CCRC COMMUNITY COLLEGE RESEARCH CENTER

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

What we are learning about whole-college redesign through guided pathways

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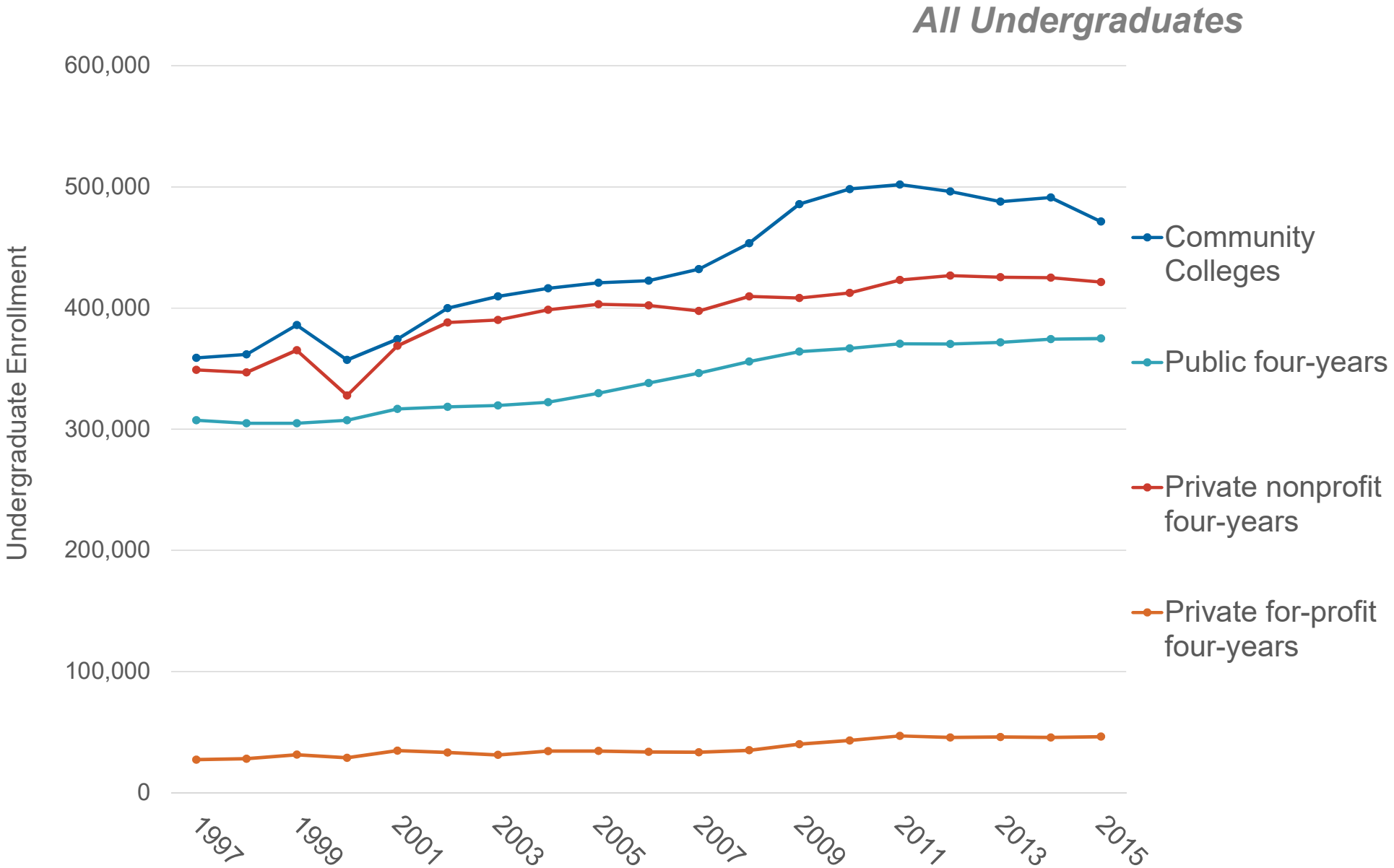
Community College Research Center, Teachers College
NYS Guided Pathways Cohort II, Institute #1
October 4, 2019

Agenda

- Setting the stage
- Thinking differently about student success
- What we are learning about implementing whole-college redesign
- Using leading indicators to measure and motivate whole-college reform
- Early adopters
- The predictive power of leading indicators

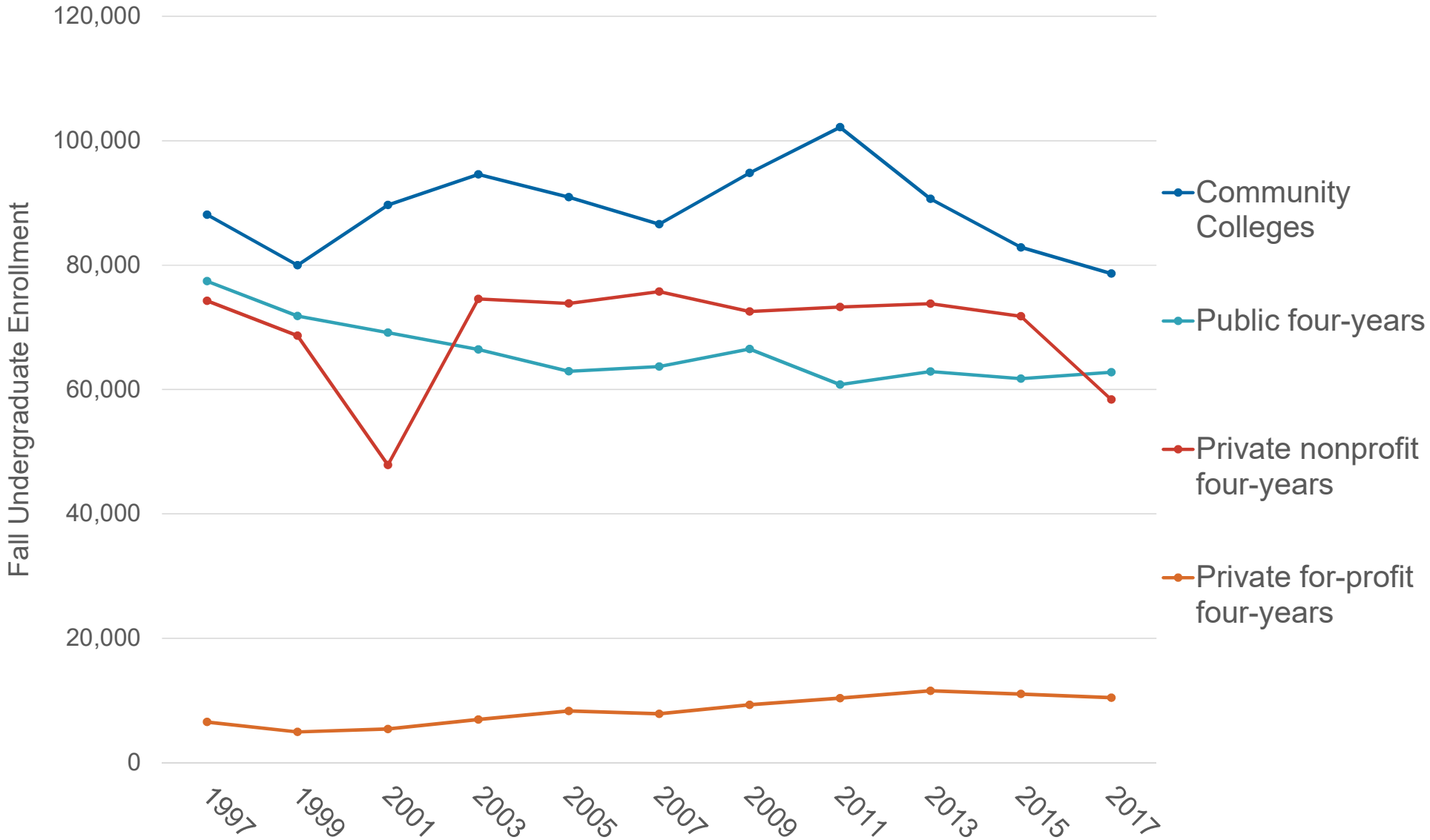
NY 12 Month Enrollment by Sector, 1997-2015



Source: IPEDS 12-Month Unduplicated Headcounts

NY Fall Enrollment by Sector, 1997-2017

25 and older undergraduates



Source: IPEDS Fall Enrollments

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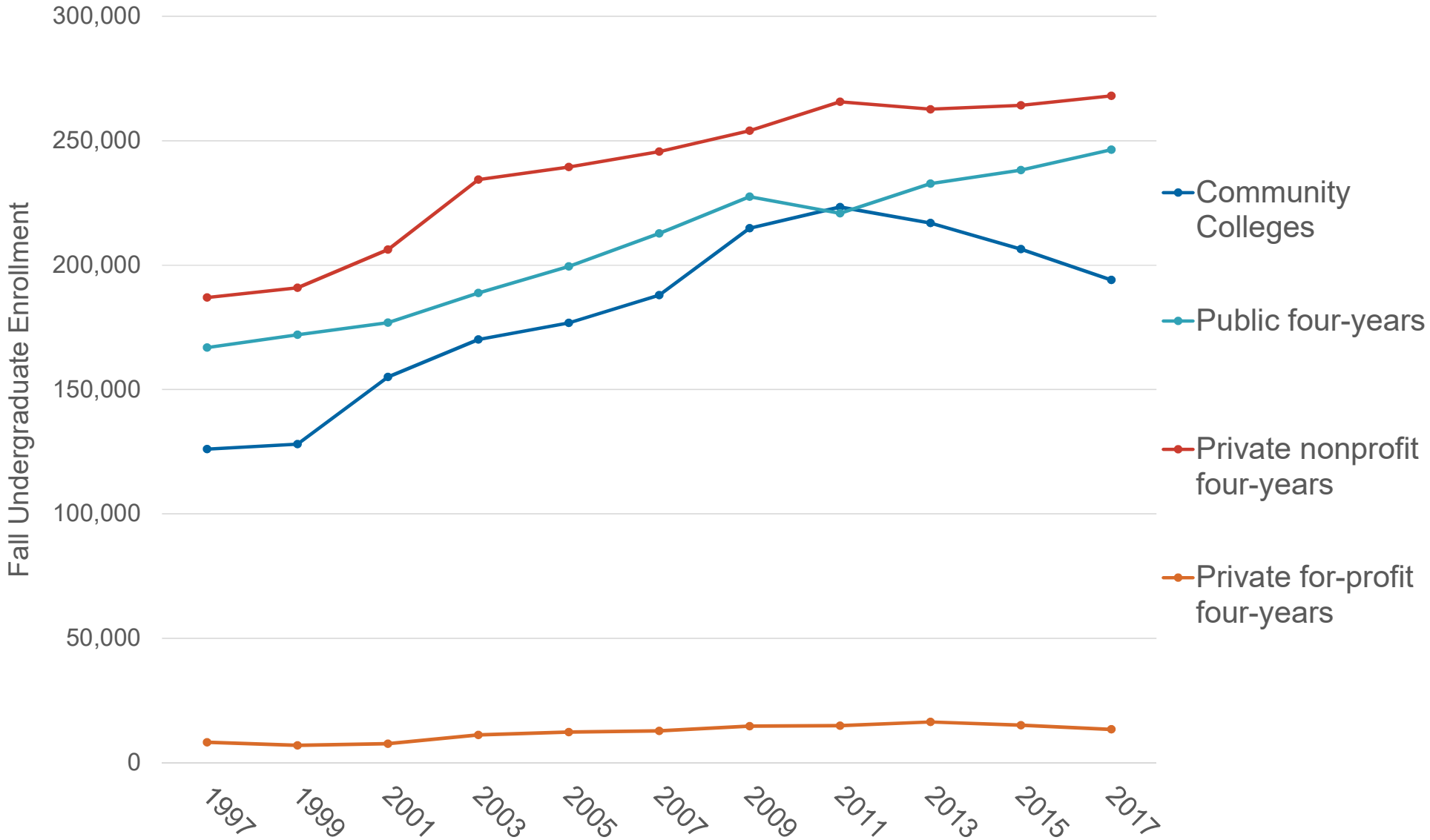
NY Fall Enrollment by Sector, 1997-2017

18-24 year old undergraduates



Source: IPEDS Fall Enrollments

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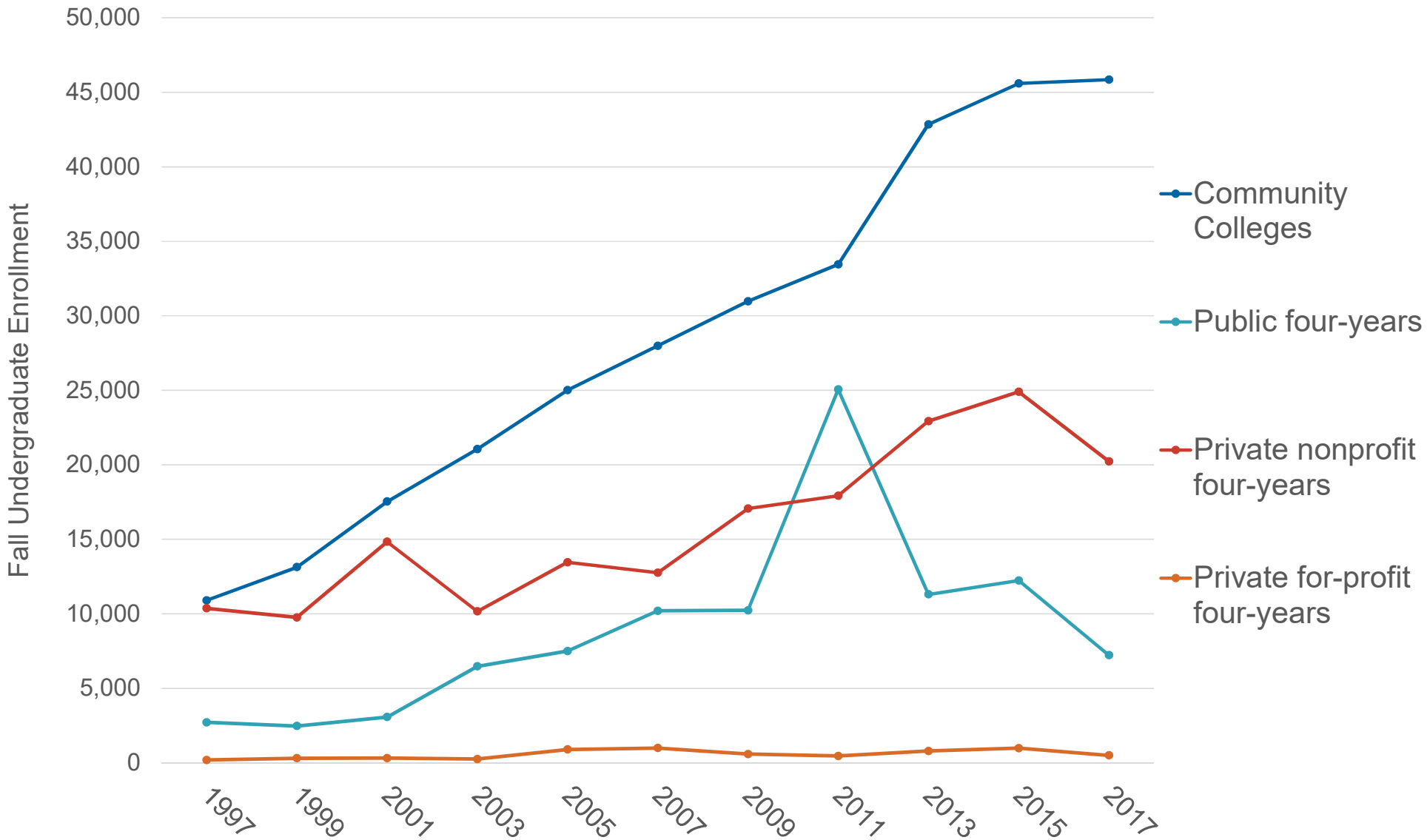
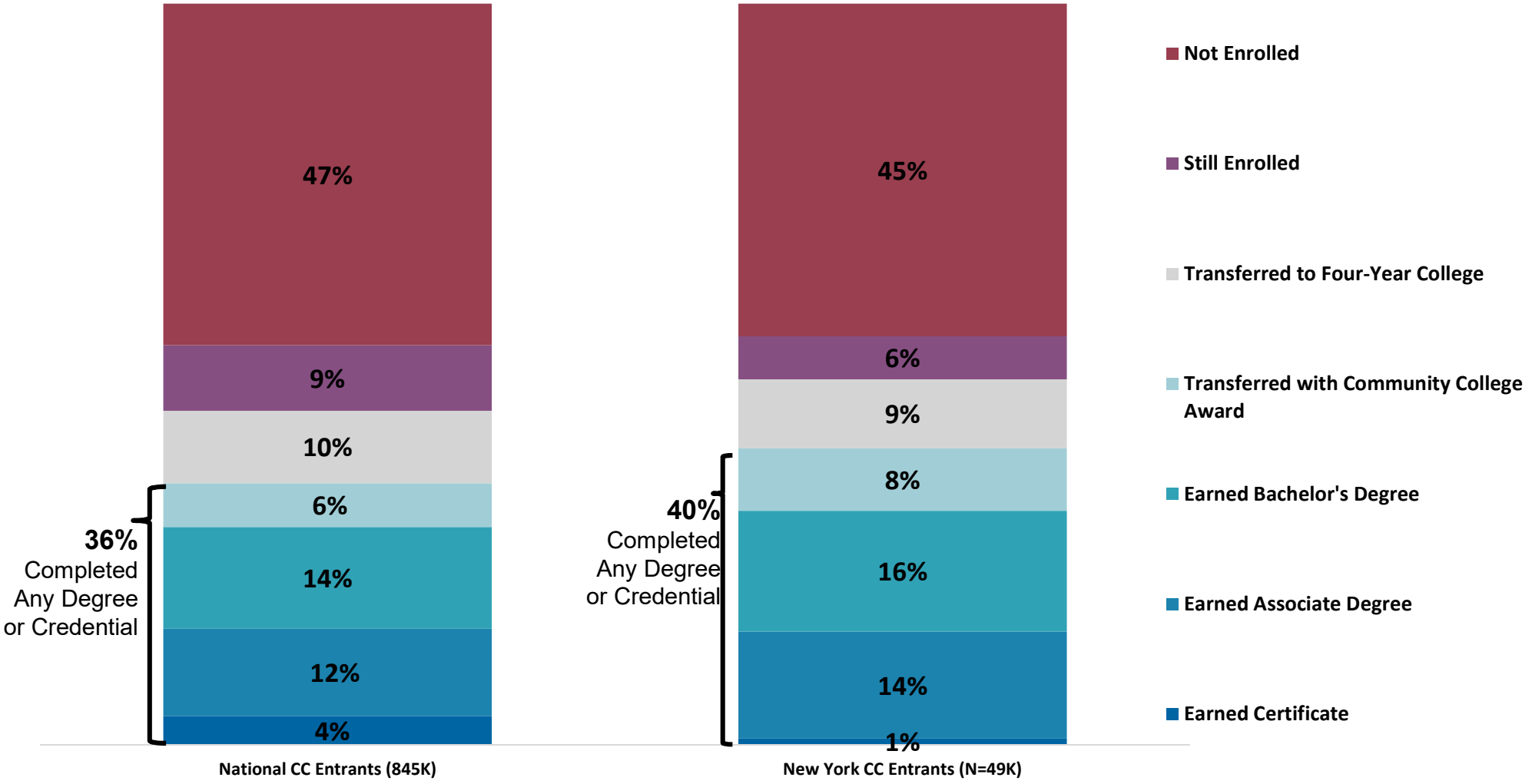
NY Fall Enrollment by Sector, 1997-2017

17 and younger undergraduates



Source: IPEDS Fall Enrollments

Highest Outcomes in Six Years 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.

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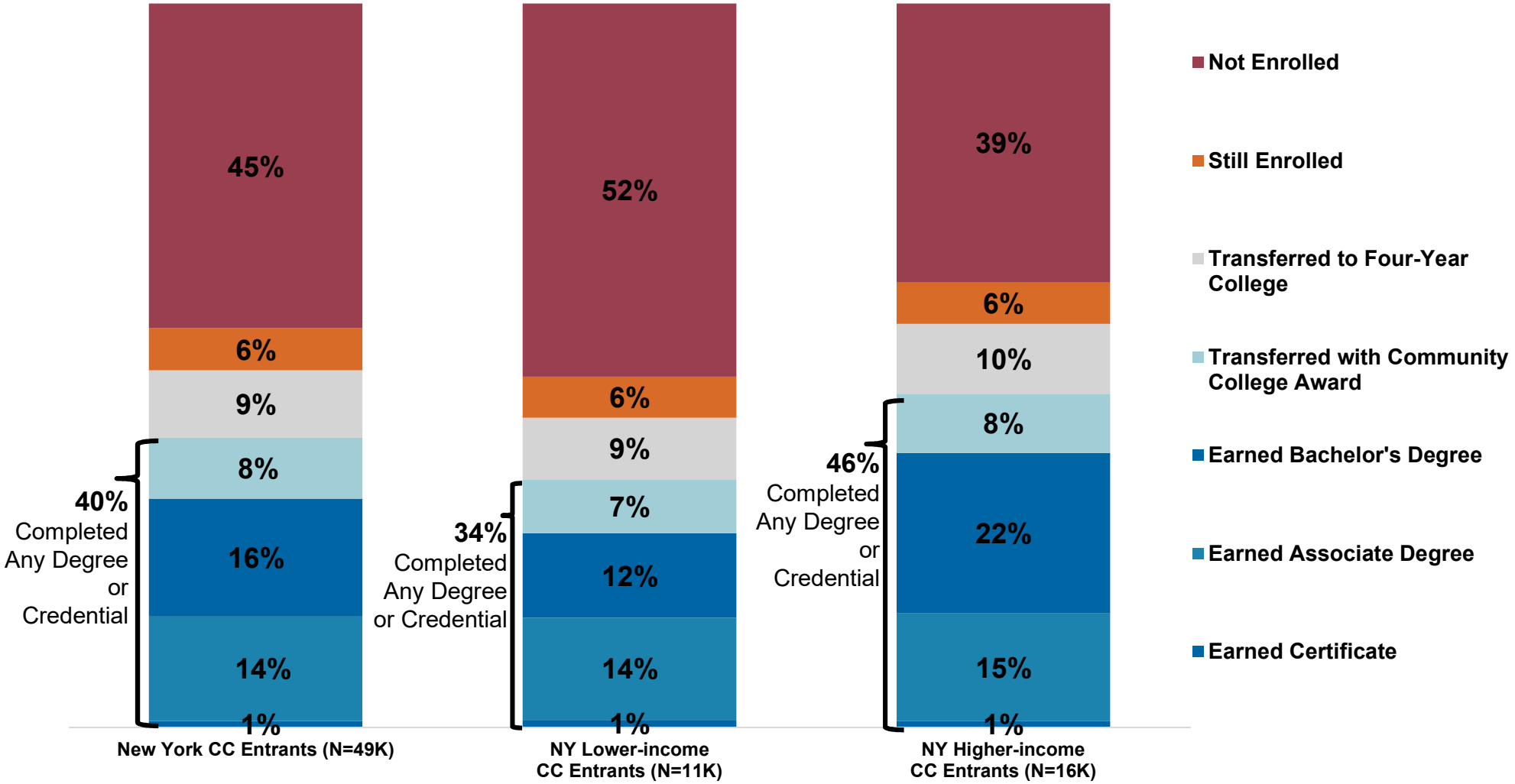
New York: Highest Outcomes in Six Years by Income Among FTEIC Degree-Seeking Community College Students (Excluding Dual Enrollment Students)



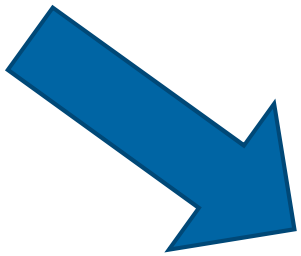
Source: CCRC analysis of NSC data on the fall 2010 FTEIC, degree-seeking community college cohort.

New CC Business Environment

- State funding cuts → Students and families pay more
- Performance funding
- Traditional high school population declining
- Tight labor markets in many parts of the country
- Developmental education enrollment sharply declining
- Declining returns to skills 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 programs leading to **degrees + skills + experience + contacts** needed for livable wage, career-path employment

New Students Want To Know

- Which programs would be a good fit for me?
- What jobs that interest me can I get from your college?
- What credentials do I need for those jobs?
- What courses will I need to take?
- How long will it take and how much will it cost?
- Who can I speak with to learn about careers and programs of interest to me?

But, Institutions Drive Students Away

- Education paths to degrees, careers, and transfer are unclear
- Intake process discourages many students from enrolling
- New students not helped to explore options/interests, develop a plan
- Prerequisite dev ed sorts out students; fails to prepare for success in college-level courses
- Students' progress not monitored
- Colleges fail to schedule courses students need, when they need them
- Too few students experience active learning; instructors not helped systematically to adopt high-impact practices
- Students not helped to gain program-relevant experience

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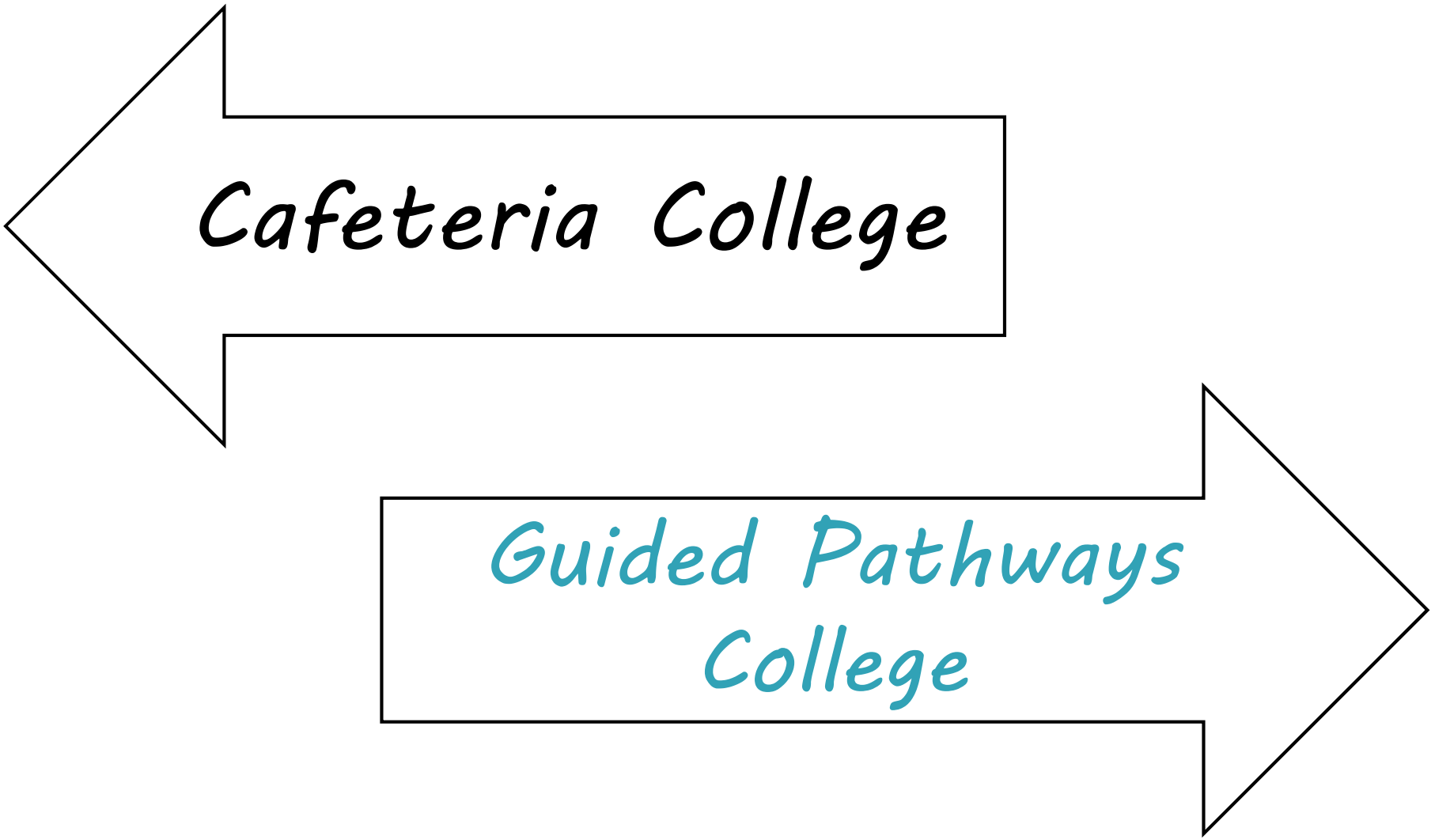
Guided Pathways: Thinking Differently About Student Success

Guided pathways mindset shifts



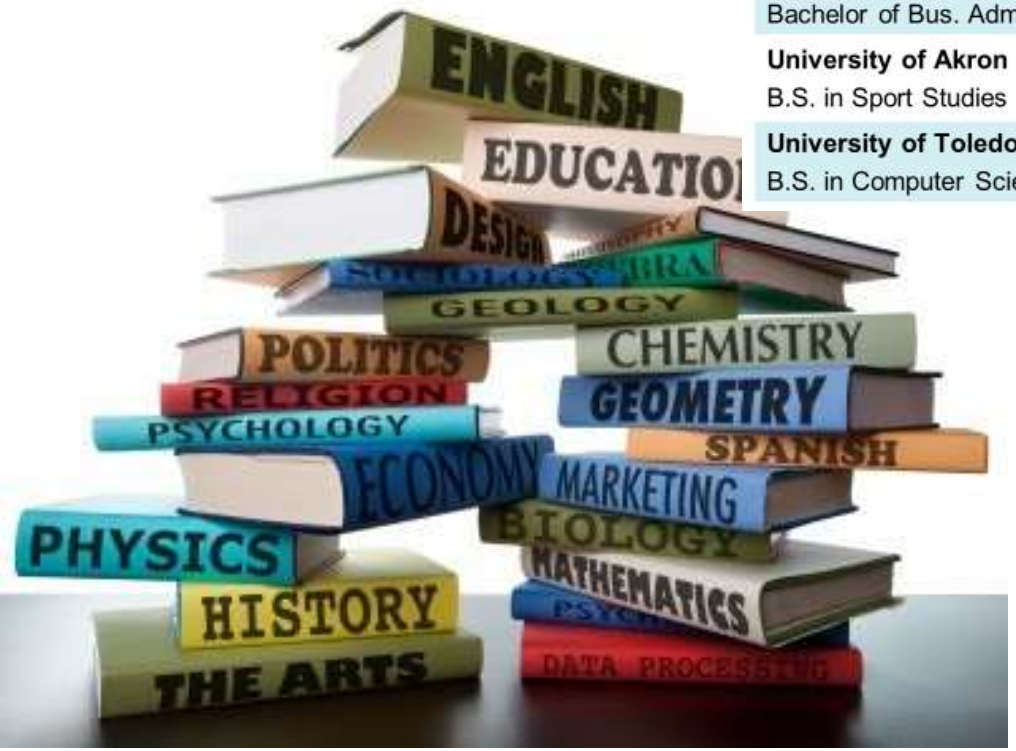
Lorain County Community College

Save on the cost of a BA!

OUR PROMISE

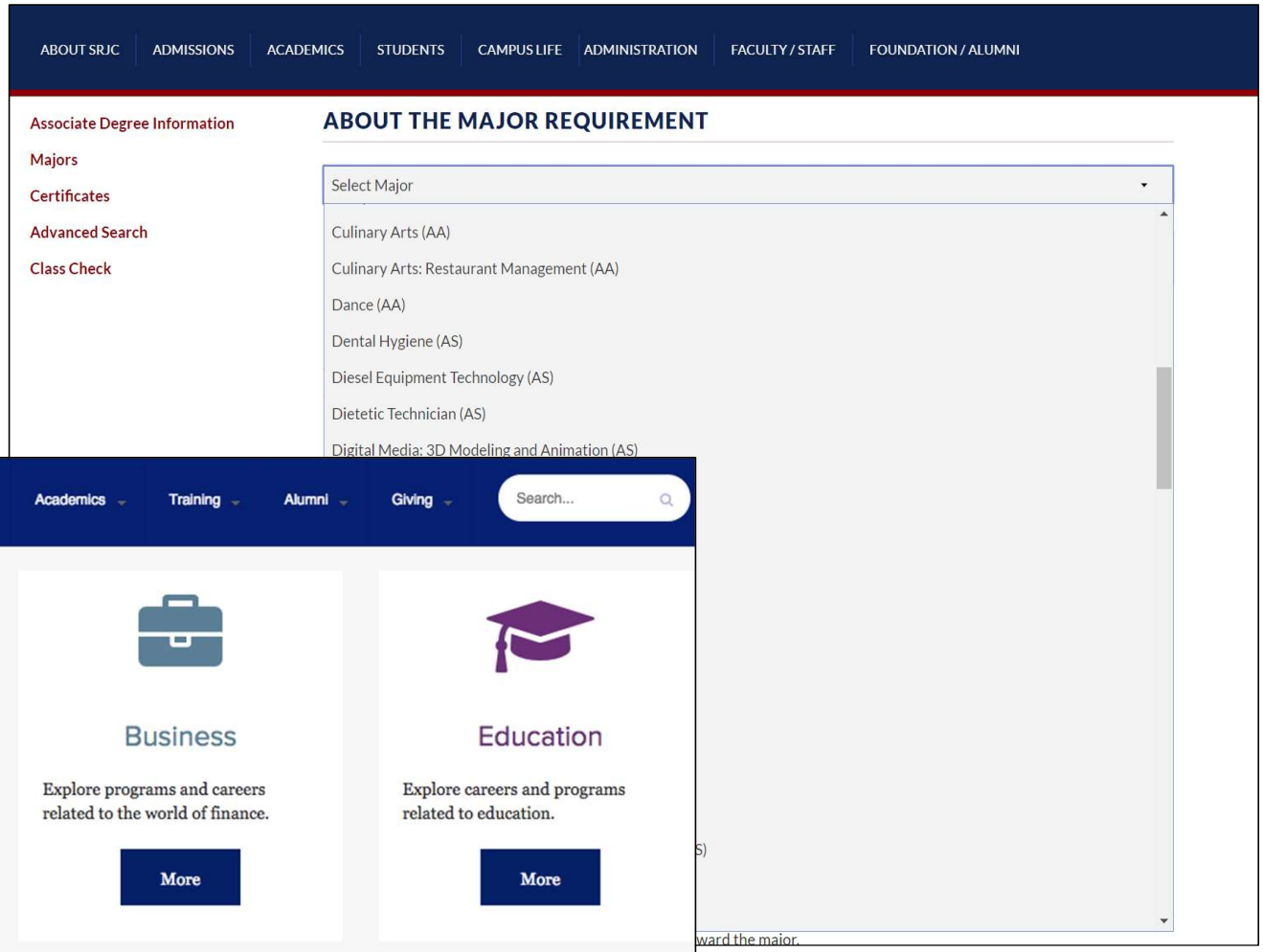
From low-cost courses…

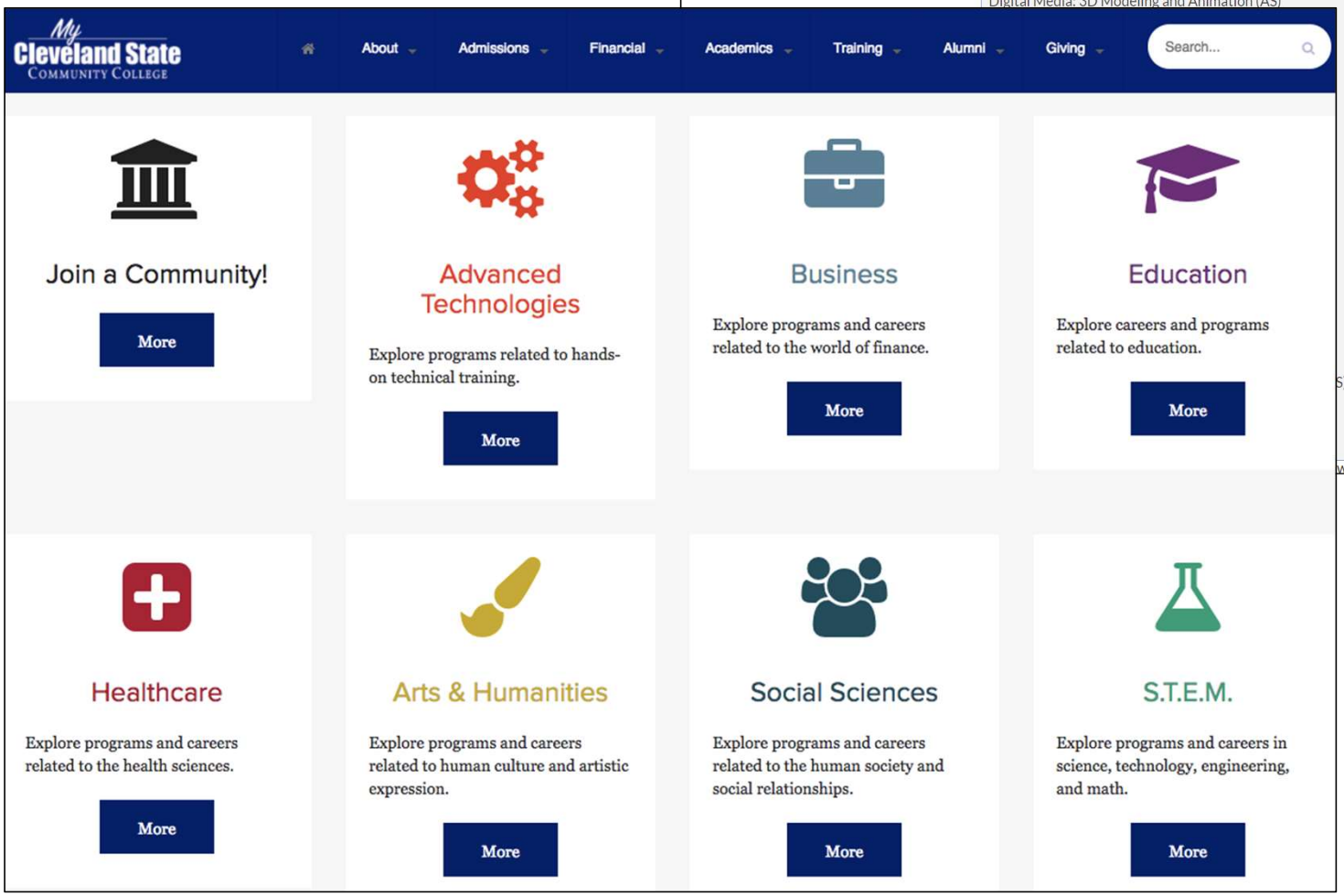
College/University	University Costs 4 Years With Room & Board	*Bachelor's Degree Completion Cost through MyUniversity*	Savings!
Ashland University B.S. in Education	$157,416	$32,798	79%
Bowling Green State University B.S. in Biology	$75,400	$11,745	84%
Cleveland State University B.A. in Psychology	$85,227	$12,525	85%
Hiram College B.A. in Accounting & Fin. Mgmt	$160,600	$24,554	85%
Kent State University Bachelor of Bus. Admin.	$77,408	$12,893	83%
University of Akron B.S. in Sport Studies	$80,578	$12,811	84%
University of Toledo B.S. in Computer Science & Eng.	$83,177	$15,726	81%



…to affordable programs, aligned with career-path jobs and further education

From alphabetical program lists…





…to academic and career communities

From course distribution lists…

Instructional Programs

- Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University.
- The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.
- A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
- Obtainment of a minimum grade point average of 2.0.

ADT also requires that students must earn a C or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is acceptable if pass is defined as a grade of C or better..

A.A.-T in Anthropology for Transfer (19 units)

Required Core (9 units)

ANTH-101	Physical Anthropology	3 units
or		
ANTH-101H	Honors Physical Anthropology	3 units
ANTH-102	Cultural Anthropology	3 units
or		
ANTH-102H	Honors Cultural Anthropology	3 units
ANTH-115	Introduction to Archaeology	3 units

List A: Select one (3 units)

ANTH-104	World Prehistory	3 units
or		
ANTH-104H	Honors World Prehistory	3 units

List B: Select one to two (4 units)

ANTH-111	Physical Anthropology Lab	1 unit
ANTH-145	Introduction to Language and Linguistics	3 units
or		
ANTH-145H	Honors Introduction to Language and Linguistics	3 units

List C: Select one (3 ur

ANTH-103A North Ame
ANTH-103B Northwest
ANTH-103C Cultures of
ANTH-103D Latin Ameri
ANTH-103E Cultures of
ANTH-121/HIST-121 California I
ANTH-125 Magic, Wit
ANTH-201 Introductio
ANTH-205 Archaeologi
ANTH-210 Archaeology
ENGL-205 World Folkl
or
ENGL-205H Honors Wo
ENGL-240 American I
or
ENGL-240H Honors Am
ENGL-280 Multiethnic
or
ENGL-280H Honors Mu

Units for Major
CSU General Education
Possible double counting
Transferable Electives (as units)
Total Units for A.A.-T De

This Associate in Arts in A intended for students who similar major at a CSU can is guaranteed admission to campus or major. Students develop an educational pla transfer requirements.

Note: Every effort has been made to keep program information current. Please use this information as a guide and consult with the chair of the department/program or an MSJC counselor.

Dental Hygiene

Associate of Applied Science

Entry wage: $57,978* Median wage: $70,640* Job placement rate: 100%**

A day in the life

Dental hygienists usually work in dental practices. They examine and evaluate the health of patients gums, expose dental x-rays, and clean patients teeth. Hygienists also educate patients about good oral health.

Three reasons to consider this program.

1. Salaries are excellent. Few two-year degrees have as much earning potential.
2. Many hygienists work fewer than 35 hours per week while earning a good salary.
3. This is a great profession if you love to learn and to help people.

Before you sign up, make sure you understand...

1. Science, science and more science. You must love science to do well in this program.
2. Admission is competitive. A typical GPA for a dental hygiene student is about 3.7. Only 12 spots are available.
3. Courses such as English and speech will help you with your communication skills and ability to relate to patients.

Roane State

Academic Map | Overview | Admission Requirements | Curriculum & Catalog | Faculty & Staff | Dental Clinics

1st Fall	1st Spring	1st Summer	2nd Fall	2nd Spring	2nd Summer	3rd Fall	3rd Spring
ENGL 1010 Composition I	CHEM 1010 Introductor…	BIOL 2230 Microbiology	DHYG 101 Pre-clinical Dent…	DHYG 112 Dental Science II		DHYG 201 Pharmacology a…	DHYG 211 Dental Hygiene S…
PSYC 2130 Lifespan De…	BIOL 2020 Human Ana…		DHYG 111 Dental Science I	DHYG 121 Clinical Dental H…		DHYG 221 Clinical Dental H…	DHYG 212 Community Heal…
BIOL 2010 Human Ana…	PHIL 1030 Intro to Phil…		DHYG 132 Dental Radiogra…	DHYG 141 Principles of Den…	DHYG 133 General and Ora…	DHYG 240 Principles of Den…	DHYG 222 Clinical Dental H…
MATH 1530 Introductor…	SOCI 1010 Intro to Soc…			DHYG 161 Biochemistry an…	DHYG 171 Dental Materials	DHYG 251 Periodontology	DHYG 242 Principles of Den…
Oct See advisor FAFSA	Feb Admission documents		Oct See advisor FAFSA	Mar See advisor		Sept Application for Graduation	Mar Job search
Nov Register	Mar See advisor		Nov Register	Apr Register		Oct See advisor	Feb Exit exam
Dec AHS application	Apr Register					Nov Register Board registrations	

This map assumes completion of course prerequisites
*Tennessee Department of Labor **Average of 2014 - 2016 graduates

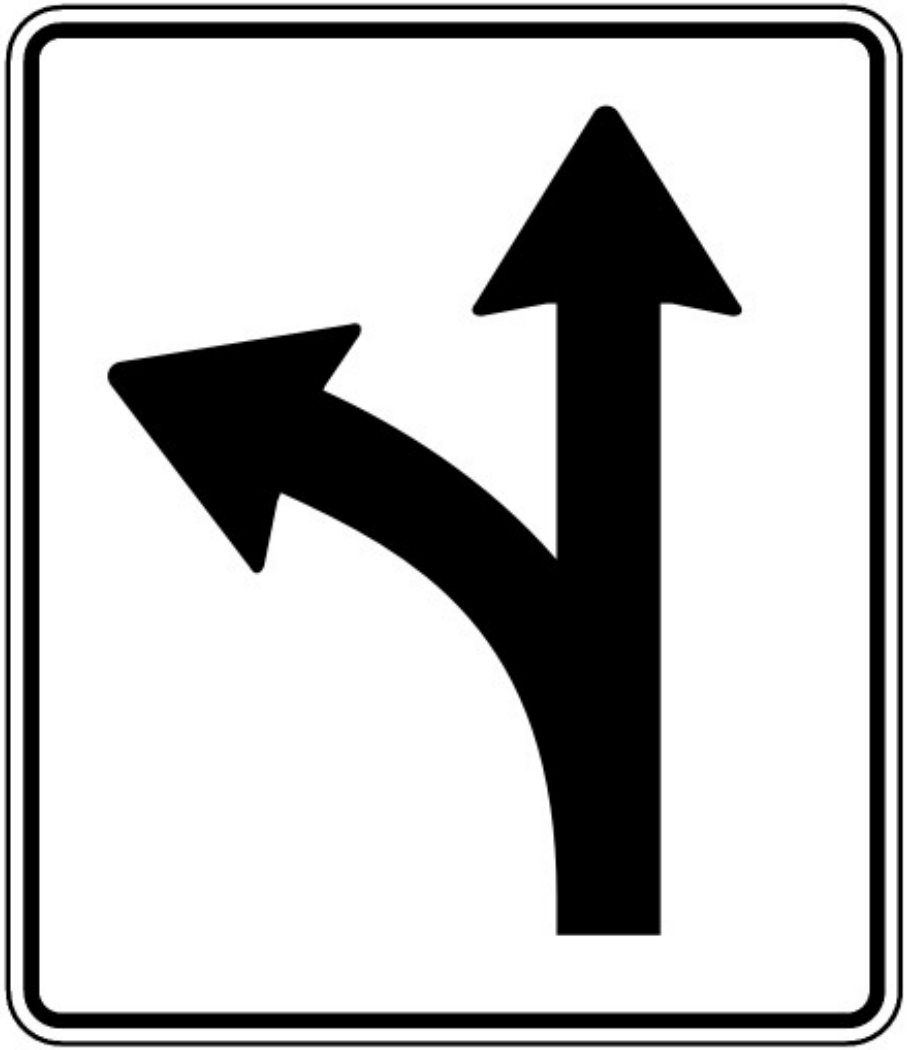
…to program maps with designated course sequences, critical courses and milestones.

From job/transfer support for near completers…

SAN JOAQUIN DELTA COLLEGE | CTC CAREER TRANSFER CENTER GOING BEYOND

…to career/transfer exploration and planning for all students from the start.

From standardized tests to assess whether students are college-ready or not



…to holistic, multiple measures assessment of strengths/ needs for all new students

From information dump at orientation…

…to support for major decisions along the path

Advising Checkpoints for Success
Associate Degree

FRESHMAN (0-29 credits*)

*Credits Toward Program

"Getting to Know You" - First Advising Session with Assigned Advisor

- ☐ Discuss transition into college life, which may include exploring skills, interests, goals, time management, and personal responsibility
- ☐ Establish a program objective that aligns with career goals and transfer plans (or explore meta majors if undecided) and review degree requirements (log transfer major and institution)
- ☐ Determine eligibility for SB1720 exemption; use Academic Profile to advise of developmental education options (make and log recommendations)
- ☐ Advise of accelerated credit options: Career Pathways, CLEP, AP, IB, AICE
- ☐ Create a personalized Guided Pathway (verify Foreign Language requirement)
- ☐ Discuss financial aid options, scholarship opportunities, and payment plan alternatives
- ☐ Familiarize student with IRSC technology, i.e. MyIRSC, Rivermail, and Blackboard
- ☐ Review other IRSC resources and services, i.e. Academic Support Center (ASC), RiverSupport Resources, Smarthinking, The River Shop, and RiverLife
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

Checkpoint: 25-49% Benchmark

- ☐ Confirm program objective selection is current and still applicable to goals
- ☐ Explore overall experience, inside and outside of the classroom, including the use of IRSC technology, resources, and services
- ☐ Follow-up on any pending discussion points from previous meeting
- ☐ Review degree audit and modify Guided Pathway if necessary
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

SOPHOMORE (30-60+ credits*)

*Credits Toward Program

Checkpoint: 50-74% Benchmark

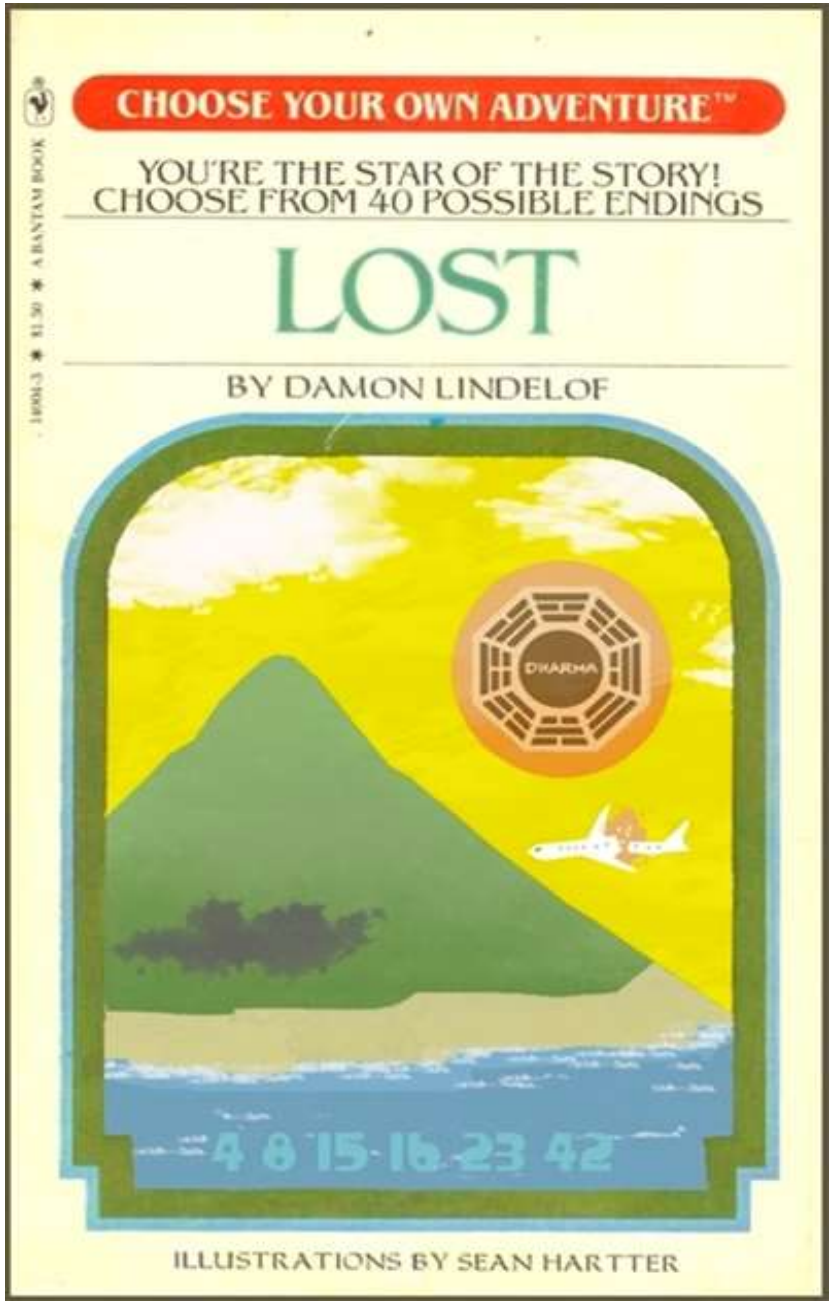
- ☐ Assist with making plans for transfer or continuation of studies at IRSC
- ☐ Follow-up on any pending discussion points from previous meeting
- ☐ Review degree audit and modify Guided Pathway if necessary
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

Checkpoint: 75%+ Benchmark

- ☐ Review remaining degree requirements to ensure that student is on track for graduation
- ☐ Finalize plans for transfer or continuation of studies at IRSC
- ☐ Refer to Career and Transition Services for resume development and mock interviewing
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable
- ☐ Discuss barrier-free graduation and advise of commencement opportunity

01/2016

From students self-advise during registration each semester…



…to advisors monitor progress, must approve changes to the plan

From teaching individual classes…

…to teaching knowledge & skills across programs and providing real-world experience toward further education/work

What we are learning about implementing whole-college redesign

Guided Pathways Essential Practices

1 Clarify 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

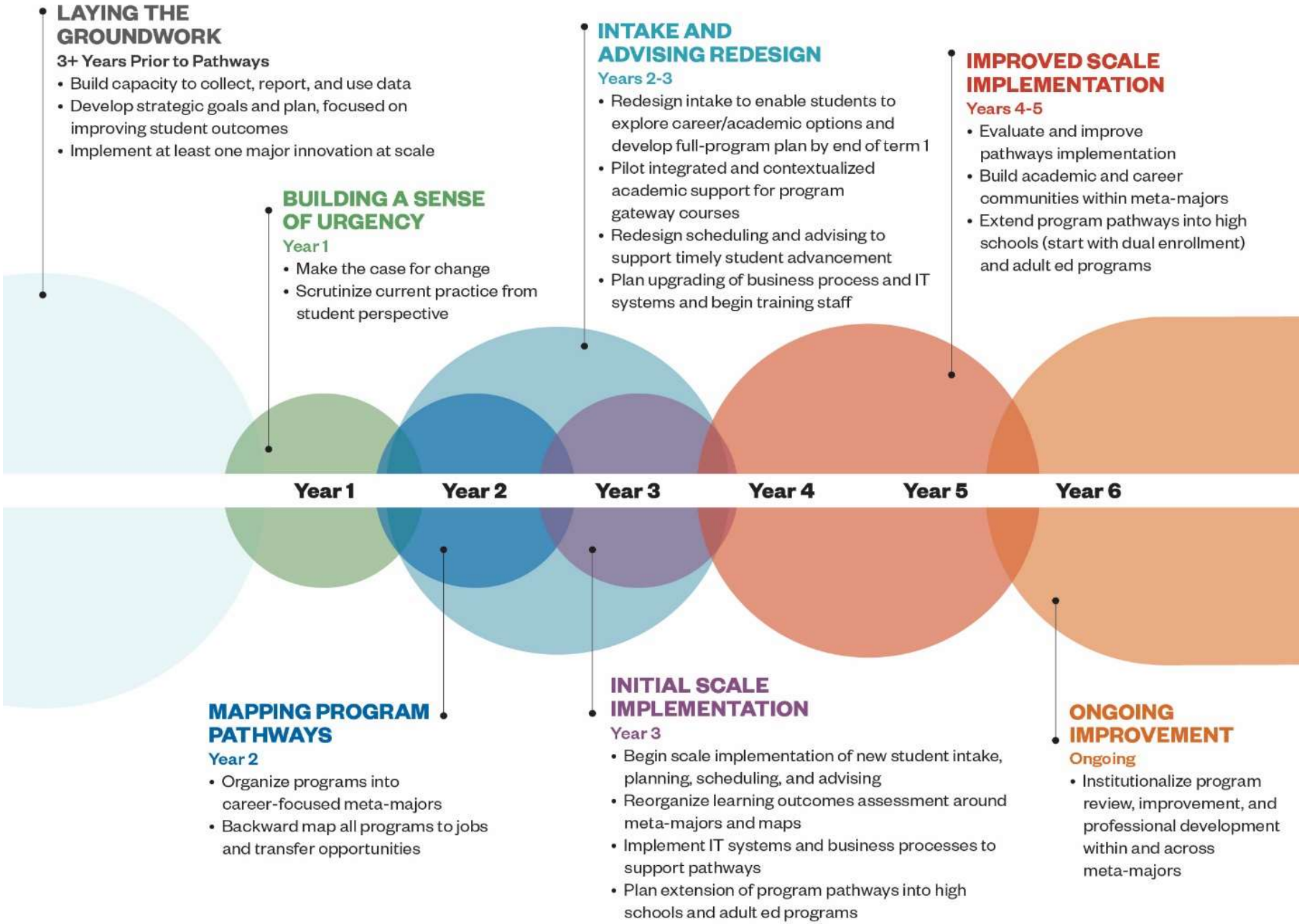
3 Keep students on path

- 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

Idealized Timeline for Implementing Guided Pathways at Scale



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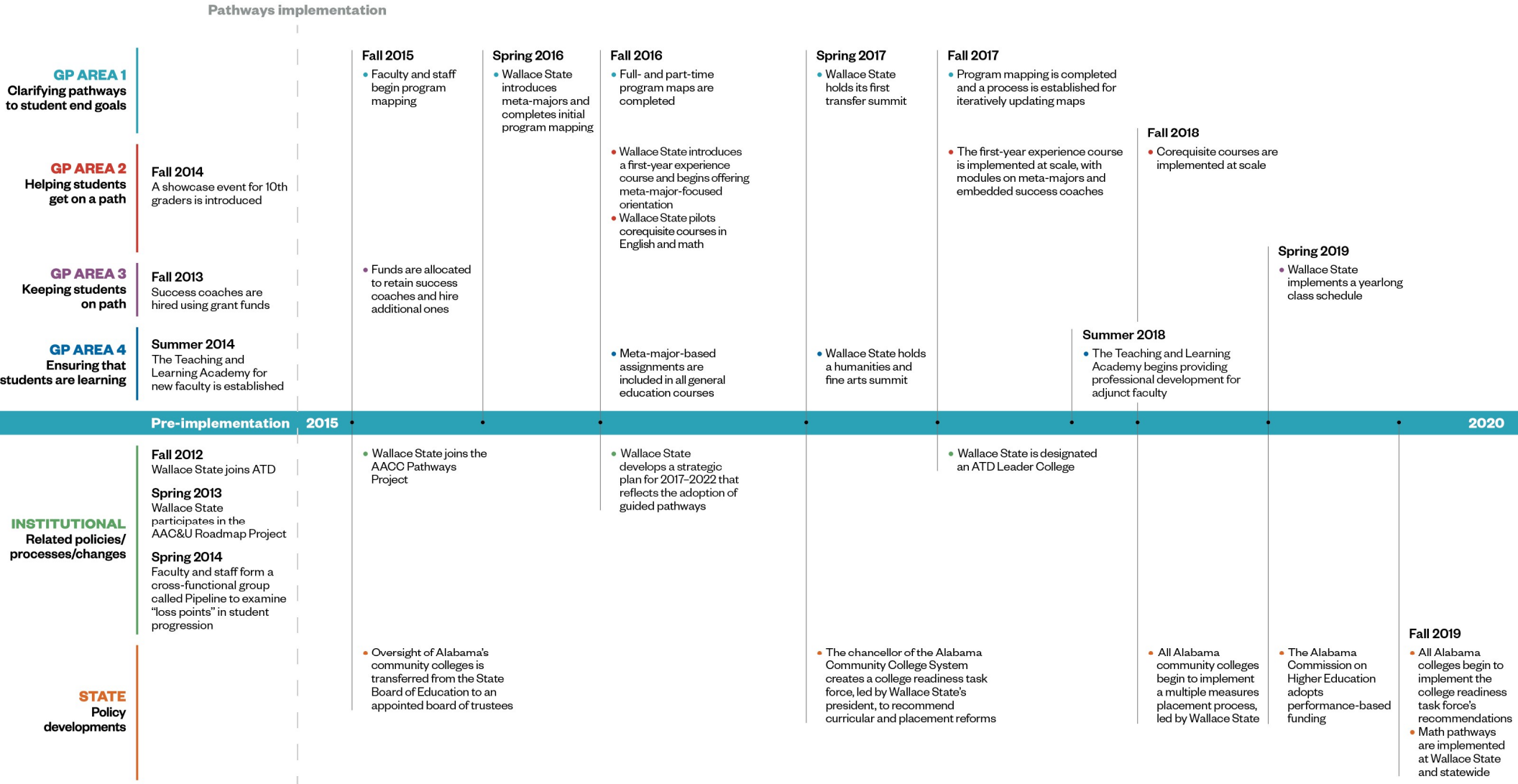
Timeline of Guided Pathways Implementation Activities at Wallace State Community College



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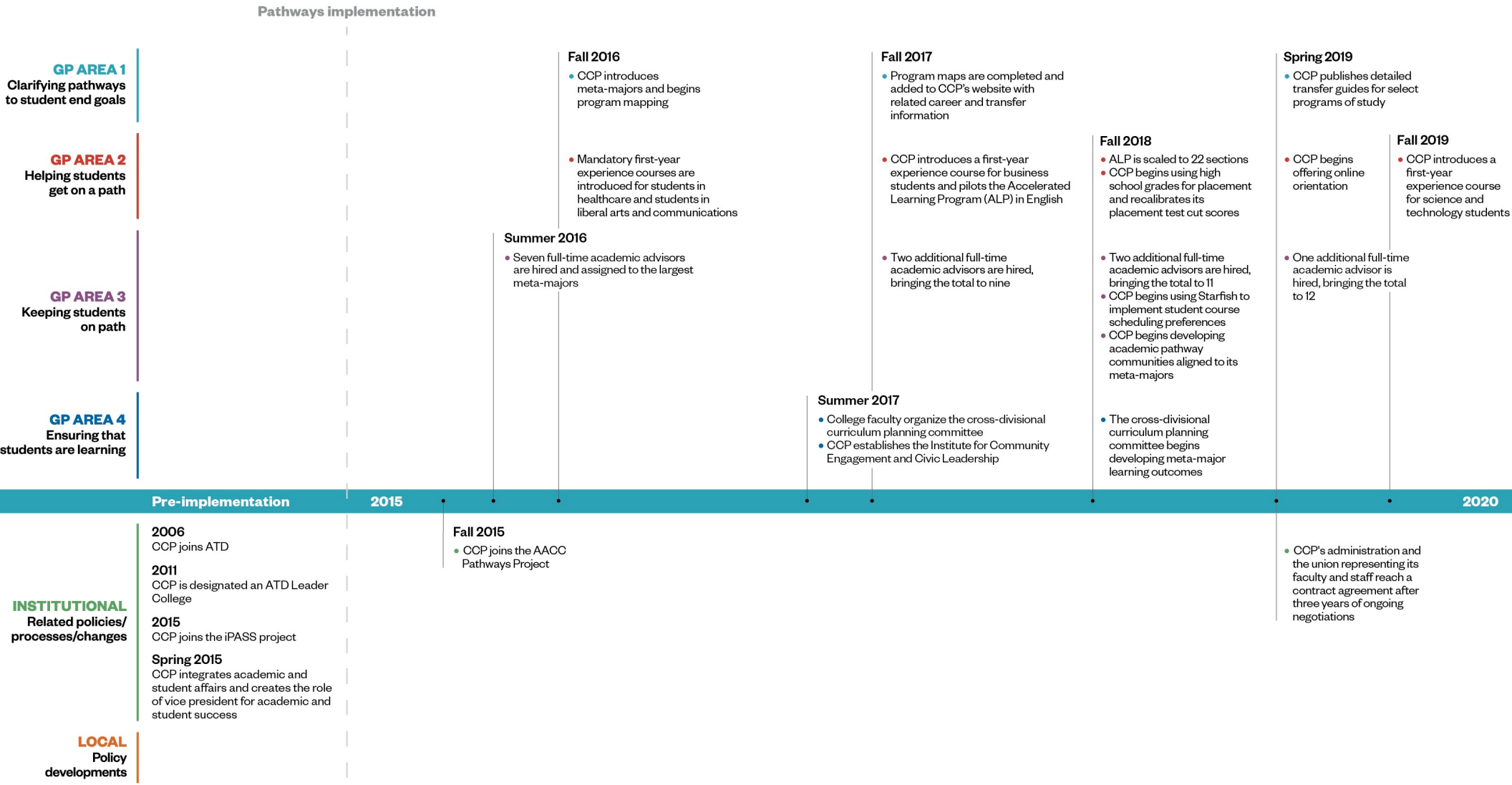
Timeline of Guided Pathways Implementation Activities at Community College of Philadelphia

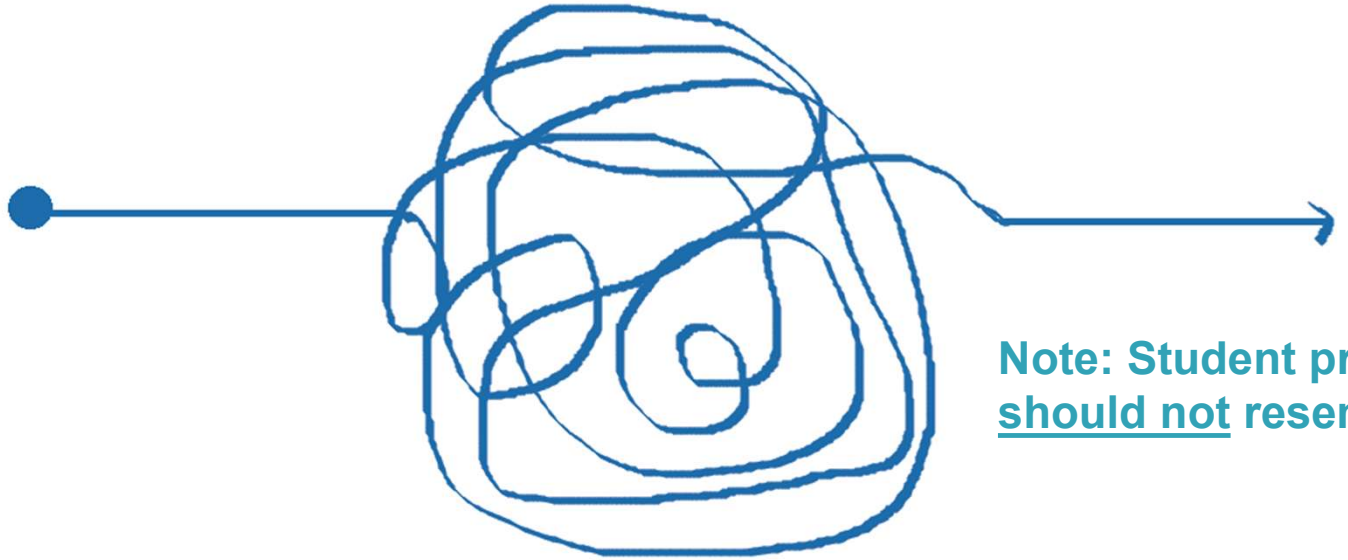


As our research focus has evolved,

What → **How**

(essential practices) (change process)

our understanding of guided pathways implementation has become more complex.



Note: Student program pathways should not resemble this figure.

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Timeline and Strategies for Leading Guided Pathways Redesigns

Pathways implementation

Laying the Groundwork for Whole-College Redesign

2+ Years Prior to Pathways

- Build awareness that college creates barriers to student success and that only large-scale, cross-college reforms will remove them
- Build a culture of data-informed practice
- Reorganize decision-making roles and structures to facilitate broad engagement in planning and implementing improvements
- Foster individual accountability for contributing to the college's goals for student success
- Encourage creativity and experimentation in developing strategies to improve student success
- Provide time and support for collaborative planning and professional development

Introducing Guided Pathways to the College Community

Starting in Year 1

- Make the case for guided pathways by showing how a lack of clear program paths and supports hurts students
- Communicate a guiding vision for the reforms
- Cultivate a shared understanding of guided pathways through college-wide in-person meetings and virtual communication
- Allow time for reflection and deliberation
- Present guided pathways as a framework for aligning and enhancing existing student success efforts

Supporting Collaborative Planning and Implementation

Starting in Years 2 – 3

- Support cross-functional leadership and collaboration to plan and implement pathways
- Engage faculty and staff from across divisions in mapping program pathways to good jobs and transfer in a major
- Ask staff and faculty to map the entire student experience—both the status quo and what it should be
- Identify and support change leaders throughout the college

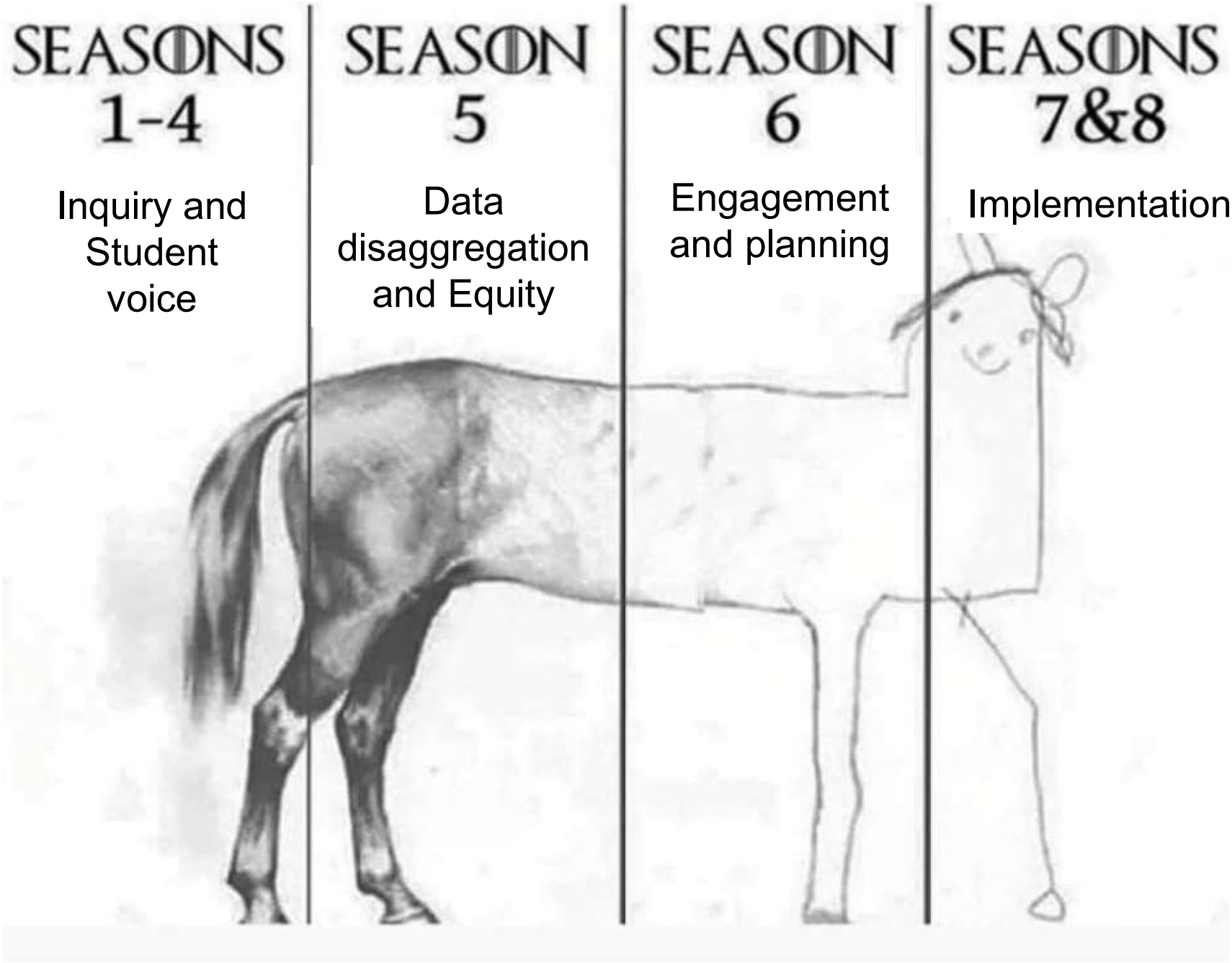
Sustaining and Institutionalizing Student Success Reforms

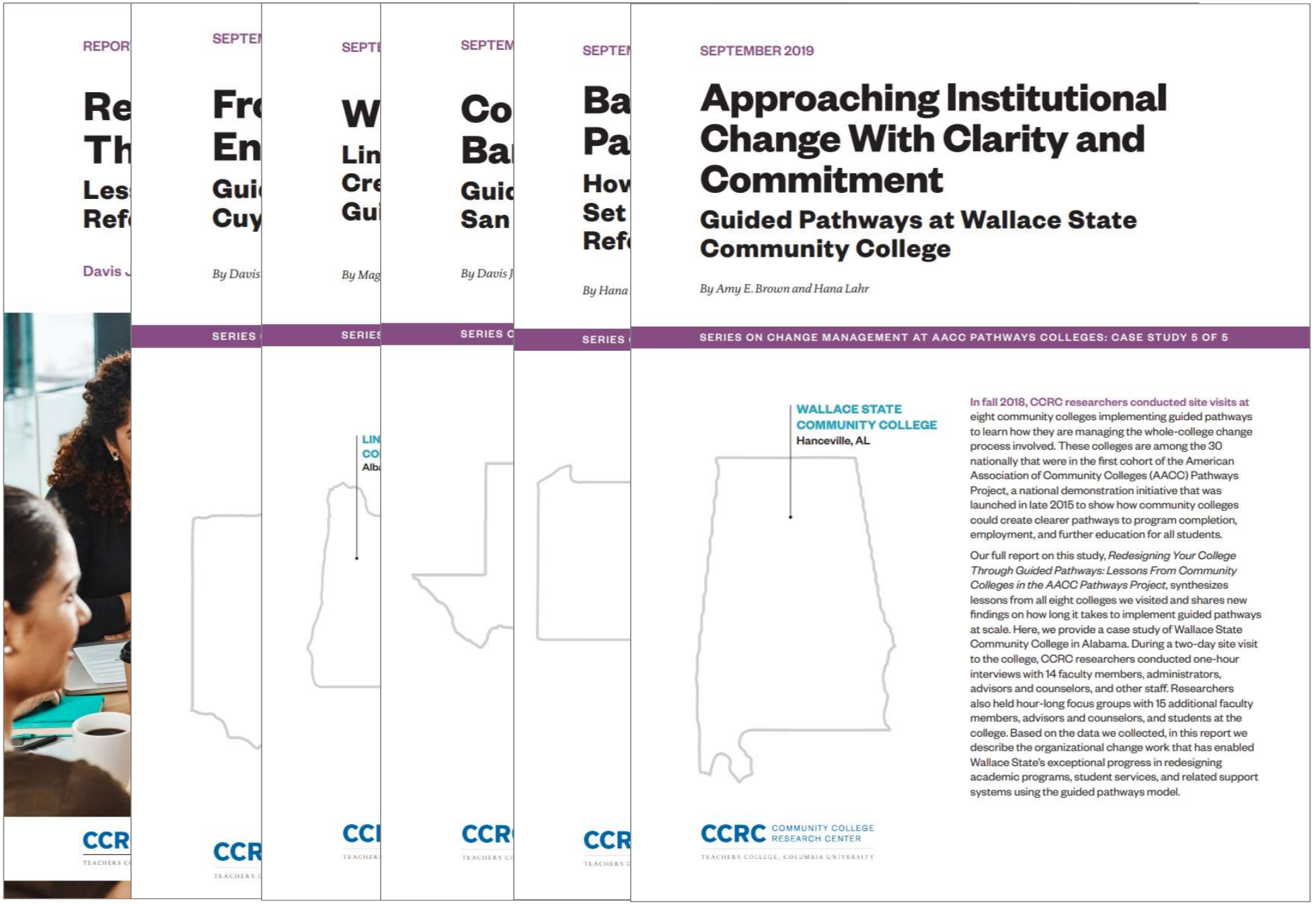
Starting in Years 4+

- Take time to celebrate wins, reflect on progress, and plan next steps
- Reallocate and align resources to help scale and sustain effective practices
- Ensure that employee hiring, onboarding, and promotion practices support a culture focused on improving success for all students

Lessons on Leading College Redesign

- Redesigning colleges on guided pathways model is **a big technical challenge, but even bigger cultural one**
- Effective leaders lay the groundwork: a) engage stakeholders across college in examining **barriers the college creates** to student success, b) **develop vision and goals** for improving experience for all students; c) **empower teams to plan and design innovations at scale**
- Critical importance to implementation of well-managed cross-functional teams
- Critical importance to redesign of broad engagement in **program and student experience mapping** (status quo and desired)
- Challenge: **creating time and resources** for reflection, design, planning, professional development and evaluation
- Challenge: **sustaining and institutionalizing innovation** in face of turnover, uncertain policy/fiscal environment; exhaustion


SEASONS 1-4
Inquiry and Student voice
SEASON 5
Data disaggregation and Equity
SEASON 6
Engagement and planning
SEASONS 7&8
Implementation



Report and case studies available here: https://ccrc.tc.columbia.edu/publications/redesigning-your-college-guided-pathways.html

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Using leading indicators to measure and motivate whole-college reform

Leading Indicators	Lagging Indicators
Formative Assessment	Summative Assessment
Measurable in a short time period	Not measurable in a short time period
Primary Goal: Improvement (Internal)	Primary Goal: Accountability (External)
Predictive of longer-term outcomes	Captures ultimate goals and outcomes
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

GP Leading Indicators: Early Momentum

a) **Credit momentum:**

1. Earned 6+ credits in 1st term
2. Earned 12+ credits in 1st term
3. Earned 15+ credits in Year 1
4. Earned 24+ credits in Year 1
5. Earned 30+ credits in Year 1

b) **Gateway Course momentum:**

6. Passed college English in year 1
7. Passed college math in year 1
8. Passed college English & math in year 1

c) **Program momentum** – Percent of students who pass at least 9 college-credit hours in the their field of study in the first year

d) **Persistence and College Course Completion EMMs**

9. Persisted from term 1 to term 2
10. Total college credits attempted
11. Total college credits completed
12. Credit pass rate

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 prerequisite remediation to corequisite 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

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Early Adopters

Alamo College District

Pathways - AlamoINSTITUTES

Goal: Every student seeking a baccalaureate degree will be successful.

Strategy:

- ✓ Students choose a pathway
- ✓ A customized pathway is created for each student based on the pre-major and requirements at the university of choice

AlamoINSTITUTES

NORTHEAST LAKEVIEW COLLEGE • NORTHWEST VISTA COLLEGE • PALO ALTO COLLEGE

My journey
Designed *for me!*

Creative & Communication Arts

Choose a career that lets you **EXPRESS YOURSELF** – as an art director, artist, graphic designer, actor, choreographer, dancer, musician, broadcast news analyst, editor, photographer, technical writer, reporter,fashion designer, desktop publisher, craft artist, multimedia artist, camera operator.

Business & Entrepreneurship

Choose a career that lets you **TAKE THE LEAD** – as a manager, computer and information systems manager, human resources manager, management analyst, event planner, audit clerk, executive assistant, procurement clerk, financial advisor, budget analyst, actuary, credit analyst, foods service manager, chef, travel guide, real estate broker, public relations specialist.

Health & Biosciences

Choose a career that lets you **MAKE A DIFFERENCE** – as a nurse, dental hygienist, physician, pharmacy technician, psychiatrist, radiologic technologist, surgical technologist, phlebotomist, biomedical engineer, veterinary technician, speech-language pathologist, physician assistant, physical therapist, respiratory care technician, invasive cardiovascular technician, occupational therapy assistant.

AlamoINSTITUTES & HS ENDORSEMENTS

Continue your journey designed for you!

HS Endorsement	AlamoINSTITUTES	Sample Career:
Arts & Humanities Multidisciplinary Studies	Creative & Communication Arts	**Technical Writer** Jobs Projected in Texas by 2024: 5,040 You will need: a Bachelor's degree Average Pay: $70,009
Business & Industry Multidisciplinary Studies	Business & Entrepreneurship Advanced Manufacturing & Logistics	**Construction Manager** Jobs Projected in Texas by 2024: 45,030 You will need: a Bachelor's degree Average Pay: $93,609
Public Service Multidisciplinary Studies	Public Service	**Elementary School Teacher** Jobs Projected in Texas by 2024: 172,990 You will need: a Bachelor's degree Average Pay: $52,813
STEM *Science, Technology, Engineering & Mathematics* Multidisciplinary Studies	Science & Technology Health & Bioscience	**App Developer** Jobs Projected in Texas by 2024: 63,120 You will need: a Bachelor's degree Average Pay: $99,827

NORTHEAST LAKEVIEW COLLEGE • NORTHWEST VISTA COLLEGE • PALO ALTO COLLEGE • SAN ANTONIO COLLEGE • ST. PHILIP'S COLLEGE

Connection WELCOME/ADVISING CENTERS → **Entry** COLLEGE SUCCESS → **Progress** FACULTY ASSIGNED WITH MAJOR → **Completion** CAREER & GRAD. CENTERS

PRE-COLLEGE—0 HOURS

- **AlamoENROLL**—Provides enrollment guidance to prospective students through cross-college website including:
  - Steps to Enrollment Checklist
  - Open Modules
  - Ready, Set, Apply
  - Intro to College and **AlamoINSTITUTES**
  - Financing Your Future
  - Test 101
  - Resources/Computer labs
- **AlamoINSTITUTES**—Provide advising information regarding career pathways
  - Health & Biosciences
  - Advanced Manufacturing & Logistics
  - Science & Technology
  - Public Service
  - Creative & Communication Arts
  - Business & Entrepreneurship
- **Early Colleges/Academies**—Course enrollment in Fr/Sr through assigned advisor.
- **Dual Credit**—Course enrollment in Jr/Sr year through assigned Advisor.
- **College Connection**—Guide through enrollment process, including completion of ApplyTexas, FAFSA Application, TSI and **AlamoENROLL** modules.
- **Grad Guru** downloaded

0–3

INITIAL ENROLLMENT—1ST SEMESTER

- **New Student Orientation/Convocation**—Ori
  - Provide Academic Advising Syllabus (0–3
  - Assist with scheduling & registering for
  - Orient students to Degree Plans via Alam
  - Online Web Registration assistance avail
  - **AlamoINSTITUTES** / major course of stu
  - Identify **ACOL/PLA**
- **Post Assessment Advising**—TSI score inter
- **Academic Refreshers**—INRW and math
- **Post Refresher Advising**

1ST SEMESTER

- Instruction on College Success (**SDEV Cours**
- Advisor utilizes **Canvas** to connect with assig
- Assist students in choosing their major usin
- **MyAlamoCareer.org and Career Coach**—vir centers, Alamo Colleges and local job marke
- **AlamoINSTITUTES** utilized
- Provide students with a plan to earn a certifi
  - Complete ISP via Alamo GPS.
- Advise and register students into appropriat
- Early Alert & Smart Start utilized
- Advisor determines Faculty integration (12–

2ND SEMESTER

- Confirm students' plan to earn a certificate
- Advise and register students into appropriat
- Early Alert & Smart Start utilized

31+ HOURS

2ND YEAR—GRADUATION

- Faculty teamed with an advisor through Degree or Certificate completion via GPS.
- Provide Academic Advising Syllabus (31+ hours)
- Advising regarding course selection is offered through Group or Individual Sessions to understand the requirements of chosen major at transfer university.
- Major Mixers/Major Mania Events
- Provide positive feedback at primary success points.
- Graduation and Transfer Initiative—Experiential/Career Centers & Faculty Mentors work in tandem to advise, graduate students and proclaim their transfer university (review their degree plan/ISP, and consider transferring to a university)

ADVISING CENTERS (19 Teams)

- Advising regarding course selection is offered through Group or Individual Sessions to understand major requirements.

2ND YEAR—GRADUATION

- Assist students (42+ Hours/ Core Complete) in Degree Audits via Alamo GPS
- Faculty advise students during semester on how to be successful in classes.
- Coordinate the Academic Achievement Events, Career/ Scholarship Fairs, Transfer Fairs, and Graduation Event/ Festival.
- Graduation Survey
- Reverse Transfer

ACTIONS: Assign Connection Advisor | Certified Advisor Assigned/PIN Given, Institut | Faculty Mentor Assigned

METRICS: Number of Apply Texas Submitte | FTICS Enrolled

(Analyst) Number of DC/EC Enrolled | Productive Grade Rate (PGR) | # of Certificate & Core Completers | Number of Degrees

DC/EC Term Retention | Number of Art. Agreements | Number of Certificates

BADGES: Welcome | College Ready, 15 Hours, 30 Hours | Core Complete | Cert., Degree, Alum

ADVISING PIN# _____
(NA if not applicable)

Congratulations!

You are halfway to completing your degree.

Important milestones that should be completed:

- Review and affirm your Individual Success Plan (ISP)
- Research transfer institutions and be familiar with their application process and deadlines, financial aid and scholarship opportunities, and housing options
- Continue career research
- Review academic standing and GPA
- Research future internships that may support your career goals
- Identify where you intend to transfer
- Understand 30 Hour Advising PIN

In progress/ next steps:

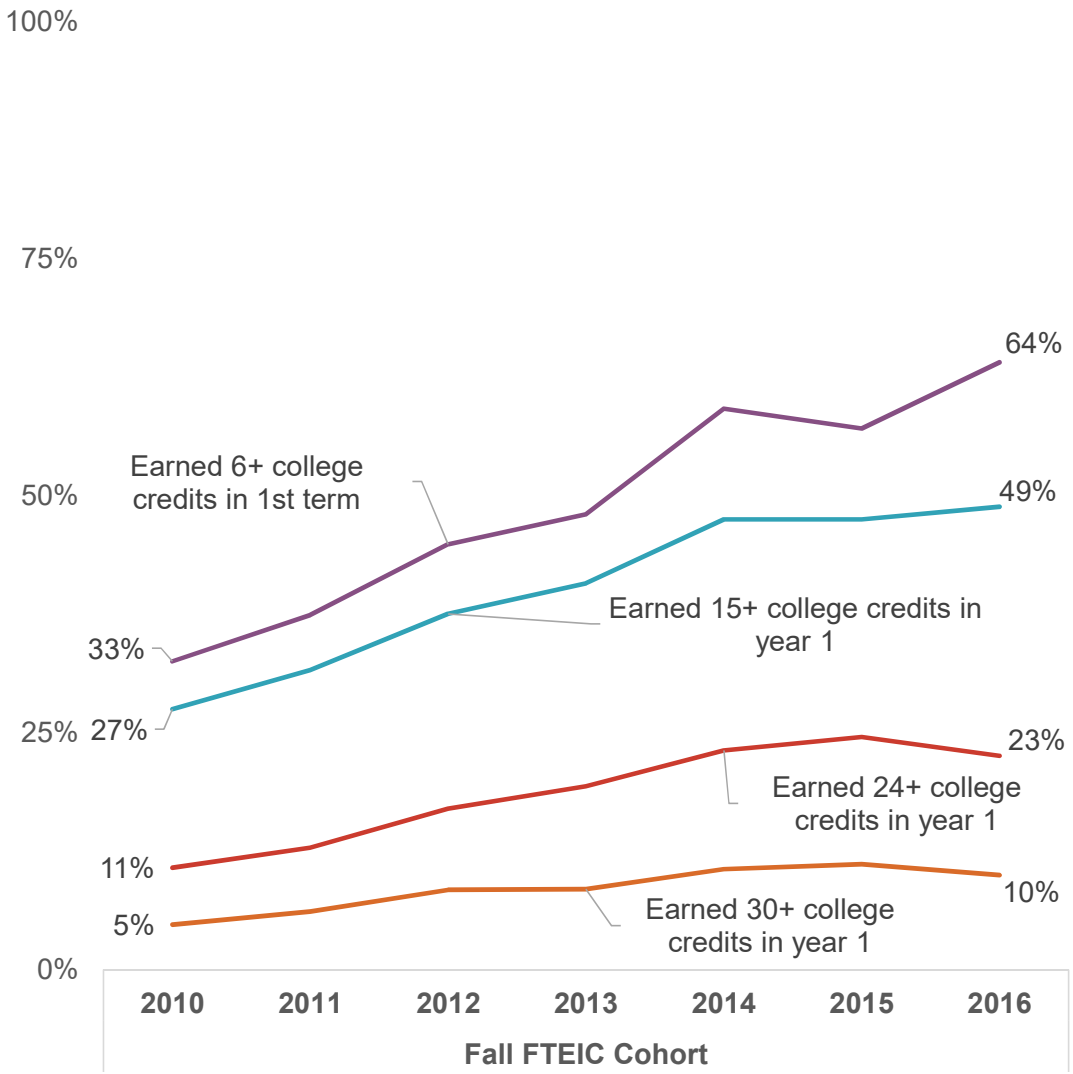
- Continue researching transfer institutions
- Continue career exploration
- Understand how Summer Momentum Plan affects you
- Use support services to help reach your goals
- Maintain consistent communication with your Certified Advisor
- Meet with your Certified Advisor each semester

This certificate hereby affirms that you, _____, are on your way to completing your educational goals!

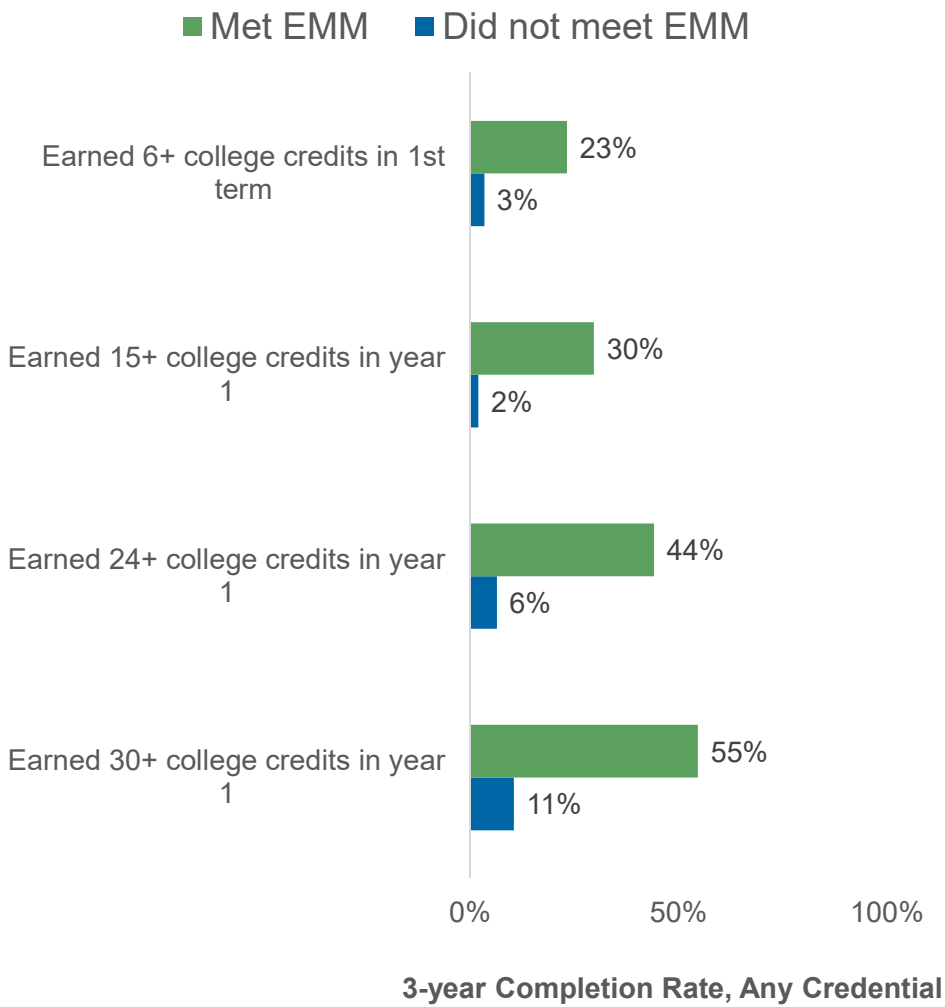
_____
Certified Advisor Signature

ALAMO COLLEGES DISTRICT
San Antonio College

Alamo Colleges Credit Momentum EMMs

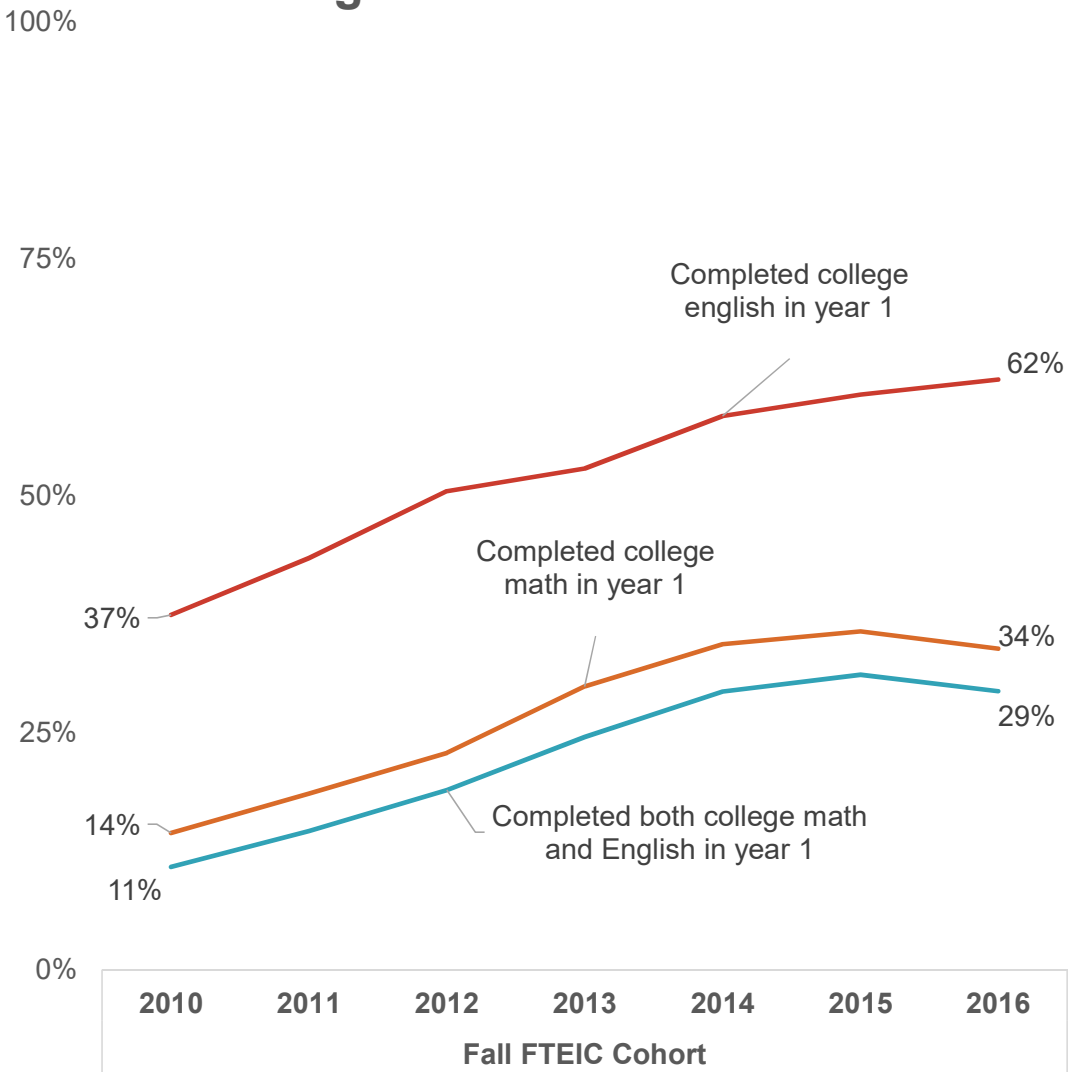


Alamo Colleges 3-year Completion Rates by EMM Status

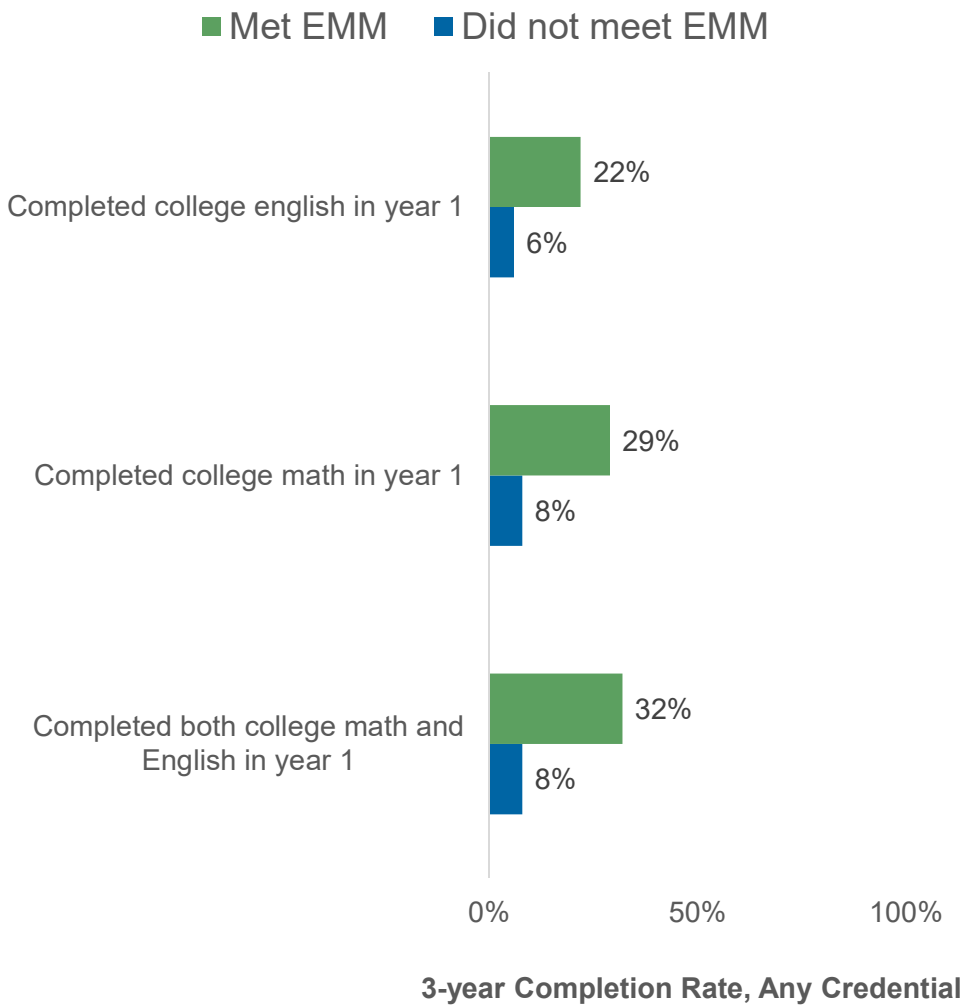


Note. Trends in Alamo Colleges Credit Momentum EMMs are shown in the left panel. The right panel shows completion rates for fall 2014 FTEIC entrants at Alamo Colleges who completed any college credential (from any institution) within three years, disaggregated by whether or not students met the particular EMM definition in their first year.

Alamo Colleges Gateway Math & English Momentum EMMs



Alamo Colleges 3-year Completion Rates by EMM Status



Note. Trends in Alamo Colleges Gateway Math and English EMMcs 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 EMM definition in their first year.

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Early Adopters

Tennessee Community Colleges

REPORT | SEPTEMBER 2018

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

CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Tennessee Completion Practices

a) Map all programs to career outcomes; include the “right” math on each map

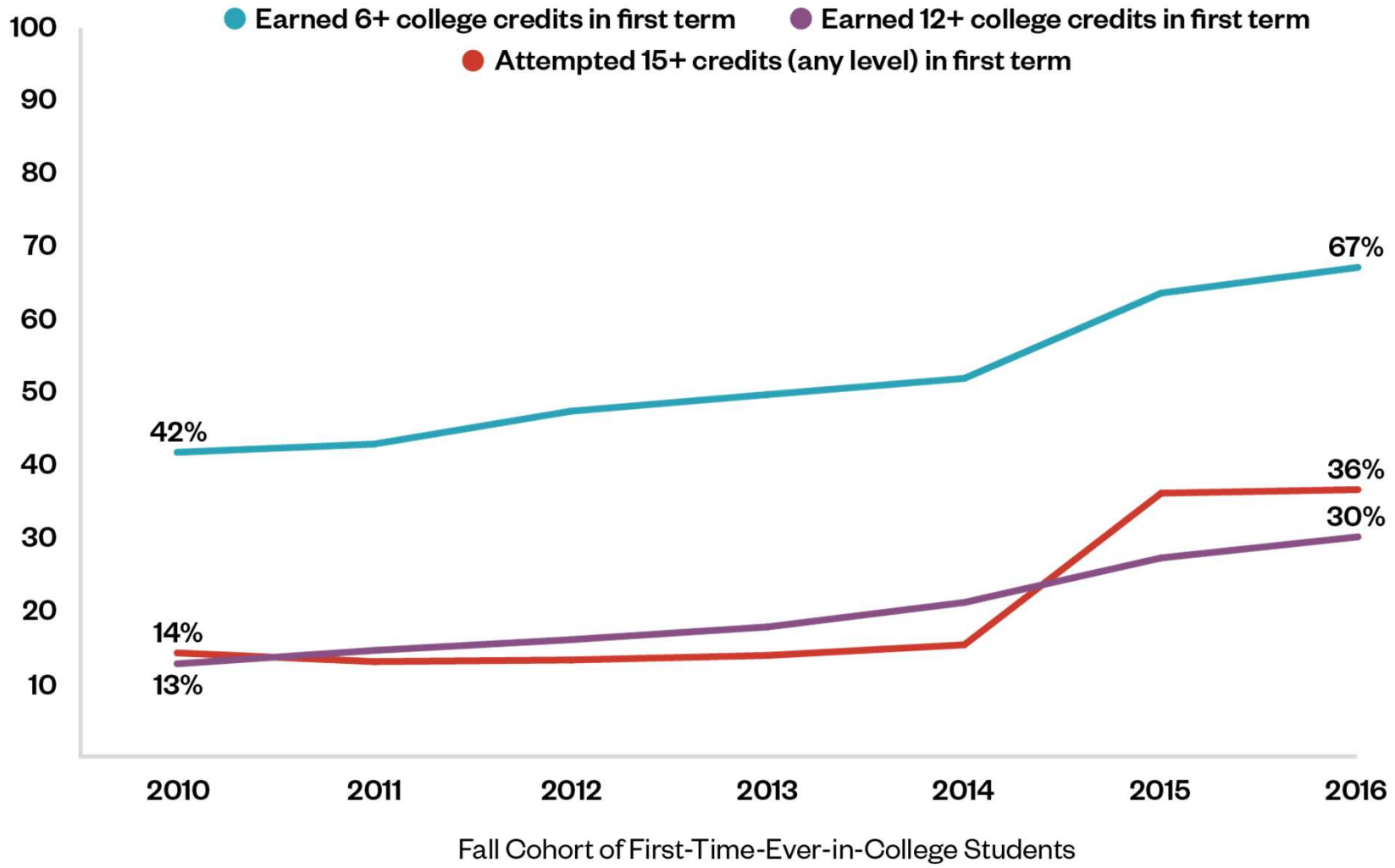
b) Redesign intake experience to help students explore, choose a major or focus area, develop full-program plan

c) Require students with ACT of 13-18 to take “corequisite” 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

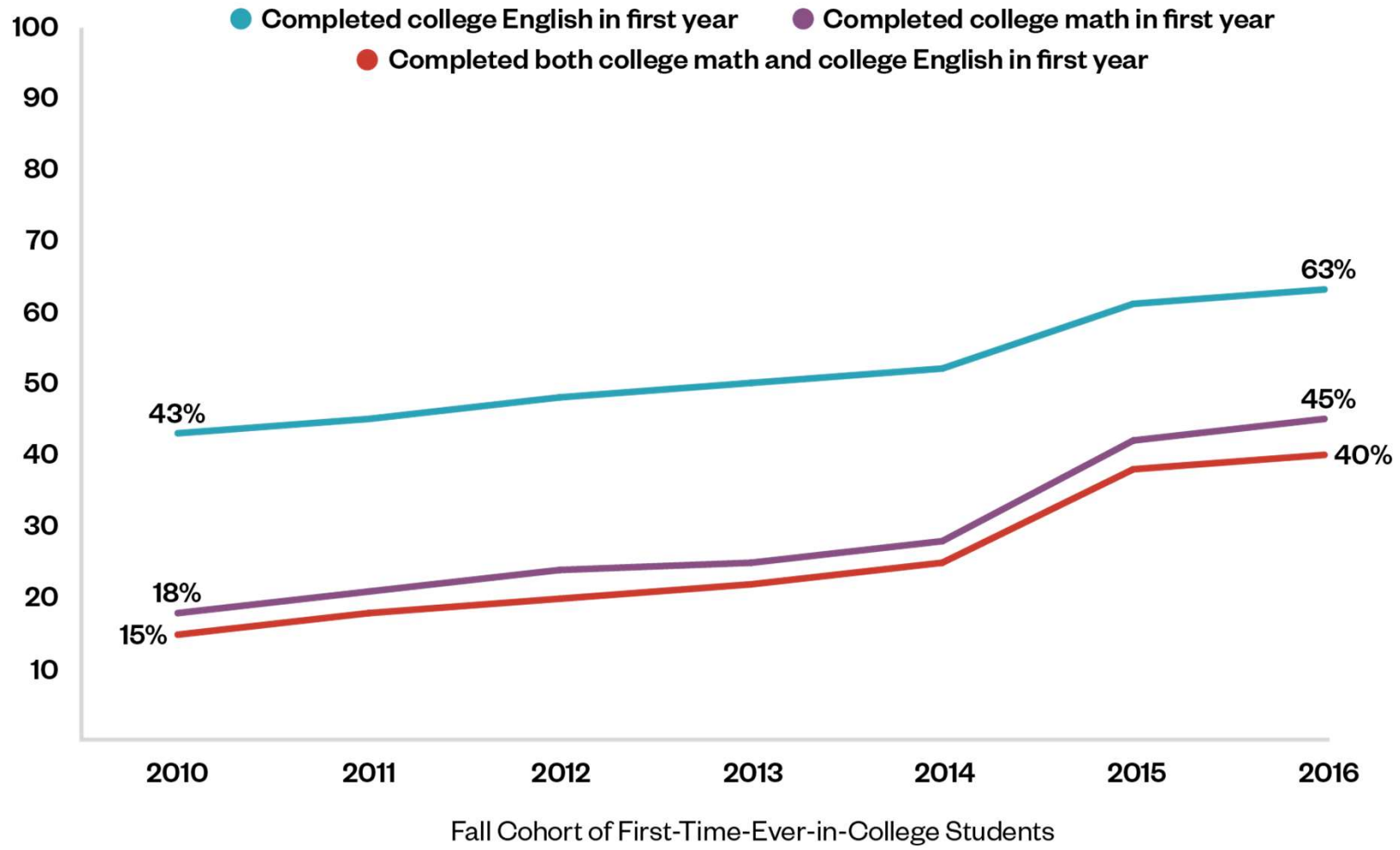
e) Increase exposure of all students to high-impact teaching practices

TN CCs: First Term Credit Momentum KPIs



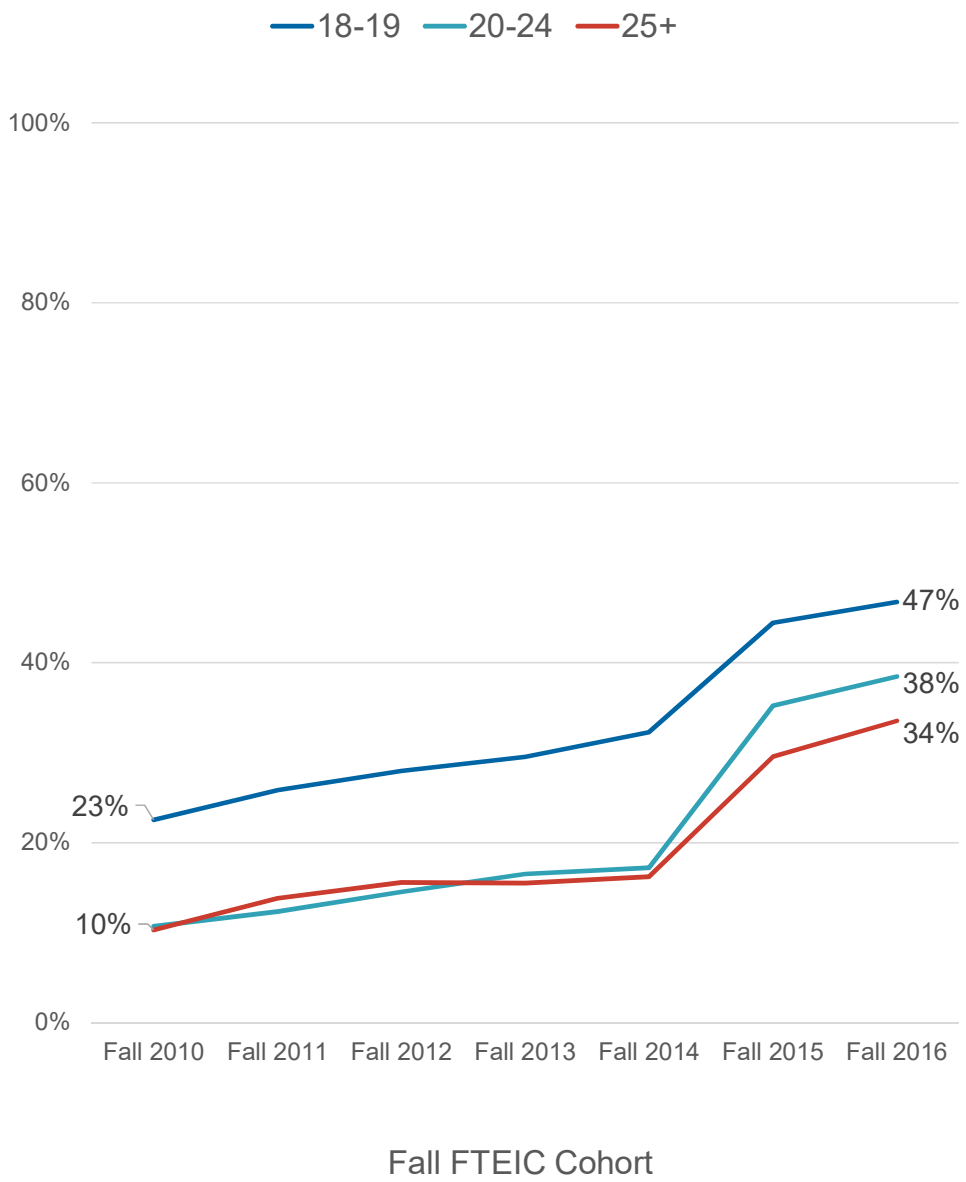
Source: CCRC Analysis of TBR Data

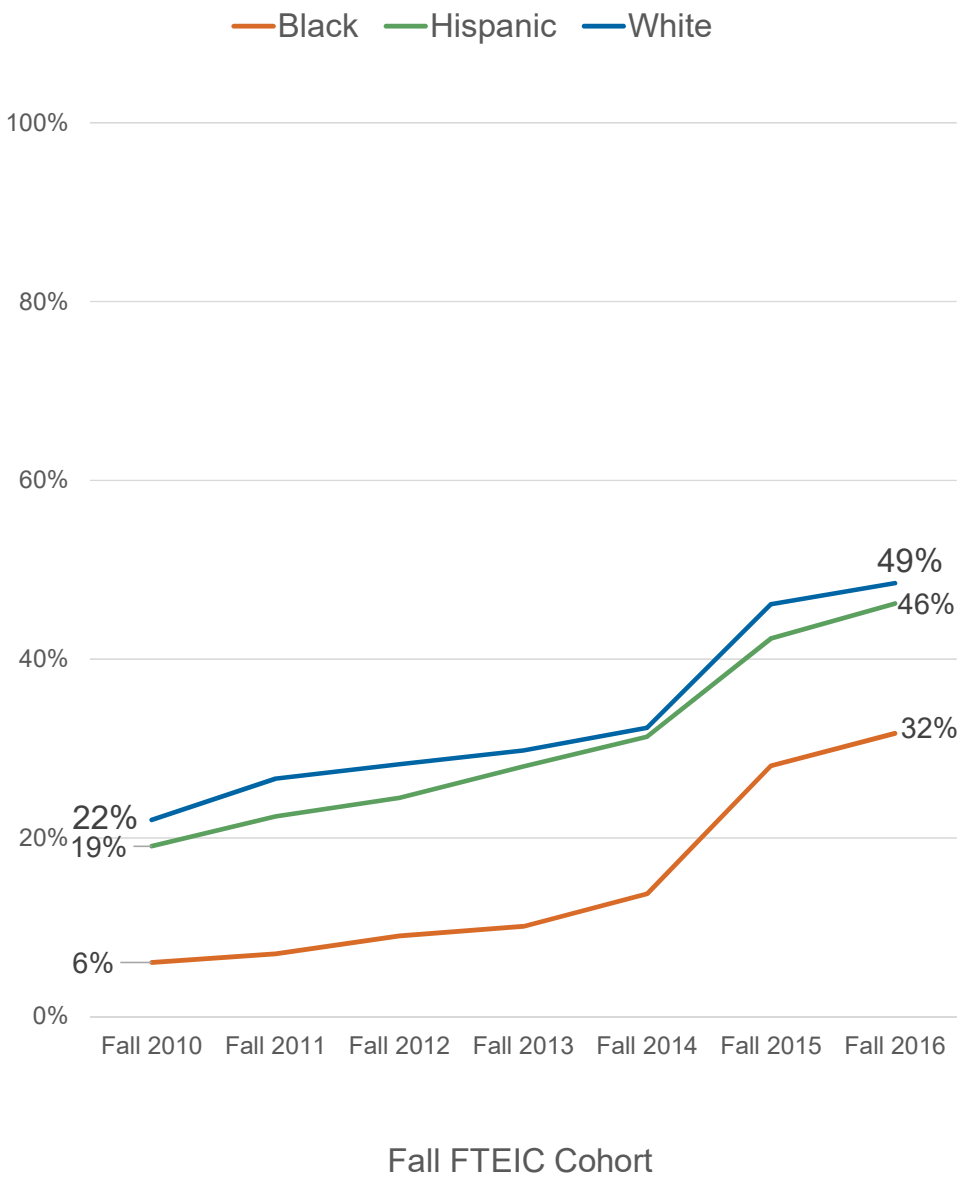
TN CCs: First-Year Gateway Course Completion



Source: CCRC Analysis of TBR Data

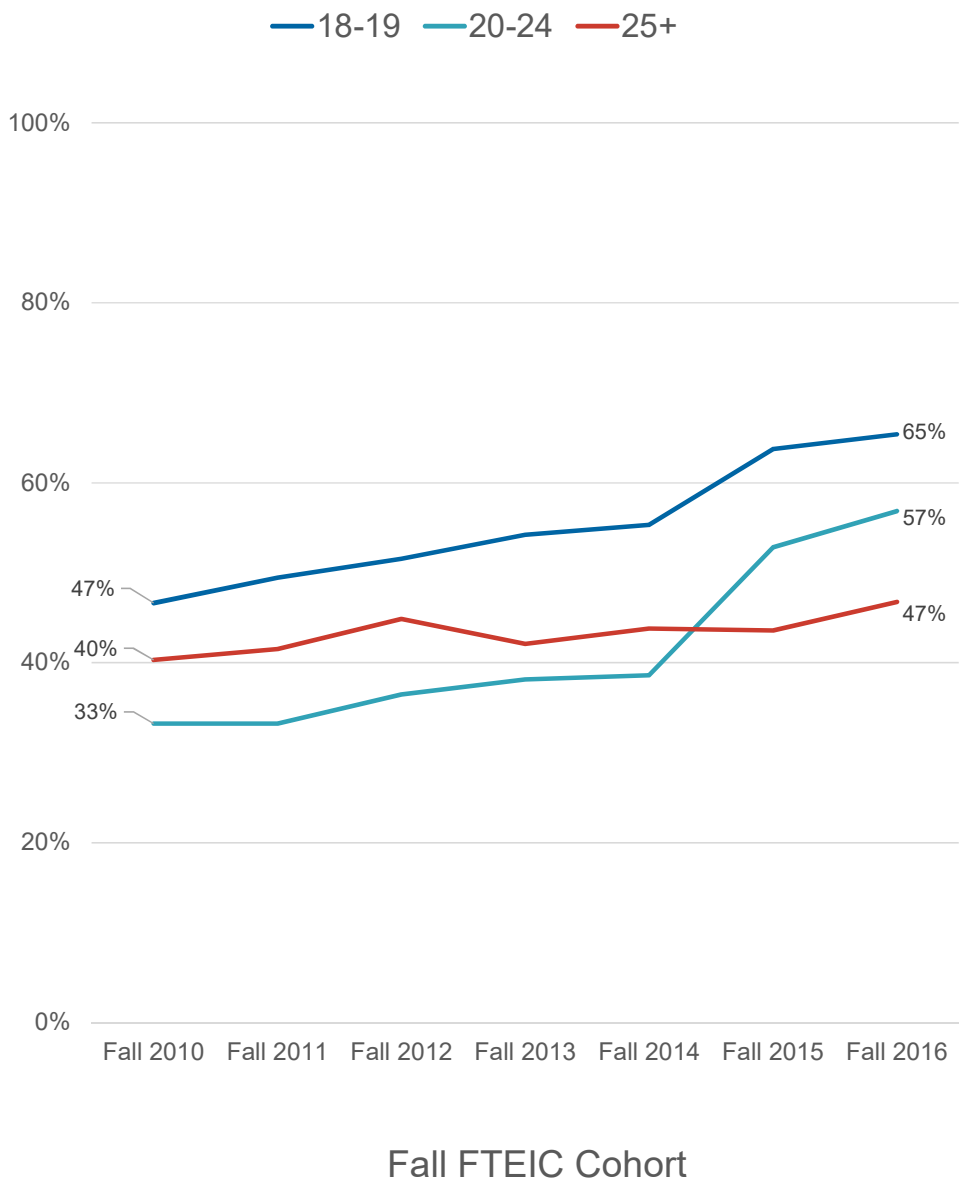
TBR CCs: Passed college math in year 1, by Age Groups and Race

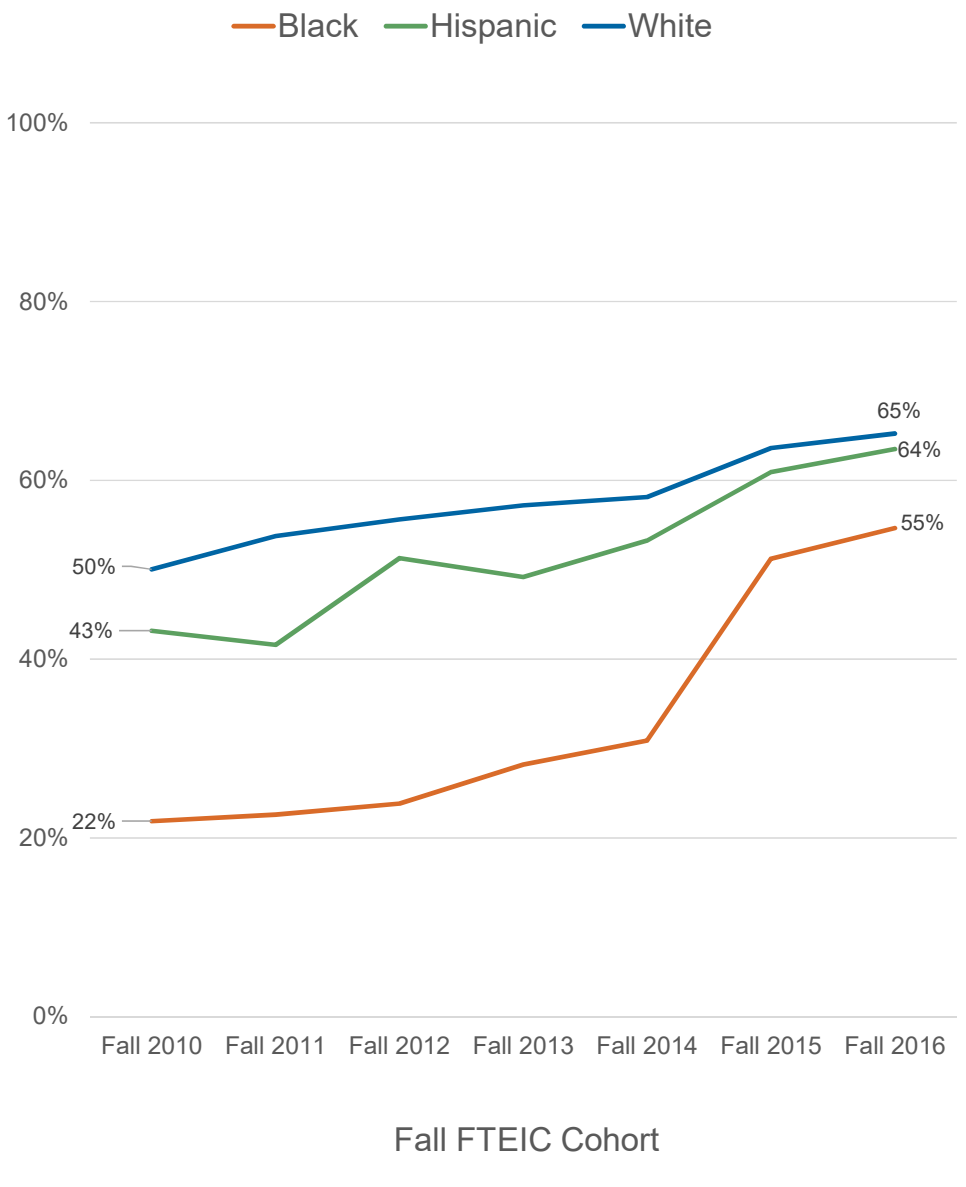




Source: CCRC Analysis of TBR Data

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





Source: CCRC Analysis of TBR Data

Considerations for leading indicators

- What are your college's leading indicators?
- Who sees these indicators and how regularly? How are they used to drive improvement?
- Does the college use the leading indicators to track whether or not you are closing equity gaps in the near term?
- Are there student populations being excluded (part-time non-credit, dual enrollment, etc.)?
- Does the college have targets for leading and lagging outcomes? Are they reasonable (too ambitious or not ambitious enough)?

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The predictive power of leading indicators

CCRC RESEARCH BRIEF

COMMUNITY COLLEGE RESEARCH CENTER | JULY 2019

Early Momentum Metrics

Leading Indicators for Community College Improvement

By Clive R. Belfield, Davis Jenkins, and John Fink

As community colleges across the country implement large-scale reforms to improve student success, they need timely and actionable metrics to determine if the changes they are making in a given year or term will likely improve student outcomes in the long run. In this brief, we examine how well nine measures of students' progress in their first year predict student completion in subsequent years and thus how suitable these early momentum metrics, or EMMs, are as leading indicators of the effectiveness of institutional reforms.

Based on analysis of student data from all community colleges in three states, we find that EMMs do predict longer term success for students. We also find that a key factor in low completion rates, as well as in equity gaps in completion rates, is that many students do not gain early momentum in their first year. College outcomes would be substantially higher if more students met EMMs. Our findings indicate the need for comprehensive reforms to community college organization and practice to help more students gain early momentum on their way to earning a credential.

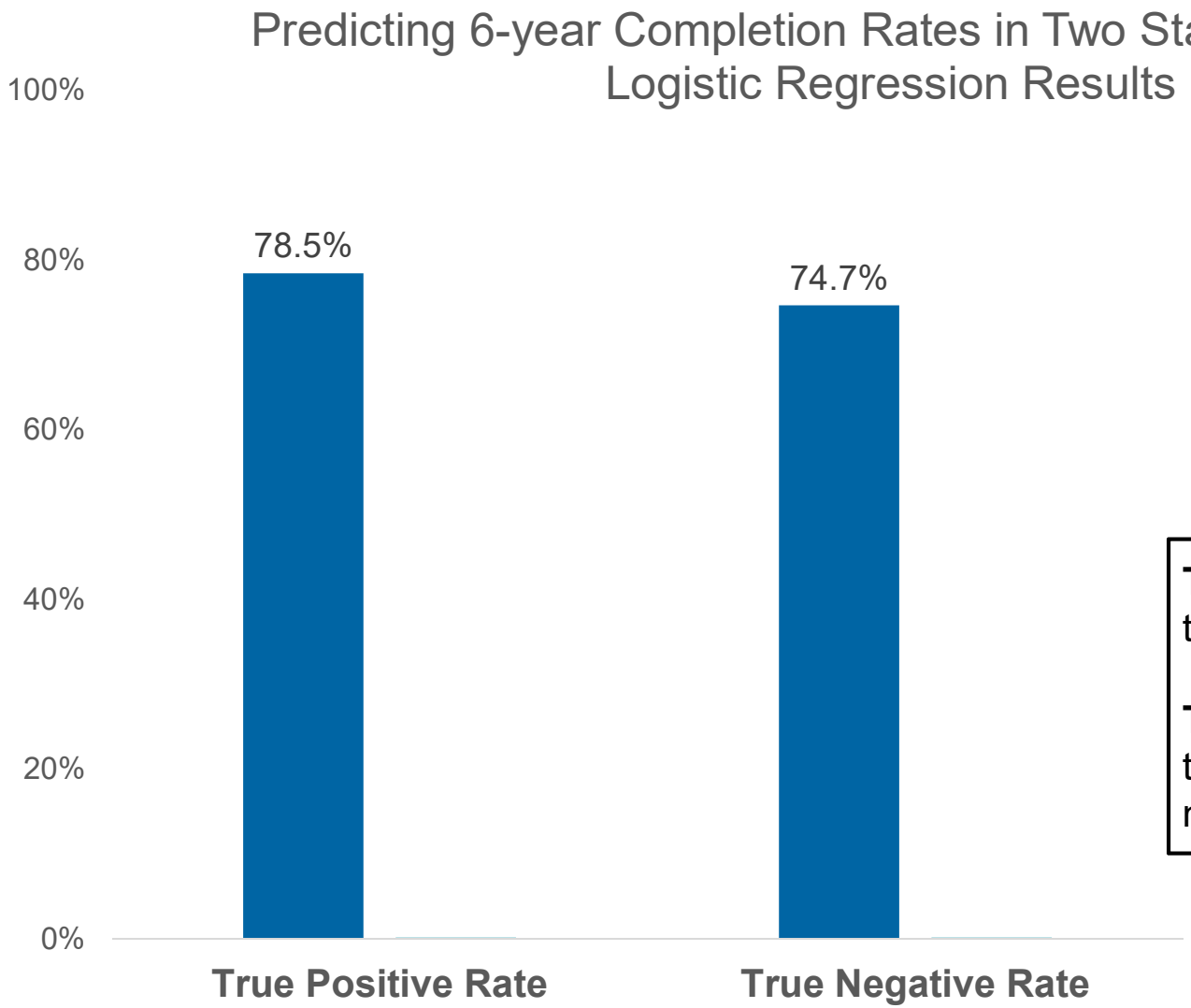
Based on analysis in three states, we find that measures of student progress in the first year predict student completion in subsequent years.

First-Year Indicators of Longer-Term Success

Throughout the nation, two-year and four-year colleges are recognizing that to "move the needle" on collegewide measures of success (e.g., completion rates) major redesign across the entire institution may be required to ensure that its programs, policies, and practices are well designed and aligned to promote student success. Hundreds of community colleges across the country are adopting whole-college reforms commonly referred to as "guided pathways" (Bailey, Jaggars, & Jenkins, 2015). As part of these reforms, colleges are mapping requirements and options for programs of study so that they are aligned with desired employment and transfer outcomes, redesigning the onboarding process to help new students explore options and interests and develop an academic completion plan, and revamping advising to better support students in making timely progress toward completion of a credential. Faculty are also working together across disciplines to ensure that curricula and teaching prepare students to succeed in employment and transfer in their field of study.

Because they involve a redesign of college practices at scale, guided pathways reforms take several years to implement (Jenkins, Lahr, Fink, & Ganga, 2018, pp. 2–3). Given that whole-college

How accurately can we predict whether or not a student completes, based on their first-year momentum?



True Positive: Student is predicted to complete and actually completes

True Negative: Student is predicted to not complete and actually does not complete

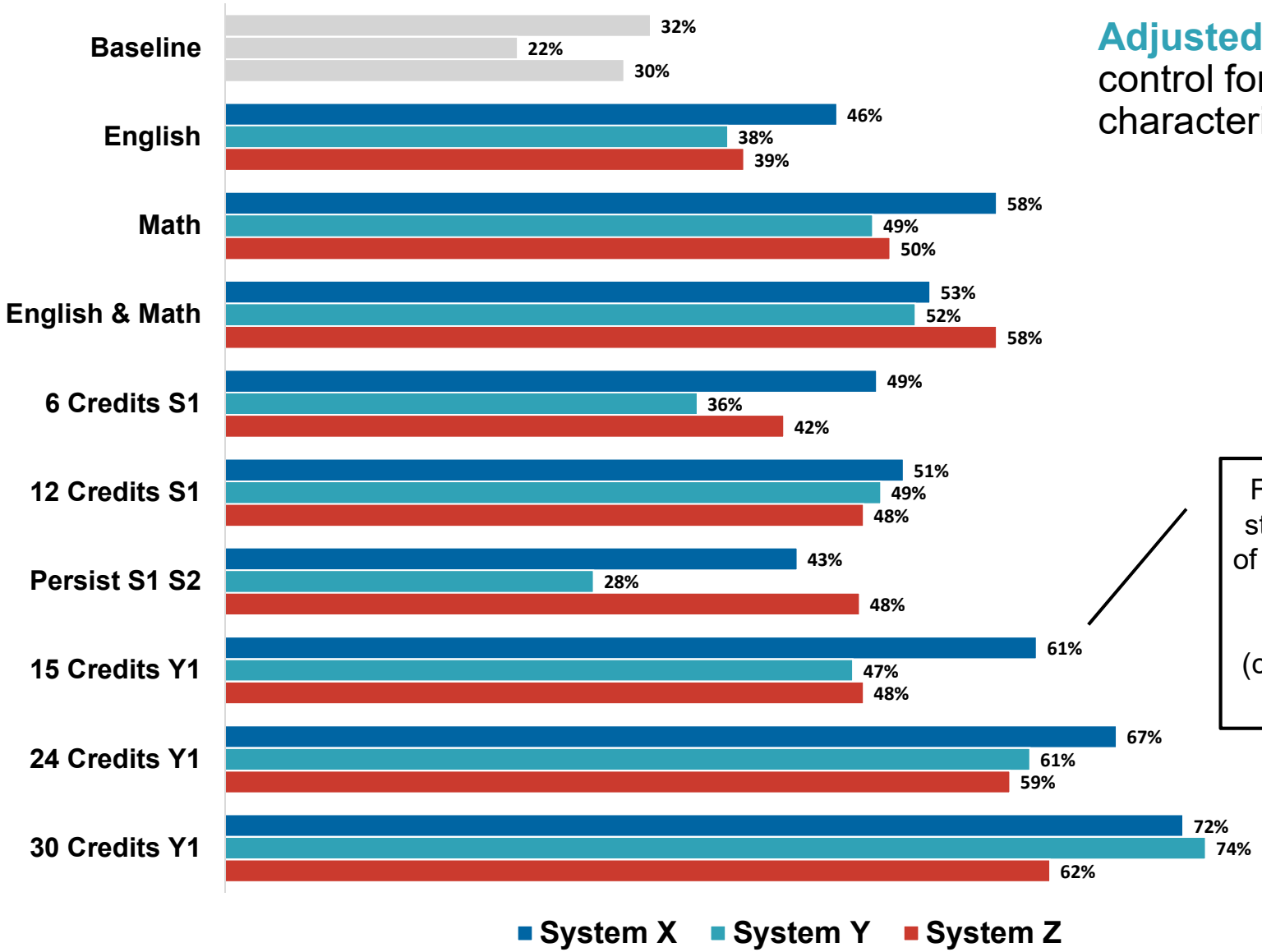
Data on FTEIC students from two state community college systems. Yanagiura, T. (Forthcoming). Using Machine Learning To Assess the Predictive Power of Academic Momentum Model at Community College

First-Year Momentum Outcomes across 3 Community College Systems

English Y1	*Completed college English in the first year*
Math Y1	*Completed college math in the first year*
English & Math Y1	*Completed both college English & math in the first year*
6 Credits S1	*Completed 6+ college credits in the first term*
12 Credits S1	*Completed 12+ college credits in the first term*
Persist S1 S2	*Persisted from term 1 to term 2*
15 Credits Y1	*Completed 15+ college credits in the first year*
24 Credits Y1	*Completed 24+ college credits in the first year*
30 Credits Y1	*Completed 30+ college credits in the first year*

System X System Y System Z

Six-Year Award Rate by EMM Status



Adjusted success rates control for student characteristics.

For example, controlling for student characteristics, 61% of students who completed 15 CL credits in year 1 completed any credential (compared to the baseline of 32%) in System X

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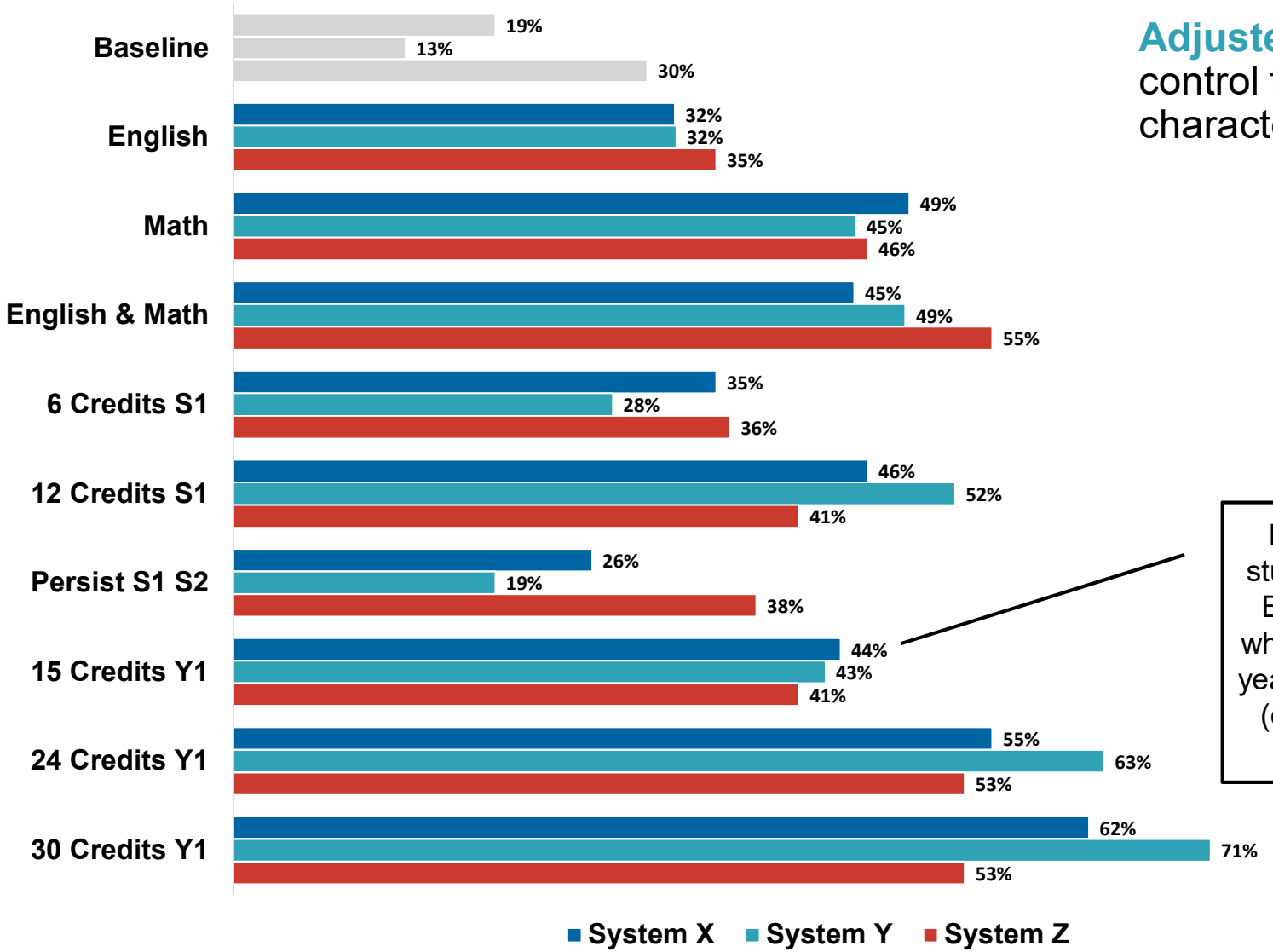
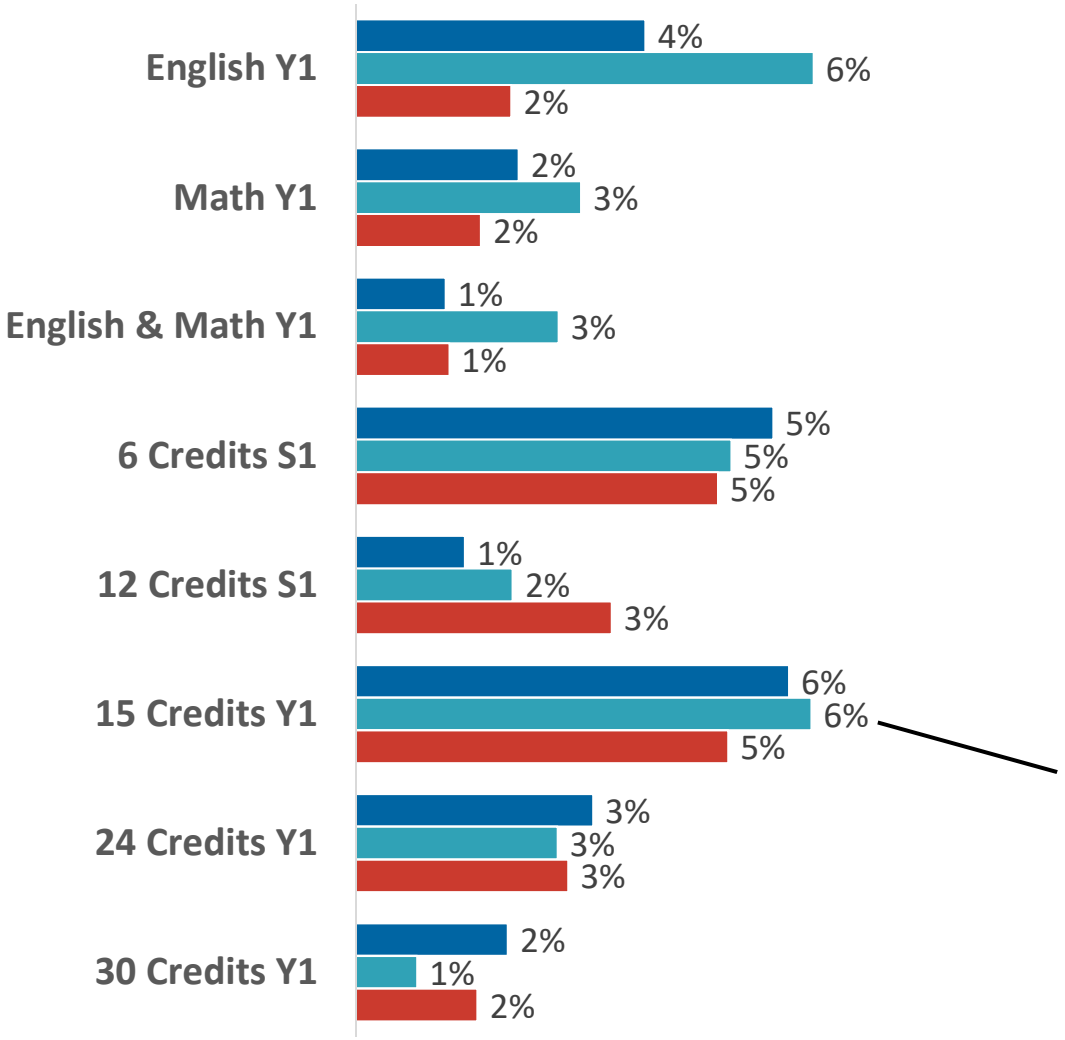
Adjusted Six-Year Award Rate by EMM Status | Black & Hispanic Students



Adjusted success rates control for student characteristics.

For example, controlling for student characteristics, 44% of Black and Hispanic students who completed 15 CL credits in year 1 completed any credential (compared to the baseline of 19%) in System X

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

Takeaways

- First-year momentum strongly predicts student success in subsequent years
- Students who achieve Early Momentum Metrics (EMMs) do better, regardless of race or gender or socio-economic status
- Key issue is equity gap in the rate at which students gain momentum in first year
- Award rates increase 1-6 percentage points if 50% more students meet each EMM
- 10 percentage point increase in completion requires doubling of EMM attainment

Guided Pathways Guiding Questions

- Does every program lead to: a) a livable-wage job (with clear paths to further education), or b) transfer with junior standing in the student's field of interest?
- How do we help all entering students explore interests, choose a program that is a good fit, and develop a full-program plan?
- How do we ensure that every entering student has a "light the fire" learning experience in term 1?
- How can we (and students themselves) monitor students' progress to make sure they stay on plan?
- How can we schedule classes so that students can take the courses they need to advance on their plans when they need them?
- How do we ensure that all students gain program-relevant experience?
- How can we enable more underrepresented students to enroll and complete programs leading to higher-opportunity outcomes?

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Thank you!

Hana Lahr
lahr@tc.columbia.edu