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for California Community Colleges

Stepping Up

Progression in English and Math From High School to College

Student Transcript-Enhanced Placement Study

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Introduction

How do we determine if incoming students are ready for college-level work? California's community college system is currently working to address this complex question in a more nuanced, comprehensive and equitable way. This research brief offers insights that can inform these efforts resulting from the Student Transcript-Enhanced Placement **Study** (STEPS)—a statewide study designed to help colleges grow their capacity to utilize high school transcript data to improve student placement.

California's community colleges have been required to use measures other than a single test score for assessment and placement purposes for over two decades. A 1988 lawsuit, *Romero-Frias et al. v. Mertes et al.*, initiated systemwide reform prohibiting the placement of students based solely on a single test score and requiring use of "multiple measures" to assess the English and math skills of students. The 2012 Student Success Act (SB1456) pushed further changes to matriculation (the process of admitting, assessing and orienting students), leading to the renaming of these processes and services to "Student Success and Support Programs" and signaling a shift in priorities and strategies. Yet, concerns remain that test scores still seem to dominate in the suite of measures in the placement process across the system (Venezia, Bracco & Nodine, 2010).

The STEPS project was supported by The Rosalind and Arthur Gilbert Foundation, the Walter S. Johnson Foundation and LearningWorks.

STEPS builds on a strong foundation of research about the utility of high school transcripts in the college placement process. When looking at placement for recent high school graduates, prior research shows that high school transcript information—including grade point average (GPA), math and English grades and test score results—may offer a viable option for improving placement for students recently out of high school (Belfield & Crosta, 2012; Brown & Conley, 2007; Brown & Niemi, 2007; Fuenmayor, Hetts & Rothstein, 2011; Jaffe, 2012; Willett, Hayward & Dahlstrom, 2008; Wurtz, 2008). This project is acting to further compound this evidence across California's community colleges. As part of a growing effort to understand and highlight the value of using multiple measures for placement to both colleges and their students, the RP Group launched STEPS in 2012 through a partnership with the California Community Colleges Chancellor's Office (CCCCO) and the California Partnership for Achieving Student Success (Cal-PASS). STEPS aims to:

- Support colleges interested in enhancing placement and advising systems specifically for recent local high school graduates by using high school transcript information
- Drive statewide dialog about practical ways to improve college placement policy and practices in general

Readers' Guide

The RP Group designed this research brief for a broad range of community college practitioners who have a hand in defining assessment and placement policy on their campuses and/or carrying out these policies in practice. These stakeholders include leaders of college instruction and student services divisions; assessment coordinators, counselors, admissions and records staff and other student services professionals; math, English and English as a second language (ESL) faculty; and research and information technology (IT) teams. This research brief provides a high-level overview of the methodology used by the colleges participating in the STEPS study to explore the link between students' high school and college performance. We then share key implications resulting from the STEPS work thus far and conclude with a preview of the project's next steps.

STEPS Methodology

Between 2012 and 2013, the RP Group worked with 11 California community colleges to implement a statewide pilot using a Microsoft Access module and statistical scripts created by Long Beach City College (LBCC) researchers to manage and analyze California Partnership for Achieving Student Success (Cal-PASS) data (see sidebar, *Long Beach City College Lays the Foundation for STEPS*). This analysis focused on a few key questions, including:

- What is the relationship between students' high school English performance measures, the level of their first English course attempted at the community college and their success in that course?
- What is the relationship between students' high school math performance measures, the level of their first math course attempted at the community college and their success in that course?

Through "STEPS 1.0," the first iteration of the pilot, colleges used Cal-PASS data to take a backwards look at students who had enrolled in English and/or math courses at their institutions. This research examined the level of their first college course attempted in either or both of these subjects as well as a number of variables related to their high school performance (e.g., recent California Standardized Test (CST) scores; level of and grade in most recent high school English and/or math course; overall GPA, excluding English and/or math). This pilot study surfaced a number of

Long Beach City College Lays the Foundation for STEPS

In 2011, Long Beach City College (LBCC) replicated a California Partnership for Achieving Student Success (Cal-PASS) study that related high school transcript data to college performance (Willett, Hayward & Dahlstrom, 2008). As in the original study, LBCC also found a significant association between high school and college performance in English and math for recent high school graduates. LBCC's work resulted in research infrastructure usable by other colleges. LBCC's work helped catalyze the STEPS project, which has forged a growing network of colleges reproducing and refining this approach and using its results to inform local use of multiple measures in placement systems and policies.

data set limitations and replicability issues with the Access module. One limitation consisted of missing data from key high school partners. When colleges attempted replication, some of the codes used to classify courses worked well for those institutions in the Long Beach area. However, other regions used course codes that fit their curriculum but were not included in the Long Beach data management scripts. In response to these issues, a grassroots effort among the participating institutions, led by Mount San Antonio College, resulted in enhancements to the database modules and analysis scripts and was dubbed "STEPS 2.0." The colleges that had not yet begun their STEPS work used the 2.0 module and scripts; in addition, most of the pilot colleges reran their analyses. The success of the 2.0 release inspired more colleges to join the effort and contribute to the growing body of evidence correlating high school and college achievement. Notably, the experience of deploying the STEPS database and analysis tools to the field is also informing a new generation of reporting tools currently being developed by Cal-PASS Plus.[1]

Readers interested in learning the technical details of the STEPS 2.0 methods or applying it in their own district can learn more by visiting **www.rpgroup.org/projects/STEPS**.

STEPS Implications

So, what does the evidence generated by the STEPS project to date tell us? In addition to identifying a number of valuable lessons about how to effectively conduct this research on the connection between high school performance and college placement, we have surfaced key considerations for local and statewide practitioners interested in advancing their work to implement multiple measures of assessment. Admittedly, community colleges serve a complex constituency. The use of high school transcript data for placement only deals with a certain subpopulation of students, albeit a significant and critical group: recent high school graduates. To that end, we aim for these themes to inform efforts to improve assessment and placement for this population in particular.

High school transcript data have significant relevance and utility to the college placement process.

Our research shows that when looking at the transcripts of recent graduates from local high schools, institutions can derive meaningful information that can facilitate more accurate placement of this population and predict their likelihood for success in college courses. When looking at the results from the STEPS pilot colleges, a few notable highlights emerge.

Specifically, findings across the 11 participating colleges indicate that high school CST scores associated most strongly with the level of students' first college English and math course. The level of the first college course attempted is typically a result of a student's placement process

1 Cal-PASS is now under new management and referred to as Cal-PASS Plus.

where college placement test scores often play a large role. Due to the presumed relationship between CST scores and college placement test scores, this finding can be stated concisely as **tests predict tests**. However, **other factors were also somewhat predictive** of the level of the first college English and math attempted. For example, the more high school "A-G" courses for UC/CSU eligibility students completed, the more likely they were to attempt a higher level English course in college. Also, students completing a higher level of math were more likely to take a higher level math course in college on average. While this finding about math may seem intuitive to the point of being trivial, the relationship was weak in comparison to what might be expected from a well-articulated pathway between K-12 and college.

In terms of performance, **non-English high school grades associated most strongly with college grades for English**. This finding leads us to assert that **for English, grades forecast grades** as students who earned higher grades in high school were more likely to earn higher grades in college English.

However, predicting college math grades was found to be more complex given the greater number of levels of high school math courses and tests as compared to English. The research indicated that levels of math completed and non-math GPA in high school can have some value in predicting success in college math courses. That said, these findings also underscore that **predictors of college math success vary among high schools and colleges.** Therefore, each college should conduct its own research in order to verify the best predictors for its students.

Readers can further explore the results of the STEPS study at www.rpgroup.org/projects/STEPS.

Colleges can use high school transcript data in a variety of ways.

These findings add to a growing body of research showing that high school transcript data have value to colleges working toward a more comprehensive and equitable approach to assessment and placement. Institutions might leverage the STEPS study to:

- Replicate the STEPS research to identify how high school transcript data can inform their own local assessment and placement processes
- Use locally-generated evidence to:
  - Expand and improve an existing multiple measures approach to college placement
  - Inform placement of recent high school students from surrounding K-12 districts
  - Measure the impact of curriculum alignment efforts between local K-12 districts and the college on reducing remediation and increasing achievement
- Contribute their local data to inform broader assessment and placement policies at the regional or state level

Implementing this placement approach requires collaboration between community colleges and their K-12 partners.

Using high school transcript data for college placement does present challenges. Implementation of this approach calls for colleges to address several technical, legal and logistical practicalities. Management of these practicalities inevitably requires colleges to mobilize a range of stakeholders, both internal to their own institutions and across segments. It suggests that colleges and their K-12 partners reach across the silos that typically exist between their systems and address differences in instruction and student support approaches. Colleges can consider the following issues when exploring use of high school transcript data.

Alignment of K-12 and community college curricula. Transcript data become even more powerful when community colleges engage with their K-12 partners in curriculum alignment efforts. Creating detailed connections between high school and community college English and math content and pedagogy can help students be more prepared for college. Leadership within both the local community college and K-12 systems is vital to promoting ground-level engagement of faculty leaders, curriculum specialists, counselors and other student services professionals in meaningful discussion and action. Colleges can leverage existing venues such as inter-segmental councils, articulation committees and/or high school principals meetings to initiate and/or facilitate this planning.

Given California's adoption of the new Common Core state standards, the time may be ripe for colleges to enter these conversations with their K-12 counterparts. Colleges will need to have a firm grasp on the impact of these new standards on how and what students learn, perform and demonstrate their understanding. Moreover, both high school and college educators will need to understand the new tests designed to determine students' mastery of the Common Core. Colleges may be wise to consider how these new standards and assessments factor into any system designed to use high school transcript data for placement.

Transmission of high school transcripts. Presently, many California community colleges do not have the infrastructure to request and receive high school transcripts. Institutions need to engage their admissions and records departments and IT divisions to work with their K-12 partners and develop a system for securely sharing student transcripts. Furthermore, these systems need to be structured to ensure that all relevant parties can access transcript data in a user-friendly manner.

Incorporation of transcript data into the assessment and placement process. Community college student services and instruction administrators must determine how to factor transcript data into students' placement, identifying what information to utilize and how it weighs against other measures used to place students. IT teams must work to incorporate these decisions into existing placement technology and processes.

Professional development of community college and K-12 educators. Community college counselors need practical hands-on training that will help them utilize transcript data in the placement process. Similarly, high school counselors need guidance in advising students about how their high school performance and test data will impact their placement once at the community college.

Emerging statewide initiatives support these collaborations.

As local community colleges begin engaging with their K-12 partners and embracing the use of high school transcript data for placement purposes, they will likely benefit from a growing infrastructure of support for this work developing at the state level. In response to the Student Success Task Force Recommendations, the CCCCO has convened a College and Career Awareness and Common Core Advisory Committee to help colleges learn about the new K-12 standards.[2] This effort is intended to assist community colleges embarking on new curriculum alignment initiatives with their surrounding K-12 districts and/or seeking to utilize the new tests that will accompany the Common Core standards for placement purposes.

Additionally, the CCCCO is presently developing a multiple measures data warehouse that will offer a variety of information colleges can use in their assessment and placement processes. This system promises to reduce the burden on colleges wishing to expand their use of several different measures for assessment and placement, including high school transcripts, by providing centralized access to student information. The CCCCO is working with the California Department of Education to populate this warehouse with key K-12 data. This system will likely be further bolstered by links to the Common Assessment Initiative, serving as a repository for students' assessment outcomes. Furthermore, it is planned for CCCApply, the online portal for students to apply for admission to participating California community colleges, to connect to the multiple measures data warehouse. These efforts have the potential to provide a robust infrastructure of support for colleges including high school transcript data and other information in their multiple measures approach to placement.

2 For more information on progress related to the Student Success Task Force Recommendations, visit www.californiacommunitycolleges.cccco.edu/Portals/0/StudentSuccessInitiative/SSTF_IMPLEMENTATIONCHART_111213.pdf.

Next STEPS

The initial STEPS study has revealed an intense interest and motivation among community college practitioners seeking to improve their placement systems. While the results of the STEPS pilot indicate that high school transcript data have significant value to the placement process, these findings also show that **colleges must embark on a local effort to conduct their own research that captures the variation among student populations and high school curricula in their area**. This project has additionally underscored the importance of collaborating with K-12 partners to examine the results of this research and collectively generate placement strategies.

To this end, the STEPS project will continue to support colleges wishing to explore and pursue the use of high school transcripts as part of their multiple measures approach. A group of California community colleges in the northern part of the state has already formed a research alliance to conduct the STEPS analyses at their own colleges. This group will work together to problem-solve, share findings and conduct regional discussions about how to improve their placement processes. This northern California STEPS initiative will benefit from support from the RP Group, Cal-PASS Plus and the Mount San Antonio College institutional researcher who led the development of the STEPS 2.0 upgrade.

Additionally, the RP Group and Cal-PASS Plus are currently conducting an expanded analysis of the relationship between high school performance and college placement. This analysis will include colleges unable to participate in the initial pilot and will explore additional variables and questions beyond those targeted in the first phase of research. The RP Group anticipates the result of this third STEPS iteration will be used to inform the development of the multiple measures data warehouse by identifying the data elements with the greatest value. Further, we expect that colleges not involved in earlier stages of the study will still be able to use the results to explore this approach to placement on their own.

Discussion Questions

Interested in exploring the use of high school transcript data as part of your college's multiple measures approach to placement? Consider engaging a team of colleagues from different parts of the college involved in the varying aspects of designing and implementing your student assessment and placement system to discuss the following questions:

1. When looking at placement data, to what extent do students who recently left your local high schools progress upward in the English and math sequences, repeat similar levels or regress in these sequences?

2. What efforts exist between local high school(s) and your college to align course content in English and math?

3. What opportunities exist to further advance students' upward progression in English and math? What strategies (e.g., support courses, placement systems, counseling and advising, content alignment, grading rubric, etc.) is your college currently pursuing and what else might you do? How might you particularly involve your K-12 partners?

4. What resources and policy updates are needed to create placement improvements for students transitioning from high school to college?

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The Research and Planning Group for California Community Colleges (RP Group) strengthens the ability of California community colleges to undertake high quality research, planning and assessments that improve evidence-based decision-making, institutional effectiveness and success for all students.

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