Using State Data to Motivate and Measure Guided Pathways Reforms

SHEEO State Community of Practice Workshop on Guided Pathways
April 18, 2019 | Seattle, WA

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Agenda

1. Guided Pathways 101
2. Using Lagging and Leading Indicators to Motivate and Measure Whole-College Reforms
3. Developing a Strategy for Using Metrics to Motivate and Measure Whole-College Reforms
1. Guided Pathways 101
A National Movement: Colleges Implementing Guided Pathways

Need to insert updated map

Institution Type
- Community College
- University

Updated February 2019
12-Month Undergraduate Enrollment by Sector

12 Month Undergraduate Enrollment, 1995-2015

Source: IPEDS
Fall Undergraduate Enrollment by Sector, Age 25 or above

Fall Undergraduate Enrollment, Age 25 or above, 1995-2015

Source: IPEDS
Fall Undergraduate Enrollment by Sector, Age 17 or below

Fall Undergraduate Enrollment, Age 17 or below, 1995-2015

Source: IPEDS
New CC Business Environment

- State funding cuts $\rightarrow$ Tuition increases
- Performance funding
- Per FTE federal financial aid declining
- Traditional high school population declining; growing pools more poorly educated
- Declining returns to skill-training only; growing demand for degrees + skills + experience + contacts
- Increased competition (public 4-years, privates, online providers)
New CC Business Model

From: Cheap, accessible college courses for gen ed transfer or technical training

To: Affordable, well-taught programs leading to degrees + skills + experience + contacts needed for livable wage, career-path employment
CC Practices that **Drive Students Away**

- Intake process discourages many students from enrolling
- Education paths to degrees, careers and transfer are unclear
- New students not helped to explore options/interests, develop a plan
- Pre-requisite developmental sorts out students; fails to prepare for success in college-level courses
- Students’ progress not monitored; advising grossly inadequate
- Colleges fail to schedule courses students need, when they need them
- Too many students experience abstract, rote instruction in subjects they see as irrelevant; too few experience active learning on issues of interest
- Too many poorly prepared students allowed to take fully on-line courses
- Instructors not systematically helped to adopt high-impact practices
- Students not helped to gain program-relevant experience
Highest Outcomes in Six Years by Income Among FTEIC Degree-Seeking Community College Students (Excluding Dual Enrollment Students)

Source: CCRC analysis of NSC data on the fall 2010 FTEIC, degree-seeking community college cohort.
Excess Credits Attempted among CC Transfers who Completed a Bachelor’s Degree

Community College Student Outcomes

- Many students (10-40%) who apply don’t show up on day 1
- Over 40% of first-time students are gone from higher ed by start of year 2
- Too many students meander, earning credits that don’t apply to a degree
- Most students transfer without earning cc credential; many students who transfer can’t apply credits toward major
- Nearly half don’t complete a credential; achievement gaps by race, income and age are stark
- Nearly 20% still enrolled or transferred with no credential after 6 years
- Few non-credit students enroll in credit programs
Redesigning America's Community Colleges

Thomas R. Bailey
Shanna Smith Jaggers
Davis Jenkins

A CLEARER PATH TO STUDENT SUCCESS
Redesign, Starting with the End in Mind

- Market program paths
- Build pathways into high schools and adult ed programs

- Help students explore options/make full-program plan
- Integrate academic support into critical program gateway courses

- Clearly map out program paths
- Redesign advising/scheduling around maps/plans
- Monitor student progress, provide feedback and support as needed

- Align program outcomes with requirements for success in career-path employment and further education

CONNECTION
From interest and application to first enrollment

ENTRY
From entry to program choice and entry

PROGRESS / COMPLETION
From program entry to completion of program requirements

ADVANCEMENT
From completion of credential to career advancement and further education

START HERE

STEP 4

STEP 3

STEP 2

STEP 1
Helping Students with Major Decisions on their Program Paths

**CONNECTION**
From interest and application to first enrollment

**ENTRY**
From entry to program choice and entry

**PROGRESS / COMPLETION**
From program entry to completion of program requirements

**ADVANCEMENT**
From completion of credential to career advancement and further education

- **What careers would be a good fit for me?**
- **What jobs can I get with a degree from your college?**
- **How much will it cost, and how will I pay?**
- **Who can I talk to about my career and program options?**
- **What program is a good fit for me?**
- **What will I need to take?**
- **Will my credits transfer?**
- **How much will it cost, and how will I pay?**
- **How do I balance my other obligations?**
- **What if I’m struggling academically?**
- **What if I want to change majors?**
- **How do I get relevant work experience?**
- **How do I apply to transfer?**
- **How much will it cost and how much will I have to pay?**
- **How do I transfer successfully?**
- **What further education and training will help me advance in my career?**
- **How much time and money until I finish?**
Guided Pathways Equity Focus

**CONNECTION**
From interest and application to first enrollment

**ENTRY**
From entry to program choice and entry

**PROGRESS / COMPLETION**
From program entry to completion of program requirements

**ADVANCEMENT**
From completion of credential to career advancement and further education

- Is the college reaching out to help underrepresented students in high schools, adult education, and non-credit programs explore the college’s pathways and pursue a program of study?

- Are entering underrepresented students entering programs leading to higher remuneration degrees/fields?

- Do patterns of student program switching result in more or less equitable representation in programs leading to high-remuneration degrees and careers?

- Are high- and low-remuneration CC awards being conferred equitably?

- Are post-graduation employment outcomes equitable?

- Are transfer and bachelor’s completion outcomes equitable?
What We Are Learning About Guided Pathways

Part 1: A Reform Moves From Theory to Practice

By Davis Jenkins, Hana Lahr, John Fink, and Elizabeth Ganga

In their 2015 book, Redesigning America’s Community Colleges: A Clearer Path to Success, CCRC researchers Thomas Bailey, Shanna Smith Jaggars, and Davis Jenkins argued that for community colleges to substantially improve graduation rates and cut back on completion among student groups, isolated programmatic interventions would not be sufficient. Synthesizing two decades of research on community colleges—and drawing on behavioral economics, organizational behavior, and cognitive science—Bailey and Jenkins argued that colleges need to fundamentally redesign their programs and services in ways that create clearer, more educationally coherent pathways to credentials that in turn prepare students for success in the workforce and further education in fields of economic importance to their regions.

These “guided pathways” reform addresses a fundamental problem with how community colleges are organized: Because these colleges were founded with the mission of providing broad access to higher education, they have devoted significant resources to attracting students to dozens or hundreds of programs. But students often take their own device: pick a course of study and piece together their schedules of confusing and incoherent class lists and program information. In these cases, a majority of students do not complete a credential, and even those who do often take more time and money on courses that do not count toward a community college’s degree. Advising and other supports are available, but students don’t know how to use them, and the students who need these services most are often the least likely to seek them.

How Cleveland State Community College is Using Meta-Majors

Meta-majors are clusters of programs in similar academic fields that help students understand a college’s offerings—programs—and help students explore, choose, and plan. These meta-majors include aligned with local and regional labor market requirements, specializations, and career paths. For example, a student interested in arts and humanities might choose one of the college’s five arts and humanities meta-majors, which provide a clear pathway to specific fields of study.

Guided pathways reforms can take several years to implement at scale because they require a thorough redesign of a college’s major functions, including:

- organizing programs into career-focused meta-majors to enhance student recruitment and exploration and program improvement;
- mapping clear paths to degrees, employment, and further education in collaboration with employers and universities;
- structuring advising to help students choose, enter, and complete a program of study;
- rethinking academic support to enable students to take and pass critical program courses in their first year of college; and
- training faculty and staff to facilitate these reforms.

CCRC’s research on the implementation of guided pathways has revealed that these reforms often follow a similar pattern of development. Figure 1 shows the general stages of this process and an approximate timeline. In colleges where we have seen substantial improvements in student progression and completion, these improvements became noticeable after colleges began to implement the essential elements of the model in concert with one another.

In colleges where we have seen substantial improvements in student progression and completion, these improvements became noticeable after colleges began to implement the essential elements of the model in concert with one another.
Guided Pathways Essential Practices

1. Map paths to student end goals
   - Meta-majors
   - Program maps
   - Career + transfer information
   - Math pathways

2. Help students get on a path
   - Early career/transfer exploration
   - Academic and financial plan
   - Integrated & contextualized academic support

3. Keep students on path
   - Monitoring progress on plan
   - Intrusive support
   - Frequent feedback
   - Predictable scheduling

4. Ensure students are learning
   - Field-specific learning outcomes
   - Active learning throughout
   - Field-relevant experiential learning
Early Adopters
Tennessee Community Colleges
Building Guided Pathways to Community College Student Success
Promising Practices and Early Evidence From Tennessee

Davis Jenkins | Amy E. Brown | John Fink | Hana Lahr | Takeshi Yanagiura
**Tennessee Completion Practices**

- Map all programs to career outcomes; include the “right” math on each map
- Redesign intake experience to help students explore, choose a major or focus area, develop full-program plan
- Require students with ACT of 13-18 to take “corequisite” math (aligned with math pathway), writing and/or reading
- Require students with ACT below 13 to develop learning plan and give them intensive support
- 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 the move a lot and spend hours outside the classroom preparing lessons. Few professions are as rewarding.

Three reasons to consider this program:

1. **EDU 101** Introduction to Teaching
   - ENGL 1010 Composition I
   - MATH 1530 Introductory Statistics
   - SPCH 1010 Fundamentals of Speech

2. **EDU 111** Intro to Education of Exceptional Children
   - ENGL 1020 Composition II
   - BIOL 1110 General Biology I
   - ARTH 1020 Art Appreciation
   - MATH 1410 Number Concepts/Algebra Structures

3. **GEOG 2010** World Regional Geography
   - ENGL 2110 Survey of American Literature I
   - HIST 2010 Survey of U.S. History I
   - MATH 1420 Problem Solving Geometry
   - GEOL 1040 Physical Geology

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**1st Fall**
- Oct: See Coach/Advisor
  - FAFSA
- Sept: EDU Advising Session

**1st Spring**
- Feb: EDU Advising Session
  - Decide Transfer Institution
- Apr: Register

**2nd Fall**
- Nov: Praxis Core
  - Apply institution
  - Register

**2nd Spring**
- Feb: EDU Advising Session
  - Praxis Core workshop
  - FAFSA
- Mar: Exit exam
  - Dispositions Due

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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
Program-Aligned Math Pathways

Math Courses Taken by First-Time College Students: Tennessee Community Colleges, Fall 2016

- Algebra/Calculus: 64%
- Math for Liberal Arts: 9%
- Other: 9%
- Statistics: 18%

Source: CCRC Analysis of Tennessee Board of Regents data. N = 18,956.
Tennessee co-requisite reform context

- **Timeline**
  - Before 2015: pre-requisite design (+ co-requisite pilot)
  - At scale in 2015: 10 institutions
  - At scale after 2015: 3 institutions
  - Some variations in writing/reading versus math

- **Math pathways**
  - Developmental math (intermediate algebra)
  - Learning support in Algebra
  - Learning support in Statistics
  - Learning support in Liberal Arts math
  - College gateway in Algebra
  - College gateway in Statistics
  - College gateway in Liberal Arts math
Impacts of placing below college-ready on gateway completion overtime: Math

Impacts of placing below college-ready on gateway completion overtime: English

Large impacts on gateway completion

All coefficients of RD-DID and pre-req RD are significant at 1% level; coefficients on co-req RD are not significant.

Fairly small impacts on credit attainment

Coefficients of RD-DID & Pre-req RD for Y1 and Y2 are significant at 5% level; other coefficients are not significant.

Math results are driven by pathway alignment

COMPLETE MATH GATEWAY BY Y1
- Algebra
- Statistics
- Math for liberal arts

Coefficients for RD-DID for statistics and math for liberal arts are significant; all coefficients for pre-req RD are insignificant.

TN CCs: First Term Credit Momentum KPIs

- Earned 6+ college credits in first term
- Earned 12+ college credits in first term
- Attempted 15+ credits (any level) in first term

Fall Cohort of First-Time-Ever-in-College Students

Source: CCRC Analysis of TBR Data
TN CCs: First-Year Gateway Course Completion

- Completed college English in first year
- Completed college math in first year
- Completed both college math and college English in first year

Fall Cohort of First-Time-Ever-in-College Students

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: Passed college English in year 1, by Age Groups and Race

Source: CCRC Analysis of TBR Data
Guided Pathways at Scale

- Map all programs (including non-credit) to jobs and transfer
- Help all new students explore interests and options
- Ensure new students take an “awesome” course in term 1
- Replace prerequisite remediation with “co-requisite” support
- Help all new students develop a full-program plan in term 1
- Schedule courses and monitor progress based on plans
- Help dual enrollment students to explore options, develop a plan, take plan-related courses
- Engage area employer and university partners in building a “regional education mobility pathways partnership”
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
Guided Pathways in Four-Year Systems: “Momentum” reforms within the University System of Georgia
Discussion Prompts

State Team Time #1

• What are your state’s main current statewide student success/college performance strategies/policies/initiatives?
• To what extent do these efforts encourage and support whole-institution reforms?
• What more could your state do to promote whole-college reforms?
• What steps would be needed to do so? Are there currently plans in the works?
2. Using Lagging and Leading Indicators to Motivate and Measure Whole-College Reforms
“Momentum” Metrics: Metrics the University System of Georgia is using to measure and motivate reforms
Using Indicators for Formative Evaluation and Target-Setting
**Idealized Timeline for Implementing Guided Pathways at Scale**

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<table>
<thead>
<tr>
<th>Leading Indicators</th>
<th>Lagging Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative Assessment</td>
<td>Summative Assessment</td>
</tr>
<tr>
<td>Measurable in a short time period</td>
<td>Not measurable in a short time period</td>
</tr>
<tr>
<td>Primary Goal: Improvement (Internal)</td>
<td>Primary Goal: Accountability (External)</td>
</tr>
<tr>
<td>Predictive of the longer-term outcomes</td>
<td>Captures ultimate goals and outcomes</td>
</tr>
</tbody>
</table>

**First year student momentum**
- Credit accumulation
- Gateway course completion
- Course completion and persistence through the first year
- Program Momentum

**Student outcomes**
- Transfer and credential completion
- Cost and time to degree
- Labor market outcomes
Highest Outcomes in Six Years by Income Among FTEIC Degree-Seeking Community College Students (Excluding Dual Enrollment Students)

Source: CCRC analysis of NSC data on the fall 2010 FTEIC, degree-seeking community college cohort.
Bachelor’s Degree Completer Program Areas Among Community College Entrants (Fall 2010 FTEIC Cohort)

Completers (N=115K) Lower income Completers (N= 24K) Higher income Completers (N= 48K)

Source: CCRC analysis of NSC data on the fall 2010 FTEIC, degree-seeking community college cohort.
Metrics for Improvement: Student Momentum as Leading Indicator

- **Leading indicators:** Actionable and timely, predictive of longer-term (lagging) outcomes
  - Important for multi-year college reforms; if leading indicators do not improve, it is unlikely that longer-term outcomes improve
  - If equity gaps do not close in the short-term, it is unlikely that they will close in the long-term
- **Current application in community colleges excludes dual enrollment students**
## Momentum Pays

**Effects** of Momentum on Six-Year Outcomes
Tennessee Community Colleges, FTEIC Fall 2008 Cohort

<table>
<thead>
<tr>
<th></th>
<th>1&lt;sup&gt;st&lt;/sup&gt; semester momentum</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; year momentum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional credits earned</td>
<td></td>
<td><em>Momentum Students:</em></td>
</tr>
<tr>
<td>Probability of degree attainment</td>
<td>Attempted 15 credits in the first semester</td>
<td>Attempted 30 credits in the first year</td>
</tr>
<tr>
<td>Tuition and fees per degree</td>
<td>(Compared to attempting 12)</td>
<td>(Compared to attempting 12 in the first semester but not 30 in the first year)</td>
</tr>
<tr>
<td>Expenditures per degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition and fees avg.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Adjusted results, controlling for student characteristics

Source: Belfield, Jenkins, Lahr, 2016.
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

d) **Persistence** – % of FTEIC students who persist to term 2.
Early Momentum Mindsets

Credit momentum:
- From full-time vs. part-time to “on-plan” vs. “off-plan”

Math and English gateway momentum:
- From academic assessment to holistic assessment
- From pre-requisite remediation to co-requisite support

Program gateway 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

Persistence:
- From next term schedule to full program plan
- From scheduling available courses to scheduling plan courses
Note. Trends in Alamo Colleges Credit Momentum KPIs are shown in the left panel. The right panel shows completion rates for fall 2014 FTEIC entrants at Alamo Colleges 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.
**Alamo Colleges Gateway Math & English Momentum KPIs**

- Completed college math in year 1: 37% (2010), 62% (2016)
- Completed college English in year 1: 11% (2010), 62% (2016)
- Completed both college math and English in year 1: 14% (2010), 29% (2016)

**Alamo Colleges 3-year Completion Rates by KPI Status**

- Completed college English in year 1:
  - Met KPI: 6% (2022)
  - Did not meet KPI: 8% (2022)
- Completed college math in year 1:
  - Met KPI: 22% (2022)
  - Did not meet KPI: 8% (2022)
- Completed both college math and English in year 1:
  - Met KPI: 32% (2022)
  - Did not meet KPI: 8% (2022)

**Note.** Trends in Alamo Colleges Gateway Math and English Momentum KPIs are shown in the left panel. The right panel shows completion rates for fall 2014 FTEIC entrants at Alamo Colleges 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.
## First-Year Momentum Outcomes across 3 Community College Systems

<table>
<thead>
<tr>
<th>Outcome</th>
<th>System X</th>
<th>System Y</th>
<th>System Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed college English in the first year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed college math in the first year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed both college English &amp; math in the first year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed 6+ college credits in the first term</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed 12+ college credits in the first term</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Persisted from term 1 to term 2</td>
<td></td>
<td></td>
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<tr>
<td>Completed 15+ college credits in the first year</td>
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<tr>
<td>Completed 24+ college credits in the first year</td>
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<tr>
<td>Completed 30+ college credits in the first year</td>
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</tr>
</tbody>
</table>

- **English Y1**
- **Math Y1**
- **English & Math Y1**
- **6 Credits S1**
- **12 Credits S1**
- **Persist S1 S2**
- **15 Credits Y1**
- **24 Credits Y1**
- **30 Credits Y1**
System X: Adjusted Six-Year Award Rate by Momentum Attainment in Year 1

Adjusted award rates controlling for student characteristics.

<table>
<thead>
<tr>
<th>Course</th>
<th>Award Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>32%</td>
</tr>
<tr>
<td>English</td>
<td>46%</td>
</tr>
<tr>
<td>Math</td>
<td>58%</td>
</tr>
<tr>
<td>English &amp; Math</td>
<td>53%</td>
</tr>
<tr>
<td>6 Credits S1</td>
<td>49%</td>
</tr>
<tr>
<td>12 Credits S1</td>
<td>51%</td>
</tr>
<tr>
<td>Persist S1 S2</td>
<td>43%</td>
</tr>
<tr>
<td>15 Credits Y1</td>
<td>61%</td>
</tr>
<tr>
<td>24 Credits Y1</td>
<td>67%</td>
</tr>
<tr>
<td>30 Credits Y1</td>
<td>72%</td>
</tr>
</tbody>
</table>
System Y: Adjusted Six-Year Award Rate by Momentum Attainment in Year 1

- Baseline: 22%
- English: 38%
- Math: 49%
- English & Math: 52%
- 6 Credits S1: 36%
- 12 Credits S1: 49%
- Persist S1 S2: 28%
- 15 Credits Y1: 47%
- 24 Credits Y1: 61%
- 30 Credits Y1: 74%

*Adjusted award rates controlling for student characteristics.*
System Z: Adjusted Six-Year Award Rate by Momentum Attainment in Year 1

Baseline: 30%

English: 39%

Math: 50%

English & Math: 58%

6 Credits S1: 42%

12 Credits S1: 48%

Persist S1 S2: 48%

15 Credits Y1: 48%

24 Credits Y1: 59%

30 Credits Y1: 62%

Adjusted award rates controlling for student characteristics.
Predicted Percentage Point Change in 6-Year Award Rates if Leading Indicator Increases by 50%

For example, the rate of credential completion in 6-years is predicted to increase 6 percentage points in System Y if 50% more students completed 15 CL credits in year 1.
• INSERT SLIDE SHOWING TAKESHI’S FINDINGS USING RANDOM FORESTS TO PREDICT COMPLETION BASED ON KPIS
Summary

- Few students are “on track” with first-year momentum key performance indicators (KPIs)
- First-year momentum strongly predicts student success in subsequent years
- Improving first-year momentum should significantly improve student success, especially for disadvantaged groups
  - Students who meet KPIs do better, regardless of race or gender or socio-economic disadvantage
  - Key issue is equity gap in the rate at which students gain momentum in first year
Summary

- Award rates increase 1-6 percentage points if 50% more students meet each KPI
- Effects of meeting multiple KPIs are additive

To increase 6-Year Award Rates by 10 percent:

- For most KPIs, the rate of KPI attainment would have to double
- For most challenging KPIs – passing both gateway English and Math and having 30 credits after one year – the rate of KPI attainment would have to increase by a factor of four or more
Discussion Prompts

State Team Time #2

• What leading indicators do we already use? Are these aligned to our longer-term outcomes? Are there longer-term outcomes we don’t have leading indicators for?

• How are colleges using leading and lagging indicators and how can the state support their formative assessment efforts to drive continuous improvement?

• How can the state support mindset shifts to focus effort on building students’ early momentum?
3. Developing a Strategy for Using Metrics to Motivate and Measure Whole-College Reforms
Setting Targets for Improvement
Guiding Questions:

• Based on data from the most recent five years, what *amount of improvements* in student success could be expected in the next five years?

• Based on data from the most recent five years, what *amount of narrowing of equity gaps* could be expected in the next five years?
Setting Targets for Improvement: Recommended Approach

- Use historical data from the past five years to identify targets for the next five years.
- Target setting should be done separately for each state, given unique state contexts.
  - Perhaps even among peer-sets within states (e.g., small vs. large colleges; rural vs. urban, etc.).
- State goal setting should be designed to motivate colleges to set their own goals for improvement based on their historical baselines.
  - Different colleges start at different baselines.
Setting Targets for Improvement: Recommended Approach

Within states or other peer groupings, use historical data to rank colleges on their improvement to differentiate ‘status quo’ from aspirational improvement

- **Status quo**: Improvement demonstrated by the median college (50th percentile rank college)
- **Aspirational**: Improvement demonstrated by the 75th & 90th percentile ranked college
There is both within and across state variation in the extent to which community colleges have increased their IPEDS grad rates historically.

Percent Change 2012-16 in 150% IPEDS Grad Rate (for FTFT students)

Graphs by State
There is both within and across state variation in the extent to which community colleges have changed the racial equity gap in their IPEDS grad rates historically.
Early Momentum Metrics: AACC Pathways 1.0 Colleges
AACC Pathways 1.0 Colleges Distribution in 2012-2017 Change in Early Momentum Metrics

AACC Pathways Colleges Percentage Point Change on Selected KPIs
2012 – 2017 FTEIC Fall Cohorts

PERCENTAGE POINT (PP) CHANGE: 2012-2017

12+ term 1  24+ year 1  CL math year 1  CL English year 1  CL math & Eng year 1  Course completion rate  Persisted term 1 to 2
AACC Pathways 1.0 Colleges Distribution in 2012-2017 Change in Early Momentum Metrics

AACC Pathways Colleges Percentage Point Change on Selected KPIs
2012 – 2017 FTEIC Fall Cohorts

<table>
<thead>
<tr>
<th>KPI</th>
<th>2012-2017 Percentage Point Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>12+ CL credits in term 1</td>
<td></td>
</tr>
<tr>
<td>24+ CL credits in term 1</td>
<td></td>
</tr>
<tr>
<td>Completed college math in year 1</td>
<td></td>
</tr>
<tr>
<td>Completed college English in year 1</td>
<td></td>
</tr>
<tr>
<td>Completed both college math and English in year 1</td>
<td></td>
</tr>
<tr>
<td>CL course completion rate in year 1</td>
<td></td>
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<tr>
<td>Persisted term 1 to 2</td>
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</tbody>
</table>
AACC Pathways 1.0 Colleges Distribution in 2012-2017 **White-Hispanic** Equity Gap Change

AACC Pathways Colleges Percentage Point Change on Selected KPIs
2012 – 2017 FTEIC Fall Cohorts

<table>
<thead>
<tr>
<th>Course Completion Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>12+ term 1</td>
</tr>
<tr>
<td>24+ year 1</td>
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<tr>
<td>CL math year 1</td>
</tr>
<tr>
<td>CL English year 1</td>
</tr>
<tr>
<td>CL math &amp; Eng year 1</td>
</tr>
</tbody>
</table>

*Increase in Gap*

*Decrease in Gap*
Using Historical Momentum Metrics to Inform Target Setting: Rate Increases

Highlight KPIs
- Earned 6+ credits in 1st term
- Earned 12+ credits in 1st term
- Earned 15+ credits in Year 1
- Earned 24+ credits in Year 1
- Earned 30+ credits in Year 1
- Passed college English in Year 1
- Passed college math in Year 1
- Passed college English & math in year 1
- Persisted from term 1 to term 2

Select a State
- A
- B

Note: Results for each KPI rate and year show the median college value or 75th percentile college value for the given KPI and year, thus the median / 75th percentile values may represent different colleges depending on the KPI and year.

https://public.tableau.com/profile/john.fink#!/vizhome/shared/8CB4HDSSM
Using Historical Momentum Metrics to Inform Target Setting: Closing Gaps

Highlight KPIs
- Earned 6+ credits in 1st term
- Earned 12+ credits in 1st term
- Earned 15+ credits in year 1
- Earned 24+ credits in year 1
- Passed college English in year 1
- Passed college math in year 1
- Passed college English & math in year 1
- Persisted from term 1 to term 2

Select a State
A  B

Note: Results for each KPI rate and year show the median college value or 75th percentile college value for the given KPI and year, thus the median / 75th percentile values may represent different colleges depending on the KPI and year.

Racial equity gaps were defined as the difference between the KPI rates for White students and racially minoritized students (Black and Latinx students). Negative percentage point changes indicate narrowing of equity gaps.

https://public.tableau.com/profile/john.fink#!/vizhome/shared/3SH6F8N5M
Using Leading Indicators Monitor, Improve, and Set Targets for Whole-College Reform

- Chart trends in student momentum in the first year
- Disaggregate results by race, family income, age, etc.
- Disaggregate results by program or meta-major
- Use historical data to set achievable, yet ambitious targets
- 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
Discussion Prompts

State Team Time #3

• What are our state targets and are they reasonable (too ambitious, not ambitious enough)? How do you know?
• How can the state help colleges to set and track reasonable targets for improvement, connected to the broader statewide goals?
Thank you!

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