How Do We Measure Student Success in Dual Enrollment Programs?
Panelists:
Maureen Ewing, The College Board
John Fink, Community College Research Center
Trey Miller, American Institutes for Research
Jason Taylor, The University of Utah

Moderator:
David Troutman, The University of Texas System
Measuring Success in High School Acceleration Programs: The AP Perspective

Maureen Ewing

October 2018
How do AP Exam takers who place out of introductory courses perform in the next course taken compared to non-AP students who took the corresponding introductory course(s) at their institution?

Are AP Exam scores valid for course placement decisions?
### Sample Results: Sciences and Statistics

<table>
<thead>
<tr>
<th></th>
<th>Non AP</th>
<th>AP</th>
<th>N/A</th>
<th>Non-AP</th>
<th>Non-AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>2.72</td>
<td>0.44*</td>
<td>0.46*</td>
<td>0.80*</td>
<td>1,860</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>3.0</td>
<td>0.32*</td>
<td>0.32*</td>
<td>0.52*</td>
<td>4,54</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>2.95</td>
<td>0.30*</td>
<td>0.30*</td>
<td>0.58*</td>
<td>220</td>
</tr>
<tr>
<td>Physics C: M</td>
<td>2.95</td>
<td>0.32*</td>
<td>0.32*</td>
<td>0.61*</td>
<td>190</td>
</tr>
<tr>
<td>Physics C: E&amp;M</td>
<td>N/A</td>
<td>0.31*</td>
<td>0.31*</td>
<td>0.61*</td>
<td>500</td>
</tr>
<tr>
<td>Statistics</td>
<td>2.87</td>
<td>0.32*</td>
<td>0.32*</td>
<td>0.61*</td>
<td>1,156</td>
</tr>
<tr>
<td>AP N</td>
<td>755</td>
<td>42</td>
<td>207</td>
<td>222</td>
<td>698</td>
</tr>
<tr>
<td>Non-AP N</td>
<td>735</td>
<td>483</td>
<td>1,101</td>
<td>1,093</td>
<td>686</td>
</tr>
</tbody>
</table>

Note: * indicates significance at the 0.05 level.
Admitted Class Evaluation Service™ (ACES)

- Free online service that can be used to evaluate credit and placement policies
- Institutions upload the necessary data and the system produces a placement validity report
Program Evaluation Perspective

• AP participation and performance and other measures of success
  • College enrollment
  • Persistence
  • Degree completion (two-year and four-year)
  • Choice of major and persistence
  • Cost savings
  • “Richer” college experience

• Importance of any given measure likely varies by stakeholders

• Defining AP Participation
  • Course only?
  • Exam only?
  • Performing well on Exam?

• Importance of control variables in correlational designs/quasi-experimental designs
Randomized Control Trial (RCT) *would have been* the “Gold Standard”
The effect of earning more and more credit-granting AP scores is partially cumulative.
Measuring Community College Effectiveness in Serving Dual Enrollment Students

John Fink
Senior Research Associate, CCRC
Vertex Conference
October, 2018
Expansion of Dual Enrollment
Concentrated at Community Colleges
Key Questions from Community College Leaders on Improving Dual Enrollment using Guided Pathways Framework

- What courses are our DE students taking & how are they selecting them?
- Are our DE students gaining momentum in a program of study in HS?
- Where do our DE students go to college after HS, how many return to our college, and what’s happening with DE students who don’t go to college?
- How many end up earning college credentials, from which institutions, and in what majors?
- What are the course-taking patterns and outcomes among DE students who continued at our college after HS?
- Are DE students passing college-level math and critical program courses either in HS or in their first year in college (after HS)?
- Are DE credits being applied to students’ degree programs?
- How do results vary by HS and program of study?
- How do results vary for students by race, income, gender, & geography?
Tracking College Effectiveness in Serving Dual Enrollment Students

Access
- Extent of ‘reach’ to HSs in service area
- Disaggregated participation rates
- Extent of course offerings
- Over/under representation in certain types of coursework by student group

Leading Indicators
- Success in particular courses & course sequences
- Credit Momentum in HS
- Gateway Course Momentum in HS
- Program Momentum in HS

Short-Term
- Post-HS college matriculation (including rates of return/yield)
- Credit, Gateway Course, & Program Momentum in first year post-HS
- Credit transfer and applicability to student degree programs
- Transfer and community college award completion

Long-Term
- “Highest Outcomes” six-year post-HS (e.g., degree completion, transfer, still enrolled)
- Program areas among completers
- Excess credits among completers
- Time to degree
- Loan default rates
- Wages

Cross-cutting questions:
- How do results differ by student characteristics (race/ethnicity, income, gender, etc.)
- How do results vary by our college’s main high school partners?
What Happens to Students Who Take Community College “Dual Enrollment” Courses in High School?

September 2017

John Fink
Community College Research Center
Teacher College, Columbia University

David Jenkins
Community College Research Center
Teacher College, Columbia University

Takoshi Yanaiguchi
Community College Research Center
Teacher College, Columbia University
Where do dual enrollment students enroll in college after high school?

84% returned to the same community college

Fink, Jenkins, & Yanagiura, 2017
What are dual enrollment students’ college outcomes?

Students who first matriculated at a community college after high school

46% completed any credential

12 pp. gap in BA attainment

Fink, Jenkins, & Yanagiura, 2017
Tracking College Effectiveness in Serving Dual Enrollment Students

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Leading Indicators of College Performance in Serving Dual Enrollment Students

What types of course-taking are associated with longer-term outcomes?
Early Momentum Matters

Early Momentum Metrics: Why They Matter for College Improvement

By David Jenkins and Thomas Bailey

Postsecondary reform has several important goals, including improving degree completion, increasing students’ chances of reaching well-defined goals, and closing equity gaps in student achievement. Thus, long-term measures—such as overall increases and improved equity in completion rates and employment outcomes—will eventually signal the success or failure of the current reform movement. But in seeking to reform college practice to improve student success over the long run, there are two broad reasons why stakeholders should initially focus on near-term measures.

Now, graduates and employers will notice years in the future. If we rely on long-term metrics, we will wait several years after enrollment is implemented to begin gauging whether they are working. If we can find measures of success early enough that progress can reduce long-term success, then we can gauge the effectiveness of the program much faster. While some programs can generate long-term success, it is unlikely that long-term success will occur if near-term outcomes are stagnant.

Successful, focusing on near-term outcomes is also very valuable for other purposes of evaluation. It can moderate enrollment and assist in making enrollment decisions. If students do not enter college soon after high school, they will not begin their degree programs toward their goals. In addition to exciting students’ time and money, lack of progress in this area can lead to increased costs and difficulty in transfer, and increased chances of program completion. An examination of first-year metrics can increase the pace of initial success necessary for subsequent success.

In this study, we propose three measures of “early momentum” for better than metrics described above. First-year metrics can measure as large to increase practices that meet the initial conditions necessary for subsequent success.

An examination of first-year metrics can motivate colleges to introduce practices that create the initial conditions necessary for subsequent success.
Is “Dual Enrollment Momentum” related to Credential Completion?
Former DE students who first attended an Ohio CC after HS: 6-year Completion Rates (any credential) by KPI Attainment in HS

<table>
<thead>
<tr>
<th>Completion Requirement</th>
<th>Did not Meet KPI</th>
<th>Met KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed 6+ College-level Credits in HS</td>
<td>27%</td>
<td>50%</td>
</tr>
<tr>
<td>Completed 12+ College-level Credits in HS</td>
<td>32%</td>
<td>56%</td>
</tr>
<tr>
<td>Completed 24+ College-level Credits in HS</td>
<td>36%</td>
<td>63%</td>
</tr>
<tr>
<td>Completed College-level Math in HS</td>
<td>34%</td>
<td>57%</td>
</tr>
<tr>
<td>Completed College-level English in HS</td>
<td>29%</td>
<td>53%</td>
</tr>
<tr>
<td>Completed both College-level Math and English in HS</td>
<td>36%</td>
<td>61%</td>
</tr>
</tbody>
</table>

Note. Former community college dual enrollment students who completed high school in 2011, tracked six calendar years. Completion rate for all students regardless of KPI Attainment was 43%. Data source: NSC and HEI.
DUAL CREDIT EDUCATION PROGRAMS IN TEXAS

Authors:
Trey Miller | Holly Kosiewicz | Courtney Tanenbaum | Drew Atchison | David Knight |
Beth Ratway | Scott Delhommer | Jesse Levin

VERTEX CONFERENCE | OCTOBER 2018
Two-year study was conducted in partnership with the Texas Higher Education Coordinating Board

- Study was made possible by the Texas Higher Education Foundation with generous financial support from these organizations:
  
  - HOUSTON ENDOWMENT
  - EDUCATE TEXAS
  - GREATER TEXAS FOUNDATION
  - The Meadows Foundation

- Study materials available at [http://www.thecb.state.tx.us/dualcreditstudy](http://www.thecb.state.tx.us/dualcreditstudy)
  
  - Draft report released for public comment at July 26th THECB Board Meeting
  - Final report to be delivered to THECB at October 25th Board Meeting
Large mixed methods study answered six primary research questions

- **Causal Impact Study**: To what extent does dual-credit education increase college enrollment, college attainment, and efficient degree completion?

- **Racial Disparities Study**: Which factors contribute to racial and ethnic disparities in dual-credit participation?

- **HB 505 Study**: What were the patterns in participation and courses grades in dual credit education, and the delivery of dual credit education programs before and after House Bill 505?
Phase II answered on six primary research questions

- **Advising Study**: How do high school counselors and college advisors select students for dual-credit education, advise them into enrolling in dual-credit courses, and coordinate advising services?

- **Academic Rigor Study**: How are dual-credit students taught and assessed compared to college-credit-only students?

- **Cost Study**: What are the annual costs of delivering dual-credit education, and how are they distributed among stakeholders? Also, how do these costs compare to the benefits of dual-credit education?
Key Findings

What have we learned?
Main Finding: Dual Credit Benefits Texas and its Students

• The benefits of dual credit far exceed the cost
  – The individual and societal benefits generated by participating in dual credit education are five times the cost of delivering this type of program.

• Dual credit increases college access and completion, and decreases time-to-degree
  – Dual credit education increased college enrollment by 2.4 percentage points, and college completion by 1.1 percentage points.

• Dual credit and college-credit only courses appear to be equally rigorous
  – From a systematic review of course syllabi, class assignments, graded student work, and survey responses submitted by dual credit and college-credit only instructors, we found that course content, student assignments, and grading standards to be similar.
Our Study Also Identified Several Areas for Improvement

• The benefits of dual credit delivered in traditional high schools are lower for disadvantaged student groups
  – Less academic preparation and less access to supports at home
    » Supports embedded in Early College High Schools are likely important for these students

• The quality of advising varies considerably, and is inadequate to ensure dual credit students transfer credits directly to their major
  – High school guidance counselors, who provide the bulk of advising, often lack resources and training to adequately guide dual credit students in their course-taking decisions.

• Costs may deter some students from participating in dual credit
  – Advisors and guidance counselors reported that the costs of enrolling in dual credit courses are an obstacle to participation
    – In Texas, providing dual credit students financial relief increases the share of costs covered by the college or the school district
How Do We Measure Student Success in Dual Enrollment Programs?

October 6, 2018

Jason L. Taylor, Ph.D.
Assistant Professor, Educational Leadership and Policy
University of Utah
@jltaylo
1. Equity
2. Outcomes
3. Students
4. Community Colleges
5. Policy

**Finding:** DC/DE policy results in inequitable access to and success in college for low-income students and student of color.

**Implication:** State policy is income- and race-neutral (so why would we expect equitable outcomes?), so make income and race goals/policies explicit.

Finding: DE/DC state policy varies (like…by a lot), and states increasingly focus on quality.

Implication: State policy needs to consider and manage the tension between DE/DC access, equity, and quality.

Finding: Systematic inequities in access to DE/DC participation based on high school characteristics.

Implication: Create incentives to expand DE/DC, and target state fiscal and human resources toward enhancing capacity in low-resource high schools to expand DE/DC.

Finding: Local DE/DC finance models can vary greatly, likely impacting student access.

Implication: Create policy to equalize funding and to reduce affordability barriers and expand access.

Finding: DE/DC students improves college readiness, except knowledge transition & skills.

Implication: Use DE/DC to help improve college readiness, but embed support services.

Multiple policies, pathways, and perspectives…

Check out all 10 chapters in Edited Volume…there’s a lot in there.

**Finding:** Federal IPEDS measurement and collection of DE/DC leaves much to be desired (inconsistent and inadequate measurement).

**Implication:** Change IPEDS data collection to improve enrollment and outcome measurement.

Finding: DE/DC and AP both help students transition, and no difference in college enrollment and retention based on standards-based accreditation.

Implication: We need more research and assessment of standards-based DE/DC.

**Finding:** Strong evidence on relationship between DE/DC and educational outcomes, DE/DC benefits all students, but mixed evidence on differential impacts.

**Implication:** Need more research on DE/DC policy and practices.
Question 1:
What should be included in a framework for measuring success in college acceleration programs?
Question 2:
How can a success framework be used and by whom? Specifically, what components of such a framework would be most appropriate for policymakers (e.g., accountability) vs. practitioners (e.g., internal, improvement-focused work)?
Question 3: How can we ensure that such a framework for measuring success advances the equity agenda? How can these measures align with the goal of expanding college opportunity to underserved school populations (African American, Latinx, Native American students)?
Session Discussion