# The Elimination of Remediation and Developmental Education is Harmful and Diversionary

Alexandros M. Goudas, PhD Associate Professor of English Delta College, Michigan NOSS Research Network Chair communitycollegedata.com @2yrcollegedata

National Association for Student Success (NOSS) Conference Presentation 2023 March 3, Nashville, TN Gaylord Opryland Resort & Convention Center, TN Ballroom CDE

#### Hello NOSS Members!

- Welcome, thanks for coming, and I hope you are well!
- Visit the Resources page at communitycollegedata.com for a PDF of this PPT with links to sources; find me on Twitter
  @2yrcollegedata
- As educators, you serve a very important role in society that is often unrecognized. Keep up the good work!

#### Hello NOSS Members!

- The topics in this presentation are complicated, and it will still be an incomplete discussion after only 45 minutes
- Therefore, please hold all questions until after the presentation; I will stay and talk to everyone
- Even better, bring questions to the NOSS Research Network meeting today (3–3:45 p.m. in Cheekwood F) where I will take more time to discuss anything about this presentation

#### Remediation and Developmental Education Definitions

- remediation: coursework, typically in English and mathematics, designed to assist students in preparing for college-level courses
- developmental education: a system of supports, which includes remediation and is based on the principles of adult learning, that is designed to increase success in college for at-risk students

Prerequisite (stand-alone) remediation and developmental education are being eliminated across the nation

This is harming hundreds of thousands, if not millions, of at-risk students in community colleges and universities

Experts are recommending the elimination of remediation and developmental education because they view it as a barrier

### This is a false narrative

There are two main reasons why policymakers are choosing to eliminate remediation:

Experts cherry-pick data and they have moved the goal line

# The Original Promise: We Can Improve Graduation Rates

Experts originally promised that because remediation was a barrier, reforming it would *increase graduation rates* 

#### 2010 American Graduation Initiative Promise: Increase Public 2-Year Graduation Rates

Dr. Thomas R. Bailey, former head of the Community College Research Center (CCRC) at Columbia University, at the White House Summit on Community Colleges (Bailey & Cho, 2010)<sub>1</sub>:

"The picture of past and current developmental education appears bleak. If students cannot get established in college with collegelevel courses, then they will certainly not be able to graduate. ... Finding better ways to address the needs of underprepared students is a necessity for meeting the Obama administration's goal of increasing the number of community college graduates by 5 million by 2020" (p. 7).

### Cherry-Picked Data 2010

However, on the first page of Bailey and Cho's (2010)<sub>1</sub> White House address, they cherry-picked results from a well-known study on remediation (Attewell et al., 2006)<sub>3</sub>:

"Less than one quarter of community college students who enroll in developmental education complete a degree or certificate within eight years of enrollment in college. In comparison, almost 40 percent of community college students who do not enroll in any developmental education course complete a degree or certificate in the same time period" (p. 1).

#### Cherry-Picked Data 2014

Other CCRC experts repeated this cherry-picked data. Here is a quote by researchers Jaggars and Stacey (2014)<sub>2</sub> (cited by almost 200 papers on Google Scholar):

"Only 28 percent of community college students who take a developmental education course go on to earn a degree within eight years, and many students assigned to developmental courses drop out before completing their sequence and enrolling in college-level courses" (p. 1).

#### Cherry-Picked Data 2010–2014

Both Bailey and Cho (2010)<sub>1</sub> Jaggars and Stacey (2014)<sub>2</sub> included footnotes citing Attewell et al. (2006)<sub>3</sub>, a wellregarded study in higher education research on remediation. Here is the footnote from Jaggars and Stacey:

"4. Based on calculations using the National Educational Longitudinal Study (NELS:88). The comparison figure for nonremedial students is 43 percent (Attewell, Lavin, Domina, & Levey, 2006)" (p. 6).

#### Cherry-Picked Data 2010–2014

Attewell et al. (2006)₃ actually found positive results for remediation once controls were used to analyze the data:

"The NELS:88 shows that 28% of remedial students in two-year colleges graduate within 8.5 years (compared to 43% of nonremedial students).... Our analyses were able to distinguish the effects of a poor high school academic preparation from the effects of taking remedial coursework in college, and we found that most of the gap in graduation rates has little to do with taking remedial classes in college. Instead, that gap reflects preexisting skill differences carried over from high school. In two-year colleges, we found that taking remedial classes was not associated at all with lower chances of academic success, even for students who took three or more remedial courses" (p. 915).

### Moving the Goal Line 2014

- Out of 79 separate RDD analyses of math, reading, and writing remedial outcomes summarized by the CCRC (Jaggars & Stacey, 2014)<sup>15</sup>:
  - 7 Positive
  - 52 Null (*null* = no diff. between remedial/nonremedial)
  - 20 Negative
- The CCRC counts the null findings as a negative result for remediation, which is because they *moved the goal line* to their own definition of success for remediation

### Moving the Goal Line 2014

CCRC definition of remediation's goal (Jaggars & Bickerstaff, 2018)<sub>31</sub>:

"To be effective, a developmental education program would need to demonstrate that it helps just-below-cutoff students perform better than their just-above cutoff peers who directly entered college-level coursework. That is, those referred to a developmental course should overcome the semester lost in developmental education by earning better grades and proceeding more quickly toward a degree" (p. 471).

#### Jaggars & Stacey (2014)<sub>15</sub>

#### **DEVELOPMENTAL MATH STUDENTS**



#### Jaggars & Stacey (2014)<sub>15</sub>

#### **DEVELOPMENTAL READING STUDENTS**



#### Jaggars & Stacey (2014)<sub>15</sub>

#### **DEVELOPMENTAL WRITING STUDENTS**



Note. "Conditional" signifies that only outcomes for students who enrolled in college-level courses, or persisted in college, were compared. LUCCS stands for large urban community college system.

### Moving the Goal Line 2014

 Out of 79 separate RDD analyses of math, reading, and writing remedial outcomes summarized by the CCRC (Jaggars & Stacey, 2014)<sub>15</sub>, 75% of them would be considered positive results for developmental education outcomes if the traditional definition of success had been applied, i.e., if the goal line had not been moved:

Remediation and developmental education coursework is designed to get at-risk students to the college-level starting line

#### Cherry-Picked Data 2018

- A CAPR (Ganga et al., 2018)<sub>6</sub> intro on developmental education for policymakers cited Chen (2016)<sub>4</sub> five times
- Chen (2016)<sub>4</sub> analyzed nationally representative sample of community college students from the BPS:04/09
- CAPR omitted key findings from the Chen (2016) report: 49% of remedial students completed all their remedial courses, and these students graduated at higher rates compared to nonremedial students (p. 22, 35)<sub>4</sub>

#### CAPR/CCRC Dev Ed Intro (Ganga et al., 2018)



#### NCES Remedial Coursetaking (Chen, 2016)<sub>4,5</sub>



#### Chen (2016) BPS:04/09 Nationally Representative Dataset 6-Year Outcomes

Table 180302: Among 2003–04 beginning postsecondary students who first enrolled in public 2year institutions, percentage distribution of students according to their postsecondary persistence and highest degree attainment as of 2009, by remedial course enrollment and completion status: 2003-09

	6-year persistence and degree attainment					
Remedial course enrollment and completion status	No degree, and not enrolled	No degree, but enrolled	Attained an associate's degree or certificate	Attained a bachelor's degree		
Total	45.2	20.2	22.9	11.8		
Enrolled in any remedial courses	44.3	23.1	22.3	10.4		
Enrolled in remedial courses and passed all	35.3	22.1	25.8	16.8		
Enrolled in remedial courses and passed some	46.7	27.0	22.2	4.2		
Enrolled in remedial courses and passed none	66.8	17.5	11.6	4.2		
Did not enroll in remedial courses	47.0	14.1	24.1	14.8		
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2023

### Chen (2016) BPS:04/09 Nationally Representative Dataset 6-Year Outcomes

	Not enrld	Still enrld	Assoc/Cert	Bachelor
Rem (all)	45.2%	20.2%	22.9%	11.8%
Nonrem (all)	47.0%	14.1%	24.1%	14.8%
Rem Compl*	35.3%	22.1%	25.8%	16.8%

\*Rem Compl = *Remedial completers*: 49% of all remedial students in BPS:04/09 nationally representative dataset passed all their remedial courses.

#### Cherry-Picked Data 2018

- I asked the lead author of Ganga et al. (2018) why this finding was not included in their developmental education introduction for policymakers
- Elizabeth Ganga from the CCRC responded in an email:

"It's not our practice to provide written statements on other scholars' work. But if you'd like to speak to Nikki Edgecombe, who runs our CAPR center, she would be glad to talk to you by phone or video conference" (personal communication, March 7, 2019).

### Cherry-Picked Data 2018

- So on a call with CAPR director Dr. Nikki Edgecombe, I asked why this important finding was not included in the developmental education introduction for policymakers
- She said that policymakers hiring CCRC/CAPR as consultants were not interested in hearing about ideas that promote the status quo (paraphrase) (personal communication, March, 2019)
- If the data show remediation works well for students, don't they have a duty as researchers to report that?

# **Remediation Never Was a Barrier**

When these reforms started in 2010–2012, remedial pass rates and graduation rates were the same as nonremedial rates

# **Remediation Never Was a Barrier**

The following slide contains outcomes reported from an IES NCES nationally representative dataset (BPS:04/09) that tracked a 2003 incoming cohort for 6 years

#### Chen (2016) BPS:04/09 Nationally Representative Dataset 6-Year Outcomes

	Not enrld	Still enrld	Assoc/Cert	Bachelor
Rem (all)	<b>45.2%</b>	20.2%	<b>22.9%</b>	11.8%
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\*Rem Compl = *Remedial completers*: 49% of all remedial students in BPS:04/09 nationally representative dataset passed all their remedial courses.

# **Remediation Never Was a Barrier**

The following three slides show outcomes reported from an IES NCES nationally representative dataset (BPS:12/17) that tracked a 2011 incoming cohort for 6 years

#### BPS:12/17 Data (Pretlow et al., 2020)

#### **National Center for Education Statistics**

Table 2.2-C. Among 2011–12 first-time postsecondary students who began in an associate's degree program, percentage distribution of 6-year attainment and persistence status at any institution, by selected beginning enrollment characteristics: 2012–17

Selected beginning enrollment characteristics	Undergraduate certificate	Associate's degree	Bachelor's degree	Enrolled at 4-year institution	Enrolled at less-than- 4-year institution	Not enrolled
Total	5.8	21.3	12.4	6.2	8.6	45.7
Self-reported remedial or developmental coursetaking, 2011–12						
Yes	6.6	21.0	11.0	6.3	9.9	45.3
No	5.4	21.5	13.1	6.1	8.0	45.9

#### BPS:12/17 Data (Chen et al., 2020)<sup>8</sup>

Table 4. HIGHEST POSTSECONDARY ATTAINMENT: Percentage distribution of 2011–12 beginning postsecondary students' highest postsecondary attainment, by first degree program and selected coursetaking experiences: June 2017

First degree program <sup>1</sup> and selected coursetaking experiences	No credential, not currently enrolled	No credential, currently enrolled at less-than- 4-year institution	No credential, currently enrolled at 4-year institution	Attained an under- graduate certificate	Attained an associate's degree	Attained a bachelor's degree
Associate's degree program	55.6	5.9	5.7	4.8	17.4	10.6
Took any remedial courses <sup>2</sup>						
Yes	57.4	7.8	5.0	4.9	17.1	7.8
No	52.5	2.8	6.9	4.6	17.8	15.5

# Remedial-Nonremedial Graduation Rates in BPS:12/17 (Goudas, 2022)<sup>9</sup>

#### Table 4

Subcategories, Totals, and Percentages for Categorical Variables With Remedial and Nonremedial Group Comparisons

Variable	All st	udents	Rem	Remedial Nonrem		medial
	п	%	п	%	п	%
Graduation (highest attained anywhere) total	6,530	100.0	3,580	100.0	2,030	100.0
Certificate	740	11.3	350	9.8	290	14.0
Associate's degree	1,310	20.0	730	20.5	440	21.4
Bachelor's degree	810	12.4	360	10.2	410	20.0
No degree	3,670	56.2	2,130	59.5	910	44.6

#### Moreover, First-Year Remedial Pass Rates Are the Same as Nonremedial

If remedial and college-level English/mathematics are barriers, then CCRC researchers Zeidenberg et al. (2012)<sub>10</sub> demonstrated that many other courses pose equal barriers to student success:

"Our findings indicate that despite the focus on college math and English, these courses are not the only obstacles to completion for community college students. In fact, they present no greater obstacle to completion than the other gatekeeper courses that are identified in this paper" (p. 4).

#### Remedial-Nonremedial First-Year GPA (Goudas, 2022),

#### Table 6

Comparison of Remedial and Nonremedial Average First-Year GPA by Income Decile (t Tests)

Income (AGI)	Remedial GPA		Nonremedial	Nonremedial GPA		
	M(SD)	п	M(SD)	п	_	
Decile 1	2.04 (1.23)	370	2.32 (1.37)	100	+0.28	
Decile 2	2.11 (1.18)	340	2.25 (1.40)	130	+0.15	
Decile 3	2.15 (1.14)	350	2.57 (1.17)	120	$+0.42^{**}$	
Decile 4	2.30 (1.15)	370	2.56 (1.24)	130	+0.26	
Decile 5	2.28 (1.12)	330	2.71 (1.09)	130	$+0.44^{***}$	
Decile 6	2.45 (1.05)	330	2.63 (1.09)	150	+0.18	
Decile 7	2.32 (1.14)	320	2.77 (1.09)	170	$+0.44^{***}$	
Decile 8	2.43 (1.04)	310	2.87 (0.99)	180	$+0.43^{***}$	
Decile 9	2.41 (1.08)	270	2.76 (1.06)	200	$+0.35^{***}$	
Decile 10	2.43 (1.03)	280	2.69 (1.11)	210	$+0.25^{*}$	

*Note.* Remedial and nonremedial combined M = 2.398; remedial combined M = 2.28;

nonremedial combined M = 2.64. The National Center for Education Statistics requires that all descriptive statistics be rounded to the nearest 10 to protect student privacy. \*p < .05. \*\*p < .01. \*\*\*p < .001.

#### Past Data Have Shown Remediation Was Not a Barrier, but Have Recent Reforms Been Effective?

According to the CCRC, the most rigorous research over the past 12 years has revealed modest but temporary gains in gateway pass rates, with only two studies on *acceleration* showing very small increases in completion rates (Note: In most of these studies, the caveats outweigh the positive results) One study doubled graduation rates, but that model included developmental education!

#### CAPR Review of Dev Ed Reforms (Bickerstaff et al., 2022)11

Report October 2022

#### Five Principles for Reforming Developmental Education A Review of the Evidence

Susan Bickerstaff, Katie Beal, Julia Raufman, Erika B. Lewy, and Austin Slaughter



#### Cherry-Picked Data 2022

Bickerstaff et al. (2022)<sup>11</sup> is a CAPR/CCRC/MDRC report that selected the "most rigorous" studies showing positive results for reforms in developmental education over the past 12 years. However, here is an example of cherry-picked data in their report:

"Another experimental study found that students placed into a college-level statistics course with corequisite support earned 4 more credits after one year and were 8 percentage points more likely to earn a degree within three years as compared to students placed into a prerequisite developmental algebra course (Logue et al., 2019)" (p. 8).

#### Corequisite Math RCT (Logue et al. 2019)<sub>12</sub>

#### TABLE 1

Estimates of Treatment Effects on Graduation and on Graduation/Transfer to a Bachelor's Degree Program

Group		Outco	ome		
	Grad	uation	Graduation/transfer		
	No covariates (%)	With covariates (%)	No covariates (%)	With covariates (%)	n
Group means					
EA	17.2	16.0	27.3	30.1	297
Stat-WS	25.3	24.0	32.0	25.3	297
Treatment effects EA vs. Stat-WS	8.1*	8.1*	4.7	4.8	594

*Note.* EA = elementary algebra; WS = workshops. \*p < .05.

#### Corequisite Math RCT (Logue et al. 2019)12

#### TABLE 1

Estimates of Treatment Effects on Graduation and on Graduation/Transfer to a Bachelor's Degree Program

		Outcome				
Group	Grad	uation	Graduation/transfer			
	Group	No covariates (%)	With covariates (%)	No covariates (%)	With covariates (%)	n
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Stat-WS	25.3	24.0	32.0	25.3	297	
Treatment effects						
EA vs. Stat-WS	8.1*	8.1*	4.7	4.8	594	
<i>Note.</i> $EA = elementation$	ry algebra; WS = works	shops.				
* <i>p</i> < .05.		No statistic remedial (EA) a once transfe	cal difference be and coreq (Stat- r and controls a	etween WS) groups re added		

#### Cherry-Picked Data 2021

Perhaps these data are cherry-picked because Dr. Logue is an outspoken and biased critic of remediation. In an *Inside Higher Ed* op-ed, here is what Logue (2021)<sub>13</sub> argued:

"This piece isn't about the fact that traditional remediation is a bottomless pit from which many students never escape (though it is a bottomless pit).... This piece is about the actual word 'remediation' -- that we don't need it anymore and should get rid of it and its analogue developmental education, as well as the whole conceptual framework that surrounds both of those terms" (paras. 1–2).

### Cherry-Picked Data 2023

In addition to cherry-picking data from biased authors who repeatedly spread misinformation about remediation, the CCRC employs equally biased researchers who also publish op-eds that are inflammatory. Fay (2023)<sub>14</sub> recently wrote this in *Inside Higher Ed*:

"Hundreds of thousands of students across the country attend colleges that still require traditional remedial courses. These students should not have to wait for system leaders to adopt policies in line with over a decade of research finding that traditional remediation is ineffective at preparing students for college. *Instead, community college students should go directly to college administrators and say no to remedial placements. They should point out that these courses add time and cost to the pursuit of a college degree and, most importantly, don't work* [emphasis added]" (para. 2).

# **Experts Moved the Goal Line to Show Reforms Were Working**

In 2010, the goal was to increase graduation rates; in 2017, the CCRC moved the goal line to define *success* as increases in gateway pass rates. Why? Graduation rates were not increasing. However, using unproven theories of *early momentum metrics* (EMM)<sub>16</sub>, key performance indicators (KPI)<sub>16</sub>, and the flawed methodology of *throughput*, researchers could argue that reforms reducing remediation were working

#### Experts Knew Reforms Were Not Going to Increase Graduation: Then They Moved the Goal Line

Top CCRC researchers' conclusions on most common reforms to remediation (Jaggars & Bickerstaff, 2018)<sub>31</sub>:

"Research suggests that the most popular reform models (including multiple measures assessment and placement, math pathways, and the co-requisite approach) will indeed improve students' rate of success in college-level math and English, but they are unlikely to substantially improve graduation rates" (p. 496).

#### Experts Knew Reforms Were Not Going to Increase Graduation: Then They Moved the Goal Line

Top CCRC researcher Scott-Clayton (2018)<sup>31</sup> explained the *throughput* methodology by interpreting results from Florida's 2013 optional remediation law in this way:

"While pass rates in the first college-level course ("gateway" course) in each subject decreased modestly (from 75 to 73 percent in English composition, and from 65 to 58 percent in math), because more students attempted these gateway courses the overall percentage of students successfully completing them rose markedly (by 7 percentage points in English and 4 percentage points in math), with larger increases for black students" (para. 15).

Imagine an outcome, such as graduation rates



Outcome Outcome Group 1 Group 2

100 students in each group start their progress to reach that outcome



Outcome Outcome Group 1 Group 2

#### Group 1 throughput: 10 graduate

#### Group 2 throughput: 14 graduate



Outcome Outcome Group 1 Group 2





Outcome Outcome Group 1 Group 2

Group 1 throughput: Now 30 graduate Group 2 throughput: Still 14 graduate



Outcome Outcome Group 1 Group 2

#### How Throughput Works (Barnett et al., 2020)<sub>17</sub>



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#### How Throughput Works (Barnett et al., 2020)<sub>17</sub>

Figure 3.6

College-Level Math Course Outcomes for Cohort 1 (Among Students in the Math Subsample)



# What Cherries Have Not Been Picked?

For decades, numerous studies showing positive results for remediation have been published in top journals (e.g., Research in Higher Education, The Review of Higher Education, The Journal of Higher Education). Why haven't they been cited?

In the past, the CCRC has noted that a few studies have found positive results for remediation. However, many excluded peerreviewed studies in top journals have also demonstrated that remediation is not a barrier:

Cabrera et al. (2005)<sub>19</sub>: "Those taking math remediation courses were 4% more likely to transfer than those who did not.... However, among Lowest-SES students, the effect of taking remedial reading is particularly noteworthy. For this group taking remedial reading actually increases their likelihood of transferring by 24%" (p. 174).

Lesik (2006)<sub>20</sub>: "Using the regression-discontinuity design and an instrumental variables strategy to model selection bias, I concluded that participating in a developmental mathematics program significantly increases the odds of successfully completing a college-level mathematics course on the first try" (p. 17).

Fike and Fike (2008)<sub>21</sub>: "Students who did not enroll in developmental mathematics had lower odds of retention than those who enrolled in developmental mathematics but did not successfully complete the course. This finding suggests the significant role that developmental mathematics plays in student retention" (p. 78).

Moss and Yeaton (2013)<sub>22</sub>: "For the term-by-term RDDs, using parametric estimates, we found a consistent pattern whereby DE students benefited from completing developmental English. During each of the five terms, DE students experienced higher achievement at the cut score when compared to NDE students" (p. 393).

Turk (2019)<sub>23</sub>: "When two groups of statistically similar students were compared, developmental education generally improved the chances of earning an associate degree" (p. 1090).

Saw (2019)<sub>24</sub>: "For 2-year college students, remediation enrollment in both mathematics and English improved the likelihood of transferring to a 4-year college and earning a bachelor's degree" (p. 298).

Sanabria et al. (2020)<sub>25</sub>: "Taking remediation is associated with a nearly nine percentage-point increase in bachelor's degree completion for 2-year college students after accounting for demographic, familial, and academic background characteristics" (p. 474).

- Noncognitive factors such as income, work, family obligations, children, daycare, transportation, race, age, parental education level, high school courses taken (HS quality), college choice, support levels in college, tutoring, disability status, mental health levels—all of these combined and more have a far larger impact on outcomes for at-risk 2-year college students than any one or two courses at the beginning of college
- Remediation is not the barrier experts claim it is; in fact, it has been helpful for millions of students

### Tens of Millions of Taxpayer Dollars Have Been Used to Create This False Narrative

CCRC/NCPR/CAPSEE/CAPR (all basically one organization formerly headed by Dr. Thomas R. Bailey) have received well over \$35 million in taxpayer dollars since 2006 (IES, n.d.)<sub>18</sub> to conduct this research, during which they created this biased narrative

### How is This False Narrative Harming At-Risk Students?

Millions of students are now required to enroll in college-level courses without adequate supports; lower pass rates in college-level courses means triple/quadruple the fail rates; no one is tracking whether these students fail out faster or have worse outcomes

### Comprehensive Developmental Education Reform is Best

- The most effective reform, the City University of New York's Accelerated Study in Associate Programs (CUNY ASAP), addresses all of these issues yet does not eliminate remediation (included in Bickerstaff et al., 2022)
- Original model more than doubled graduation rates (21% vs. 48% for developmental students) and was an RCT comprised of 90% students of color (Miller et al., 2021)<sub>26</sub>
- Miller et al. (2020)<sub>27</sub> studied a replication of ASAP in Ohio and found that this model of true holistic *developmental education* caused a 3-year graduation rate increase of 12 percentage points (49 vs. 37%) (p. 48) at a cost of \$1,840 per student per year (p. ES-7)
- These models included required developmental coursework first

### Remediation and Developmental Education Should Be Offered as Options

- A reasonable policymaker should conclude that traditional standalone remediation should be retained as options for students
- I encourage you to argue that your institutions implement welldesigned corequisites, i.e., just beneath the college-level cutoff, thoughtful multiple measures for placement reforms, i.e., actual mixed measures with more advisors and coordinated efforts at all levels of the institutions, and appropriate accelerated options, etc., including stand-alone remediation as options (not accelerated)
- It is complicated and requires money, time, staffing, effort; but the goal is extremely important in society and is very much worth it

### Remediation and Developmental Education Should Be Offered as Options

- By the way, I support effective and well-supported reforms in remediation and developmental education (R/DE) (e.g., multiple "mixed" measures for placement, acceleration options, corequisites for students just beneath college-level cutoff, etc.)
- However, the preponderance of data support the inclusion of traditional stand-alone prerequisite R/DE coursework as an option for students at institutions of higher education
- Holistic reform addressing income, including developmental courses as an option, is the best approach for at-risk students

### **Final Thoughts**

• In a response to my paper on flawed research with Dr. Hunter R. Boylan in the *Journal of Developmental Education* (Goudas & Boylan, 2012)<sub>28</sub>, the head of the CCRC and coauthors (Bailey et al., 2013)<sub>29</sub> responded with a profound statement that should resonate with policymakers today:

"While our research does conclude that the current system of developmental education does not work very well for many students, we do not advocate—nor do we believe that the results of our research support—the elimination of developmental education, the placing of all students into college courses, or the wholesale conversion of developmental education into a co-requisite model" (p. 2).

### Addressing Learning Loss in K-12 and Community Colleges

- Pandemic learning loss occurred in K-12; most would agree that we need to have targeted interventions to reduce those gaps; most people would also agree at-risk students have experienced learning loss for decades
- Goldhaber et al. (2021)<sub>30</sub> recommended that "schools could compensate for that deficit...: with tutors, extra periods of instruction in math and reading, Saturday academies and afterschool programs" (para. 6); almost everyone would support these interventions (which is essentially remediation and layers of supports)
- Why should we apply a different approach for students who have experienced any type of learning loss once they arrive at college?

#### Thank you!

Please take these data to your institutions and argue to keep stand-alone remediation and developmental education as an option for at-risk students! I'm happy to assist you <sup>(C)</sup>

> References below and more reading available: communitycollegedata.com alexmgoudas (at) gmail (dot) com

> > Follow me @2yrcollegedata

(See below for references with links)

#### References

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