

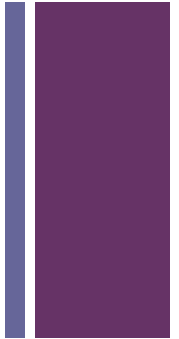


Smoothing the Pathway From High School to College: Research-based Practices

Elisabeth Barnett
Teachers College, Columbia University
May 2017



Where I work



Community College Research Center

- Research organization, founded in 1996.
- Focused on assessment, completion, pathways, college readiness, outcomes evaluation.
- Lead organization in three USDOE national centers.

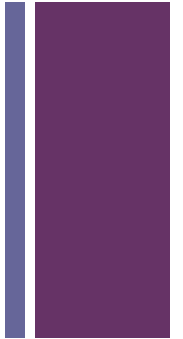
WEBSITE: <http://ccrc.tc.columbia.edu/>

National Center for Restructuring Education, Schools, and Teaching

- Research and development center, founded in 1990.
- Conducts research and functions as a research partner.
- Has worked on early and middle college high schools for 14 years.

WEBSITE: <http://www.tc.columbia.edu/ncrest/index.html>

+ Today's presentation



Research on improving the high school to college pathway- an evidence based approach

Discussion of selected approaches

DURING HIGH SCHOOL

- Summer bridges
- Early assessment and transition courses
- Dual enrollment

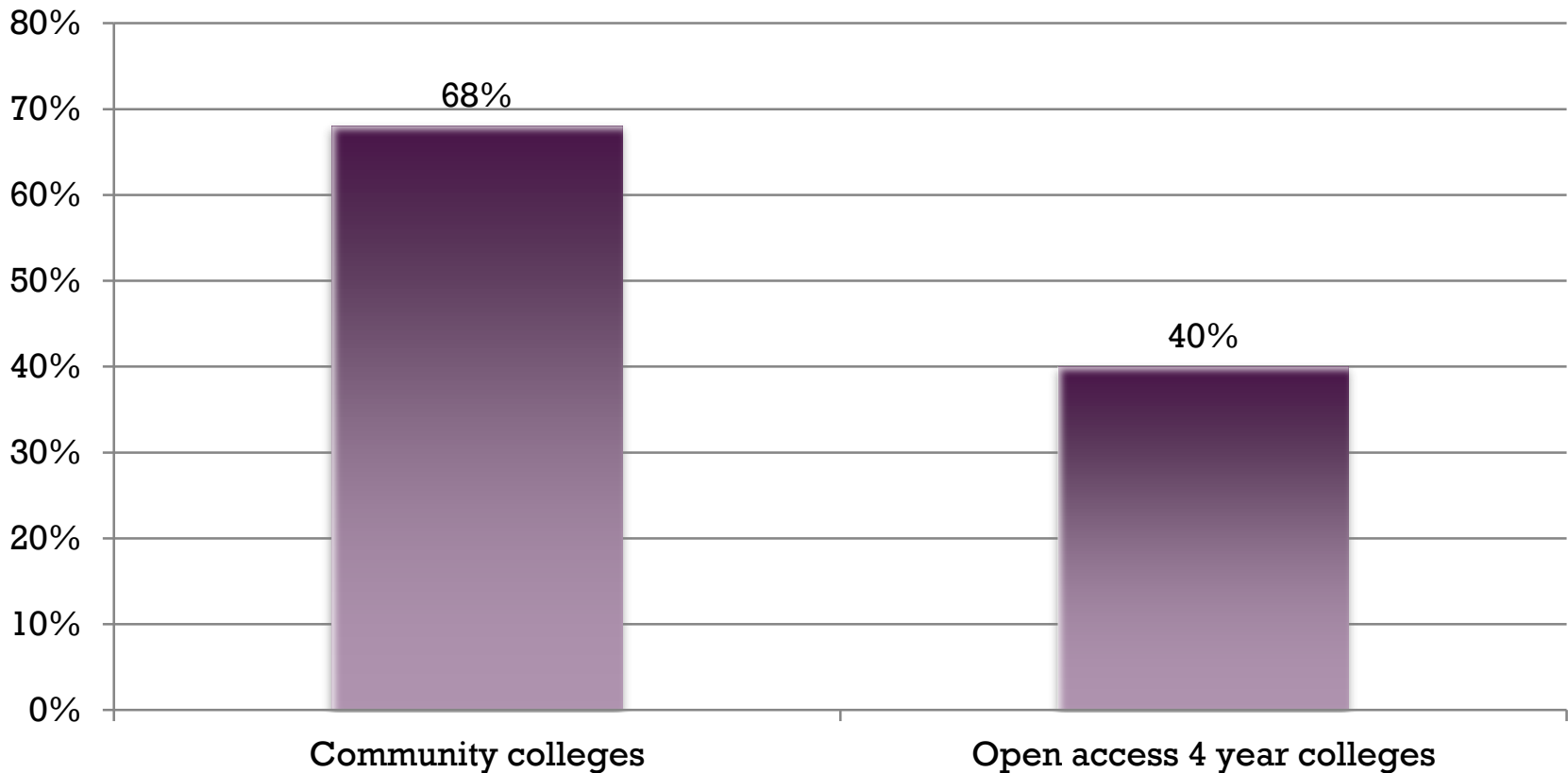
IN COLLEGE

- Improving assessment
- Guided pathways
- Student supports

Many students are not ready for college

(NCES, 2013)

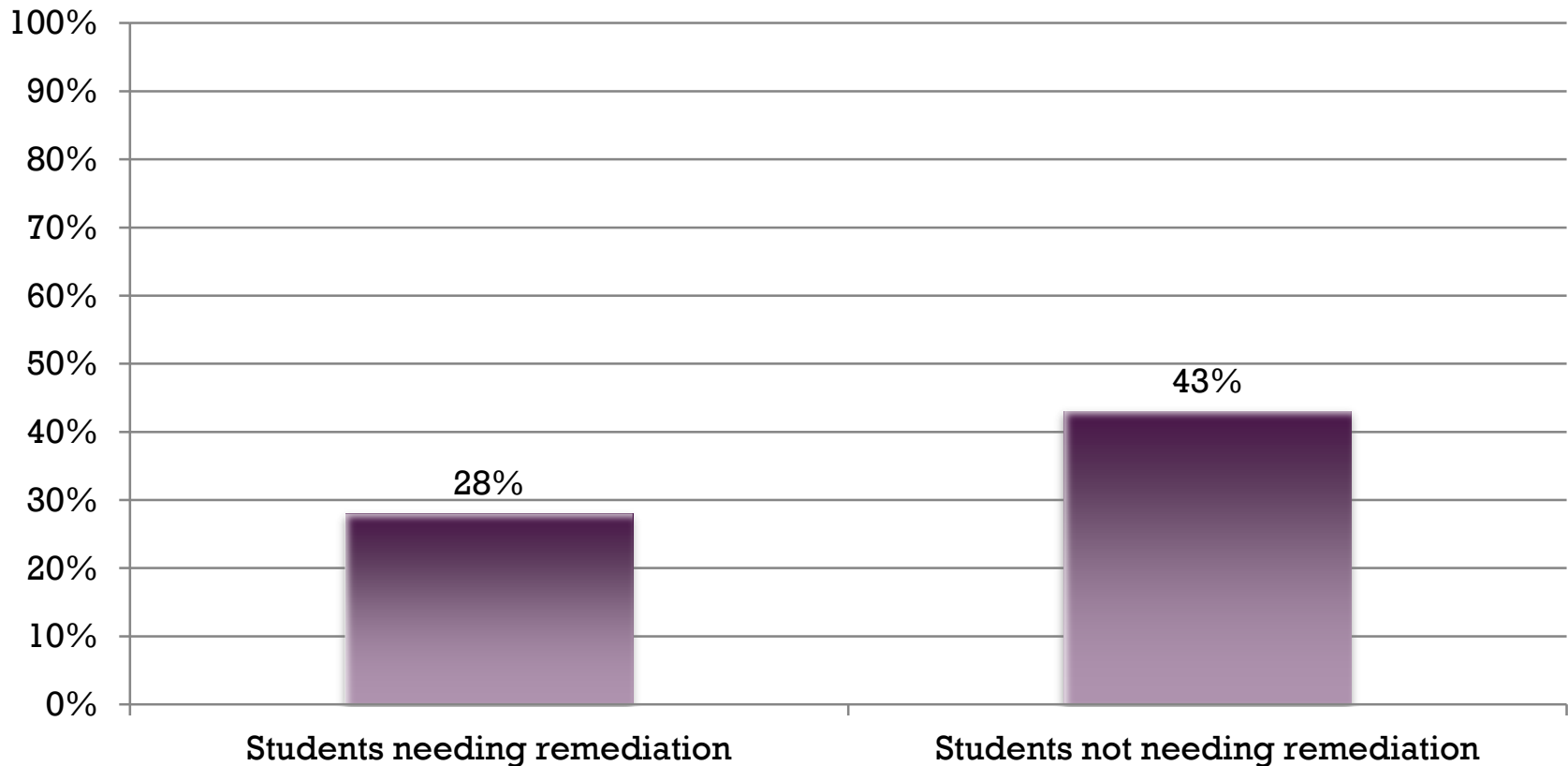
Students needing 1+ remedial course



Students needing remediation are less likely to graduate college

(Attewell, Lavin, Domina, and Levey, 2006)

Community college graduation rates within 8 years



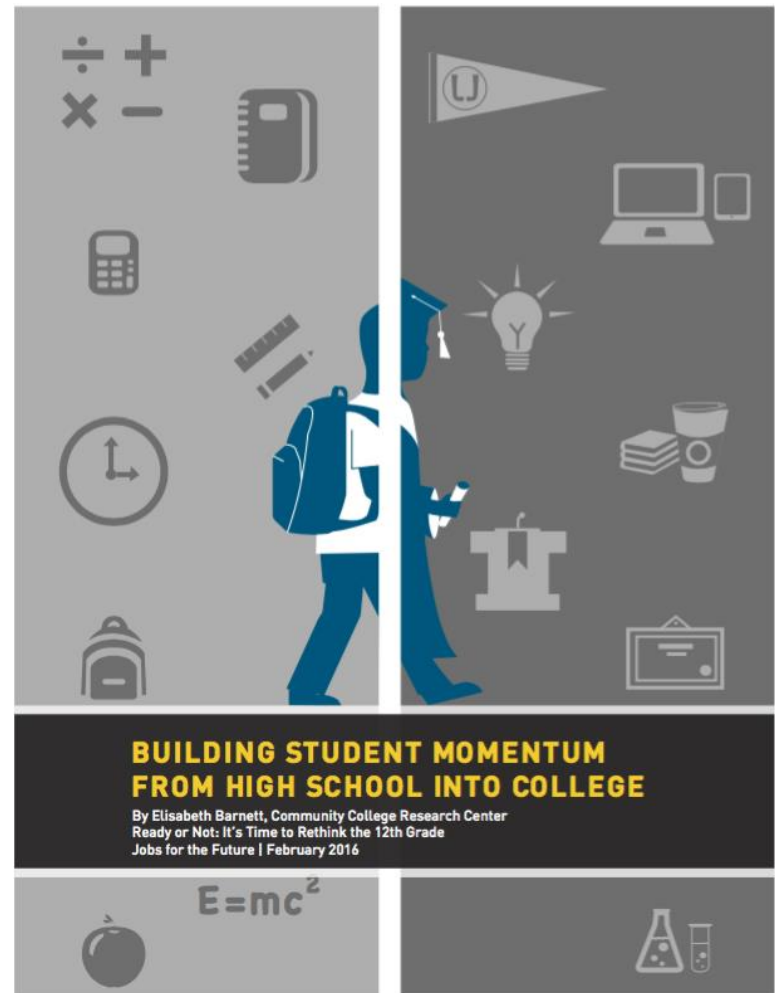
SOLUTIONS?

- PROCESSES, POLICIES—
Ways to structure the student experience to achieve better outcomes.
- PROGRAMS—
Specified activities offered to selected students to achieve better outcomes.

Building Student Momentum from High School Into College

A report that builds on:

- Prior CCRC work on momentum points
- A belief in the power of K-12 and higher education partnerships
- Research evidence on what works in the high school to college transition.



Promoting College Readiness

- Students need to graduate high school college-ready in three domains



- *Every* student needs work in *each* of these areas. This creates a “momentum chain.”

- Academic knowledge and skills
- Non-cognitive skills
- College cultural capital

A Momentum Chain System

- Student should accumulate both *experiences* and *attainments* that create a momentum chain.
- *Every* student is monitored using a tool like this.

EXPERIENCES AND ATTAINMENTS THAT PROVIDE MOMENTUM

MOMENTUM POINTS		EXPERIENCE OR ATTAINMENT?
Academic Knowledge and Skills	Participating in a rigorous core curriculum in high school	Experience
	Taking college-level courses, specifically dual enrollment, AP, and/or IB	Experience
	Math and English foundational knowledge at the level required for placement in college-level, credit-bearing courses	Attainment
	Earning a good high school GPA	Attainment
	Accruing six college credits during high school	Attainment
Noncognitive Skills	Opportunities to establish personal goals and life direction	Experience
	Opportunities to develop and strengthen a range of noncognitive skills predictive of college success	Experience
	Good attendance	Attainment
	Showing readiness on a noncognitive assessment	Attainment
College Cultural Capital	Exposure to college norms and expectations	Experience
	Validation by high school and college faculty	Experience
	Completing one or more college applications and the FAFSA	Attainment
	Commitment (submission of paperwork) to attend a college in the fall following graduation	Attainment

Academic knowledge and skills

- Participating in a rigorous core curriculum (E)
- Taking college-level courses – dual enrollment, AP, IB (E)
- College ready Math and English (A)
- Earning a good high school GPA (A)
- Accruing six college credits in high school (A)

Non-cognitive skills

- Opportunities to establish personal goals (E)
- Opportunities to develop non-cognitive skills (E)
- Good attendance (A)
- Showing readiness on a non-cognitive assessment (A)

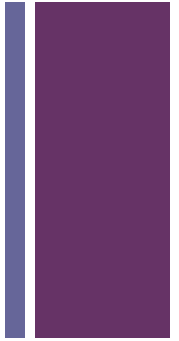
College cultural capital

- Exposure to college norms and expectations (E)
- Validation by high school and college faculty (E)
- Completing one or more college applications and the FAFSA (A)
- Submission of paperwork to attend a college (A)



	Momentum points	Experience or attainment?	No/in progress/yes
Academic Knowledge and Skills	Participating in a rigorous core curriculum in high school	Experience	N ___ IP ___ Y
	Taking college-level courses, specifically dual enrollment, AP, and/or IB	Experience	N ___ IP ___ Y
	Math and English foundational knowledge at the level required for placement in college-level, credit-bearing courses	Attainment	N ___ IP ___ Y
	Earning a good high school GPA	Attainment	N ___ IP ___ Y
	Accruing six college credits during high school	Attainment	N ___ IP ___ Y
Affective/Noncognitive Skills	Opportunities to establish personal goals and life direction	Experience	N ___ IP ___ Y
	Opportunities to develop or strengthen a range of noncognitive skills predictive of college success	Experience	N ___ IP ___ Y
	Good attendance	Attainment	N ___ IP ___ Y
	Showing readiness on a noncognitive assessment	Attainment	N ___ IP ___ Y
College Cultural Capital	Exposure to college norms and expectations	Experience	N ___ IP ___ Y
	Validation by faculty	Experience	N ___ IP ___ Y

+ Developmental Summer
Bridge Programs



Developmental Summer Bridge Study (2009-12)

- DSBs were implemented by 8 colleges in Texas
- Research was done by the National Center for Postsecondary Readiness
- 3 components:
 - Implementation study
 - Random assignment study of student outcomes
 - Cost study

College Locations



Programs in the DSB Study (2009)

- Sponsored by and located at a college
- 4-5 week interventions (64 -100 hours)
- Accelerated instruction in developmental math, English, and/or reading
- Academic and student services support
- “College knowledge” component
- Student stipend of up to \$400 for completers.

2009 DSB Students

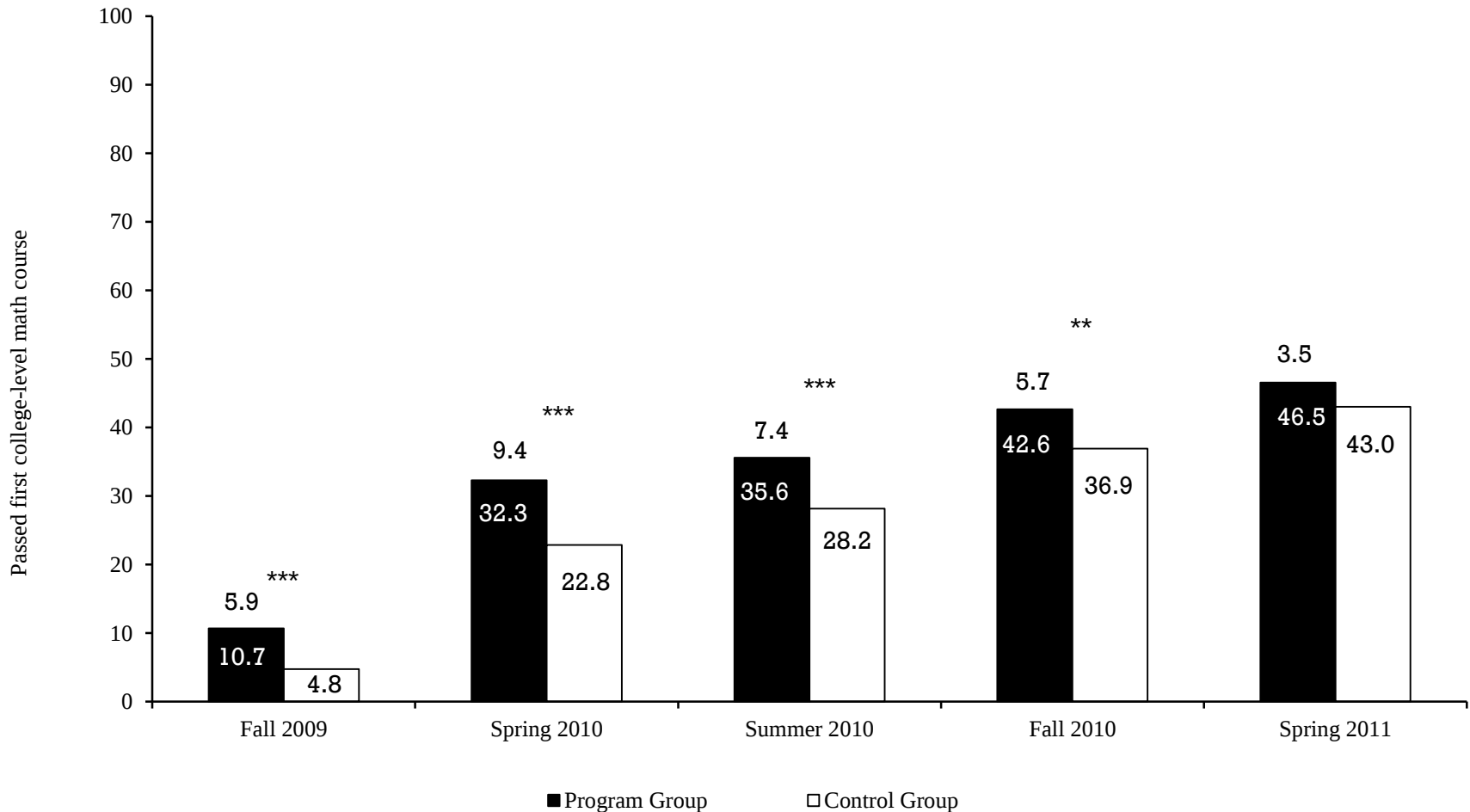
College	Program	Control	Started	Finished	% done of starters
El Paso	165	108	141	138	98%
Lone Star - Cyfair	75	50	65	64	98%
Lone Star - Kingwood	52	35	49	47	96%
Palo Alto	53	35	54	45	83%
San Antonio	91	61	52	48	92%
St. Philips	154	104	146	139	95%
South Texas	83	55	70	64	91%
TAMIU	126	85	114	109	96%
TOTALS	799	533	691	654	95%

Impact Findings

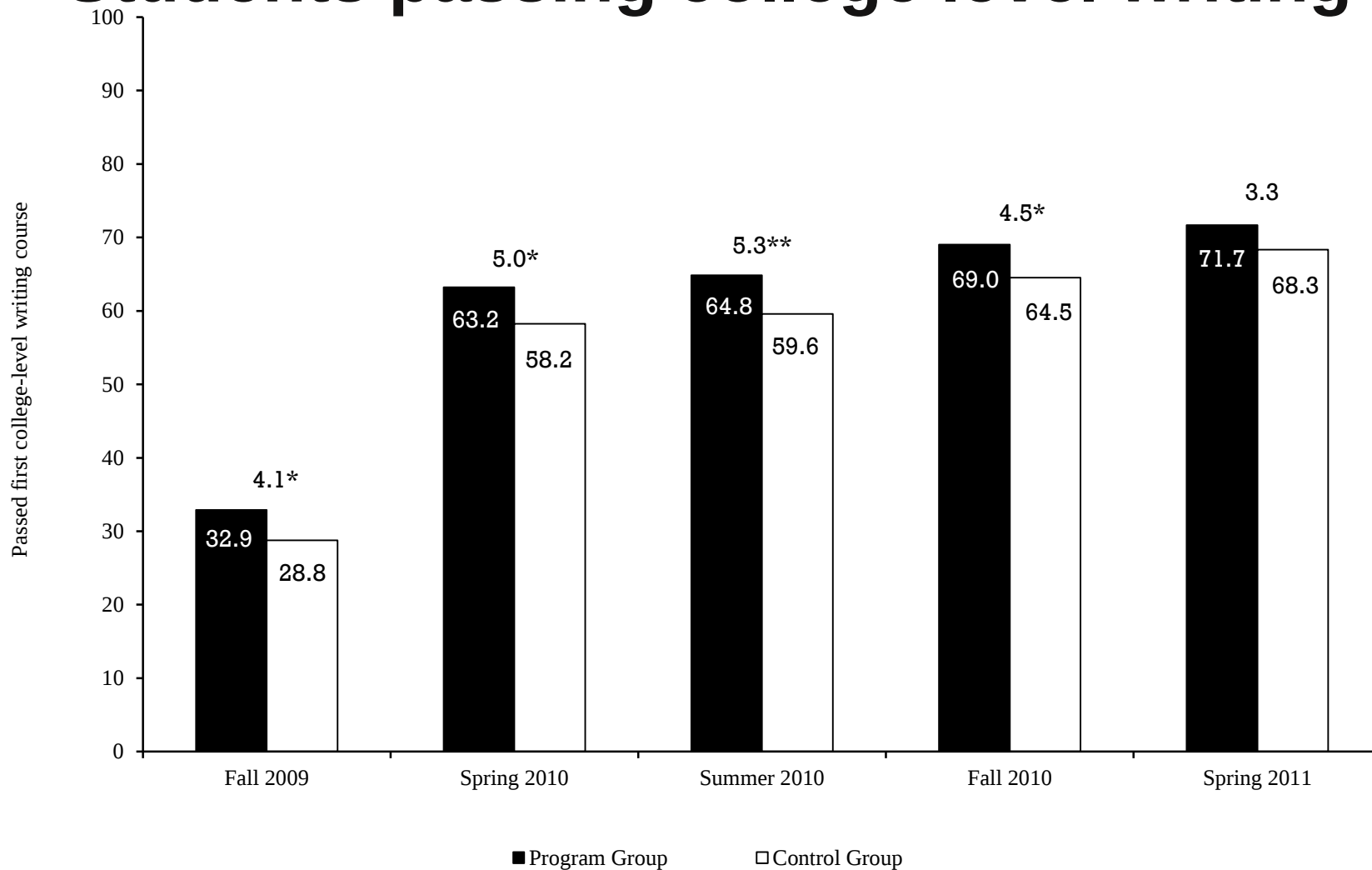
Texas Developmental Summer Bridge programs:

- Did not impact college enrollment or persistence (cumulative semesters enrolled).
- Did not impact credits earned over 2 years.
- BUT it accelerated initial progress through college-level math and writing in the first year.

Students passing college-level math

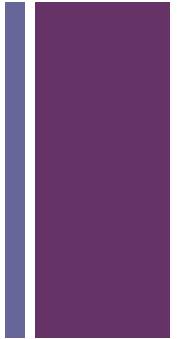


Students passing college level writing





Summary of 2009 Program Costs



- Total costs ranged from \$62,633 to \$296,033 per site.
- Average costs ranged from \$840 to \$2,349 per participant; the average across 8 sites was \$1,319.

Thoughts on summer bridge courses

- Well designed bridge courses are a lot of work, expensive, and hard to make appealing to students.
- Bridge courses can increase students' preparation for college math and English courses.

+ Early College Readiness
Assessments and Transition
Courses

Reshaping the College Transition Research

Early college readiness assessments: Assessments administered no later than the 11th grade that measure students' readiness to successfully perform entry-level, credit-bearing postsecondary work.

Transition curricula: Courses, learning modules, or online tutorials developed jointly by secondary and postsecondary faculty and offered no later than 12th grade to students at risk of being placed into remedial math or English in college.

Potential of early college readiness assessments

Theory:

Knowledge is power.
Students and schools can
take action to help
students become college
ready by graduation.

Evidence:

Participation in California's
early assessment (EAP)
reduced students'
probability of taking
remedial courses in college
by 6.1 percent in English
and by 4.3 percent in math.

Howell, Kurlaender, and Grodsky (2010)

Potential of transition courses

Theory:

A full year course in math or English can be offered to students in the 12th grade...

- At no extra cost
- Offering high school credit
- Meeting colleges' criteria for college readiness.
- And some include a mechanism for placing out of developmental education.

Evidence:

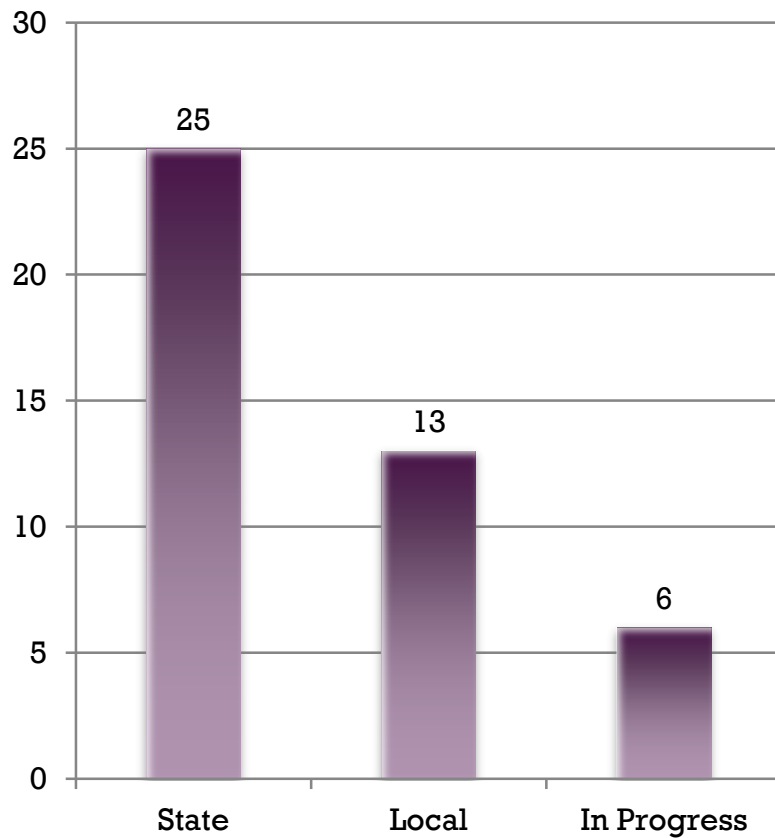
Promising descriptive results from high schools and colleges.

Emerging more rigorous research results.

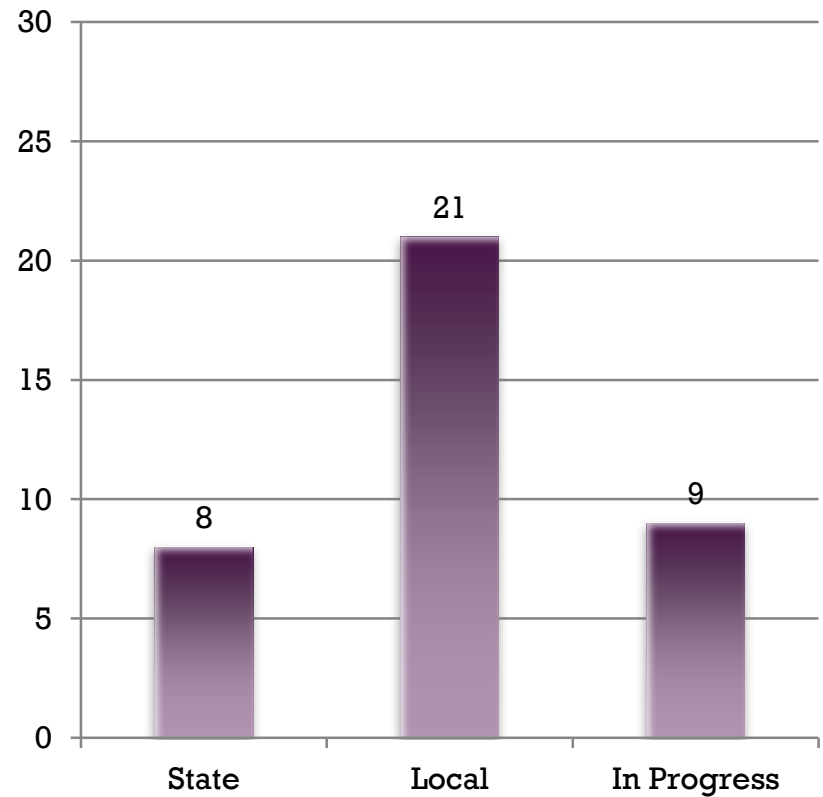
50-state scan

(Barnett et al, 2013)

States with ECRA



States with Transition Curricula



New York

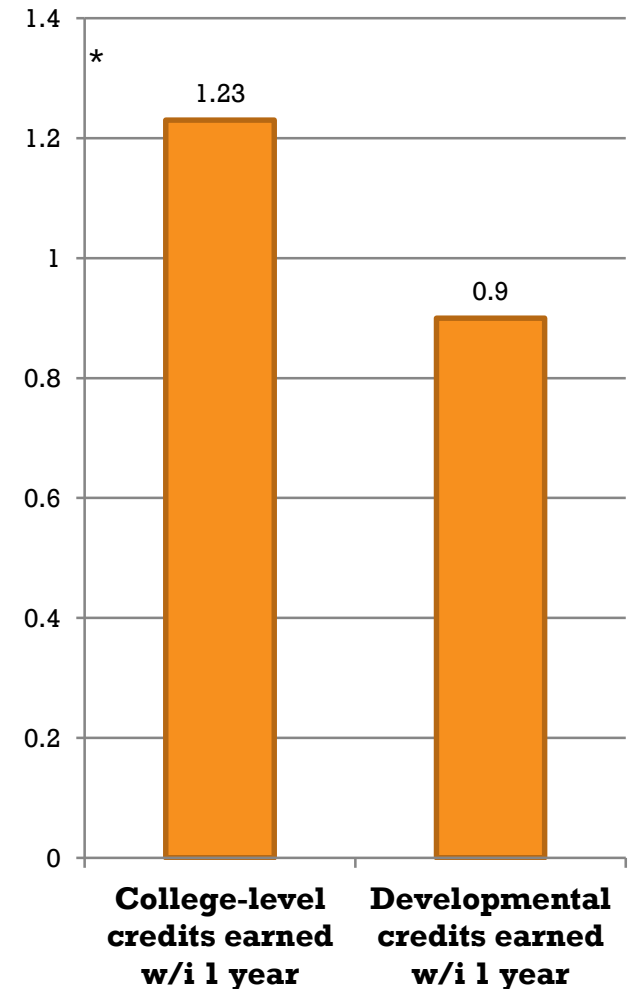
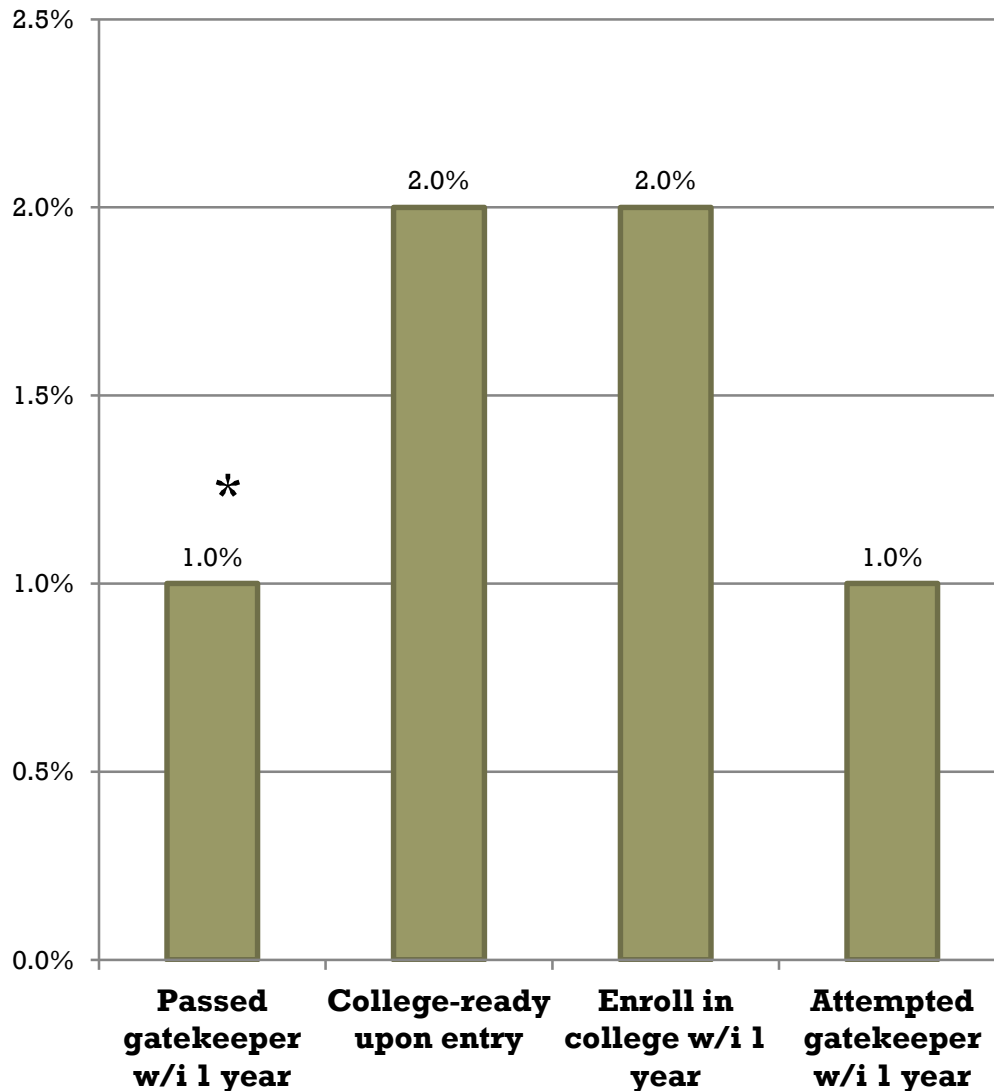
At Home in College (AHC):

- ◆ Designed and administered by CUNY's Collaborative Programs
- ◆ Early assessment: Regents exams
- ◆ Transition courses in English and math, with College Knowledge component
- ◆ 62 participating high schools (1,903 students)

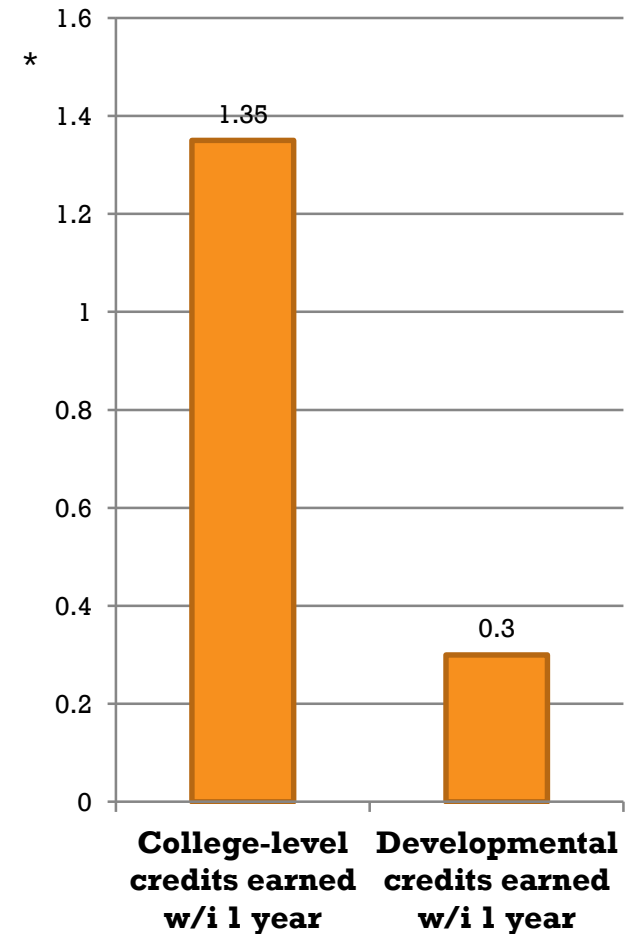
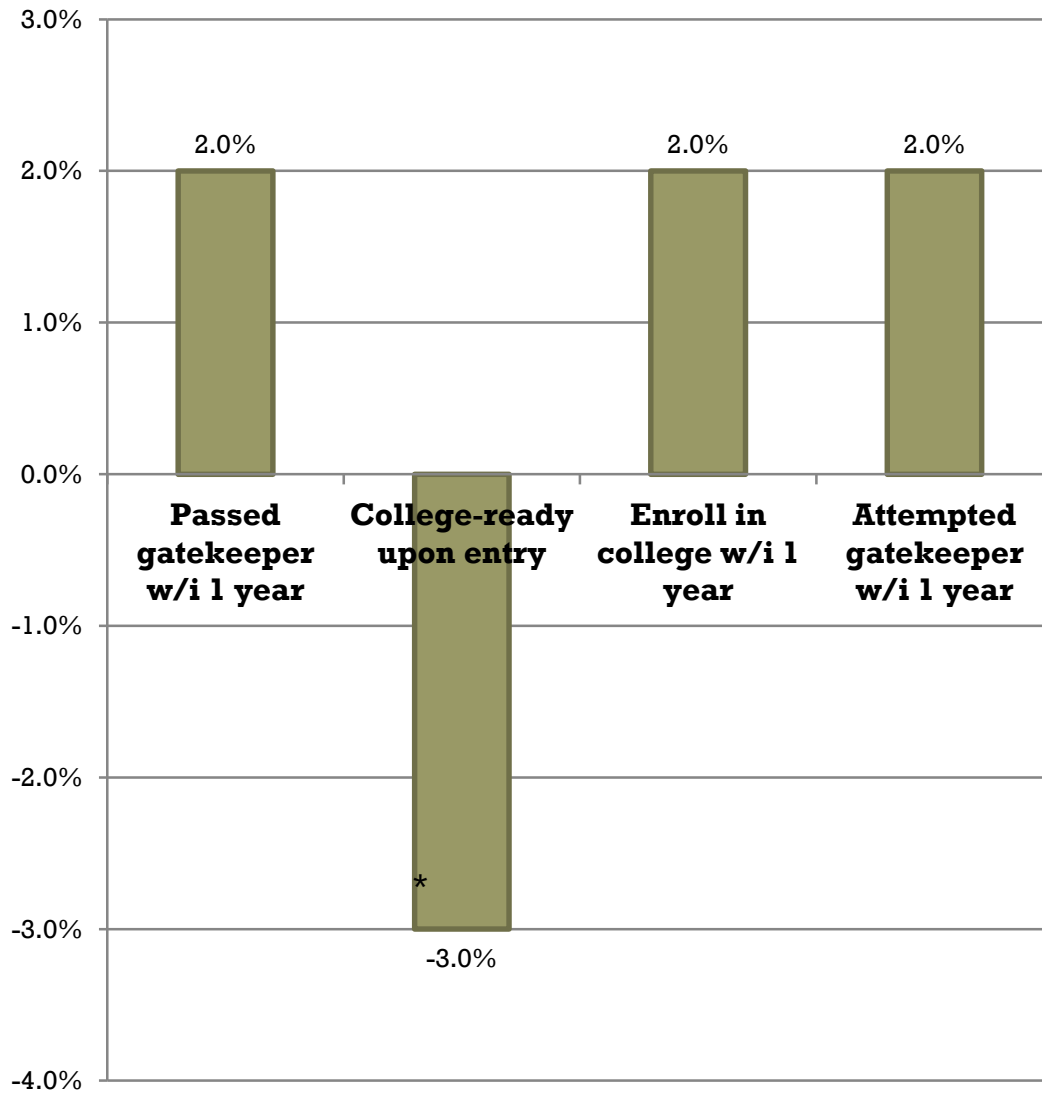
Difference In Differences Design Outcomes Estimated:

Primary (all within one year)	Secondary (all within one year)
• College readiness at college entry in math/English • Passing gatekeeper course in math/English	• College enrollment • College credits earned • Developmental education credits earned • Attempted a gatekeeper course in math/English

Impact of At Home in College - Math



Impact of At Home in College - English



Tennessee

Seamless Alignment and Integrated Learning Support (SAILS):

- ◆ Community college initiated and supported; state funded
- ◆ Student placement based on ACT score in 11th grade
- ◆ 5 online math modules that mirror the community college curriculum
- ◆ Completers place out of college deved; some take dual credit math

SAILS - results

From Fay, 2016

Study of SAILS schools where high school and college students used the same curriculum:

- ◆ College students completers: 47- 65%
- ◆ High school completers: 79 – 97%

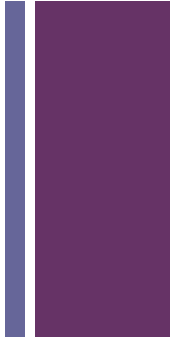
From Boatman, 2016

- ◆ Participating in the SAILS program appears to positively impact
 - ◆ high school graduation
 - ◆ enrollment in college.
- ◆ The effects are driven largely by 2-year college enrollment.



Dual Enrollment

+ What is dual credit?



Dual credit: Students receive both high school and college credit for a college class successfully completed.

Dual enrollment: Students are concurrently enrolled in high school and college. They may or may not receive high school credit for college courses completed.

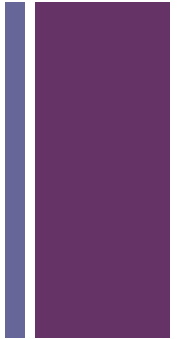
+ Findings from Florida

(Karp et al, 2007)

Dual enrollment participation positively related to:

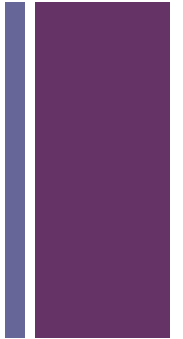
- Students' likelihood of earning a HS diploma (↑4.3%)
- Enrolling in college (↑ 7.7%)
- Persistence to the second semester of college
- Higher GPAs one year after HS graduation (↑.21)
- Remaining enrolled in college 2 years after HS
- More credits earned 3 years after HS graduation (↑15.1)

Male and low-income students benefited more from dual enrollment participation than their peers





National Research (An, 2012)



Findings:

- Dual enrollment students are 8 percentage points more likely to earn a postsecondary degree; 7 percentage points more likely to earn a BA.
- First generation students are especially likely to benefit.
- Students who earn at least 6 college credits are more likely to benefit.

Early College High Schools

- Dual enrollment on steroids?
- A **school** offering a combined high school and college curriculum with lots of student supports.
- There are also EC **programs**.

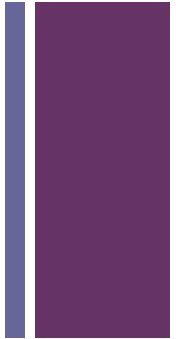
Pioneers:

- Middle College National Consortium - 1974
- Bard High School Early College (Simons Rock) – 1970s

National movement:

- Early College High School Initiative 2002-2012
 - Funder: Bill & Melinda Gates Foundation and others

+ AIR/SRI Study (2013)

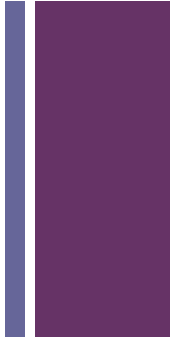


- More likely to graduate from high school. 86% vs. 81%
- More likely to enroll in college. 80% vs. 71%
- More likely to earn a college degree in 2 years.
- The impact of **did not differ significantly based on gender, race/ethnicity, family income, first-generation college-going status, or pre-high school achievement.**

+ Multiple Measures for
Assessment and Placement



What's at stake



- Participation in developmental education is associated with poorer student outcomes.
- Developmental education is expensive.
- Only students who really need developmental education courses should take them.
- Current placement systems are flawed.



Assessment and Placement Research

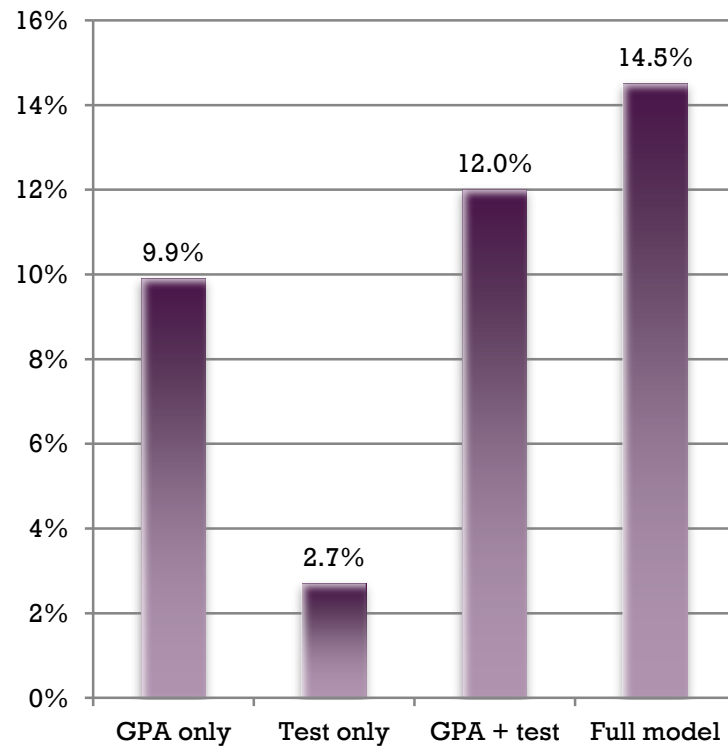
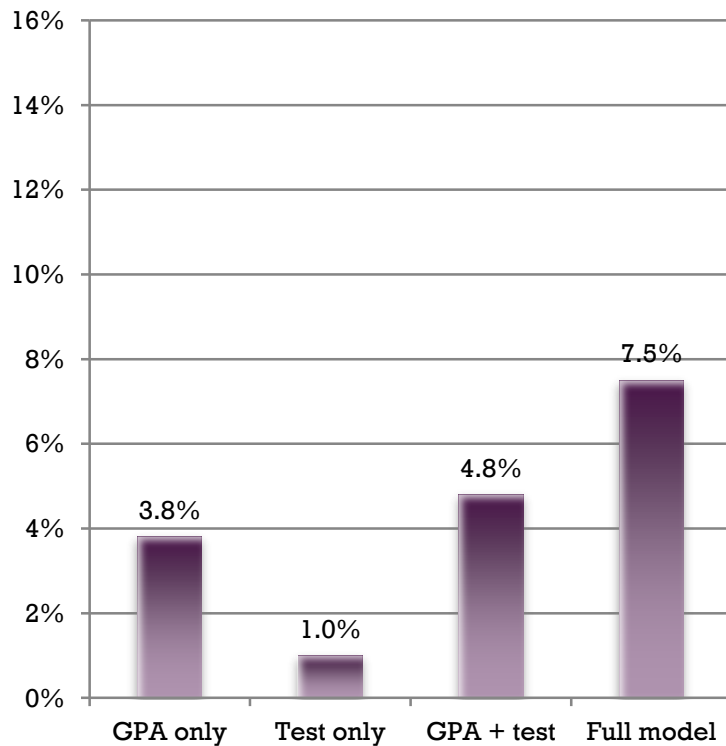
		Placement According to Exam	
		Developmental	College Level
Student Ability	Developmental		Over-placed (English – 5%) (Math – 6%)
	College Level	Under-placed (English – 29%) (Math – 18%)	



Predictors of Success: SUNY College

ENGLISH

MATH



Multiple measures – some approaches

- ◆ Exempt students from testing (Ohio)
- ◆ Hierarchy of measures (North Carolina)
- ◆ Review panel looks at a range of measures (Wisconsin)
- ◆ Decision rules/bands (Minnesota)
- ◆ Use of an algorithm (NY, California)

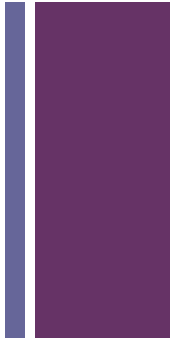


Guided Pathways

Research on choices and pathways

- ◆ Recent work in psychology, marketing, and behavioral economics: more choice is not always better.
- ◆ Students undertake surprisingly minimal search efforts regarding educational options...they often resort to trial and error.
- ◆ Students end up taking courses without a clear plan, especially if they are undeclared or in liberal arts.
- ◆ Students take courses that aren't required to complete a credential.

(Scott Clayton, 2011)



Guided Pathways Defined

(Johnstone, 2015)

These highly structured student experiences encourage completion by:

- *Establishing **clear roadmaps** to students' end goals*
- *Incorporating **intake processes** that help students clarify goals for college and careers*
- *Offering **on-ramps** to programs of study designed to facilitate access for students with developmental needs*
- ***Embedding advising**, progress tracking, feedback, and support throughout a student's educational journey.*

(Jenkins & Cho, 2014; Bailey, Jaggars, & Jenkins, 2015)



What are your career and life goals?

A degree or certificate from CCC is your ticket to a rewarding career – either right after graduation, or after a successful transfer to a four-year university. We have the resources to get you there, but you have to make some choices about your path.

Know What You Want

The City Colleges of Chicago offers well over 100 degree and certificate programs. That's a lot of choices! To narrow down your options, **1) choose one of our Ten Focus Areas.** Your College Advisor can give you tools and ask you the right questions to help you make your decision. Once you have chosen a focus area, you should consult with your College Advisor to **2) decide if you plan to transfer** to a four year school. With this information, you and your advisor can determine the degree or certificate program that works best for you!



**Advanced
Manufacturing**

Healthcare



**Business & Professional
Services**

Information Technology



**Construction
Technology & Drafting**

Liberal Arts



**Culinary Arts &
Hospitality**

Life & Physical Sciences



**Education & Human
Services**

**Transportation,
Distribution, & Logistics**



Consider that in 2018, 80% of jobs in Illinois will fall under College to Careers focus areas. The College to Careers (C2C) initiative makes sure that we are training people to fill these positions. C2C also partners with potential employers and transfer institutions to ensure students make smooth transitions to meet their goals.

Set An Appointment With Your Advisor

Your College Advisor is your biggest ally in choosing your path at City Colleges. It is important that you meet with them frequently. Use the program [GradesFirst](#) to set an appointment.



To Set An Appointment With Your Advisor:

- Go to ccc.gradesfirst.com and log-in with your CCC username and password
- Click on the Calendar tab, and then on "Get Advising" on the right-side of the page
- Your advisor's calendar will pop up; choose an appointment date and time



Student support



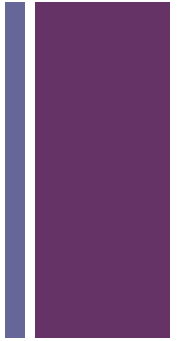
ALP is like seminar (from CCBC website)

In a typical class that accompanies English 101, they spend time:

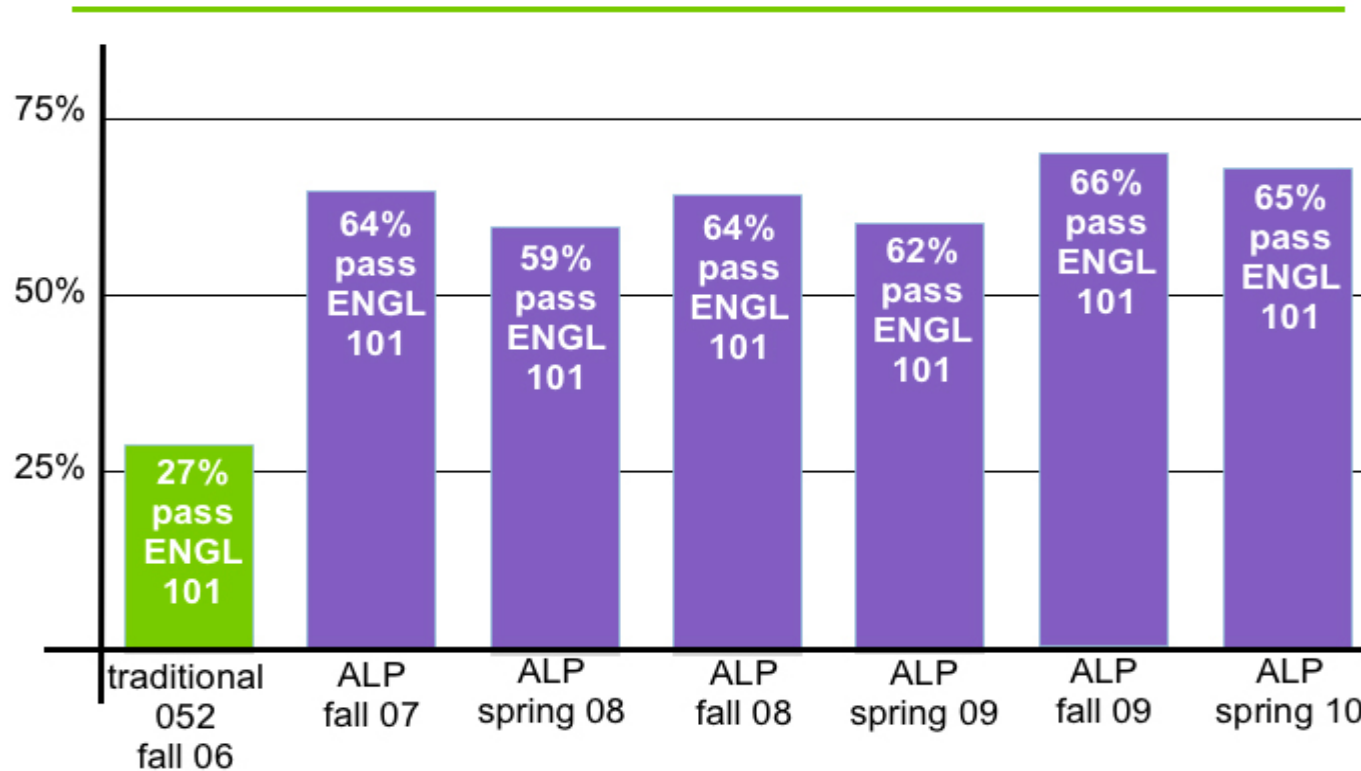
- answering questions left over from the 101 class
- discussing ideas for the next essay in 101
- reviewing drafts of essays the students are working on for 101
- working on grammar and punctuation
- discussing how to succeed as a college student
- discussing problems interfering with the students' progress in 101



ALP courses or “seminar” (from CCBC website)

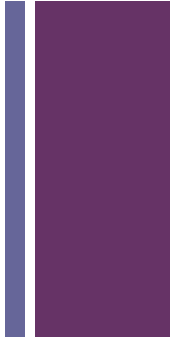


Semester Success Rates in ENGL 101





Supplemental Instruction



- The SI program provides peer support by having students who succeeded in traditionally difficult academic courses help other students complete these courses.
- SI provides review sessions in which students are discussing readings, comparing notes, working together to predict test items, and sharing ideas for improving class material.
- Terenzini (2005) found that across hundreds of institutions and thousands of courses, SI participants earned an average final course grade roughly 15 percentile points higher than non-participants.



Summary of recommendations



- ◆ Prioritize reforms over programs.
 - ◆ Look for ways to reach ALL students.
- ◆ Use research-based practices.
- ◆ Measure what matters.
- ◆ Make the education pathway easy to follow.



For more information

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