Using Data to Monitor and Improve Student Progression and Success

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Integrating Redesigned Dev Ed into Pathways
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Idealized Timeline for Implementing Guided Pathways at Scale

**LAYING THE GROUNDWORK**
3+ Years Prior to Pathways
- Build capacity to collect, report, and use data
- Develop strategic goals and plan, focused on improving student outcomes
- Implement at least one major innovation at scale

**BUILDING A SENSE OF URGENCY**
**Year 1**
- Make the case for change
- Scrutinize current practice from student perspective

**MAPPING PROGRAM PATHWAYS**
**Year 2**
- Organize programs into career-focused meta-majors
- Backward map all programs to jobs and transfer opportunities

**INTAKE AND ADVISING REDESIGN**
**Years 2-3**
- Redesign intake to enable students to explore career/academic options and develop full-program plan by end of term 1
- Pilot integrated and contextualized academic support for program gateway courses
- Redesign scheduling and advising to support timely student advancement
- Plan upgrading of business process and IT systems and begin training staff

**INITIAL SCALE IMPLEMENTATION**
**Year 3**
- Begin scale implementation of new student intake, planning, scheduling, and advising
- Reorganize learning outcomes assessment around meta-majors and maps
- Implement IT systems and business processes to support pathways
- Plan extension of program pathways into high schools and adult ed programs

**IMPROVED SCALE IMPLEMENTATION**
**Years 4-5**
- Evaluate and improve pathways implementation
- Build academic and career communities within meta-majors
- Extend program pathways into high schools (start with dual enrollment) and adult ed programs

**ONGOING IMPROVEMENT**
**Ongoing**
- Institutionalize program review, improvement, and professional development within and across meta-majors
GP Leading Indicators: Early Momentum

a) **Credit momentum** – % of FTEIC students who attempt 15/30 credits in one term/year

b) **Gateway momentum** – % of FTEIC students who pass college-level English/math (or both) in one year

c) **Program momentum** – % of FTEIC students who pass at least 9 college credit hours in the student’s field of study in one year (including prerequisites)
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-informed goals, and closing equity gaps in student achievement. Thus, long-term measures such as overall increase 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.

First, graduation and employment can occur much faster than reform. While relying on longer-term metrics, we will have to wait several years after reforms are implemented to begin to get an indication of whether they are working. If we can find measures of near-term progress that predict long-term success, then we can gauge the effectiveness of the reform much earlier. While near-term progress does not guarantee longer-term success, it is unlikely that long-term success will occur if near-term outcomes are stagnant.

Second, focusing on near-term outcomes is not only valuable for the purpose of evaluation; it can also motivate and help public continuous improvement and advancement of reforms. If students begin their college career off track, then they will spend their first year not making progress toward their goals. In addition to wasting students’ time and money, lack of progress in the first year can lead to economic and financial difficulties in transfer and lowered chances of program completion. An examination of first-year metrics can motivate colleges to institute practices that create the initial conditions necessary for subsequent success.

In this brief, we propose three measures of “early momentum” for both of the reasons described above: 1) It is beginning to show that these near-term metrics predict long-term success, and 2) the metrics focus attention on initial conditions at colleges that are particularly important for solidifying the foundation for student success. While these measures are valuable individually, as a group they give a better picture of the impact of reforms on students, and thus are more valuable if used together. These measures include:

- An examination of first-year metrics can motivate colleges to introduce practices that create the initial conditions necessary for subsequent success.
Early Momentum **Mindsets**

a) Credit momentum:
   • From current semester schedule to full-program plan
   • From full-time vs. part-time to “on-plan” vs. “off-plan
   • From scheduling available courses to scheduling plan courses

b) Gateway momentum:
   • From standardized placement tests to holistic diagnostic assessment
   • From pre-requisite remediation to co-requisite support

c) Program momentum:
   • From job/transfer help for near completers to career exploration and planning from the start
   • From gen ed to meta-majors
   • From algebra and English gateways to critical program courses
Evidence from Early Adopters
Cuyahoga Community College (Cleveland)
Cuyahoga Community College Credit Momentum KPIs

Note. Trends in Cuyahoga Community College Credit Momentum KPIs are shown in the left panel. The right panel shows completion rates for fall 2014 FTEIC entrants at Cuyahoga who completed any college credential (from any institution) within three years, disaggregated by whether or not students met the particular KPI definition in their first year. Cuyahoga’s three-year completion rate for the fall 2014 FTEIC cohort overall was 10.5%.
Cuyahoga Community College
Gateway Math & English Momentum KPIs

Cuyahoga Community College 3-year Completion Rates by KPI Status

<table>
<thead>
<tr>
<th>Completed college math in year 1</th>
<th>34%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed college English in year 1</td>
<td>56%</td>
</tr>
<tr>
<td>Completed both college math and English in year 1</td>
<td>22%</td>
</tr>
</tbody>
</table>

Note. Trends in Cuyahoga Community College Gateway Math and English Momentum KPIs are shown in the left panel. The right panel shows completion rates for fall 2014 FTEIC entrants at Cuyahoga who completed any college credential (from any institution) within three years, disaggregated by whether or not students met the particular KPI definition in their first year. Cuyahoga’s three-year completion rate for the fall 2014 FTEIC cohort overall was 10.5%.
Evidence from Early Adopters
Tennessee Community Colleges
a) Map all programs to job and transfer outcomes (including the “right” math)
b) Redesign intake experience to help students explore, choose a major or focus area, develop full-program plan
c) Require students with ACT of 13-19 to take “co-requisite” math (aligned with math pathway), writing and/or reading
d) Require students with ACT below 13 to develop learning plan and give them intensive support
e) Increase exposure of all students to high-impact teaching practices
Elementary Education (K-5)

Transfer Teaching, Elementary Education (K-5)
Associate of Science in Teaching

A day in the life
Elementary education requires patience, creativity and a passion for helping students learn. Teachers are on their feet a lot and spend hours outside the classroom preparing lessons. Few professions are as rewarding.

Three reasons to consider this program.

1st Fall
- EDU 101 Introduction to Teaching
- ENGL 1010 Composition I
- MATH 1350 Introductory Statistics
- SPCH 1010 Fundamentals of Speech

1st Spring
- EDU 111 Intro to Education of Exceptional Child
- ENGL 1020 Composition II
- BEOL 1110 General Biology I
- ARTH 1030 Art Appreciation
- MATH 1410 Number Concepts/Algebra Structures

2nd Fall
- GEOG 2010 World Regional Geography
- ENGL 2110 Survey of American Literature I
- HIST 2010 Survey of US History I
- MATH 1430 Problem Solving Geometry
- GEOG 1040 Physical Geography

2nd Spring
- EDU 211 Educational Psychology
- HIST 2120 Survey of US History II
- POLS 1080 American Government
- SCI 1012 Introduction to Physical Science
- HUM 1012 Humanities Elective

Key Course: Program faculty have identified this course as key to your success. Recommended Elective: Check catalog for other acceptable courses. This map assumes completion of course prerequisites.
Math Courses Taken by First-Time College Students: Tennessee Community Colleges, Fall 2016

Source: CCRC Analysis of Tennessee Board of Regents data. N = 6,709.
TBR CCs: Passed college English in year 1, by Age Groups and Race

Fall FTEIC Cohort

Source: CCRC Analysis of TBR Data
TBR CCs: Passed college math in year 1, by Age Groups and Race

Source: CCRC Analysis of TBR Data
TBR CCs: Credit Momentum KPIs (for FTEIC entering cohorts)

- Earned 6+ credits in 1st term:
  - Fall 2010: 42%
  - Fall 2011: 42%
  - Fall 2012: 42%
  - Fall 2013: 42%
  - Fall 2014: 42%
  - Fall 2015: 42%
  - Fall 2016: 42%

- Earned 12+ credits in 1st term:
  - Fall 2010: 32%
  - Fall 2011: 32%
  - Fall 2012: 32%
  - Fall 2013: 32%
  - Fall 2014: 32%
  - Fall 2015: 32%
  - Fall 2016: 32%

- Earned 15+ credits in Year 1:
  - Fall 2010: 30%
  - Fall 2011: 30%
  - Fall 2012: 30%
  - Fall 2013: 30%
  - Fall 2014: 30%
  - Fall 2015: 30%
  - Fall 2016: 30%

- Earned 24+ credits in Year 1:
  - Fall 2010: 24%
  - Fall 2011: 24%
  - Fall 2012: 24%
  - Fall 2013: 24%
  - Fall 2014: 24%
  - Fall 2015: 24%
  - Fall 2016: 24%

- Earned 30+ credits in Year 1:
  - Fall 2010: 6%
  - Fall 2011: 6%
  - Fall 2012: 6%
  - Fall 2013: 6%
  - Fall 2014: 6%
  - Fall 2015: 6%
  - Fall 2016: 6%

Source: CCRC Analysis of TBR Data
TBR CCs: Earned 12+ credits in 1st term, by Age Groups and Race

Source: CCRC Analysis of TBR Data
Tips on Using Data to Monitor/Improve Student Progression/Success

- Chart trends in early momentum for FTEIC students (do so for dual enrollment students separately)
- Disaggregate results by race, family income, age, etc.
- Disaggregate results by major or meta-major
- Convene faculty and student services staff to discuss how to redesign new student experience to increase early momentum
- Hold similar discussions/planning by meta-major
- Scrutinize all changes through equity lens
Thank you!