John Muir, our patron saint of western wilderness, celebrated his 177th birthday this week. Self-described as a “poetico-trampo-geologist-botanist and ornithologist-naturalist etc. etc. !!!!,” he devoted his life to learning about and protecting our natural heritage. Of his many achievements, he is well known for his sojourn into Yosemite Valley from 1868 to 1874 and his subsequent urging to Congress to establish Yosemite National Park.

While we may not truly comprehend his full experience of laying eyes on the Yosemite Valley for the first time, we have the privilege of laying our own eyes on it and imagining his experience while creating our own.

In a small parallel, this issue is devoted to bringing the experience of the 2015 RP Conference to those who were not able to attend. First, all materials from the sessions can be accessed here. Second, the series of articles in this issue take a deeper dive into a few of the many sessions that received high praise from attendees.

Thank you to all those who attended the Conference and we look forward to continuing the conversations throughout 2015!

Sincerely,
Priyadarshini Chaplot
The RP Group

P.S. It is no coincidence that Earth Day falls in the same week as John's birthday. In Alaska, on July 18, 1890 (80 years before the first Earth Day), John wrote:

"How hard to realize that every camp of men or beast has this glorious starry firmament for a roof! In such places standing alone on the mountaintops it is easy to realize that whatever special nests we make--leaves and moss like the marmots and birds, or tents or piled stone--we all dwell in a house of one room--the world with the firmament for its roof--and are sailing the celestial spaces without leaving any track."

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Announcements

Submit a Nomination for the 2014 POWER Awards by May 1
Has your college developed effective strategies and processes for student learning outcomes assessment that link learning with equity? Submit your nominations for the upcoming 2015 POWER Awards. Details here.

Submit a Nomination for the 2015-17 RP Group Board by May 8
Would you like to know more about current issues in community college evaluation, research, planning and professional development statewide? What about becoming a part of the future of research, planning and evaluation in California? The RP Group is accepting nominations for at-large members of the RP Group Board. Details here.

Register for the 2015 Strengthening Student Success Conference
When it comes to student learning and institutional effectiveness, what have we learned over the last decade and what's on the horizon? Held on October 7-9 at the Oakland Marriott City Center, this year's SSS Conference will address assessment, pathways, basic skills and more! Peruse conference goals, strands, schedule and post-conference workshops here and register here.

STATEWIDE SPOTLIGHT | Multiple Measures at Multiple Colleges: Reimagining Student Capacity

Author: John J. Hetts, Senior Director of Data Science, Educational Results Partnership

Almost a decade of research in the California community colleges strongly suggests that our reliance on standardized testing for assessment (WestEd, 2011) is systematically underestimating the capacity of our students to successfully complete college-level work at our colleges. Willett, Hayward, & Dahlstrom (2008) found that student grades in 11th grade English and Math were more highly correlated with student performance in community college courses, but weakly related to student placement compared to 11th grade California Standards Test scores. Replicating Adelman's The Toolbox Revisited (Adelman, 2006) in the Riverside Community College District, Martinez (2011) found that self-reported high school courses and grades are stronger predictors of completion of community college than standardized assessments (which quickly drop out of the analysis). Hetts, Fuenmayor, and Rothstein (2012) found that overall high school GPA and grades in students' last discipline course were stronger predictors of student performance in college English and math courses than standardized tests in the same discipline.

The potential to improve our understanding of the factors that predict student performance in our courses in order to better assess students' readiness for those courses was further supported by CCRC research on large community college systems (inter alia Belfield & Crosta, 2012; Scott-Clayton, 2012; Scott-Clayton & Rodriguez, 2012). All of this research has served as the foundation for two statewide research projects: the Student Transcript Enhanced Placement Study (STEPS; Willett & Karandjef, 2014) and the Multiple Measures Assessment Project (MMAP). Collectively, this body of research strongly suggests that we
have been substantially underestimating and, as a result, likely undermining our students' actual capacity to succeed in our courses.

Three different California community colleges were among the first to set out to harvest the fruits of these research efforts. Starting in 2012, Long Beach City College (LBCC) implemented the use of evidence-based multiple measures in assessment and placement as a key part of its broader Promise Pathways initiative. Through that effort, LBCC more than tripled the rate of students placed directly into transfer-level English and math while maintaining and even improving the successful completion rate of students placed into those courses. More powerfully, LBCC improved the completion of key early milestones of academic progress within the first two years by two to six times previous rates. Beginning in 2014, Bakersfield College launched its Making it Happen program, implementing a wide range of assessment and placement reforms, including using multiple measures to place students into transfer-level and accelerated courses, contextualized assessment testing, and various other just-in-time wrap-around student support services. With an initial cohort of 450 students, Making it Happen saved Bakersfield College students 800 semesters of time in developmental education with minimal impact on successful completion rates. Also in 2014, Sierra College implemented an elegant web-interface to directly empower students with information about their college readiness using a multiple measure algorithm developed from STEPS, exempting students from assessment if eligible. Students placed into transfer-level courses in English via multiple measures at Sierra College successfully completed the course at higher rates than those placed by the standardized testing instrument alone.

These early results at three very different institutions underscore the potential impact of the adoption of more robust multiple measures in the California community colleges. Combined with other emerging research demonstrating similar transformational impacts of accelerated curriculum or the lowering of cutscores (whether accidental or intentional), these results suggest a tremendous opportunity to support student success, address student equity, and dramatically improve student outcomes as we work together to redesign our assessment system toward a more effective, comprehensive, and holistic approach to understanding our students' capacity using the strongest evidence that we have available. There remains a vital role for standardized assessments for many of our students, particularly tests designed by and customized for our system. However, one collective first step we need to take as we embark on this systemic change is to do one very simple thing: follow the evidence to once more recognize the capacity of so many of our students to do college-level work if only given the chance.

Questions:

• Send any questions about the research described or inquiries about participating in the statewide Multiple Measures Assessment Project pilot to jhetts@edresults.org.
RESEARCH | Creating "Citizen Researchers" with Tableau, or, You Don't Need a Research Request Form Because You Can Look Up that Data Yourself!

Authors: KC Greaney, Director of Institutional Research, Greg Drukala, Research Analyst, Jeanne Fadelli, Research Analyst and Lara Abel, Research Technician, Santa Rosa Junior College

Many colleges are considering Tableau data visualization software to automate the presentation of data in a user-friendly, interactive, visually appealing, robust format. The Santa Rosa Junior College (SRJC) Research Office, in our quest to create "Citizen Researchers," has extended this tool to make detailed data accessible via the web and to promote effective conversations with practitioners about data to inform future actions. Specifically, we use Tableau at SRJC to present our Strategic Planning Scorecard, our Fact Book and the results of Student Surveys. Data needed for regular reporting (e.g., Student Success Scorecard results) or for committees (e.g., Student Equity, Basic Skills) are built into the data visualizations. The result is a streamlined data reporting process, much more appealing and useful than printed reports, where users can self-serve the data they need, including the ability to drill down to the details.

The clear value of using a tool such as Tableau to research and planners is (1) automation of research reporting; (2) streamlining the work of the Research Office; (3) making data widely available to support planning at all levels; and (4) allowing citizen researchers to answer their own data questions by drilling down into the data.

At SRJC, we see this as a way to democratize data, to take it out of IT or Research Office MIS data bases and to put it in the hands of the people who need it. We have started a local campaign to create "SRJC Citizen Researchers," adopting the slogan "Data to the People!" This effort is meeting with some enthusiasm and success, which is signaling a shift at SRJC. Historically, the college culture had not been one of inquiry or regular use of data, in great part because data had not been regularly nor readily available to employees.

SRJC has primarily used Tableau in three very different efforts: (1) our internal Strategic Planning Scorecard, (2) our extensive Fact Book and (3) to share the detailed results of student surveys. In all three efforts, the visualizations (all web-based) start at a broad, general level, to appeal to those who want the quick, aggregated number. Users are visually invited to go deeper, to click on choices to disaggregate the data and present the information in different ways (maps, charts, etc.). Users are also able to download and print the charts/tables they create through their interactive choices.

SRJC's Tableau data visualizations have been shared in various venues, such as the Student Equity Committee, which needs data disaggregated in all kinds of ways. The data visualizations allow committee members to explore the data to answer the questions that come up. For example, looking at an outcome by ethnicity, a committee member might find that Latinos achieve at a lower rate than whites. Are there differences by gender within the Latino student population? What about by age? What about by age and gender within ethnicity? These types of explorations can now be conducted by committee members and not by the Research Office. Another example is the development of our Strategic Planning Scorecard. Data visualizations were shared with our Institutional
Planning Council, whose members could then interact with and explore the data to inform the collective committee setting of targets and timelines.

We have also shared the information at Professional Development Days, where we are training and anointing "Citizen Researchers." This has been a remarkably popular workshop. We in the Research Office also use these workshops to evaluate the effectiveness of the visualizations we have created by asking users for feedback, and by observing them interact with the data.

**Resources:**

All data visualizations at SRJC are web accessible and not password protected. Please explore the following links, being sure to scroll down, and to hover and click to ensure you are experiencing all the visualizations have to offer:

- Sonoma County Junior College District (SCJCD) Fact Book 2014
- SCJCD Strategic Planning Scorecard
- CTE Outcomes Survey selected results for SRJC
- CTE Outcomes Survey selected results statewide
- SRJC 2013 Student Survey - Part 1
- SRJC 2013 Student Survey - Part 2

**PLANNING | Make Your Equity Strategy Immediately Actionable**

**Author:** Gregory Stoup, Senior Dean of Research & Planning, Contra Costa Community College District

It's 3:00 PM on a Tuesday. Adjacent conference rooms have been reserved by two college committees. In room 1-A a workgroup is reviewing equity data in hope of identifying a goal for closing the achievement gap. In room 1-B a planning committee is working to establish college goals for overall student performance. Room A concludes that the college should set a goal of closing the equity gap by 5%; room B agrees that the institution goal for student performance should be an increase of 2%. The meetings adjourn. Missions accomplished.

This is a caricature, but true-to-life versions of this disjuncture occur all too frequently at community colleges. However, with some foresight and proper preparation, we can change this dynamic and not only connect the intentions and aspiration of student equity and outcomes planning, but use the relationship between the two to generate immediately actionable interventions that serve to improve them both.

The research team at Contra Costa Community College District has developed a suite of three tools that can help colleges (1) make institutional goal conversations more tangible, (2) develop equity strategies that synchronize with those goals and (3) identify specific student populations that will help move the needle toward those goals.

Tool 1: A simple dashboard that allows user to cultivate an understanding of the relationship between various goal choices and the required number of additional success
needed to achieve them. An excel spreadsheet showing the current level and recent trend of a variety of college performance metrics is outfitted with an interactive feature that allows users to enter a desired increase in each goal (percent improvement) and algebraically translates that percentage into the number of additional successes required to attain that goal.

![Institutional Effectiveness Indicators](image)

**Tool 2:** An equity scenario planner that provides users with a graphical depiction of the achievement gap at their college and an interactive feature to test the consequence on the achievement gap resulting from hypothetic improvements for specific subpopulations. Through a Tableau interface, users can take the headcount figures derived from the dashboard and apportion that figure across student populations to gauge the corresponding impact on the college's equity gap.
Together, Tools 1 and 2 set up an iterative, back-and-forth scenario testing process whereby college planners can determine if, say, the goal of improving the completion rate by 3% can be distributed across underserved populations in a manner that supports their goal for closing the achievement gap.

Tool 3: A target population generator enables colleges to identify specific students (by name, ID and demographics) whose success would move the college toward achieving their goal. An SQL query tool allows colleges to identify students who are close to achieving success, e.g. in their fifth year and 10 units shy of a degree, but who might need a little nudge of support to help get them there.

Resource:

- Peruse the PowerPoint from the related conference session titled "Using Data Equity to Set Institutional Standards and Goals"

ASSESSMENT | A Renaissance of Multiple Measures in California

Authors: Craig Hayward, Director of Research, Planning & Accreditation, Irvine Valley College, Terrence Willett, Director of Planning, Research, and Knowledge Systems, Cabrillo College and Alyssa Nguyen, Associate Director of Research and Evaluation, The RP Group

"Underplacement" may just be the biggest barrier to student success that you’ve never heard of, most likely because it is largely invisible. Underplacement occurs when a student who would have succeeded at a higher-level English, math or ESL course is placed into a lower-level
counterpart. Since the underplaced student typically performs well in a lower-level course, the long-term negative consequences of decreased throughput rates may not be readily apparent. Despite this lack of visibility, when underplacement has been identified and discussed by groups of faculty at multiple measure pilot colleges, there has been general agreement that great efforts should be focused on reducing it.

A recent series of research papers by the Community College Research Center (CCRC) investigated placement and student performance relative to expected student capabilities, given their high school performance and GPA. Their findings were surprising: approximately half of all students placed by standardized tests were being underplaced in both math and English. That is, students who were very likely to have received at least a "C" in transfer-level work were assigned to remedial or basic skills coursework. Another study found that relying on just a placement test resulted in 29% of high schools students being "severely underplaced" in English while about 19% of incoming students were severely underplaced in math. In this case, these students were highly likely to have been able to earn a "B" in transfer-level work—if only they had been placed there. Using the best placement from either the test or from an index comprised of high school performance data resulted in the greatest decrease in underplacement error and the greatest overall placement accuracy.

Underplacement is pernicious. Students placing into low levels of remedial sequences are highly unlikely to complete a transfer-level gatekeeper course. For example, across the California community college system in fall 2010, only 7% of students placed at three levels below transfer in math complete a transfer-level math course within three years, despite roughly two-thirds of students successfully completing each level they attempted. In English, only 19% completed. Without these courses, students are highly unlikely to complete degrees and transfer.

The good news is that we have the opportunity to do something very powerful to adjust the scales and recuperate students who are being placed unnecessarily into remediation. California education code wisely calls for the use of "multiple measures" when using a test to place students. The Multiple Measures Assessment Project (MMAP) research team has spent the past year investigating the utility of high school performance data for predicting performance of incoming students in their initial English and math classes. This information can be used as a set of powerful multiple measures, tapping domains that are distinct from that of standardized tests, making it a very useful complement to standardized English and math placement tests.

The MMAP research team used regression-based decision trees to develop rule sets that identify students who are highly likely to succeed at any given level of placement. The rules are based on high school performance data such as cumulative high school GPA, high school test scores, AP course-taking, and, for math, grades in specific high school math courses. The team selected decision trees because they sort students into relatively homogenous categories based upon a specific criterion, have few data assumptions, and account for nonlinearities and interactions. For this project, the criterion is an average predicted GPA in the college-level class of 2.2 or higher. The decision trees that result from the analysis do not require any technical background to understand and discuss. They are also easily converted into code that automatically assigns students to the highest placement level for which they qualify.

This March, the MMAP research team released a default set of decision rules to the 23 MMAP pilot colleges. All of the colleges are currently investigating the implications and potential impact of applying these placement rules. Colleges will engage with their local
multiple measures information and find ways to improve upon the rule sets and their implementation to further reduce placement error in their local context. This could include engaging with feeder high schools to compare curricula and practices. A number of colleges will be live-testing the rule sets this coming fall. Statewide impact studies of applying the rule sets disjunctively with standardized placement tests—what is, taking the highest placement level of either approach—show a potential for increasing the proportion of students starting in transfer level math by 12 percentage points and the percentage of students starting in transfer-level English by 25 percentage points. This would boost about 75,000 students a year into a higher academic trajectory. This kind of impact is predicated on having available transcript information on all incoming students. A system that will make all California students’ transcript information available to colleges is currently under development. In the meantime, colleges have had good success using the data voluntarily submitted to Cal-PASS Plus by their feeder high schools.

Finally, MMAP is also currently collecting data on the use of social-psychological scales such as academic self-efficacy, conscientiousness, mindset, college identity, mindfulness and grit. Investigations are focused on how these so-called non-cognitive variables (NCVs) may be able to enhance the predictive power of multiple measures placement models or how they might possibly be used as proxies for missing high school performance information.

So, be sure to add “underplacement” to your spell check dictionary and keep your eyes peeled for signs of it and how to reduce it.

**Resources:**

- Access a [webinar](#) from April 22 that features examples on using R, an open source statistical software, on building decision trees and other analytical models
- Learn more about the [Multiple Measures Assessment Project](#)