P.A.?	Answer	"A" average (4.00-3.50)	"B" average (3.49-3.00)	"C" average (2.99-2.00)	"D" average (1.99)-1.50)	"F" average (below 1.5)	Don't know
	Points	+3	+2	0	0	-2	0
(ESL Only) How good is your writing in your native language? I think I do a good job writing:	Answer	I can not write a good sentence	A sentence	A paragraph	A page	A 3 to 5 page essay	
	Points	-2	-1	0	+1	+2	

Let Icarus Fly:

The Four Cornerstones of Gateway Course Completion and Success for All our Students

West Los Angeles College
May 8, 2015

John J. Hetts, Ph.D.
Senior Director of Data Science
Educational Results Partnership
jhetts@edresults.org
@jjhetts

EDUCATIONAL RESULTS PARTNERSHIP

Cal-PASS PLUS

Overview

- Standardized assessment systematically and substantially underestimates student capacity
  - Particularly for students of color, low income students, first generation college students, women
- Four evidence-based cornerstones on which to rebuild community college outcomes
  - Range of cost but exceptionally high ROI
    - to students, colleges, the state – all of us
  - Tremendous completion, equity, and real world implications
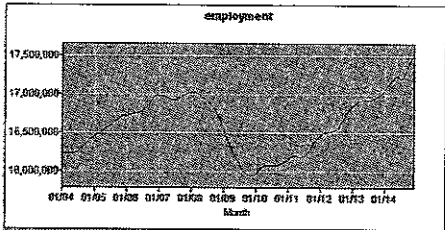

But first, I digress

A little classics, a little econ, and a little probability

First, Classics:
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...

## A little macroeconomics:
Great Recession in CA, BLS data

- The worst recession in any of our lifetimes took a million people out of the workforce for a year or more, causing suffering on an epic scale.
- Now - imagine if we knew it was happening and stopping it was fully in our control.

And a quick probability estimation

- Imagine you're told that an event is **highly unlikely** to occur

- Take a moment to decide the **maximum probability** of that event's occurrence between 1-100% that you would accept as consistent with a description of "highly unlikely"

NAEP Math and Reading Assessments
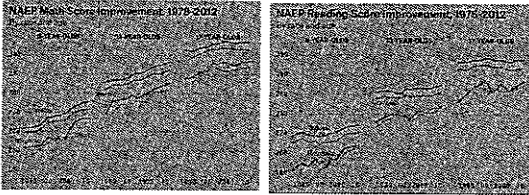
What If the Conventional Wisdom is Wrong?

- 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
  - NAGB, 2012: Incredible variability in cutscores; 2-year colleges often use HIGHER cutscores than 4-year bit.ly/NAGB2012
  - Hiss & Franks, 2014: Underestimates capability of students of color, women, first generation college students, low SES: bit.ly/DefiningPromise

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What if?

-
  students but with limitations in how we have assessed their capacity to do college-level work?

- OR

- What if one of the key barriers to our students' successful transition to and success in college is one that we fully control?

Four transformative cornerstones

Cornerstone 1: Improving assessment through evidence-based multiple measures

Resources/references:
- http://bit.ly/MMAP2015
- http://bit.ly/RPSTEPS
- http://bit.ly/RPMultipleMeasures
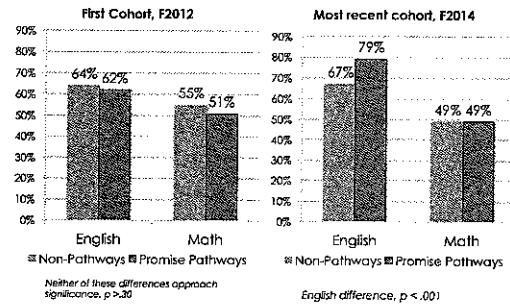- http://cccassess.org

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Utility of HS information to improve assessment

- 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
- 2012: Hetts, Fuenmayor, & Rothstein
  - strong predictive utility of HS GPA and grade in discipline for course performance
- 2014: Willett & Karanjeff
  - replication of 2012 research by 12 colleges (STEPS)
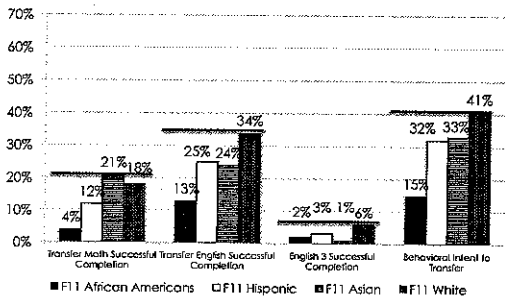- MMAP: Multiple Measures Assessment Project

Before I show you the success rates...

- What are the standards for including a prerequisite on a course?

- Prerequisites can be required if:
  - Needed for health and safety of student
  - Required by statute or rule
  - If student would be <u>highly unlikely</u> to successfully complete the course if the prerequisite wasn't fulfilled first.
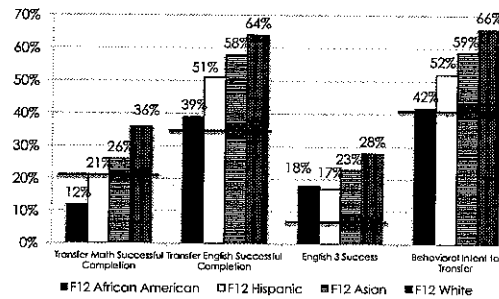
Success rates in transfer-level courses

First Cohort, F2012 — English 64% 62%, Math 55% 51%

Most recent cohort, F2014 — English 67% 79%, Math 49% 49%

Non-Pathways / Promise Pathways

Neither of these differences approach significance. p >.30

English difference, p < .001

Equity impact: 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%, 34%
English 3 Successful Completion: 2%, 3%, 1%, 6%
Behavioral Intent to Transfer: 15%, 32%, 33%, 41%

F11 African Americans / F11 Hispanic / F11 Asian / F11 White

Equity impact: F2012 2-year rates of achievement

Transfer Math Successful Completion: 21%, 26%, 36%, 39%... 64%
Transfer English Successful Completion: 51%, 58%
English 3 Success: 18%, 17%, 23%, 28%
Behavioral Intent to Transfer: 42%, 52%, 59%, 66%
12%

F12 African American / F12 Hispanic / F12 Asian / F12 White

MMAP Overview

- Statewide replication of use of high school information via CalPASS Plus
  - Uses classification and regression trees (CART) to organize students into highly similar performance
  - Allows for very complex, non-linear effects and robust to missing variables
  - Rule set development: placement where past students with those characteristics achieved a C+ or better in course
  - All colleges welcome to join or follow along with pilot effort (23 and counting!)
    - http://bit.ly/MMAP2015
    - jhetts@edresults.org
    - 714-380-2678

Multiple Measures Assessment Project:
Potential Impact of conservative statewide Implementation

Math: Traditional Placement 29%, Multiple Measures 41%
English: Traditional Placement 48%, Multiple Measures 63%

Percent placed at transfer level

Traditional Placement / Multiple Measures
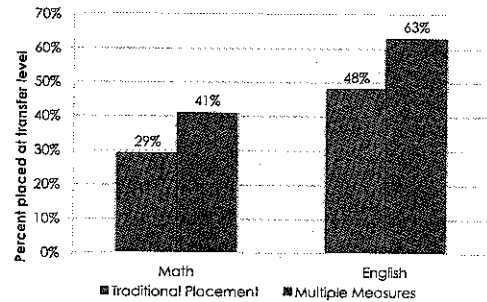
Evaluation of 2011-2012 pilot year of California Acceleration Project

- Compare outcomes of accelerated students vs. similar students enrolled in traditional English and math basic skills sequences
  - Students followed through spring 2013
  - 18 accelerated pathways at 16 colleges
  - 1,836 accelerated English students & 22,354 comparison students with complete data
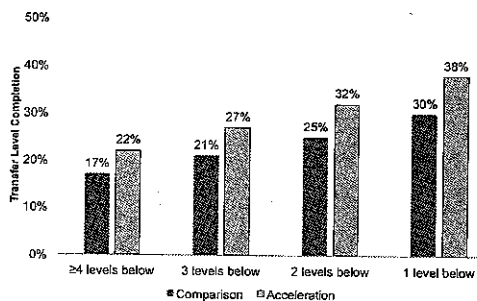 - 653 accelerated math students & 23,607 comparison students with complete data

Summary of Findings

- Large and robust effects of acceleration that work for
  - Students of all backgrounds
  - Students at all placement levels
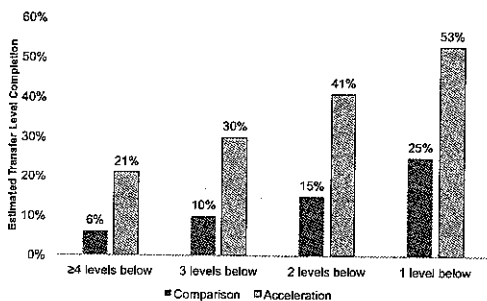- Quality of implementation mattered
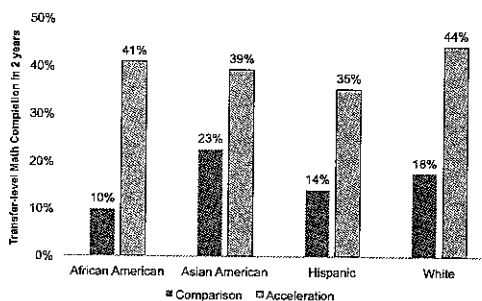
CAP increased odds of transfer-level course completion in two years
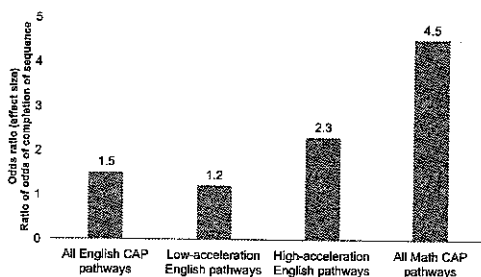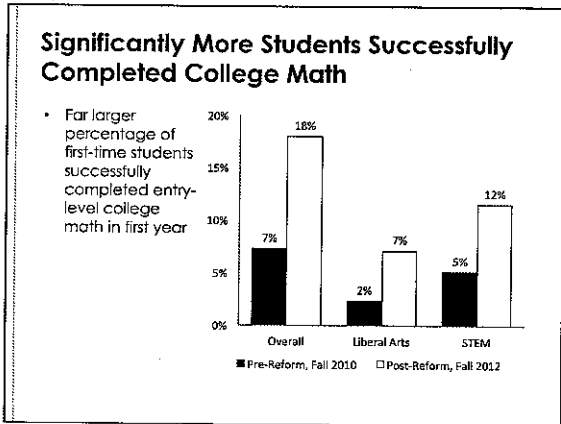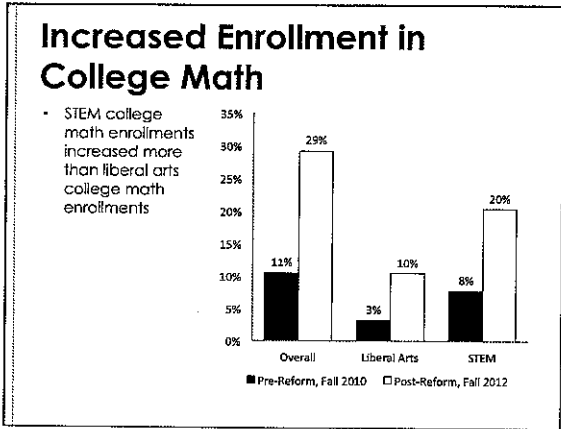

Regression Adjusted Effects - English

Regression Adjusted Effects – Math

Completion of transfer-level math by ethnicity

Developmental Math Reform – Virginia Community College System

- Introduced new instrument (VPT-MATH)
- Intentionally increased percentage assigned to college-level math

Pre-Reform, Fall 2010 ☐ Post-Reform, Fall 2012

Increased Enrollment in College Math

- STEM college math enrollments increased more than liberal arts college math enrollments

■ Pre-Reform, Fall 2010 ☐ Post-Reform, Fall 2012

Successful Completion of College Math Declined

Of those placed at college level and that enrolled, successful completion rates declined after introduction of the VPT.

■ Pre-Reform, Fall 2010 ☐ Post-Reform, Fall 2012

Significantly More Students Successfully Completed College Math

- Far larger percentage of first-time students successfully completed entry-level college math in first year

■ Pre-Reform, Fall 2010 ☐ Post-Reform, Fall 2012

Cornerstone 4: Corequisite models

Resources/references:
- http://bit.ly/2015ALP
- 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

Impact of putting one __more__ of the four cornerstones in place

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Summary of impacts

Pillar	Transfer-level success rates (if taken)	Developmental Success Rates	Transfer-level completion (by entire cohort)	Meaningful equity impacts	Upfront Development of Curriculum
Multiple Measures	No change to higher	Lower overall (but no change for students that remain)	Much higher	Substantial	Low
Acceleration	No change to higher	No change to higher	Much Higher	Substantial	High
Cutscore revision	Slightly lower	No change to slightly lower	Much Higher	Substantial	Low
Corequisite models	Higher	Higher	Much Higher	Moderate to substantial	High

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Potential Needs for Professional Development and Other Support to Optimize Outcomes

- Transfer level courses
  - E.g., first-year students in first year English again
- Developmental courses
  - E.g., best students will no longer be present
- Faculty re-training support
- Student Support Services
  - E.g., how to interpret and incorporate additional evidence of student capacity
- Unlearning of previous narrative
  - Counselors
  - Assessment and Matriculation staff
  - Foundational skills faculty
  - Administrators

- Enrollment management
- Curriculum development and redesign
- Rebuilding relationship/trust of students and K-12 partners
- Institutional research skills and capacity
  - Understanding modeling and analytics

What might this mean for our institutions?

- Improved outcomes for our students
  - And taking less time to achieve them
- Improved behavior from our students
- Better prepared students
- Higher quality data to better understand student performance and interventions
- Improved targeting of interventions
- *New May 2015 Budget Revise developments

2015 May Budget Revision Notes

- http://bit.ly/2015MayRevise (pp 24-25)

  - community colleges in improving delivery of basic skills instruction by adopting or expanding the use of evidence-based models of placement, remediation, and student support that accelerate the progress of underprepared students toward achieving postsecondary educational and career goals.

  - An increase of $2 million Proposition 98 General Fund for a pilot program to provide incentives to community college districts and the CSU to coordinate their efforts to provide instruction in basic skills to incoming CSU students in an efficient and effective way.

  - An increase of $15 million Proposition 98 General Fund to further close achievement gaps in access and achievement in underrepresented student groups, as identified in local Student Equity Plans.

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.