SABBATICAL REPORT

Fall 2023

AB-705/1705 RESEARCH

Gathering Data, Analyzing Programs, Sharing Best Practices, Making Connections and Plans Moving Forward

by

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OVERVIEW

Introduction

The purpose of my sabbatical was to research various models of curriculum, workshops, support classes and successful best practices from other community colleges. The goal is to improve the success rate of our students in their transferable math class within a year since the implementation and effects of the new law AB-705/1705. My focus was on the classes Math M05 College Algebra and Math M11 College Algebra for Liberal Arts, but it expanded to Pre-Calculus and Calculus. I attended many webinars and read many articles on the subject of AB-705/1705, but I was unable to attend any math conferences due to the cost. I visited many college's math websites, emailed and had conversations with math instructors at other colleges, researched both websites of ASCCC.org and CCCCO.edu, and participated in demonstrations of online math programs.

Reviewing my timeline in my sabbatical proposal, I accomplished everything that I set out to do except for attending math conferences and also to work together with the math department, dean, and VP of AA to develop the best plan for support for our students. I realize now that this would occur after I came back from my sabbatical during the Spring 2024 semester and I am ready to collaborate on forming a plan for our student's success using my research and my proposals that I formed, and still forming; it is a "work in progress."

The Effects of AB-705

AB 705 and its Unintended Consequences

On the Academic Senate for California Community College website, I read the article AB-705 and Its Unintended Consequences by Rosmarie Bezerr-Nader, Fresno City College, February 2020. Although AB-1705 has cemented the requirement for students to take and pass a transfer level math and English class in one year, this article raises many concerns. I believe it is only a matter of time for these concerns to become reality.

- It has taken away advantages to several students, even though it has helped other students.
- Devalues diversity and returning students. It does not prepare students to take the ASVAB for military students, the TEAS for nursing students, students seeking job advancements, and working part-time students.
- It has tunnel vision expecting all students want to finish a degree in two years, or even earn a degree.
- Instructors may be pressured to increase passing rates by diluting content.
- Takes away options for underprepared students.
- Modifications would be more efficient than elimination of developmental classes.
- Returning students who fail a transfer class three times will most likely not continue their college education and resign to accepting a low-paying, menial job.
- For equitable learning, respect the diverse educational needs and goals of California students, whereas California is one of the most diverse areas in the country.

These are the suggestions taken from this article to blend BSI with AB-705:

1. Create an optional placement test to help students choose appropriate classes for their skill levels. To show compliance with AB-705, ask each student to sign a statement asserting his or her enrollment in a developmental class or transfer classes was a choice, NOT a requirement.
2. Retain optional sections of basic classes, especially a comprehensive foundational arithmetic class. In addition to its use in everyday life, arithmetic is the foundation for higher math classes and science classes. Arithmetic is often the gatekeeper preventing students from qualifying for programs and jobs.
3. Promote equity by retaining and administratively financing a limited number of developmental classes.
4. Promote student commitment and accountability by attaching units and financial aid to developmental, non-transferable classes.
5. Enable students to decide how to best spend their financial aid. Print the balance of financial aid available to each student on grade reports.

When the pendulum swings back, we need to be prepared. The number 4 suggestion is a bold move, and I do not see how that could be possible. For now, my take-away is to have a placement "test" that is not a test, but a self-guided placement survey that helps students choose appropriate classes for their skill levels.

This article quoted Yuba College instructor John Almy (2017), author of "The Fast Lane to Nowhere," so I read his article on the Inside Higher Ed website. He basically said that to save our system we must stop promoting students who do not know the material; we should not accelerate students who do not know the basics. Success is earned and not given and may require a great deal of hard work. Here is a quote by John Almy:

"We put remedial students who are incapable of surviving remedial classes into transfer-level classes alongside students who are supposedly prepared, and that, along with a little extra tutoring, will somehow provide the lower-level students with the desire and abilities to quickly acquire all the skills they have failed to gain in the first 12 years of their educations. Baloney!"

My question is if these students do not have the desire and perseverance to succeed in a transfer level math class, how do we get students to have such a desire and act upon it? What is the incentive? Well, I believe that would require another, different type of sabbatical research.

AB 705 Unintended Impacts on Classes and Faculty

Also on the Academic Senate for California Community College website, I read the article AB 705: Unintended Impacts on Classes and Faculty by David Morse, English Professor at Long Beach City College, April 2020. Morse confirms that the data shows students passing transfer-level English and math courses have increased. However, success rates have decreased slightly, especially for students of color. He notes that while more students are passing, more students are failing.

In the article, Morse includes comments and concerns from other faculty. Jeff Burdic, an English Professor from Clovis College, explains that he is spending more time on teaching "soft skills"

that the students are not getting the full university-level experience. To quote Burdic, because it is a very good comment and said so well that I must share it, “The course outline is a minimum, and the richness provided by a faculty member’s ability to individualize the course and to fully and enthusiastically engage students may be sacrificed due to the additional demands of addressing remedial needs that were not previously a primary aspect of transfer classes.”

A math professor at the Los Rios District had similar comments regarding their liberal arts math course with support: “Instead of learning about the beauty of mathematics, the fully prepared students heard boring explanations about arithmetic.”

Lisa Fitzgerald, English Professor at Long Beach City College, discussed the impact on faculty that they are doing much more work and are being stretched thinner causing fatigue. She suggests that lighter course loads or smaller class sizes could offset the fatigue caused by the new way she teaches.

Morse concludes with the suggestions that adjustments are need for the CCC’s placement process in terms of curriculum structure and class sizes so that the positive aspects of AB-705 won’t negatively impact the content in courses nor the faculty teaching them.

My take-away from this article is that we need to lower class sizes. At Moorpark College funding has been given toward the CET program. I believe funding needs to go to smaller class sizes for the sake of the content of course, reaching all levels of student preparedness, and to alleviate the workload that has impacted the math faculty in which no other department has experienced at this level. If we do not, more students will drop out, our FTEs will not grow, and content may get “watered-down.” This is my recommendation that I fully stand behind.

Faculty Association of California Community College (FACCC)

June 13, 2022, Michael Burke wrote an article that discusses the new legislation, AB 1705, and how it will make it more difficult for colleges to enroll students in remedial courses. The FACCC states that they strongly oppose this bill while it has strong support from student organizations, the state Chancellor’s Office, advocacy groups like the California Acceleration Project and the nonprofit law firm Public Advocates.

Here are responses to Burke’s article:

“…considers one piece of data: throughput. They count how many more students complete the transfer level course in 2019 compared to 2015. They completely ignore the drastic increase in the number of students that fail these courses and the impact that has on those students.”

“Imagine returning to school in your 30s wanting to pursue a STEM degree and you are told you will need to start in pre-calculus. This is daunting for many students. It crushes dreams.”

“AB 1705 assumes that the grades received in high school are correct and never inflated. Grade inflation is rampant among high schools and is used to pass students through on schedule, so as not to upset the parents and to hide the fact that some students are not performing at grade level.”

“Why doesn’t California give everyone a college graduation certificate together with the birth certificate?”

Public Policy Institute of California

The Public Policy Institute of California (PPIC) did a study and found out that students who start in a transfer-level course have a better chance of completing it even if they do not pass on their first try compared to students who start at below transfer level courses. Their study also found that students who did not pass their transfer-level course the first time were also not passing their other courses and suggested that these students need a wider range of support.

Google

I "googled" AB-705 and found this comment, or quote, with no author noted, but with a date of Oct 21, 2022. I found it intriguing. There must be an author, but I assume they want to be anonymous. Otherwise, I do apologize for borrowing this quote. It definitely does belong here.

> "AB 705 was created primarily to increase the number of transfer students; however, in doing so, it inadvertently decreased diversity and ignored the needs of returning students. A student who fails transfer-level math or English course three times is likely to become discouraged and give up on getting a better job."

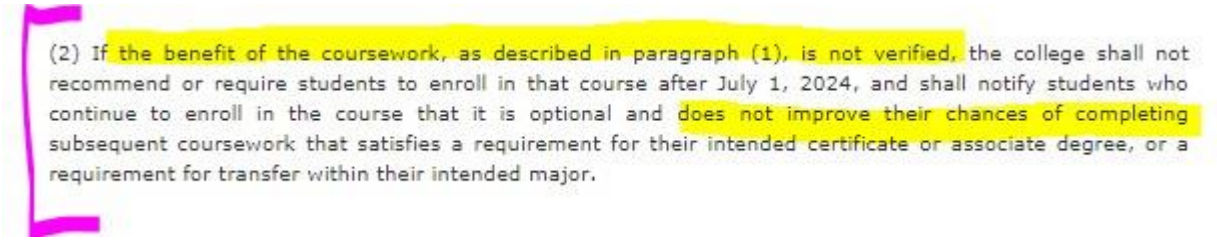
My observation is in a form of a question. Why are we focusing on one type of student? The student with the goal to transfer to a 4-year University. And why have we stopped caring about all other students who come from disadvantage backgrounds, other countries, returning students, and people who just want to better their skills or earn units for their employment? Is AB-705 really legal in light of the Civil Rights Acts in our country? I will not be surprised if there is a class-action lawsuit in the near future.

Support Group for AB-705

I did many searches on the internet using different search engines and found no support for teachers, especially math teachers, who are being forced to implement AB-705. This was discouraging at first, and I thought how I might go about making a support group myself. Then the lightbulb turned on and I went to Facebook. Yes, there is a support group on Facebook for AB-705. I joined the group and I recommend other teachers in our department do the same. AB 705 Math Forum Here are some post that are relevant:

Game-Based Learning in College Mathematics by Kathleen Hoffenholly

We teach in our math courses not to make this logical error:


(2) If the benefit of the coursework, as described in paragraph (1), is not verified, the college shall not recommend or require students to enroll in that course after July 1, 2024, and shall notify students who continue to enroll in the course that it is optional and does not improve their chances of completing subsequent coursework that satisfies a requirement for their intended certificate or associate degree, or a requirement for transfer within their intended major.

"If the college can't prove X then the college must say 'X is false'" is a logical fallacy. This is Hao-Nhien Vu's response to this.

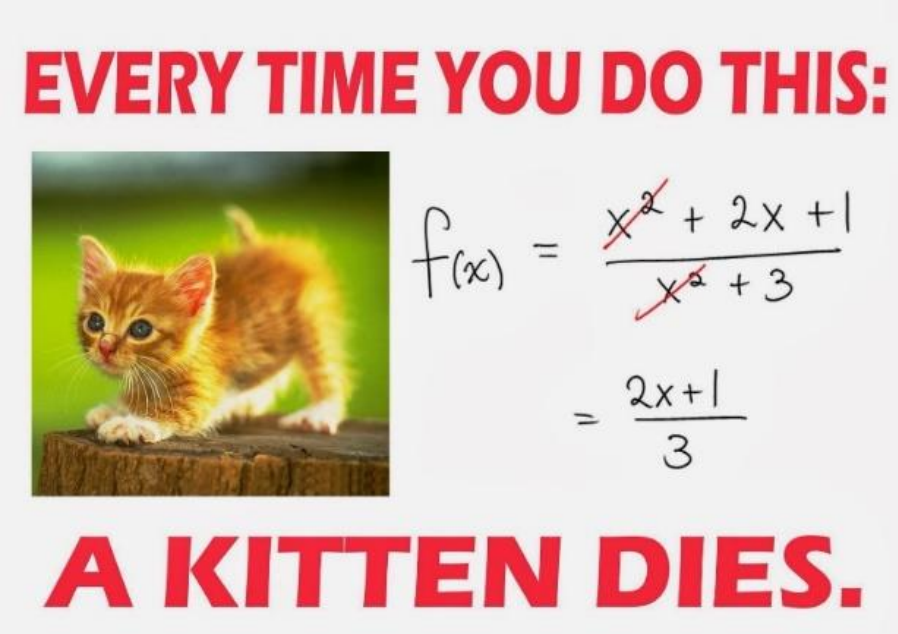
Summer Serpas posted a link for a free Webinar titled "Check-In So Your Students Don't Check Out." The description: "A Check-In routine is a flexible way for instructors to communicate, "I

care about you, your experiences in this class, and your learning."" This would have been good to attend; unfortunately it was last May 2023.

Max Sklar shared the AB-1705 FAQs link.

Corrine Kirkbride posted a job announcement for a math position at Pasadena City College.

This would not be complete without sharing my favorite meme that I found:



GATHERING DATA

AB-705 /1705 Data

AB-705 Before and After Data

I watched a video that Terrance Willett, Dean of Research Planning and Institutional Effectiveness, Cabrillo College, hosted and presented on Transition in Math from High School to Community College Before and After AB 705. The data from his school shows repetition of classes from high school to college have gone down for the most part, but have gone up for the STEM classes. (First slide). And the success rates have gone down after the implementation of AB-705. (Second slide)

Table 1. Transition from High School to Community College with Row Percentages

	CC Arith	CC PreAlg	CC El Alg	CC Geom	CC Int Alg	CC TL SLAM	CC PreCalc	CC Calc+	Total N
Fall 2016									
HS Arith	12%	29%	34%	*	21%	2%	1%	*	1,674
HS PreAlg	17%	40%	18%	*	23%	*	*	*	109
HS Alg 1	11%	32%	32%	*	22%	2%	1%	*	1,905
HS Geom	8%	23%	32%	*	31%	3%	2%	0%	4,296
HS Alg 2	4%	13%	24%	0.10%	40%	11%	8%	1%	8,044
HS Stats	2%	10%	17%	*	34%	19%	13%	5%	3,697
HS PreCalc	2%	6%	12%	*	37%	18%	19%	6%	4,745
HS Calc+	1%	1%	3%	*	20%	16%	20%	39%	1,776
F2016 Total Row %	5%	14%	22%	0.05%	33%	11%	10%	5%	100%
F2016 Total N	1,261	3,800	5,749	13	8,661	2,937	2,563	1,262	26,246
Fall 2019									
HS Arith	*	2%	4%	*	28%	50%	16%	1%	1,521
HS PreAlg	*	3%	*	*	45%	44%	5%	*	149
HS Alg 1	0.40%	2%	4%	*	32%	47%	14%	1%	2,048
HS Geom	0.20%	1%	3%	*	24%	53%	18%	1%	4,203
HS Alg 2	0.10%	0.40%	1%	*	13%	55%	28%	2%	9,528
HS Stats	*	0.10%	0.50%	*	9%	56%	27%	7%	6,335
HS PreCalc	*	0.20%	0.30%	*	7%	47%	33%	13%	5,843
HS Calc+	*	*	*	*	2%	31%	15%	51%	2,273
Fall 2019 Total Row %	0.10%	1%	1%	*	14%	51%	25%	8%	100%
F2019 Total N	32	171	382	*	4,430	16,248	7,965	2,670	31,900

Notes: * indicates cell had fewer than 10 students. Darker shaded cells represent higher values within each high school course level. Cells with an orange border indicate repeating already completed HS courses. See Appendix A for abbreviation definitions.

Table 2. Success (Grade of C or Better) in First Community College Math Attempt after High School Transition

	CC Arith	CC PreAlg	CC El Alg	CC Geom	CC Int Alg	CC TL SLAM	CC PreCalc	CC Calc+	Total N
Fall 2016									
HS Arith	52%	46%	39%	*	37%	51%	43%	*	1,674
HS PreAlg	50%	41%	35%	*	36%	*	*	*	109
HS Alg 1	48%	43%	40%	*	29%	42%	40%	*	1,905
HS Geom	50%	55%	46%	*	41%	39%	34%	59%	4,296
HS Alg 2	64%	66%	58%	*	55%	54%	46%	39%	8,044
HS Stats	64%	65%	65%	*	65%	72%	69%	68%	3,697
HS PreCalc	66%	72%	69%	*	66%	68%	59%	58%	4,745
HS Calc+	50%	86%	79%	*	76%	81%	69%	74%	1,776
F2016 Total Row %	55%	57%	53%	54%	55%	64%	57%	67%	57%
F2016 Total N	1,261	3,800	5,749	13	8,661	2,937	2,563	1,262	26,246
Fall 2019									
HS Arith	*	27%	35%	*	27%	42%	31%	29%	1,521
HS PreAlg	*	40%	*	*	18%	15%	38%	*	149
HS Alg 1	50%	56%	33%	*	28%	33%	23%	41%	2,048
HS Geom	50%	49%	47%	*	30%	36%	23%	35%	4,203
HS Alg 2	57%	65%	49%	*	41%	48%	34%	32%	9,528
HS Stats	*	78%	55%	*	40%	59%	45%	65%	6,335
HS PreCalc	*	71%	60%	*	57%	65%	54%	44%	5,843
HS Calc+	*	*	*	*	69%	80%	66%	70%	2,273
Fall 2019 Total Row %	53.00%	53%	44%	*	36%	52%	41%	58%	47%
F2019 Total N	32	171	382	*	4,430	16,248	7,965	2,670	31,900

Notes: * indicates cell had fewer than 10 students Darker shaded cells represent higher values within each high school course level. Cells with an orange border indicate repeating already completed HS courses. See Appendix A for abbreviation definitions.

Conclusions

Pre-AB705s	Post- (Mid-) AB705
~3/4 repeated HS coursework	~2/5 repeated HS coursework
Rate of students repeating advanced HS math (above Algebra 2) in CC ~9%	Rate of students repeating advanced HS math (above Algebra 2) in CC ~21%
Overall Success Rates ~57%	Overall Success Rates ~47%
Minoritized students ~20% more likely than Asian and White students to repeat coursework in community college lower than that which they had already successfully completed in high school	Over three quarters of minoritized students transitioned to transfer-level community college math

Despite strong increases in rate and volume of transfer level math completion post- (mid-) AB705 with greatly improved equity in access and completion outcomes, a substantial percent of students are still repeated already completed HS coursework especially for advanced math students along with a drop in success rates in students' first community college math attempt.

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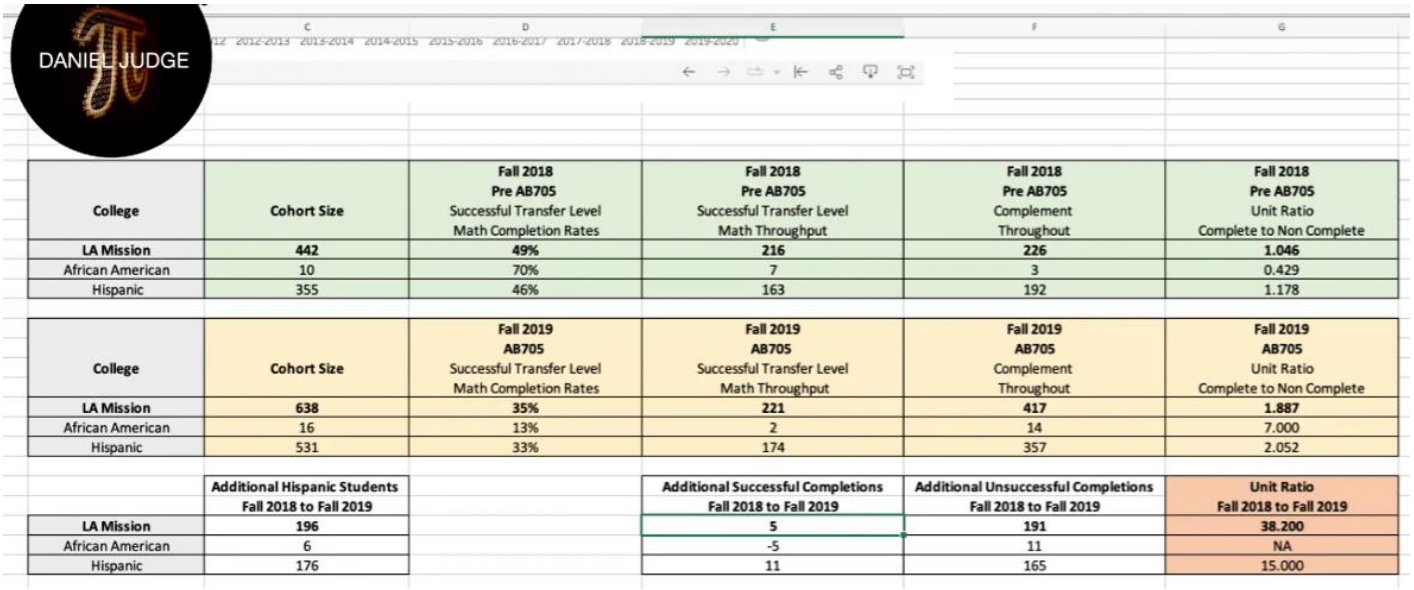
I found this data very interesting so I am sharing it here. I do not want to discredit Terrance Willett in any way; thus, I have given the due credit to him with the link to his presentation in my first paragraph above. This, of course, is data before the implementation of AB-1705. Still, it is astounding to see that their success rates dropped from 57% to 47%. I would like to see the data from Moorpark College compared and contrasted in a similar way. What are our success rates before and after AB-705/1705? What are the repetition rates from high school to college? This, in my opinion, would be very informative, and supports the need to meet with the high school math teachers from our surrounding high schools.

Data from Los Angeles Mission College

In his article *Politics, Pendulums, and AB 1705 Opposing AB 1705 Does Not Mean Opposing Acceleration* by Troy Myers, Sacramento City College, Fall 2022, Myers first states why he, the FACCC, and the Academic Senate, oppose AB 1705. He states very compelling arguments that we can support acceleration without eliminating per-transfer preparation courses. (If you read no other article I have posted in this paper, do read this one!) However, I have included this article because Myers shares information from a presentation by Daniel Judge, math professor at East Los Angeles College, which includes data from our neighboring district LACCD, specifically from Los Angeles Mission College located in Sylmar, the north-east side of the San Fernando Valley, in which about 70% of the population are Latino. Judge's presentation also includes data from LA City College and the other 7 colleges in the LACCD district which is the largest district in the state of California with a high population of students of color.

Below is a screen shot of Judge's presentation that shows the through-put, that is, the Additional Successful Completions to Additional Unsuccessful Completions (in the last row) as 5 to 191. That is a through put of 1 to 38.2 which means that for every one more student that completed a transfer-level math course post AB 705, there were 38.2 additional students who attempted and failed. This is not a success in any way or form.



College	Cohort Size	Fall 2018 Pre AB705 Successful Transfer Level Math Completion Rates	Fall 2018 Pre AB705 Successful Transfer Level Math Throughput	Fall 2018 Pre AB705 Complement Throughout	Fall 2018 Pre AB705 Unit Ratio Complete to Non Complete
LA Mission	**442**	**49%**	**216**	**226**	**1.046**
African American	10	70%	7	3	0.429
Hispanic	355	46%	163	192	1.178

College	Cohort Size	Fall 2019 AB705 Successful Transfer Level Math Completion Rates	Fall 2019 AB705 Successful Transfer Level Math Throughput	Fall 2019 AB705 Complement Throughout	Fall 2019 AB705 Unit Ratio Complete to Non Complete
LA Mission	**638**	**35%**	**221**	**417**	**1.887**
African American	16	13%	2	14	7.000
Hispanic	531	33%	174	357	2.052

	Additional Hispanic Students Fall 2018 to Fall 2019	Additional Successful Completions Fall 2018 to Fall 2019	Additional Unsuccessful Completions Fall 2018 to Fall 2019	Unit Ratio Fall 2018 to Fall 2019
LA Mission	**196**	**5**	**191**	**38.200**
African American	6	-5	11	NA
Hispanic	176	11	165	15.000

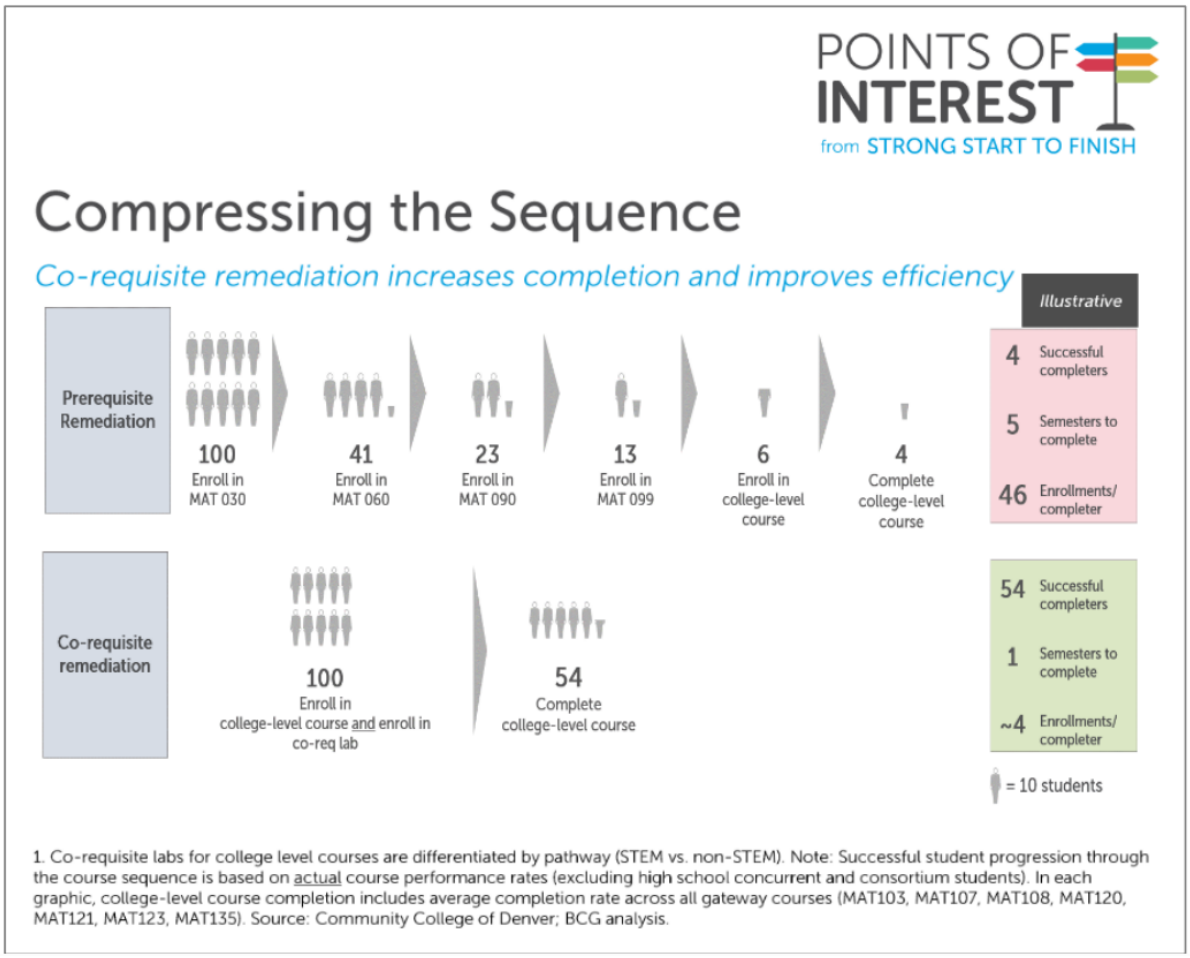
In this article, Myers explains this date in his own words:

“Among Hispanic students at Los Angeles Mission College, 176 additional students attempted transfer-level math and only 11 students completed it. An additional 165 Hispanic students did not succeed in transfer-level math and were left with substandard grades on their permanent academic records. Every student group had increased fail rates in transfer math at Los Angeles Mission College, and the success gaps between white students and students of color grew.”

In Judge’s presentation, he “does the math” and shows that a student is more likely to survive the Titanic disaster than to pass a transfer-level math class in one year, post AB 705. If only politicians could understand this data, and can see the math, they would stop AB 705/1705 immediately.

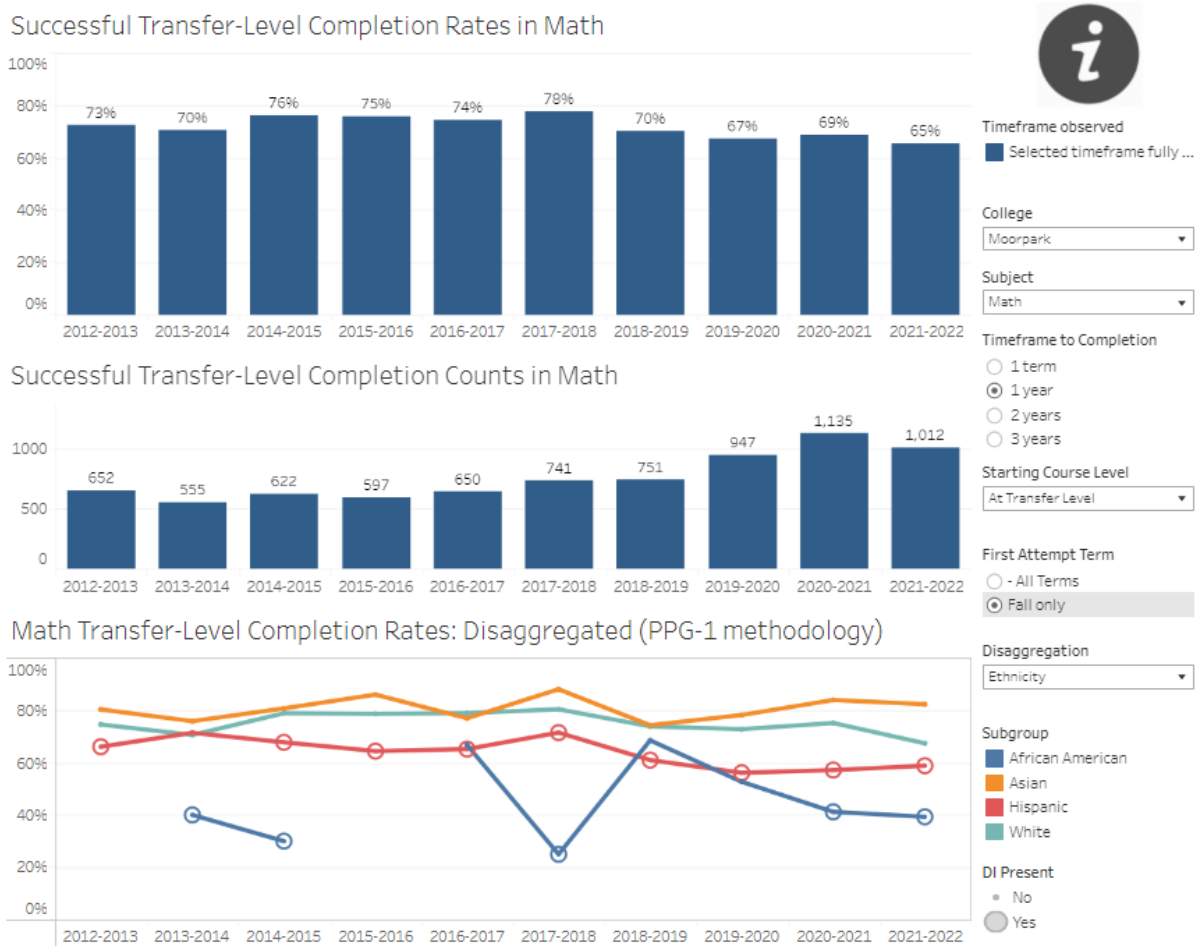
Corequisite Labs Data

From the Community College of Denver, their data shows that co-requisite courses with remediation have an increase rate of completion of students as well as an improvement in efficiency. However, I would have to question, as Daniel Judge did in the previous paragraphs, what is the number of students who do not complete a college level math class including those students who withdrew from their class or did not even sign up in the first place?



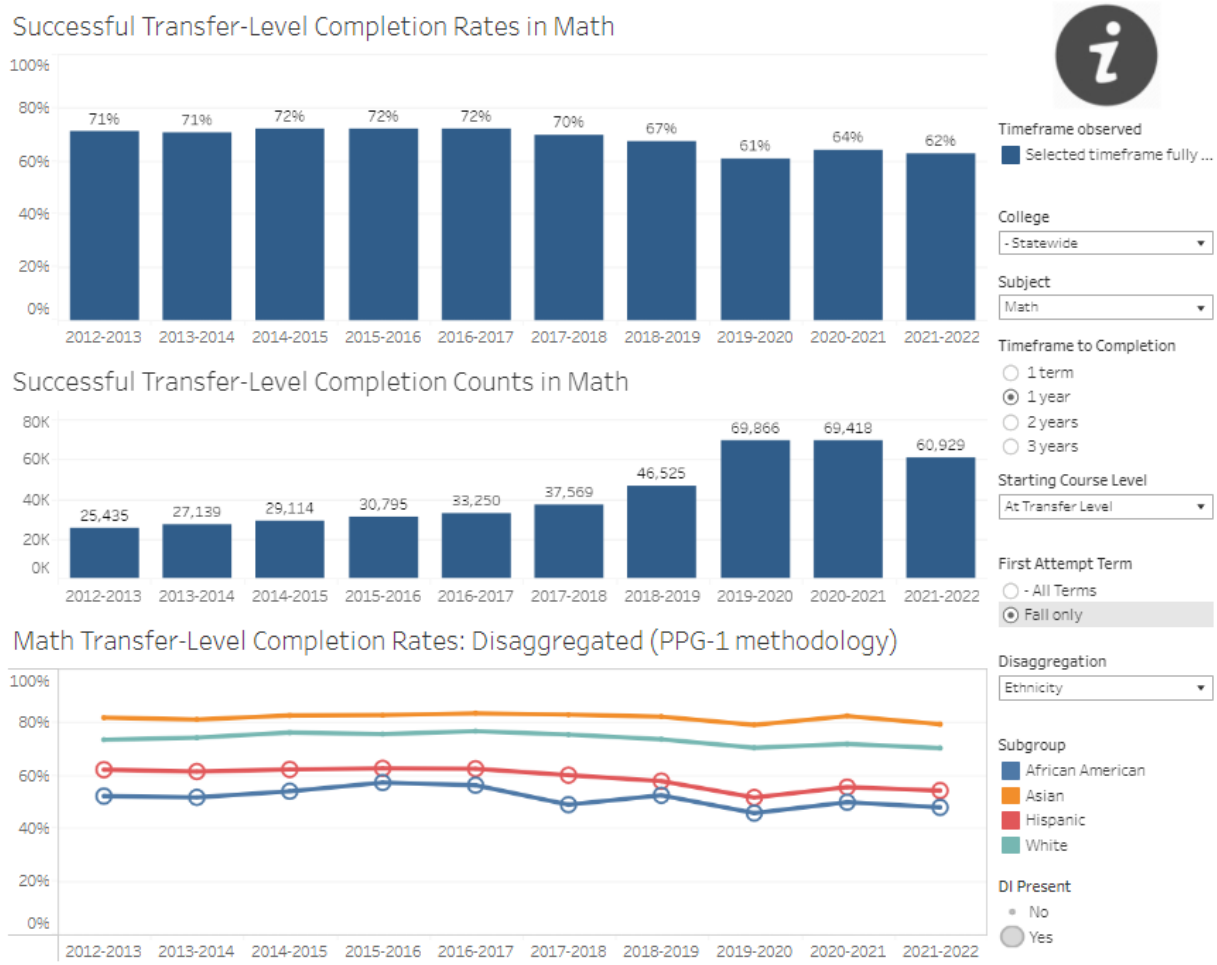
Moorpark College vs CA Statewide Success Rates in Math

Moorpark College



It is evident that the equity gap is growing which is not a favorable outcome. And the further we get away from the implementation of AB-705, success rates are decreasing. We, as a department, need to view this updated dashboard every semester and work on making adjustments to help close the equity gap if it continues to widen.

California Statewide



Although the equity gap is remaining about the same, or is slightly larger, I believe that since this data is from all 116 community colleges, it is more difficult to gage this data since the communities in California are widely different from each other. However, this data does show that the further we get away from the implementation of AB-705, success rates are decreasing.

RESEARCH ON OTHER COLLEGES AND UNIVERSITIES

Math Programs

Cypress College

On the Cypress College math webpage, there is a guided self-placement tool which is not a test. It asks questions such at “What areas do you want to study?” and other questions about themselves. The math webpage also has a short video that explains the implementation of AB-705 (is a bit outdated since AB-1705 has been passed). It explains how to determine which math class the student should enroll in. The math webpage also has math review videos. It comes right after the guided self-placement tool.

I highly recommend putting such a video on our math department website. I can work on updating the website with these ideas that I have found on other college’s math websites. This would help students to know which math courses to take. Also, I know that we have math videos housed in CANVAS courses. I believe we should also put them on our math webpage. This way the videos are available to all students before their math class starts. I understand that the drawback would be that anyone could access the videos. However, I think the advantage of having them available to students before their class begins would outweigh this drawback.

Cabrillo College

Cabrillo College uses a corequisite design and enroll students with a GPA lower than 2.6 into the support classes. This was presented at the webinar *Corequisite Support as a Lever for Imposing Outcomes: A Qualitative Exploration*, sponsored by the RP Group. They stated that support classes save students time compared to doing it on their own. They include in their curriculum learning development and critical thinking engagement.

Cuyamaca College

At this same webinar mentioned in the previous paragraph, Tammi Marshal and Dan Curtis, math professors at Cuyamaca College, shared that students who may not be taking Pre-Calculus in high school will still get placed into Calculus but with support. They shared that they have seen an 83% increase in enrollment. (Mind you, this is enrollment, not a success rate.) They are working on the support material that will teach certain topics of Algebra and Trigonometry needed for Calculus. (Note that they said “teach” and not review. This concerns me greatly.) Students get their placement from being asked questions about their educational goals and major. They noted that Pre-Calculus is the floor for STEM majors.

Las Positas College

On the Math webpage of Las Positas College, the first and main thing that is shown is Concurrent Support Class FAQ's. It starts with a one-minute video of a student’s success story told by the student herself.

- Credit or non-credit. If credit, students pay for one lab unit and receive pass or no pass on their transcripts.

- No homework, but assignments in the class.
- At the beginning of the semester: “Successful Learning Activities,” time management and note taking skills, study skills, preparing for a test.
- Throughout the semester the students can work on their math assignments.
- Later part of the semester: Practice tests, write quiz corrections, watch math videos.
- Non-credit class: Students enrolled in a first level transfer course or enrolled in a Calculus course and seek prerequisite support to fill in any learning gaps.
- Credit class: Students who need to reach full-time status (for financial aid reasons). International students are not able to take non-credit classes.

At Las Positas College, the math faculty conduct a Math Jam before each semester, one week before both fall and spring semesters. They include a short video explaining how this will help students. They offer day, evening, on-ground, hyflex, and virtual options.

I emailed the math department coordinator, Jennie Graham, and the math support coordinators, to ask her how their support classes worked and if they were filling. Jennie replied and let me know that they were offering support classes that were not connected to classes and they were not filling. Now they are offering support classes connected to classes and they are filling now. She also gave me the following information which I found very interesting.

“In Fall 2022 when we discontinued all basic skills classes, we shifted to a "supports are required model," but only for students in the lowest of the three recommended GPA bands from the state's data. We had our IR run some data for us, but we don't think it was accurate based on where it was pulled, so we're working with IR to sort that out before we make a judgement call on their effectiveness when required for that population.”

Saddleback Community College

At Saddleback Community College, the baseline level of placement is taking one of these classes below with support. The requirements to be able to place into College Algebra or Trigonometry without support is listed in the second box below, to be able to place into Pre-Calculus, Applied Calculus and Calculus with Analytical Geometry are listed in the third box below.

– Transfer Math with Support (Baseline Level)

Placement courses include: Math 103, Math 14, Math 10+210S, Math 10, Math 8+208S and Math 124+224S. Other eligible courses: Psyc 44, Business 10, Econ 2 and Econ 4

Baseline placement is the default initial Math Placement from the Guided Self Placement Survey. Incoming first-time college students are at minimum eligible for this level upon completion of the Matriculation Process. All courses are at college-level.

MATH 103 MATHEMATICAL IDEAS 3 units
MATH 10 INTRODUCTION TO STATISTICS 3 units
MATH 14 MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS 5 units
MATH 8 COLLEGE ALGEBRA FOR BRIEF CALCULUS 5 units
MATH 124 TRIGONOMETRY 3 units

– Transfer Math

Placement courses include: Math 8, Math 124

Other eligible courses: Chem 3 and all courses in lower placement level

Requirements to receive this Math Placement:

- Two semesters of high school Algebra 2 (or equivalent), successfully completed with a grade of C (or better) and an unweighted cumulative GPA of 3.0 or higher.
- Intermediate Algebra from a regionally accredited U.S. college or university, successfully completed with a grade of C or better.
- Grades of C- and lower are considered non-passing.

– Higher-level Math for BSTEM Majors

Placement courses include: Math 11, Math 2, Math 3A

Other eligible courses: all courses in lower placement levels

Requirements to receive this Math Placement:

- Equivalent high school math coursework (e.g. PreCalc, Math Analysis, Calculus), successfully completed with a grade of C (or better) and an unweighted cumulative GPA of 3.0 or higher.
- Equivalent MATH from a regionally accredited U.S. college or university, successfully completed with a grade of C or better.
- Grades of C- and lower are considered non-passing.

MATH 2 PRE-CALCULUS MATHEMATICS 5.0 Units
MATH 11 A BRIEF COURSE IN CALCULUS 5.0 Units (Applied Calculus)
MATH 3A ANALYTIC GEOMETRY AND CALCULUS 5.0 Units

Since I was quite intrigued about the way they place students, I sent an email to the co-chairs of the math department to find out more. Sumaya McCleave and Frank Gonzalez replied and explained the following. When students register, they complete a Guided Self Placement Survey. They ask for all of the math courses they took in high school because some students take statistics the year after they take pre-calculus. Their department voted to require students who have not passed Algebra II to take support classes with Trigonometry and College Algebra but make it optional for Statistics. Starting Fall 2024 Business Calculus will be their baseline placement, and starting Fall 2025 Calculus will be their baseline placement for STEM students. They are working on creating curriculum for a Calculus Instructional Lab that will open Fall 2025. This will be separate from the Tutoring Center. The idea is that students in Calculus or Business Calculus can come to the Instructional Lab to get extra help if they have gaps in prerequisite knowledge.

After reading and reviewing Saddleback Community College Math Department's method of placing students, I would like to discuss this with our department if we can do something similar. My question is, of course, is this legal within AB-1705? Did they find a "loophole" or are they "pushing the envelope" ? Even if we cannot make students take support classes, we can highly recommend that they take the support classes.

Los Angeles Mission College

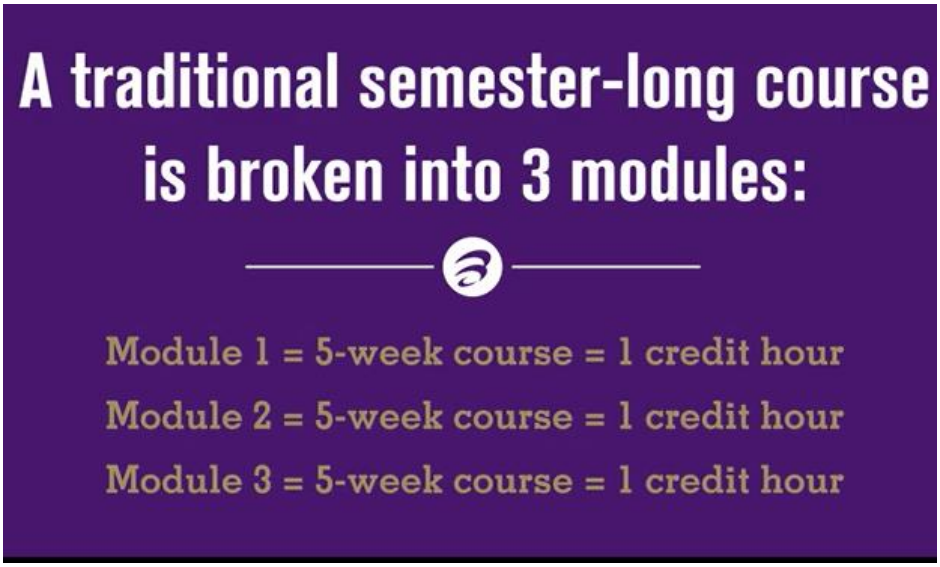
At LAMC, Statistics classes has both attached and non-attached support classes. The classes with the attached support fill first. Pre-Calculus, Statistics, and Applied Calculus have a 2-unit lab built-in. I would like to pursue this option for Moorpark College. In Fall 2023, the math department held workshops throughout the semester that were topic-specific for College Algebra; the attendance was very low. In Spring 2024 they are trying the workshops again but not topic-specific. They hope to see if they have better attendance.

There is a 4-week Summer Program and 2-week Winter Program offered to students through the school. This is for any student and this program is paid for by grants.

Butler Community College, El Dorado, Kansas

Butler Community College has claimed that their new method of offering traditional semester-long courses in three modules is helping students to be successful.

Math Modules at Butler



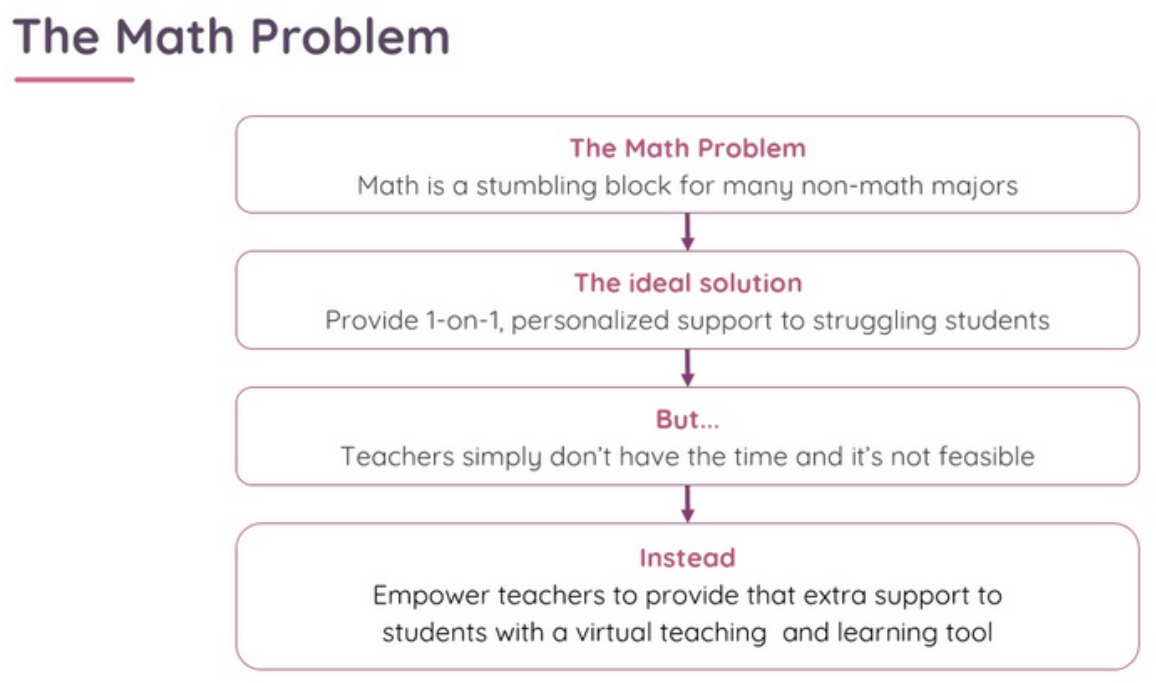
I thought about this long and hard and I do not believe that we would be allowed to do this with AB-1705, but could it hurt to ask? Have we tried this in years past, like 20 years ago? If memory serves me correctly, I think Ventura College had something similar to this. It was for Math M01 or Math M03 and it had 5 modules, one for each unit. They were self-paced classes and I think they used the program Aleks, or something similar to it like Hawks.

Radboud Universiteit, Netherlands

I attended the Webinar: *Math for non-math majors. Engaging students with digital real-world math*, sponsored by Sowiso, an online learning & testing environment for STEM used at Radboud Universiteit, engaging students and saving teachers time. This online platform includes interactive math exercises. They stated these two premises:

- Students' struggles lead to lack of confidence in their skills and a lack of motivation.
- Instructor's main struggle is dealing with student's disengagement and demotivation.

They explained that their method of reaching students include giving one hour for students to ask anything. They also refer students to the videos available on Sowiso.com. They reach out to struggling students and schedule one-on-one meetings. They discuss the student's daily life to make connections, and also dispel myths of math. This online program Sowiso.com uses Interactive Theory in which students interact with graphs, then they are given endless practice problems online, followed by a testing module. The teacher looks at the student's progress reports on this program and identify at-risk students. This reminds me of our Aleck's online program that several or our math faculty are using. They shared this visual-aide they used in their presentation to describe the premises and their conclusion.



BEST PRACTICES

Support Material

ASCCC and CCCCO

I read through both websites of ASCCC.org and CCCCO.edu looking for any kind of support material. I found many articles on the subject of AB-705 and AB-1705. I read several of these articles but did not find any support material nor any type of support for that matter. I did not find any success stories or anything useful that we could implement in our math courses. The only thing that I found was that support classes and more tutoring is what we should be doing and what should work. “Should” is the operative word.

Student Support on Campus

I believe we all have different ideas and definitions when we say “student support.” My idea is finding engaging and interactive lessons and materials to use in the math classroom. Several of our math faculty “rock” at this and were able to be part of the PROMESAS program in which we learned and shared many of such engaging math lessons and activities to supplement our lessons.

Nonetheless, I continued looking for any kind of support. One kind of support I found is helping students to stay off or get off of academic probation. I attended the Webinar *Academic Probation Reimagined*, presented by our own Oleg Bespalov, Dave Anter, and Jodi Dickey, from Moorpark College. It was a very helpful webinar; however, I knew most of the items that they shared since I have been teaching at Moorpark College for 10 years. One new thing I learned is that there is a desire to change the expression “Academic Probation” to “Academic Notice.” I think this is a great move so as to remove the negative connotation.

I also attended the Webinar *Decreasing Racial Inequalities in Transfer*, by Dr. Darla Cooper and Dr. Katie Brohawn, sponsored by the RP Group. They followed the transfer journeys of over 7,000 African American/Black community college students. For the students in their program, it was mandatory to participate in Umoja. What is Umoja? I had never heard of this. Umoja is a single, global solution that is enabling efficient and transparent management of the United Nation's financial, human and physical resources and improving programmatic delivery. Umoja is the Swahili word for "unity." It is one of the principles of Kwanzaa: to strive for and maintain unity in the family, community, nation, and race. Umojacommunity.org connects over 70 community colleges.

Here are the main points and tools that were presented in this webinar to help students stay off of probation:

- Ask “What challenges are you facing now?”
- Use an Early Alert program as soon as they miss one class and/or one assignment.
- To help them get back on track, find out what they need.
- Students should see their counselor at least three times (I assume per semester).
- Note that Black students are not the sole responsibility of Black faculty.
- Faculty and staff to have Trauma Informed Practice training. This training provides an overview of what trauma is and how it affects people.

- Use PipelineToPossibilities.com, a program committed to educating youth on various aspects of the justice system & inspiring youth to become leaders in society.
- Use Umoja to connect to students, to support them, and make relationships to get to know them.

The presenters encouraged schools to put resources behind the outcomes that we want to achieve, and to put "community" into community college.

Another webinar I attended was *Belonging* by Joyce Mueller and Dr. Bryce Bunting, sponsored by Xan Edu. They shared the following outline in their presentation:

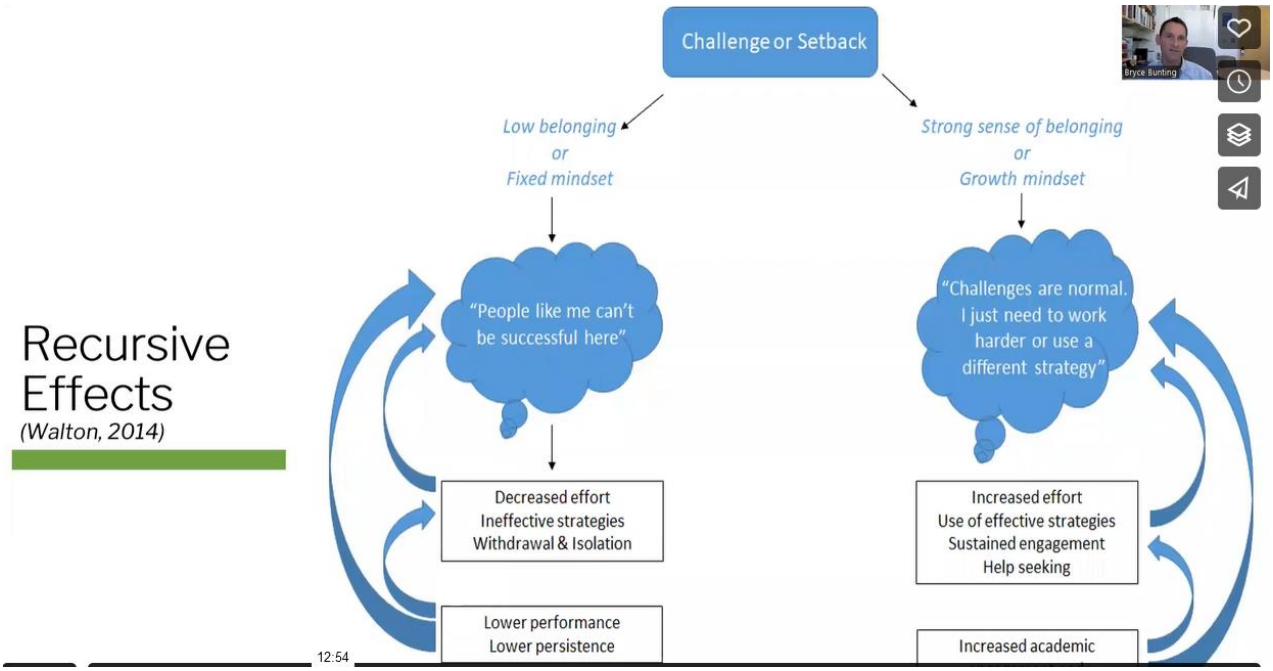
1. How to be successful: Growth = Effort + Effective strategies + Help-seeking
2. Fast Friends Procedure. Have students pair up, ask several questions of each other.
    a) Fosters social belonging and connection.
    b) Decreases fear of rejection / marginalization.
    c) Increases likelihood of day-to-day conversation.
3. Values Affirmation Exercise
    a) Identify your most important values
    b) Reflect on why these values are important to you.
    c) Know that "I am more than just my grade."

Here are some questions that can be used in the "Fast Friends" Procedure:

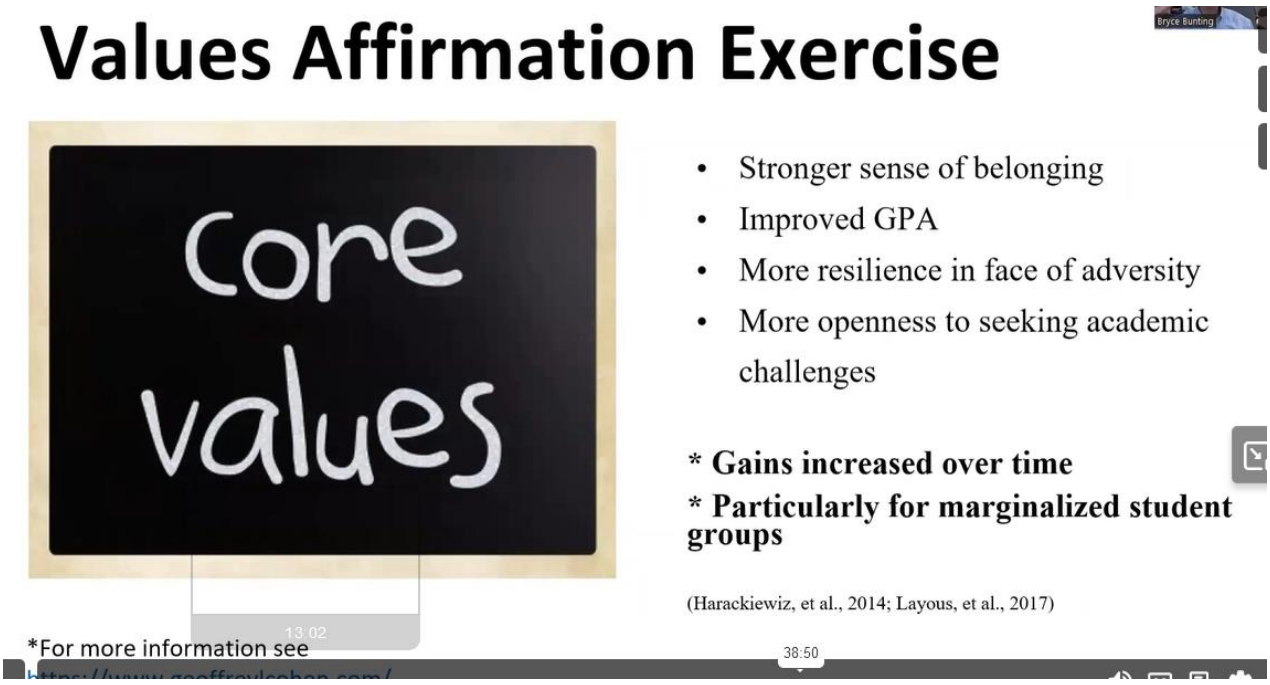
Three main factors of belonging that they shared are: Social-friends, Academic, and Campus-Community

- Social is finding friends with shared interests, and participating in student organizations.
- Academic refers to a student feeling competent in class and comfortable engaging with faculty.
- Campus-Community is a more holistic feeling of being generally accepted and valued by the college.

Here is a visual that they shared that really helps us see the cycles that a student can get in.



And here are results that they shared that are proven effective.



The presenters also promoted this book. It probably would be good for all of us to read.

The presenters invited us to contact them if we have any questions about their webinar.

Virtual Corequisites

I watched the video provided by Strong Start to Finish on the topic of Virtual Corequisites asking the question if it is as good as in person or good enough? This was a discussion of shifting to online teaching during the lock down by a panel of math and English faculty, deans and directors with connections to corequisite support models. I believe several points are still relevant today. Here are some items they shared:

- Going out of their way to connect with students before they dropped and “disappeared.”
- Equity issues: provide technology to students.
- Analyze your own data: check on students if they have access to tutoring; if they are participating in discussions; do they have the student experience; are they active and collaborative in their learning.
- Accessible and inclusive: “Student Hours” instead of “office hours;” Community of learners.
- Message students who have not turned in assignments.
- Teacher training, faculty development, and wrap around services including mental health.

I believe we are doing most all of these items and have “lived through” and learned these during the lock down. Two things that stood out to me are 1) Analyze your own data; and 2) Message students that have not turned in assignments. I have analyzed my own disaggregated data before, although I have not since the lock down. Farisa Morales (Physics) and Vincent Crisostomo (Chemistry) conducted an initiative, with the direction and support of the deans, for faculty to analyze their own disaggregated data. I would like to continue to do this and also encourage our math department to do this as well. It is very telling and helpful to look back at the classes we taught, what we were going through at the time, whether teaching too many units, experiencing illnesses or family losses, or struggling with any other kind of stress.Then make a plan moving forward on how to improve when we have difficulties ourselves. It is very

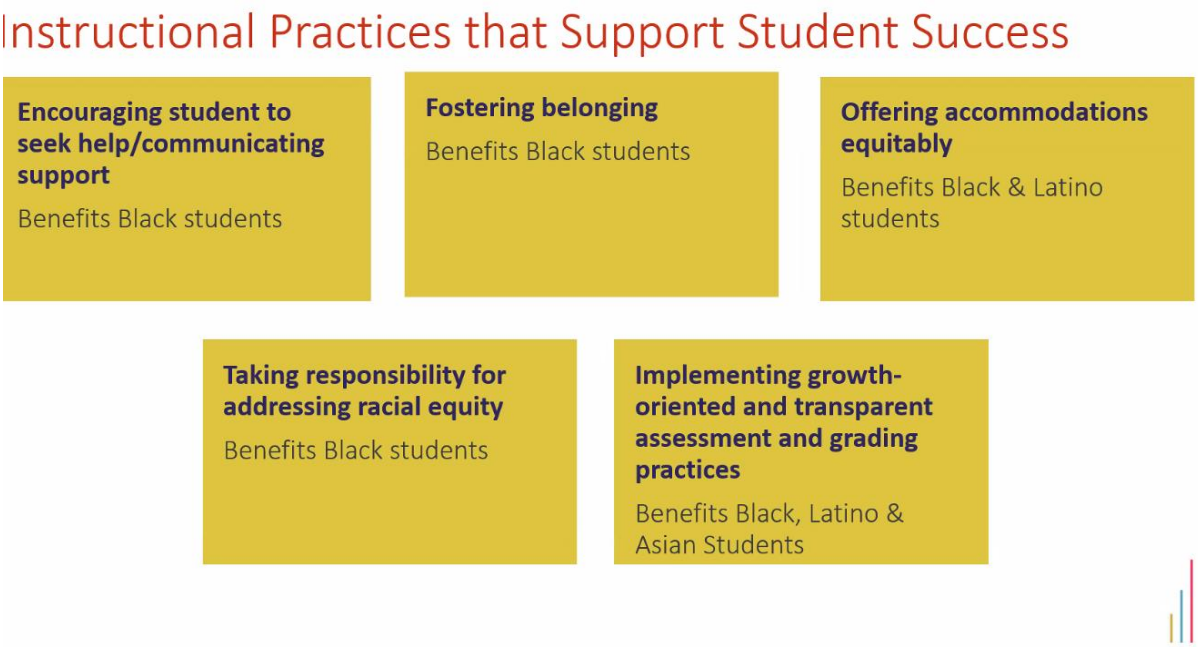
difficult to separate work life with personal life especially for teachers as we have a deep desire for our students to be successful.

The other topic is very important as well, to message students who are not turning in assignments. I believe this is truer for online classes as students can just fall through the cracks and then “disappear” quickly. I do this for my online classes and I know it takes a great deal of time, but I believe it is very important to take that time.

Sharing Best Practices

Instructional Strategies

I attended a CAP Webinar entitled *Instructional Strategies*. They had a panel of presenters which included Linda Hintzman, Pasadena Community College, and Analinda Arrozo, Cuyamaca College, who shared their findings on pass rates. In Statistics, they found that Black and Latino students had the lowest pass rates. Also, they found that the help and encouragement from math faculty were the most important factors to student’s success in their transfer-level math class. Below are Instructional Practices that they reviewed to further help students.



I believe the math faculty at Moorpark College have been doing the first box for many years: “Encouraging student to seek help/communicating support.” For the second box, “Fostering belonging,” I believe that the pod-style classrooms greatly help fostering belonging. I understand that some teachers do not like the pod-style classroom, so I ask, what other ways can faculty foster belonging? We have PAL sessions in the Learning Center and some teachers give group work study guides to do outside of the classroom, including me. For the 3rd box, “Offering accommodations equitably,” we do offer accommodations through ACCESS. What other accommodations can we offer? The fourth box is “Taking responsibility for addressing racial equity.” At Moorpark College, we have the TMWOCA (Teaching Men and Women of Color

Advocates) group of teachers and they have a “hub” on CANVAS for faculty and staff to participate in and to learn and share information with each other. However, what kind of responsibility am I require to do? We teach math. This topic rarely comes up in our classes, but I am sure we all address it professionally if and when it does come up. The last box, “Implementing growth-oriented and transparent assessment and grading practices,” can mean clearly defined standards, helpful feedback, marks that indicate progress, and reattempts without penalty. I personally do not agree with allowing college level students to re-take exams especially without penalty. If we do, then we are actually penalizing students who are well prepared and have put in the work and study time for the exams and enabling students who are not regardless of their background and ethnicity. There needs to be some standard of what a grade means on a test and for a class. Otherwise, I feel this is along the lines of “give everyone a trophy.” It rewards students who do not do their assignments nor practice for the tests. However, some teachers do allow this; it is their pedagogical practice and they have the academic freedom to do so. Overall, I believe all of these topics in the boxes we are already doing. To ask teachers to do more, we are just stretching them too thin and “burn-out” can occur. The best teacher for students is one that is not burned-out. Here are some other ideas that the panel suggested:

- Teachers hold office hours in the tutoring center.
- Call office hours “Student Visitation Hours.” (There could be a negative connotation to this.)
- Shared office hours with any teacher with the same course.
- Include the theme or message in the syllabus: “We are doing this together.”
- Contract grading.
- “Check-in so students don’t’ check-out.”
- Students need a sense of belonging to counter act their feelings of “Am I the only one?”

Growth Mindset

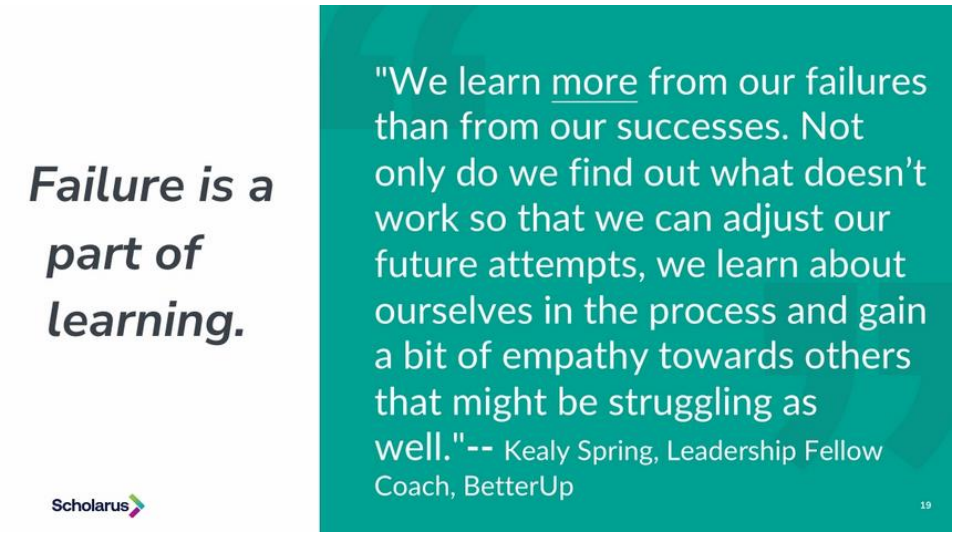
I attended this webinar: *Support for Struggling Students*, Presented by XanEdu and Dr. Amy Baldwin.

They shared several helpful ideas. Here are some of them:

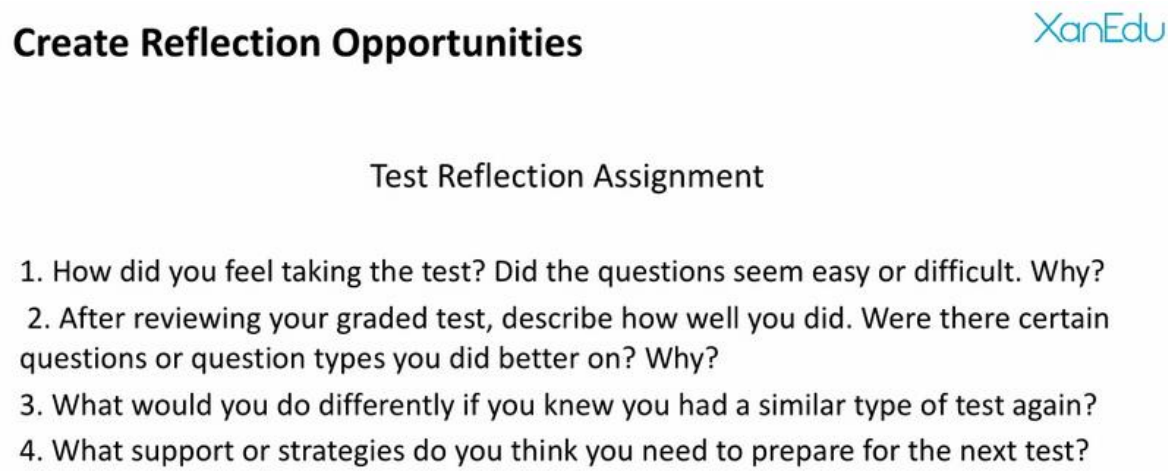
- Put in your syllabus “Be informed participants in your own learning.”
- Create a culture of support on campus.
- Teach students that struggle and failure are part of the learning process.
- “Crises of Confidence” during the semester. Take the opportunity to share strategies.
- Give a real story about a student of how they overcame their failure.
- Share with students your own past and current struggles.
- “Fail Forward Week” after 4 to 6 weeks into the semester. Take time to stop and reflect upon the positive outcomes of their failures. The challenge is not whether you can manage to never fail, because we all will fail, but how you respond to your failures.

They shared a famous quote by a famous writer: “No matter. Try again. Fail again. Fail better.” This gave me the idea to find more quotes from famous people to share with students. (See Appendix A)

Here is another quote that they shared in their presentation:

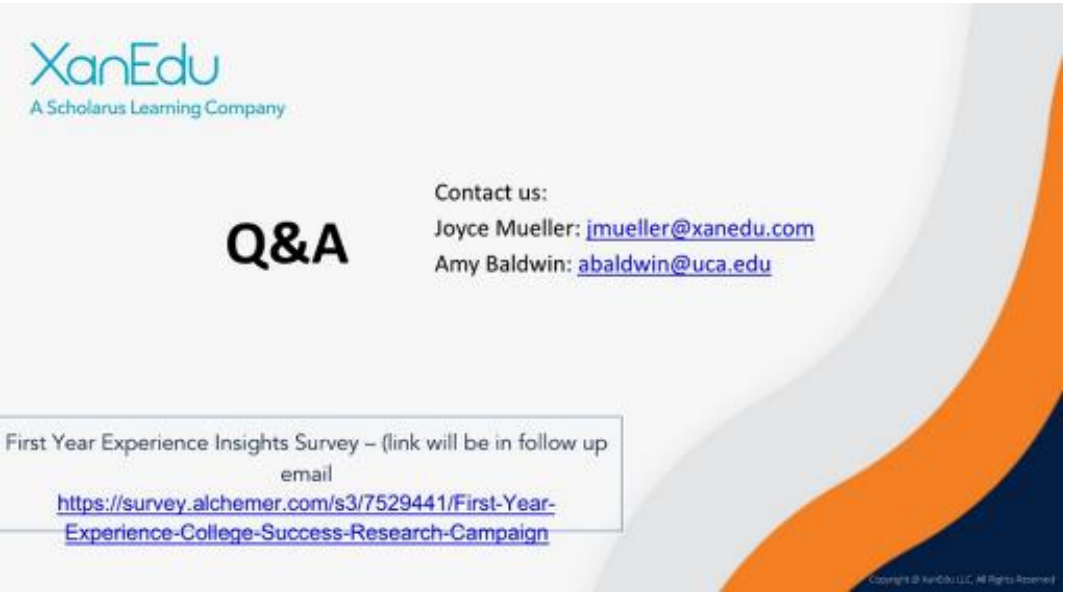


Another strategy that they shared is to give Test Reflection Assignments. I know that several teachers in our math department already do this, as well as myself. However, I have not used a question like number 3 below. I think this is a very good question to include; I will start using it in my classes. The presenter shared that students will learn more effectively if they monitor their own learning process. When they start having difficulties, they need to adjust their behavior and strategies to learn the material.



In this presentation, they talked about the Growth Mindset vs the Fixed Mindset. I have already created discussion assignments for my online classes and will share them here (in Appendix B). I know that other teachers also have Growth Mindset in their CANVAS courses and lesson plans. So, this is nothing new to our math department, but this is a very good illustration that they shared:

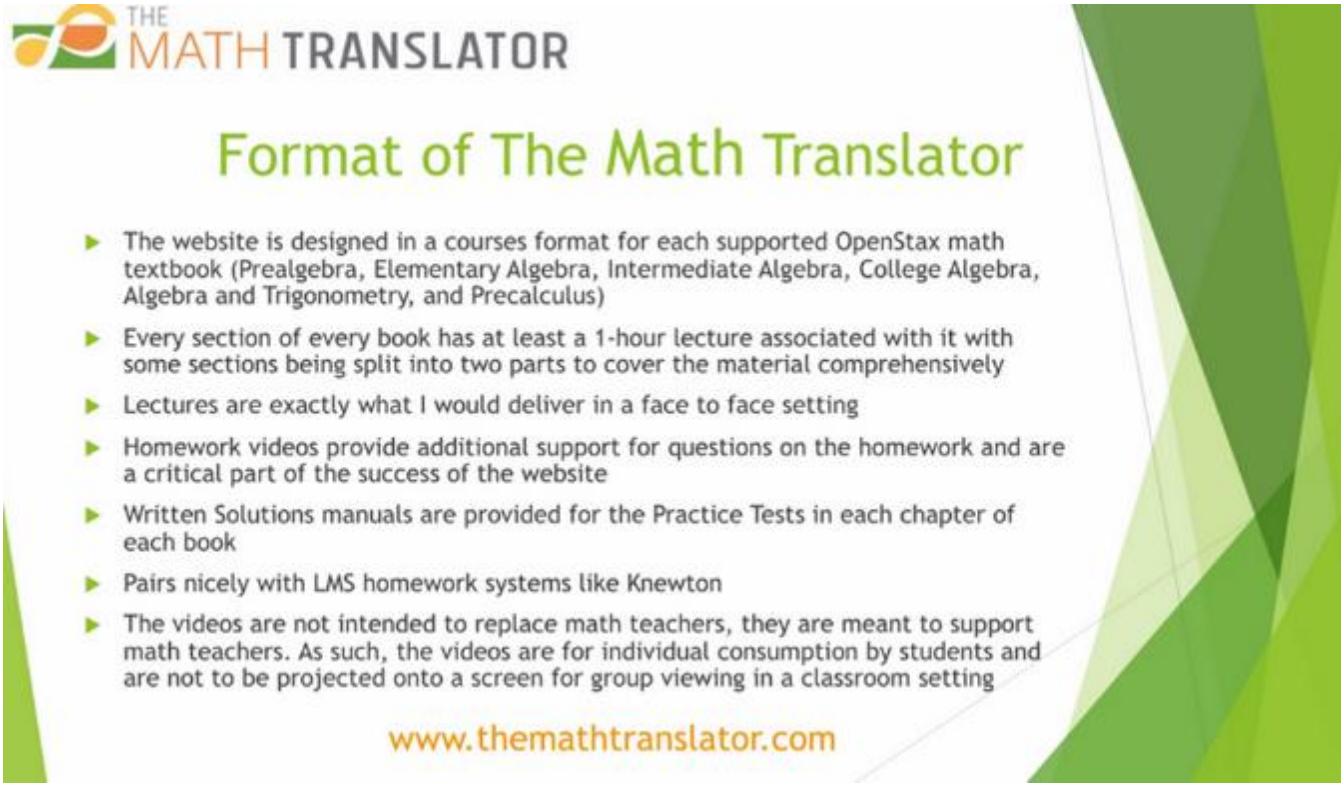
Here is their contact information:



Online Platforms and Programs

The Math Translator

Professor Melissa McNickle presented the online program TheMathTranslator.com. Not only did she present in this webinar, sponsored by OpenStax, she created this program. She shared that the OpenStax free online textbooks, created by RICE University, Houston, TX, are being used in 150 countries and that 70% of colleges (in the US?) are using it (including our math department at Moorpark College). What she created are video lessons that pair up with the OpenStax textbooks. She made short snipit videos but also full lessons, as she would give in her classroom. Each section is a one-hour lecture. She has made videos for College Algebra, Trigonometry, and Pre-Calculus. She also made videos for the odd numbered homework problems. It pairs with LMS homework like Knewton. It is meant to support a math class and not replace math teachers. Instructors log-in is limited: the first two weeks are free to check it out; then it must be renewed every 6 months. (It was unclear if there is a cost to the teacher and/or the institution.) Instructors cannot project these video lessons onto a screen in a classroom to use in place of the teacher's own lecture. Students have access to individual subscriptions. The first two weeks are free to check it out. The cost is $18.99/month or $199.98/year for students. This seems like a very good program to use since we are using OpenStax in many of our classes. I encourage our faculty to check this out, see a demonstration and discuss this at one of our faculty meetings.



Grasple X

I attended a webinar, sponsored by OpenStax, that Boris Odinot and Pim Stuurman presented on Grasple X, an interactive online learning tool: grasple.com. This program offers an open education with a business model. It is an "Open Collaboration" in which teachers can create content together. It is connected with OpneStax and has the same homework problems. Teachers can monitor student's progress, they can give exams, and they can work on or change existing problems as well as create their own content and courses. The book is on one side of the screen and the homework is on the other side of the screen making it helpful for students to utilize this resource. A teacher's account is free. However, a Premium Teacher Account can be purchased for $500 and used for the first 50 users, with a maximum of 200 students. This gives students free access to the program. They have created a Calculus course. This could be very useful for our math faculty now that Calculus is becoming the baseline for STEM students and we have more online courses.

Game-Based Learning

Game-Based Learning in College Mathematics by Kathleen Hoffenholly is a free interactive online learning tool using games and activities to review and reinforce math concepts. I found this on the FaceBook AB-705 group.

Maple Soft

User Case Study wrote the article *Innovating Math Teaching: Maple Learn's Impact at Siera College.* The case study was on Professor Donna Smith, math professor, Sierra College, who started using Maple Learn to enrich her classroom instruction. Maple Learn is an online mathematics teaching and learning platform developed by Maplesoft. Smith said that her students' performance improved, they became more confident in their math abilities, and that it fosters independent learning. The program is highly interactive with simplification capabilities and works for both advance students and for those struggling with math.

Summer Programs

CSUN

Cal State University of Northridge conducts a summer program called Pathways to Excellence. This webpage shows the program in detail for the two options for incoming freshmen students:

- **Math and First-Year Connections** — a comprehensive, four-week session with two courses: University 100 (UNIV 100); Early Start Math 196P (ESM 196P)
- **Math Connections** — a shorter, three-week session, with only one course: Early Start Math 196P, STEM and specific non-STEM class sections

The first option, Math and First-Year Connection, meets four days a week, for four hours a day, for four weeks in the summer. In addition to taking these courses, students will meet with peer mentors, receive tutoring or coaching, and participate in social activities.

The second option, Math Connections, is 2 ½ hours a day, for three weeks in the summer. In addition to taking this course, students receive tutoring and meet with peer mentors.

For the ESM 196P class, students can choose from:

- Morning, afternoon or evening classes.
- Classes that meet fully or half online.
- Class sections for STEM and specific non-STEM majors.

I recommend that we model a 2-week program after the Math Connections program.

Cabrillo College

Cabrillo College offers a free, non-credit “Math Plus” program designed to prepare students for their fall or spring math courses. They offer a day time, in person option that meets for one week for 6 hours each day. And they offer an evening time, online, that meets for two weeks for 3 hours each evening. This is similar to our Bridge programs, but our Bridges are only 2 days which, in my opinion, is not enough time to review material and prepare students.

Cal Poly SLO

California Polytechnic State University, San Luis Obispo offers a summer enrichment program called Summer Springboard to incoming freshmen. In fact, several universities across the nation and in other counties offer this program to their students which offers a rich taste of life on a major campus and a rich academic curriculum with dynamic workshops and projects that foster self-discovery.

EXPLO

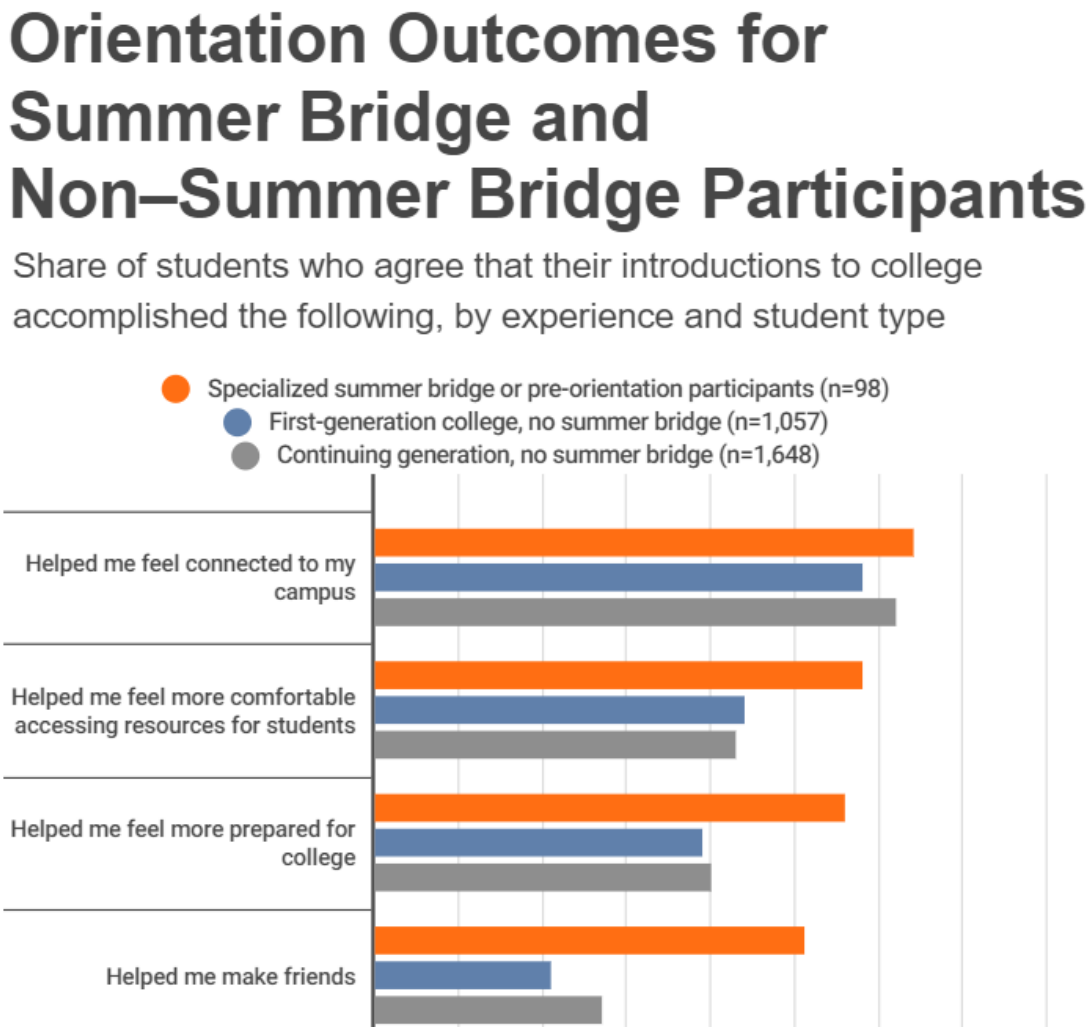
EXPLO is a pre-college summer program in which students select 2 courses and 3 electives to get a taste of the subjects before the term begins. This program helps students take charge of their own learning, discover their interests in different subjects, and makes lifelong friends. It gives students a unique insight into a career that they may be pursuing. The program offers students an advantage as it helps them navigate life as a college student before they start college. The EXPLO pre-college summer program is at many universities such as Wellesley College, near Boston, MA; Georgetown University, University of Rochester; Brown University;

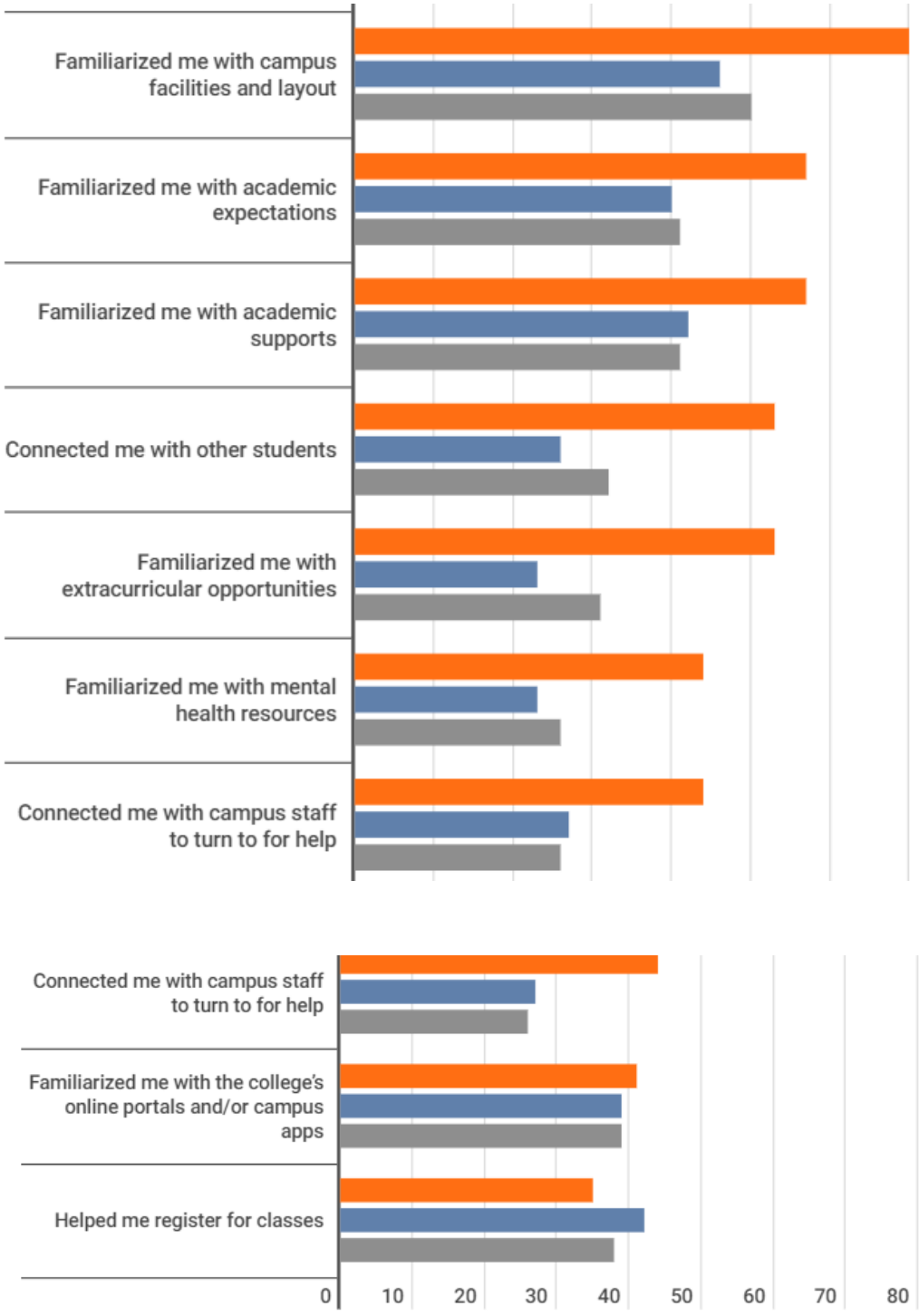
Parson Paris, France; Wake Forest University, Tufts University, and the list goes on. Students experience college-level study with fun activities while building life skills.

Student Voice Collection / Inside Higher Ed

Summer Bridges Builds First Gen Connections

I read this article by Colleen Flaherty on Inside Higher Ed, part of the Student Voice Collection, September 15, 2023. The article has several testimonials from first-generation students who participated in a summer bridge program and claim that it greatly helped them with accessing resources, preparing for college, and socially connecting with other first-generation and continuing-generation students. The survey asked 3,000 two- and four-year college students. Here is the data:





Source: Inside Higher Ed/College Pulse survey of 3,000 college students.

Student Voice is an Inside Higher Ed and College Pulse collaboration.

Websites

MathTV.com

This site has free math videos in both English and Spanish in topics from Beginning Algebra to Calculus. It also has Study Skills and now it has Corequisite courses for Statistics and College Algebra. It's main focus is math classes at the college level.

PurpleMath.com

This site also has free math videos for College Algebra. It has a broader range of offerings for K-12 math and Standardize Test Preps.

Khanacademy.org

Most math teachers and students know this site well. It is an even broader site that includes many topics at many levels, not just math.

Texas Instruments Family of Functions modular course

These are videos on graphing functions that are on the Texas Instruments website.

Desmos.com/calculator

Most teachers know about this free online graphing calculator. I use it in my Trigonometry and Calculus classes. Students can see how functions work with all of the transformations. It takes time to learn this program and create lessons with it. Perhaps we can do a workshop for the math department to learn how to implement this program in their classes.

CONNECTING TO LOCAL HIGH SCHOOLS

School Districts and High Schools with webpages:

There are 15 high schools near Moorpark College that I found on the Ventura County Office of Education (link below). Five math teachers, that is one-third, responded with a “Yes” that they would like to meet with Moorpark College math teachers. All 5 teachers prefer meeting on Zoom rather than meeting in person at Moorpark College.

Ventura County Office of Education

Conejo Valley USD		
Conejo Valley High School	Cameron White, math chair	
Newbury Park High School	Kristina Keener, AP of Instruction	
Thousand Oaks High School	David Nystrom	
Westlake High School	Lisa Ryder, math chair	responded: YES
Thousand Oaks (private school)		
Hillcrest Christian School	Charlie Lee	
Moorpark USD		
Moorpark High School	Scott Mangers, math chair	
Simi Valley USD		
Royal High School	Bob Willging, math chair	
Santa Susana High School	Matthew Duda, math chair	responded YES
Simi Valley High School	Pam Atkison	
Apollo High School	Dean May, principal	
Simi Valley (private school)		
Grace Brethren High School	Joy Tsang, math chair	responded YES
Oak Park USD		
Oak Park High School	Robin Midiri, math chair	responded YES
Oaks Christian School	Sarie Anderson, math chair	
Las Virgenes USD		
Agoura High School	Anna Robinson	responded YES
Calabasas High School	Michael Yeung, math chair	

Here is the email letter that I sent out to the High Schools:

Hello! I hope this letter finds you well.

This is Renee Butler, math instructor from Moorpark College, reaching out to the math departments at the high schools that are our “feeder-schools” to Moorpark College. In years past the MC math department have had collaboration meetings with high school math teachers for communication and support between our schools.

The math department at Moorpark College is again reaching out to the high school math departments to reconnect, especially now in light of the new law AB-1705. This law does not allow California community colleges to offer Intermediate Algebra classes or below anymore. In our opinion, this new law is causing more students to drop out of classes, and those who wrote the law (Irwin, district 42, Ventura) are more concerned about through-put. This law is trying to force students to pass a transfer math and English class within their first year of college.

Would you/your math department be interested in reconnecting (or connecting) to meet with the math teachers at Moorpark College to discuss what to expect from this new law, and work together to help students transition from high school to college? In past years we met on the campus at Moorpark College. Perhaps now, for more convenience, we could meet on a zoom call. If so interested, please let me know. I will be working with my math department to set up a meeting sometime in the Spring 2024 semester.

Sincerely,

Renée Butler
Math Professor
Moorpark College

NON-CREDIT MATH COURSE

In my sabbatical proposal, I stated that I had talked with math faculty, the math chair, our dean, and the VP of AA regarding our concerns about the affects of implementing AB-705/1705. I mentioned that John Forbes suggested that a non-credit math class would be a good strategy to try. My plan was to start to write curriculum and/or organize such a non-credit math class that students could take prior to taking their transfer level math course. I envisioned that such a non-credit course would be 8-weeks. This is so a student could take this class during the first 8-weeks of a semester, and then enroll into their transfer level math course for the second 8 weeks of the semester. I thought this was brilliant. However, as I was doing my research, I came across and read the following from the AB 1705 Implementation Guide:

"4. By July 1, 2023, a community college shall not enroll into non-credit coursework students who have graduated from a United States high school or been issued a high school equivalency certificate, as a substitute or replacement for direct placement and enrollment into transfer-level English and mathematics coursework. Statute references: §78213 (i)(4)"

This means that colleges can enroll students into non-credit corequisites but it is required that students are co-enrolled in transfer-level coursework. In other words, we are to create and use support courses. However, from our own data and experiences these past few years, the data has shown these support courses are not working and students are not enrolling in them.

According to this, we would not be able to offer a non-credit math course to prepare students for their transfer level math course. This "burst my bubble" so to speak. So, my focus turned to creating a summer course or "math jam" similar to what other community colleges offer.

My thought: Students who enroll in a Calculus I class can have the option to enroll in a Pre-Calculus class for non-credit concurrently. Can we make one CRN both credit and noncredit? Probably not. If Calculus I students can take a Pre-Calculus class, or even an Algebra class, as a corequisite for non-credit, then they could have all the math tools they need to be successful in Calculus. However, students probably will not want to take two math classes as one time, and not have one of them count on their transcripts.

SUMMARY

Review

In reviewing the purpose of my sabbatical, I was able to research various models of curriculum and support classes, attend many workshops and webinars, and find successful best practices from other community colleges, universities, and professionals. And now I am sharing this research with our math department, dean, administrators and the district to work on the goal of improving the success rates of our students in their transferable math class within a year. Reviewing my timeline in my sabbatical proposal, I accomplished almost everything that I set out to do. I was able to gather data on the effects of AB 705 /1705, and gather information from other community colleges and from online programs. I was unable to attend math conferences due to the cost, and I did not work on a non-credit math course since AB 1705 does not allow students to take such a class. Students must take concurrent support classes.

Suggestions

Gather Data

We should acquire our Complement Throughput data to find our own unit rate of complete to noncomplete of students' transferable math classes. We need to continue to monitor the Successful Transfer-Level Completion Rates in Math on the CCCO website for Moorpark College. I also suggest that we set up a workshop day to analyze our own disaggregated data and share any outcomes or insights that we may discover about our own data.

Self-guided Placement survey

For entering students, there should be a self-guided placement survey to help guide student as to which math courses and/or path they should take when selecting classes.

Design Corequisite Course

In addition to the support classes that we already have, we need to write support classes for other transferable math classes and I highly recommend that they be connected to classes with the same professor. Furthermore, I would like to explore the idea of having a 2-unit lab connected to any of our math courses similar to the math courses offered at LA Mission College.

Smaller class sizes

No other department has been affected to the degree that the math department has been affected with the passage of this bill. With the tasks set before us in this new era of AB-705/1705, smaller class sizes are necessary so that we can better help underprepared students, which is a majority of our students, to be successful in passing their transferable math class within a year. Teachers will be able to reach more students in each class with a variety of levels of student preparedness. To give an example, Cypress College has a maximum number of 35 students in each of their math classes.

Math webpage

I would like to work on the math webpage with another math teacher to add videos of success stories, a self-placement survey, and to include remediation videos.

Utilize CANVAS Best Practice course

I have started a Best Practice course in CANVAS and would like to have it available to all math faculty to add helpful activities, rich tasks and review material. Faculty can share anything that they would like to that has worked for their classes.

Attend OpenStax and other online webinars

I highly recommend that math faculty attend online webinars from OpenStax, Inside Higher Ed, The RP Group, or any accredited math group or forum. They are highly resourceful and give very helpful insight and ideas.

Create a Summer Program: Math & Study Skills

This is certainly not the least on my list, but actually the highest recommendation that I am giving to my math department and dean. After reviewing and researching the many summer programs offered at other colleges and universities, I see how valuable a summer program can be. I have already started working on such a program. I drew from the information and plans that my team created from the Leadership Academy, in the district led by our previous chancellor Dr. Greg Gillespie. I would like to share my plans that I have started to create a 2-week summer program for students to review math concepts and prepare to be a student at Moorpark College.

Plans Moving Forward

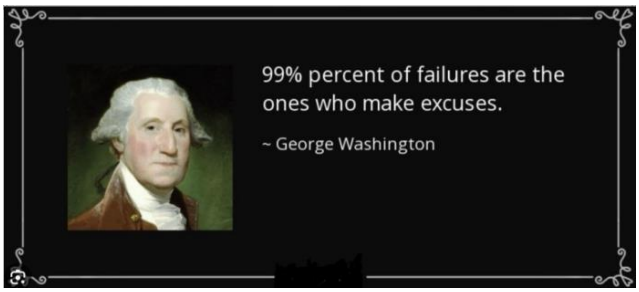
I am ready to work together with my math department, our dean, and VP of AA to develop the best plan for support for our students. We can collaborate on forming plans proposed in my suggestions and from my research, to obtain the goal of improving the success rates of our students in their transferable math class within a year since the implementation of the new law AB-705/1705.

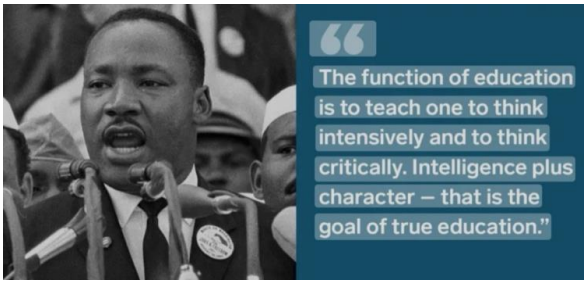
Finally, I would like to thank VCCCD for allowing me to have this sabbatical to research all of this material. I plan on sharing this with the Moorpark College math department, my dean, our VP of AA, and with our sister schools and our district as a whole. Thank you.

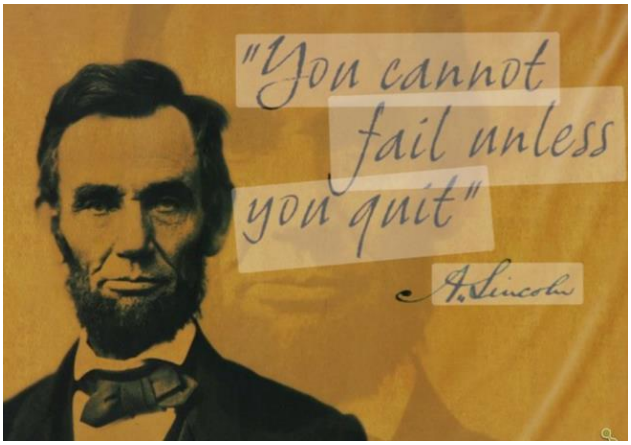
APPENDICES

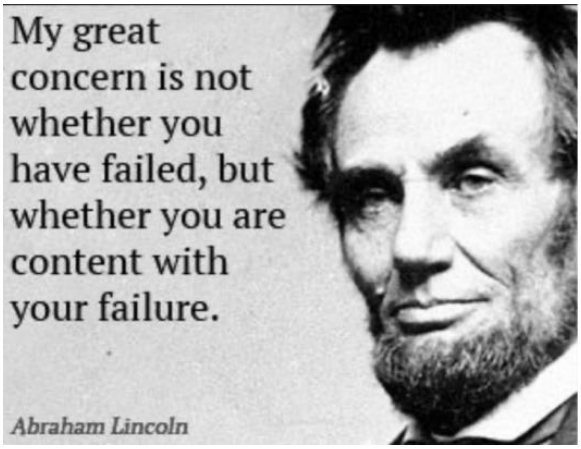
Appendix A

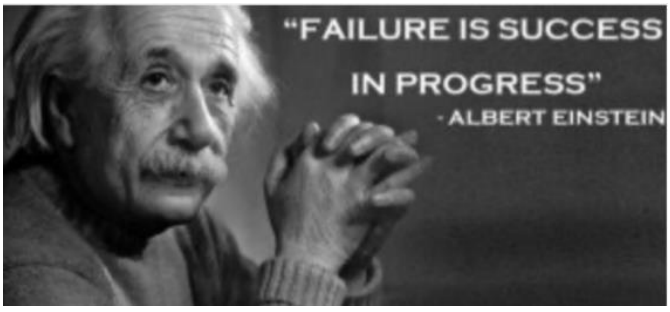
Quotes from famous people on the topic of "Failures."

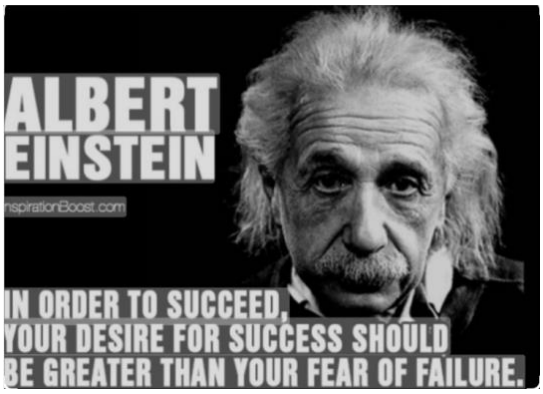


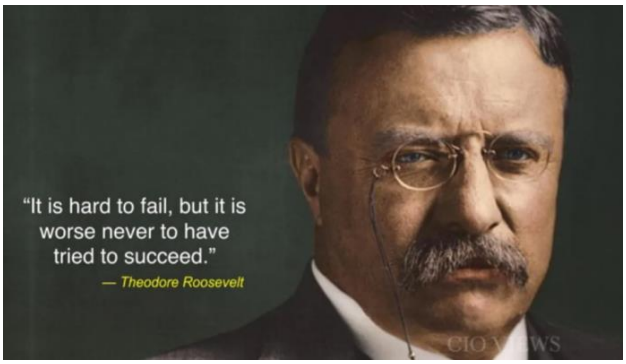




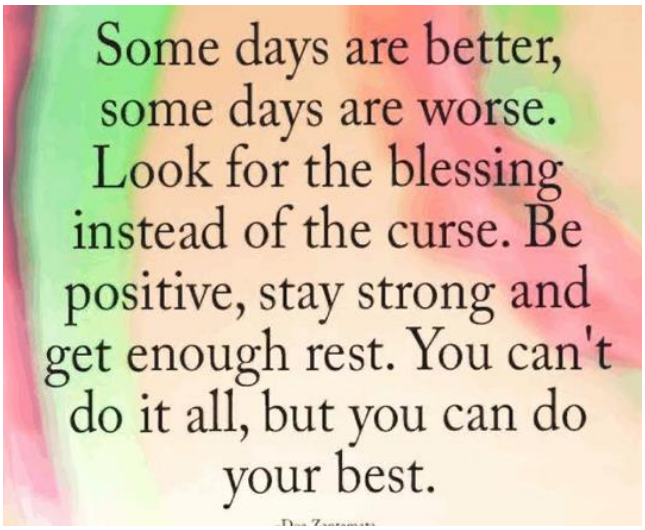


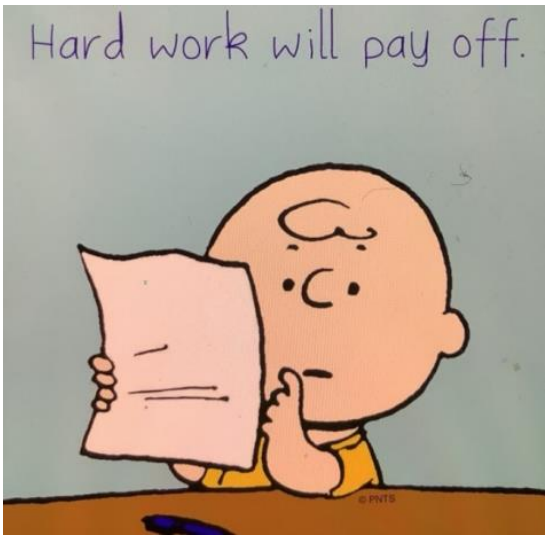






Also, some motivational quotes.





Appendix B

Discussions on Growth Mindset vs Fixed Mindset I use in my online classes in CANVAS.

Growth Mindset vs Fixed Mindset

Watch the Growth Mindset Video (about 4 minutes long). Then answer these questions.

Growth Mindset Video

1. What is something that a fixed mindset will say when faced with difficulties? How does it react to setbacks?

2. What is something that a growth mindset will say when faces with difficulties? How does it react to setbacks?

After posting, comment on at least two other student's posts for full credit. Also, you can 'like' post. I highly encourage you to go back to respond to any further questions or comments on your post or what you posted on other student's posts. Build a sense of community.

Growth Mindset Survey

Open up this pdf file and take the Growth Mindset survey. (survey on next page) (You do not need to print this out, just jot down your scores and use a calculator to find your belief index number). When you take this survey, answer according to what you have done in the past, not what you hope to achieve or what you think is the best answer. Be honest and think about how you approached math problems and math classes in past years and what you actually did back then.

After taking the survey, post your belief index number if you feel comfortable doing so. Comment on if this is what you expected or if this surprised you somewhat. Reflect on how you might change your belief index number and/or give suggestions on how to approach a math assessment with a growth mindset.

After posting, comment on at least two other student's posts. To generate a community of learning and to foster a growth mindset, go back and read any comments on your post, or on other student's posts.

Growth Mindset 6 Examples

Watch this 5-minute video about Fixed mindset and Growth mindset examples. There are 6 examples total. Please note: these video clips are from about 6 years ago, if not more.

As you watch each example, decide if it is a Fixed mindset or a Growth mindset. Then, near the end, at about 4:45 minutes, pause the video so you can read the chart and see if you were right about each example.

Video of examples of Fixed mindset and Growth mindset

Discussion: Pick one example that you either relate to or you find interesting. If it is a Fixed mindset example, give suggestions on how this person could have responded with a Growth mindset. If it is a Growth mindset example, reflect upon how this situation turned out in a positive way.

After posting, comment on at least two other student's posts. I encourage you to come back to this discussion and answer questions that other students may be asking of you and/or read the encouragement that they post. You can really make connections with this discussion forum.

Growth Mindset survey

Do you have a fixed mindset or a growth mindset when it comes to learning math? Take this survey to find out. Seven pairs of statements are given in the table below. Score your beliefs in the following manner:

- If you strongly agree with the statement in column A, record a 1.
- If you agree with the statement in Column A more than column B, record a 2.
- If you agree with the statement in Column B more than column A, record a 3.
- If you strongly agree with the statement in column B, record a 4.

Column A	score	Column B
1. There are many problems in my math textbook that I won't be able to solve, even if I try really hard.	1 2 3 4	1. I believe that if I try really hard, I can solve almost every problem in this book.
2. There is only one way to solve most problems.	1 2 3 4	2. There is usually more than one way to solve most problems.
3. The best way to learn is to memorize the different kinds of problems and the steps to solve them.	1 2 3 4	3. The best way to learn is to make sure that I understand the concepts and each step I take to solve the question.
4. Some people have mathematical minds and some don't. Nothing they do can really make a difference.	1 2 3 4	4. Everyone can learn math with the right opportunities to learn and with hard work.
5. I get frustrated when I make a mistake and want to give up.	1 2 3 4	5. I am comfortable making mistakes because mistakes help me to learn.
6. Mathematics is about getting the right answer by quickly recalling math facts.	1 2 3 4	6. Mathematics is about problem solving and critical thinking.
7. I don't think I will use very much math in my career path, so all I need to know is basic numbers and operations.	1 2 3 4	7. I need to develop a deeper understanding of math topics and concepts.

Add up your score and divide by 7 (you can round to the nearest tenth place). This number can be your belief index. If your belief index is low, closer to 1, you are currently more in a fixed mindset. If your belief index is high, closer to 4, you are currently more in a growth mindset.

Adopted from Mathematics for Elementary School Teachers 7e, by Bassarear & Moss, Cengage Learning.

SABBATICAL PRESENTATION

AB-1705: The Pendulum has Swung Again

Data, Programs, and Plans

Renée Butler

OUTLINE

Overview

Data

Other Colleges

Best Practices

Plans & Programs

Suggestions & Summary

OVERVIEW

The purpose of my sabbatical was to research various models of curriculum workshops, support classes and successful best practices from other community colleges, from webinars and articles, and any other form of communication I could find.

The goal is to improve the success rate of our students in their transferable math class within a year since the implementation and effects of the new law AB-1705.

THE EFFECTS OF AB-705

Article: AB-705 and Its Unintended Consequences by
Rosmarie Bezerr-Nader, Fresno City College, February 2020

- It has taken away advantages to several students, even though it has helped other students.
- Devalues diversity and returning students.
- Does not prepare students to take the ASVAB for military students and TEAS for nursing students, students seeking job advancements, and working part-time students.
- It has tunnel vision expecting all students want to finish a degree in two years, or even earn a degree.
- Instructors may be pressured to increase passing rates by diluting content.
- Takes away options for underprepared students.
- Modifications would be more efficient than elimination of developmental classes.
- Returning students who fail a transfer class three times will most likely not continue their college education and resign to accepting a low-paying, menial job.
- For equitable learning, respect the diverse educational needs and goals of California students, whereas California is one of the most diverse areas in the country.

THE EFFECTS OF AB-705

Article AB 705: Unintended Impacts on Classes and Faculty by David Morse, English Professor, Long Beach City College, April 2020

- Spending more time on teaching “soft skills” that the students are not getting the full university-level experience. Jeff Burdic, English Professor, Clovis College
- “Instead of learning about the beauty of mathematics, the fully prepared students heard boring explanations about arithmetic.” Math professor at the Los Rios District
- Faculty are doing much more work and are being stretched thinner causing fatigue. Lighter course loads or smaller class sizes could offset the fatigue caused by this new way of teaching. Lisa Fitzgerald, English Professor, Long Beach City College

Google

“AB 705 was created primarily to increase the number of transfer students; however, in doing so, it inadvertently decreased diversity and ignored the needs of returning students. A student who fails transfer-level math or English course three times is likely to become discouraged and give up on getting a better job.”

FACULTY ASSOCIATION OF CALIFORNIA COMMUNITY COLLEGES

June 13, 2022 Michael Burke wrote an article that discusses the new legislation, AB 1705, and how it will make it more difficult for colleges to enroll students in remedial courses. The FACCC states that they strongly oppose this bill while it has strong support from student organizations, the state Chancellor's Office, advocacy groups like the California Acceleration Project and the nonprofit law firm Public Advocates.

Responses to this article. (These are my people)

"…considers one piece of data: throughput. They count how many more students complete the transfer level course in 2019 compared to 2015. They completely ignore the drastic increase in the number of students that fail these courses and the impact that has on those students."

"Imagine returning to school in your 30s wanting to pursue a STEM degree and you are told you will need to start in pre-calculus. This is daunting for many students. It crushes dreams."

"AB 1705 assumes that the grades received in high school are correct and never inflated. Grade inflation is rampant among high schools and is used to pass students through on schedule, so as not to upset the parents and to hide the fact that some students are not performing at grade level."

"Why doesn't California give everyone a college graduation certificate together with the birth certificate?"

AB-705 BEFORE AND AFTER DATA

Transition in Math from High School to Community College Before and After AB 705, by Terrance Willett, dean of Research Planning and Institutional Effectiveness, Cabrillo College

Table 1. Transition from High School to Community College with Row Percentages

	CC Arith	CC PreAlg	CC El Alg	CC Geom	CC Int Alg	CC TL SLAM	CC PreCalc	CC Calc+	Total N
Fall 2016									
HS Arith	12%	29%	34%	*	21%	2%	1%	*	1,674
HS PreAlg	17%	40%	18%	*	23%	*	*	*	109
HS Alg 1	11%	32%	32%	*	22%	2%	1%	*	1,905
HS Geom	8%	23%	32%	*	31%	3%	2%	0%	4,296
HS Alg 2	4%	13%	24%	0.10%	40%	11%	8%	1%	8,044
HS Stats	2%	10%	17%	*	34%	19%	13%	5%	3,697
HS PreCalc	2%	6%	12%	*	37%	18%	19%	6%	4,745
HS Calc+	1%	1%	3%	*	20%	16%	20%	39%	1,776
F2016 Total Row %	5%	14%	22%	0.05%	33%	11%	10%	5%	100%
F2016 Total N	1,261	3,800	5,749	13	8,661	2,937	2,563	1,262	26,246
Fall 2019									
HS Arith	*	2%	4%	*	28%	50%	16%	1%	1,521
HS PreAlg	*	3%	*	*	45%	44%	5%	*	149
HS Alg 1	0.40%	2%	4%	*	32%	47%	14%	1%	2,048
HS Geom	0.20%	1%	3%	*	24%	53%	18%	1%	4,203
HS Alg 2	0.10%	0.40%	1%	*	13%	55%	28%	2%	9,528
HS Stats	*	0.10%	0.50%	*	9%	56%	27%	7%	6,335
HS PreCalc	*	0.20%	0.30%	*	7%	47%	33%	13%	5,843
HS Calc+	*	*	*	*	2%	31%	15%	51%	2,273
Fall 2019 Total Row %	0.10%	1%	1%	*	14%	51%	25%	8%	100%
F2019 Total N	32	171	382	*	4,430	16,248	7,965	2,670	31,900

Notes: * indicates cell had fewer than 10 students. Darker shaded cells represent higher values within each high school course level. Cells with an orange border indicate repeating already completed HS courses. See Appendix A for abbreviation definitions.

AB-705 BEFORE AND AFTER DATA

Transition in Math from High School to Community College Before and After AB 705, by Terrance Willett, dean of Research Planning and Institutional Effectiveness, Cabrillo College

Table 2. Success (Grade of C or Better) in First Community College Math Attempt after High School Transition

	CC Arith	CC PreAlg	CC El Alg	CC Geom	CC Int Alg	CC TL SLAM	CC PreCalc	CC Calc+	Total N
Fall 2016									
HS Arith	52%	46%	39%	*	37%	51%	43%	*	1,674
HS PreAlg	50%	41%	35%	*	36%	*	*	*	109
HS Alg 1	48%	43%	40%	*	29%	42%	40%	*	1,905
HS Geom	50%	55%	46%	*	41%	39%	34%	59%	4,296
HS Alg 2	64%	66%	58%	*	55%	54%	46%	39%	8,044
HS Stats	64%	65%	65%	*	65%	72%	69%	68%	3,697
HS PreCalc	66%	72%	69%	*	66%	68%	59%	58%	4,745
HS Calc+	50%	86%	79%	*	76%	81%	69%	74%	1,776
F2016 Total Row %	55%	57%	53%	54%	55%	64%	57%	67%	57%
F2016 Total N	1,261	3,800	5,749	13	8,661	2,937	2,563	1,262	26,246
Fall 2019									
HS Arith	*	27%	35%	*	27%	42%	31%	29%	1,521
HS PreAlg	*	40%	*	*	18%	15%	38%	*	149
HS Alg 1	50%	56%	33%	*	28%	33%	23%	41%	2,048
HS Geom	50%	49%	47%	*	30%	36%	23%	35%	4,203
HS Alg 2	57%	65%	49%	*	41%	48%	34%	32%	9,528
HS Stats	*	78%	55%	*	40%	59%	45%	65%	6,335
HS PreCalc	*	71%	60%	*	57%	65%	54%	44%	5,843
HS Calc+	*	*	*	*	69%	80%	66%	70%	2,273
Fall 2019 Total Row %	53.00%	53%	44%	*	36%	52%	41%	58%	47%
F2019 Total N	32	171	382	*	4,430	16,248	7,965	2,670	31,900

Notes: * indicates cell had fewer than 10 students Darker shaded cells represent higher values within each high school course level. Cells with an orange border indicate repeating already completed HS courses. See Appendix A for abbreviation definitions.

AB-705 BEFORE AND AFTER DATA

Presentation by Daniel Judge,

Math Professor at East Los Angeles College

Titanic Mortality Table	Men	Women	Boys	Girls	Total
Survived	332	318	29	27	706
Died	1360	104	35	18	1517
Total	1692	422	64	45	2223

Survive	Died	Unit Ratio
706	1517	2.149

AB-705 BEFORE AND AFTER DATA

Presentation by Daniel Judge,

math professor at East Los Angeles College

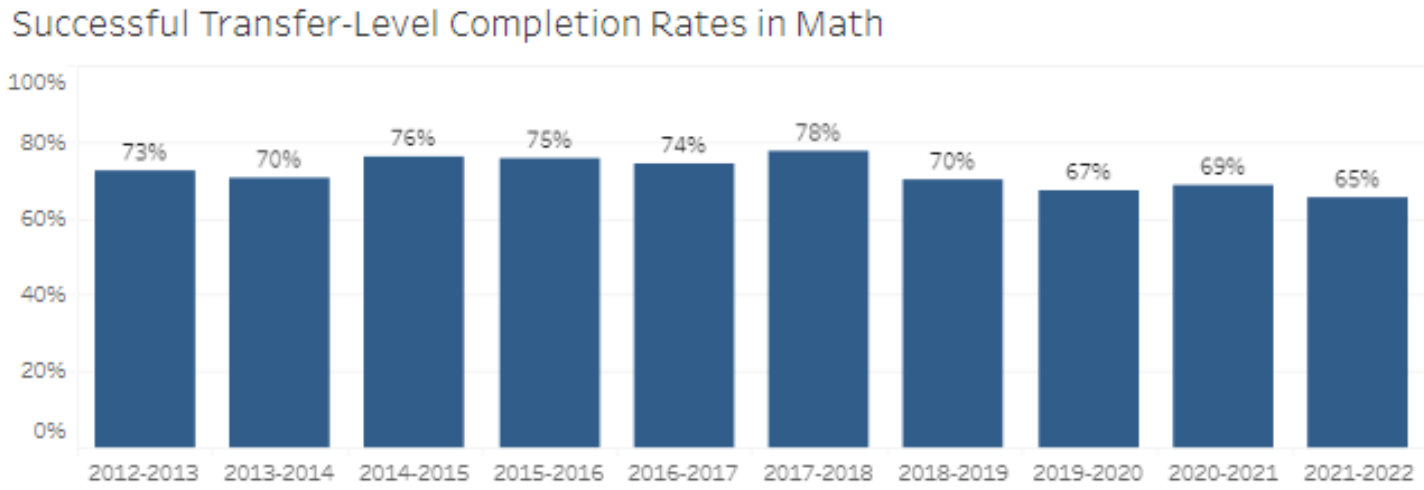
College	Cohort Size	Fall 2018 Pre AB705 Successful Transfer Level Math Completion Rates	Fall 2018 Pre AB705 Successful Transfer Level Math Throughput	Fall 2018 Pre AB705 Complement Throughout	Fall 2018 Pre AB705 Unit Ratio Complete to Non Complete
LA Mission	**442**	**49%**	**216**	**226**	**1.046**
African American	10	70%	7	3	0.429
Hispanic	355	46%	163	192	1.178

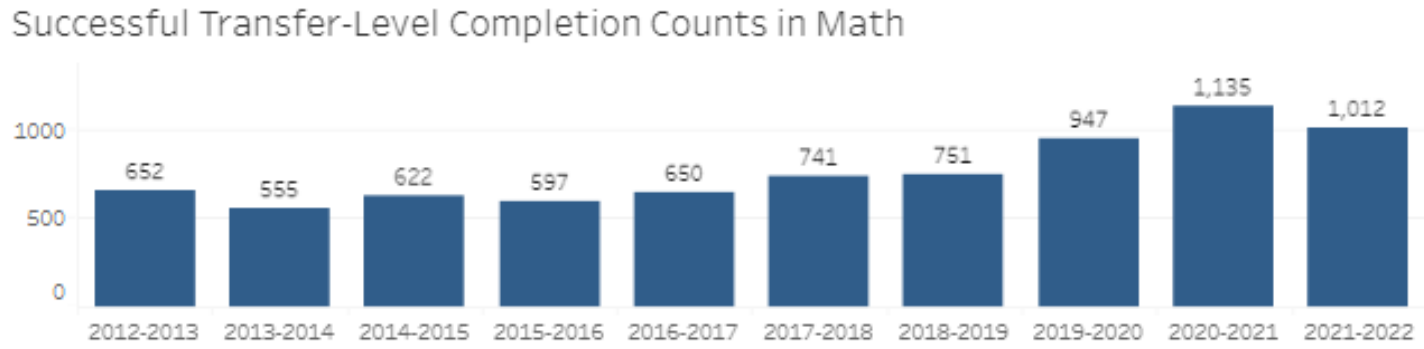
College	Cohort Size	Fall 2019 AB705 Successful Transfer Level Math Completion Rates	Fall 2019 AB705 Successful Transfer Level Math Throughput	Fall 2019 AB705 Complement Throughout	Fall 2019 AB705 Unit Ratio Complete to Non Complete
LA Mission	**638**	**35%**	**221**	**417**	**1.887**
African American	16	13%	2	14	7.000
Hispanic	531	33%	174	357	2.052

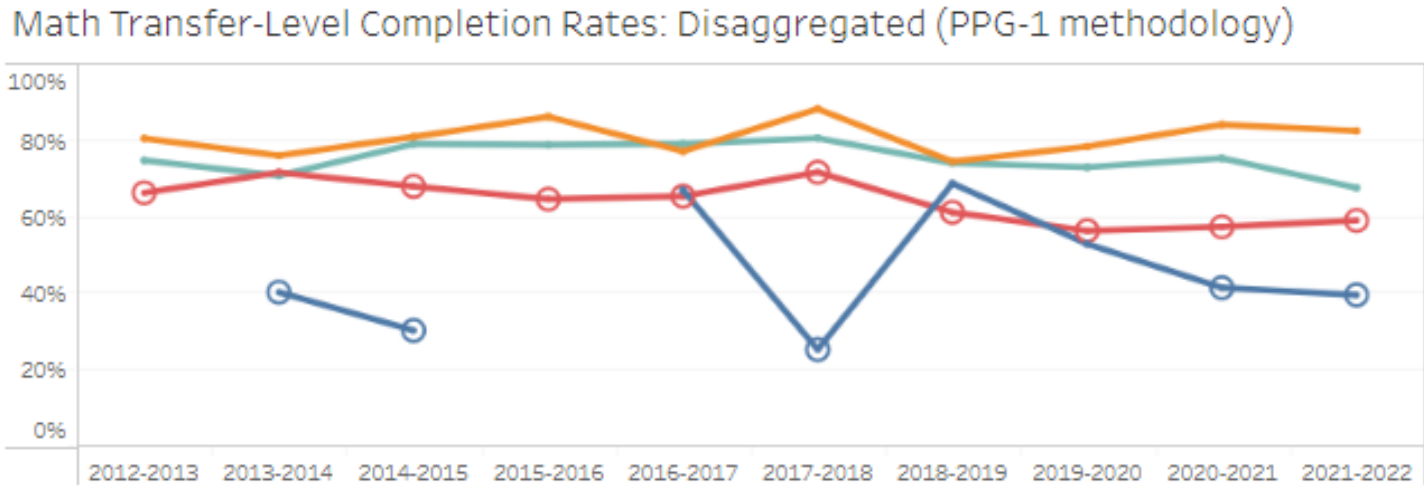
	Additional Hispanic Students Fall 2018 to Fall 2019	Additional Successful Completions Fall 2018 to Fall 2019	Additional Unsuccessful Completions Fall 2018 to Fall 2019	Unit Ratio Fall 2018 to Fall 2019
LA Mission	**196**	**5**	**191**	**38.200**
African American	6	-5	11	NA
Hispanic	176	11	165	15.000

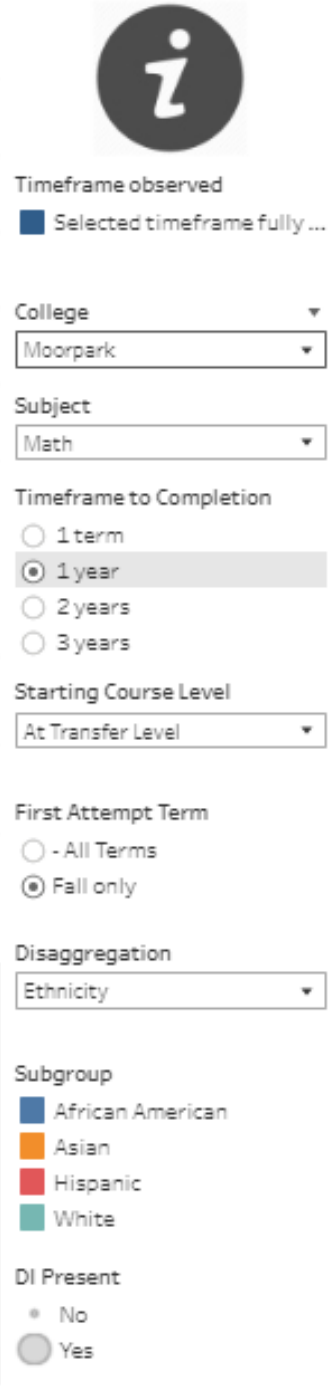
MOORPARK COLLEGE

Here is the data from Moorpark College for success rates for transfer level math in 1 year.



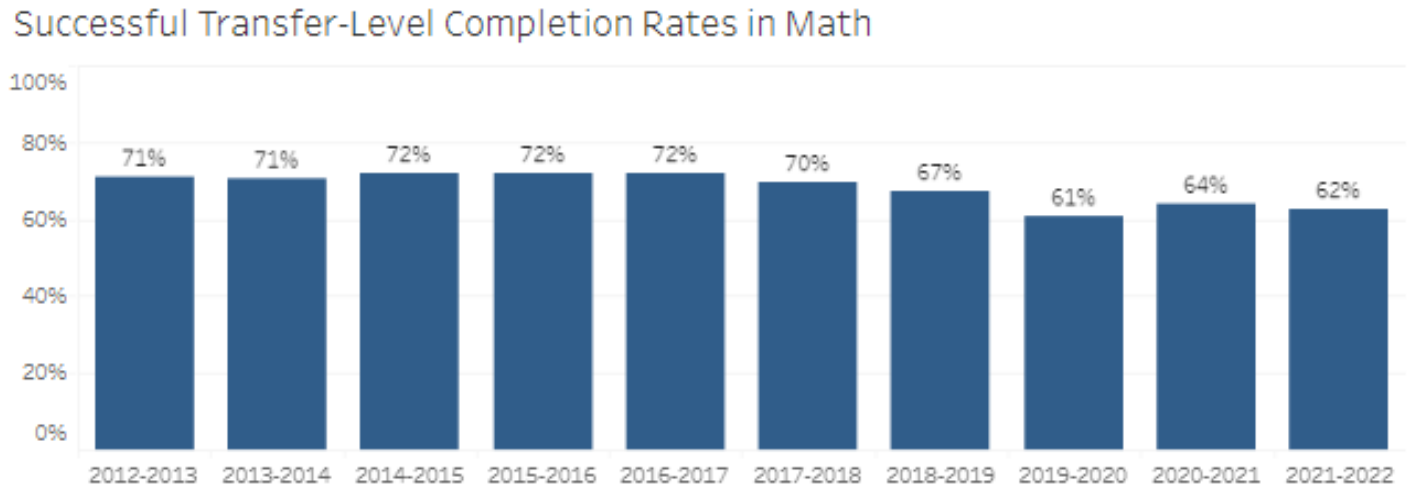


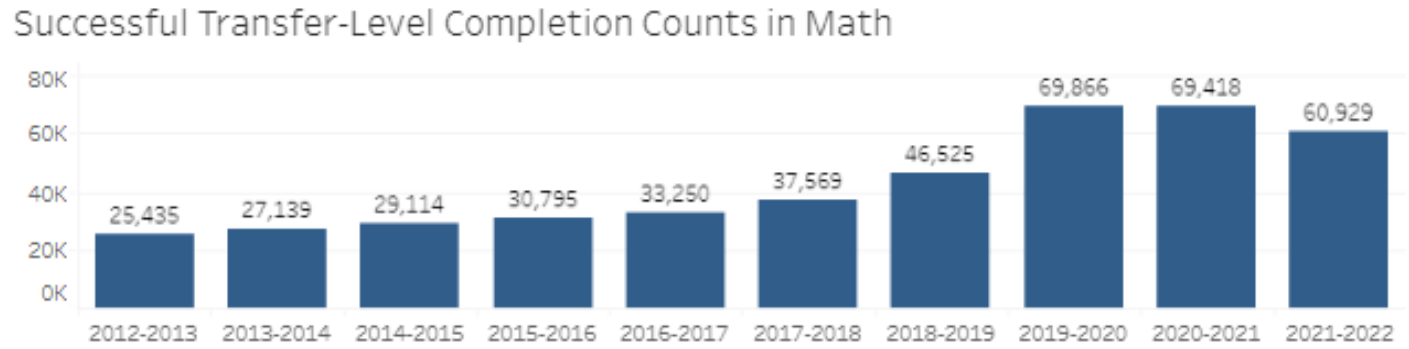


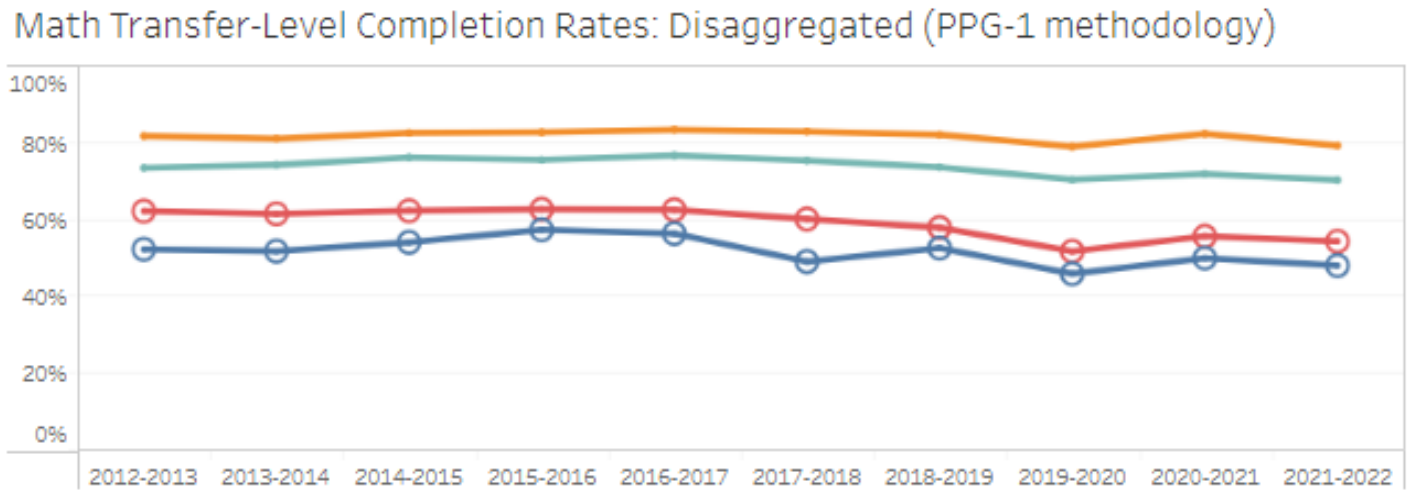


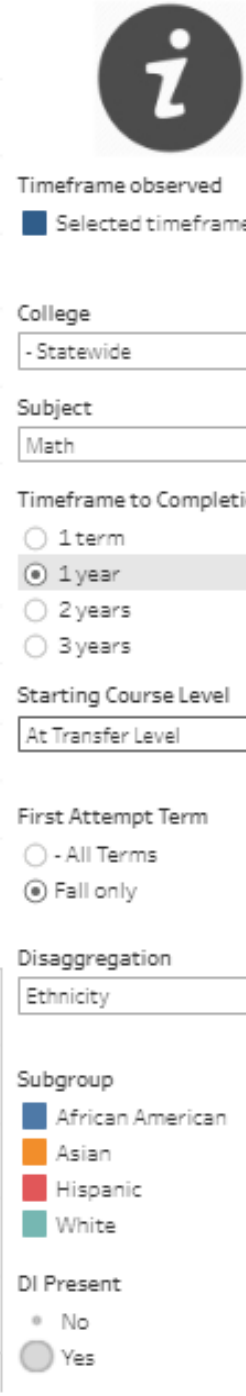
STATEWIDE CALIFORNIA

Here is the data for all of the colleges in California for success rates for transfer level math in 1 year.









OTHER COLLEGES

CUYAMACA COLLEGE

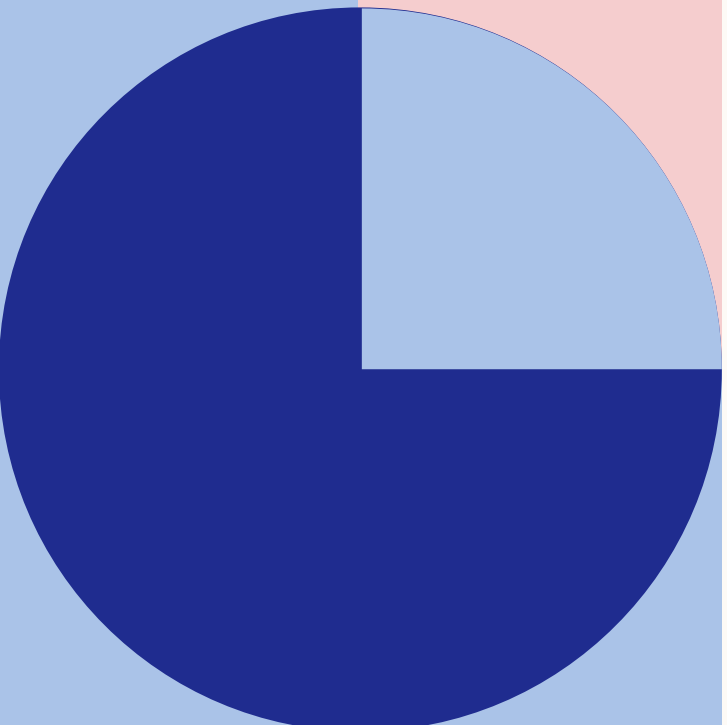
CABRILLO COLLEGE

COREQUISITE DESIGN

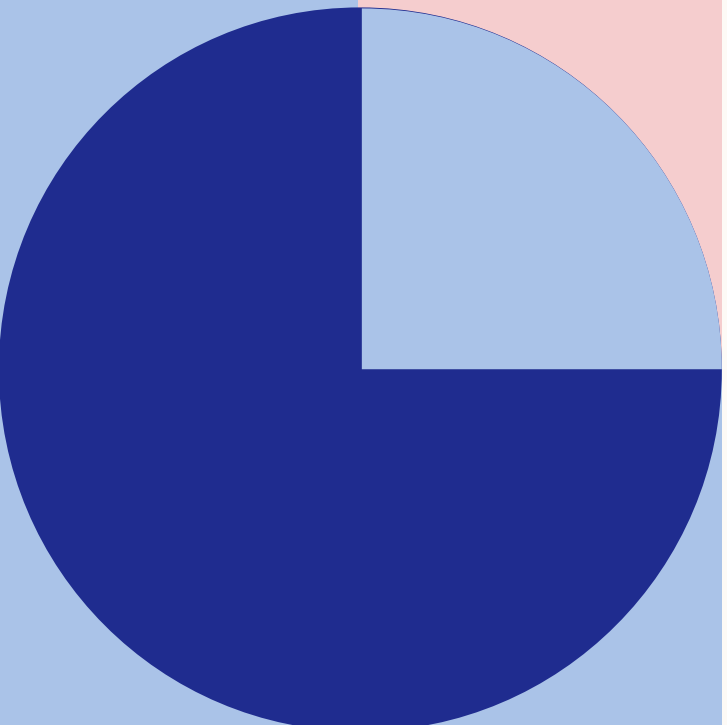
Both colleges presented at the webinar *Corequisite Support as a Lever for Imposing Outcomes: A Qualitative Exploration*, sponsored by the RP Group

- Students not taking Pre-Calculus in high school will still get placed into Calculus but with support.
- Students get their placement from being asked questions about their educational goal and major.
- 83% increase in enrollment.
- Working on support material that will teach certain topics of Algebra and Trigonometry needed for Calculus.

- Enroll students with a GPA lower than 2.6 into the support classes.
- Curriculum includes learning development and critical thinking engagement.



OTHER COLLEGES



CYPRESS COLLEGE

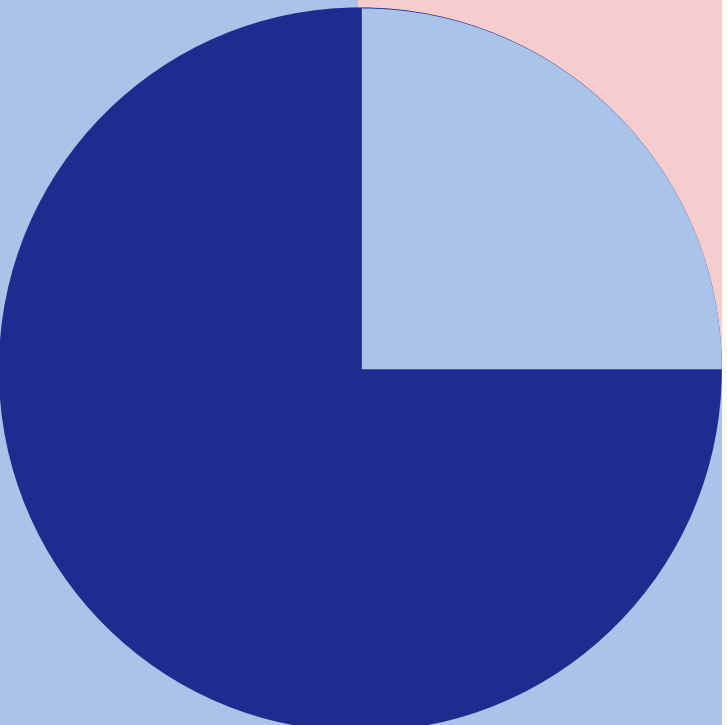
LAS POSITAS COLLEGE

MATH WEBPAGES

- Guided self-placement tool which is *not* a test.
- Short video that explains the implementation of AB-705 and how to determine which math class the student should enroll in.
- Math review videos.

- First and main thing that is shown is Concurrent Support Class FAQ's.
- A one-minute video of a student's success story told by the student herself.
- Short video explaining their Math Jam one week before each semester. Day, evening, on-ground, hyflex, and virtual options.

LAS POSITAS COLLEGE

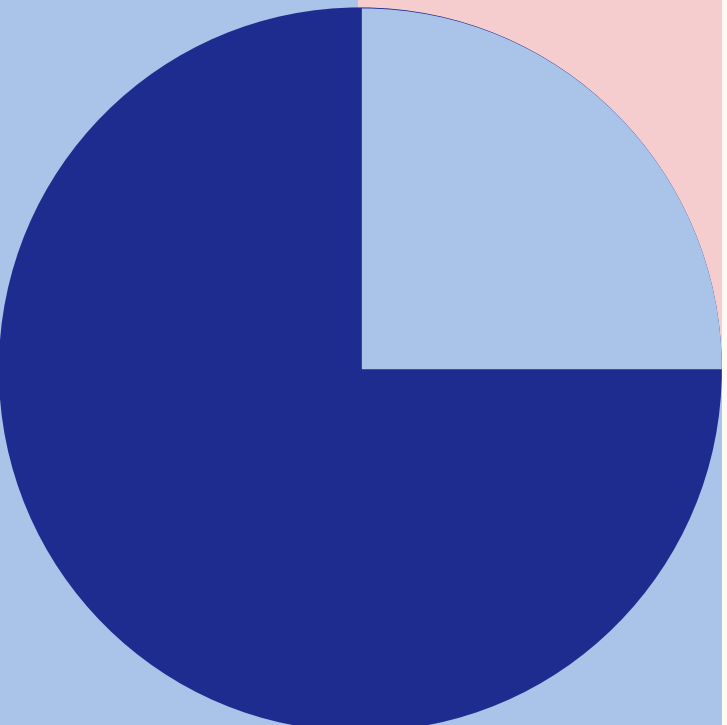


SUPPORT CLASSES

They changed to a "supports are required model," but only for students in the lowest of the three recommended GPA bands from the state's data.

- Credit or non-credit. If credit, students pay for one lab unit and receive pass or no pass on transcripts.
- At the beginning of the semester: “Successful Learning Activities,” time management and note taking skills, study skills, preparing for a test.
- Throughout the semester the students can work on their math assignments.
- Later part of the semester: Practice tests, write quiz corrections, watch math videos.
- Non-credit class: Students enrolled in a first level transfer course or enrolled in a Calculus course and seek prerequisite support to fill in any learning gaps.
- Credit class: Students who need to reach full-time status (for financial aid reasons). International students are not able to take non-credit classes.

SADDLEBACK COMMUNITY COLLEGE



GUIDED SELF PLACEMENT SURVEY

Communication through email with Sumaya McCleave and Frank Gonzalez, department co-chairs.

- The survey asks students for all of the math courses they took in high school.
- Their department voted to require students who have not passed Algebra II to take support classes with Trigonometry and College Algebra, but optional for Statistics.
- This is in agreement with their sister college IVC.
- Starting Fall 2024 Business Calculus will be their baseline placement.
- Starting Fall 2025 Calculus will be their baseline placement for STEM students.
- They are working on creating curriculum for a Calculus Instructional Lab that will open Fall 2025, separate from their tutoring center.

SADDLEBACK COMMUNITY COLLEGE

GUIDED SELF PLACEMENT SURVEY

– Transfer Math with Support (Baseline Level)

Placement courses include: Math 103, Math 14, Math 10+210S, Math 10, Math 8+208S and Math 124+224S. Other eligible courses: Psyc 44, Business 10, Econ 2 and Econ 4

Baseline placement is the default initial Math Placement from the Guided Self Placement Survey. Incoming first-time college students are at minimum eligible for this level upon completion of the Matriculation Process. All courses are at college-level.

MATH 103 MATHEMATICAL IDEAS 3 units
MATH 10 INTRODUCTION TO STATISTICS 3 units
MATH 14 MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS 5 units
MATH 8 COLLEGE ALGEBRA FOR BRIEF CALCULUS 5 units
MATH 124 TRIGONOMETRY 3 units

SADDLEBACK COMMUNITY COLLEGE

GUIDED SELF PLACEMENT SURVEY

– Transfer Math

Placement courses include: Math 8, Math 124

Other eligible courses: Chem 3 and all courses in lower placement level

Requirements to receive this Math Placement:

- Two semesters of high school Algebra 2 (or equivalent), successfully completed with a grade of C (or better) and an unweighted cumulative GPA of 3.0 or higher.
- Intermediate Algebra from a regionally accredited U.S. college or university, successfully completed with a grade of C or better.
- Grades of C- and lower are considered non-passing.

MATH 8 COLLEGE ALGEBRA FOR BRIEF CALCULUS 5 units
MATH 124 TRIGONOMETRY 3 units

SADDLEBACK COMMUNITY COLLEGE

– Higher-level Math for BSTEM Majors

Placement courses include: Math 11, Math 2, Math 3A

Other eligible courses: all courses in lower placement levels

Requirements to receive this Math Placement:

- Equivalent high school math coursework (e.g. PreCalc, Math Analysis, Calculus), successfully completed with a grade of C (or better) and an unweighted cumulative GPA of 3.0 or higher.
- Equivalent MATH from a regionally accredited U.S. college or university, successfully completed with a grade of C or better.
- Grades of C- and lower are considered non-passing.

MATH 2 PRE-CALCULUS MATHEMATICS 5.0 Units
MATH 11 A BRIEF COURSE IN CALCULUS 5.0 Units (Applied Calculus)
MATH 3A ANALYTIC GEOMETRY AND CALCULUS 5.0 Units

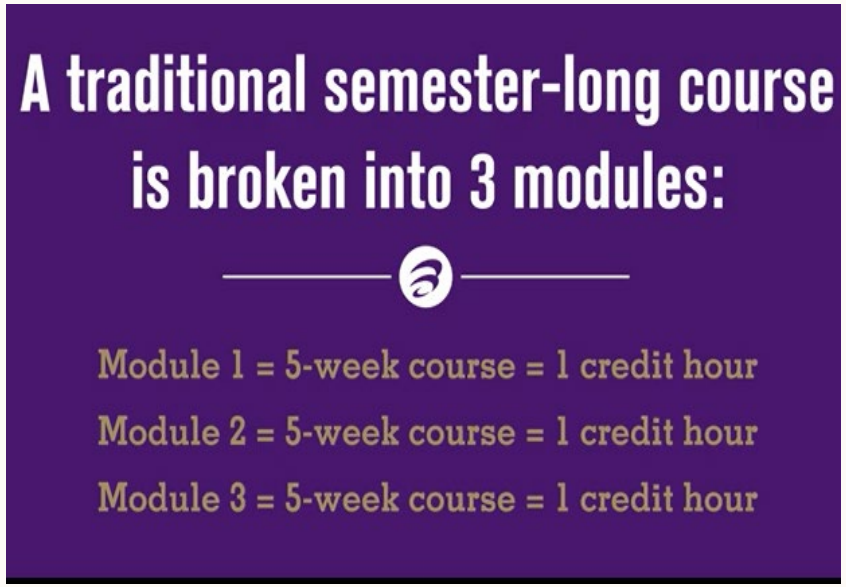
OTHER COLLEGES

BUTLER COMMUNITY COLLEGE

EL DORADO, KANSAS

MATH MODULES AT BUTLER

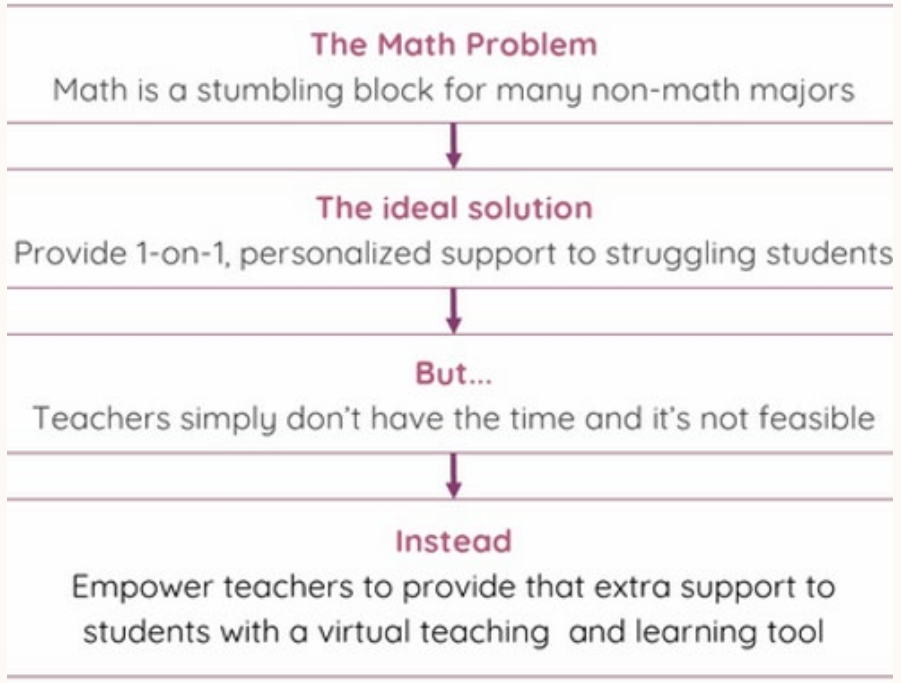
Students are more successful with taking College Algebra in three modules.



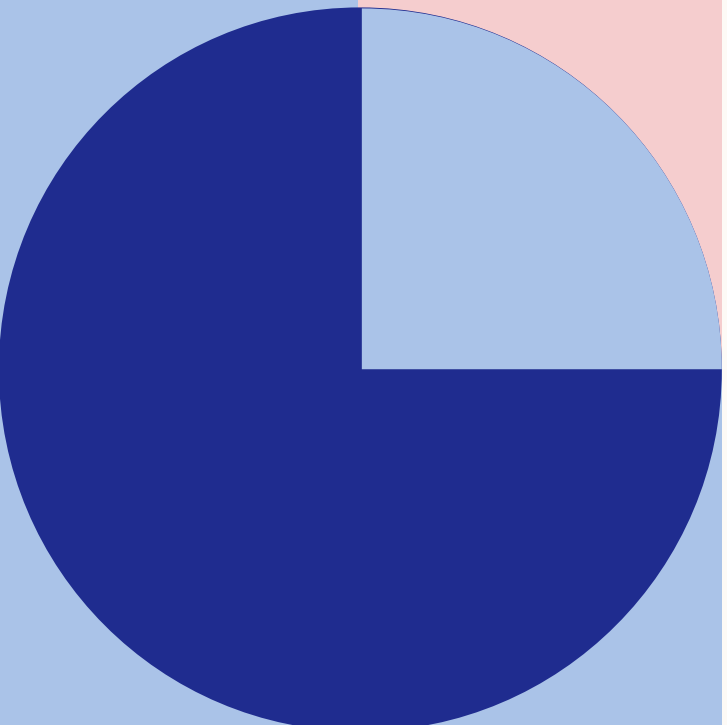
RADBOUD UNIVERSITEIT

NETHERLANDS

SOWISO, AN ONLINE LEARNING & TESTING ENVIRONMENT FOR STEM



OTHER COLLEGES



LOS ANGELES MISSION COLLEGE

Conversation with Bamdad Samii, Math department chair regarding support classes.

- Statistics classes has both attached and non-attached support.
- The classes with the attached support fill first.
- Pre-Calculus, Statistics, and Applied Calculus have a 2-unit lab built-in.
- Fall 2023 held workshops throughout the semester that were topic-specific for College Algebra – low attendance.
- Spring 2024 they are trying the workshops again but not topic-specific – see if they have better attendance.
- 4-week Summer Program and 2-week Winter Program offered to students through the school, paid by grants.

BEST PRACTICES

Strong Start to Finish
A panel of Math and English faculty, deans and directors transitioning to online during the lockdown

- Analyze your own data: check on students if they have access to tutoring; if they are participating in discussions; are they active and collaborative in their learning.
- Accessible and inclusive: “Student Hours” instead of “office hours;” Community of learners.
- Message students who have not turned in assignments.

BEST PRACTICES

Belonging

By Joyce Mueller and Dr. Bryce Bunting
Sponsored by Xan Edu

Three Main Factors of Belonging

1. **Social-friends**: Finding friends with shared interests, and participating together in student organizations.
2. **Academic**: Students feeling competent in class and comfortable engaging with faculty.
3. **Campus-Community**: Students have more holistic feeling of being generally accepted and valued by the college.

BEST PRACTICES

Belonging

By Joyce Mueller and Dr. Bryce Bunting

Sponsored by Xan Edu

Fast Friends Procedure:

- Student pair up and ask several questions of each other.
- Fosters social belonging and connection.
- Decreases fear of rejection / marginalization.
- Increases likelihood of day-to-day conversation.

Values Affirmation Exercise

- Identify your most important values.
- Reflect on why these values are important to you.
- Know that “I am more than just my grade.”

BEST PRACTICES

Belonging

By Joyce Mueller and Dr. Bryce Bunting

Sponsored by Xan Edu

Results they shared that their methods are proven effective:

- Stronger sense of belonging
- Improved GPA
- More resilience in face of adversity
- More openness to seeking academic challenges

BEST PRACTICES

Instructional Strategies *A* CAP Webinar
A panel of presenters which included Linda Hintzman, Pasadena Community College, and Analinda Arrozo, Cuyamaca College,

Findings on Pass rates:

- In Statistics, they found that Black and Latino students had the lowest pass rates.
- They found that the help and encouragement from math faculty were the most important factors to student's success in their transfer-level math class.

BEST PRACTICES

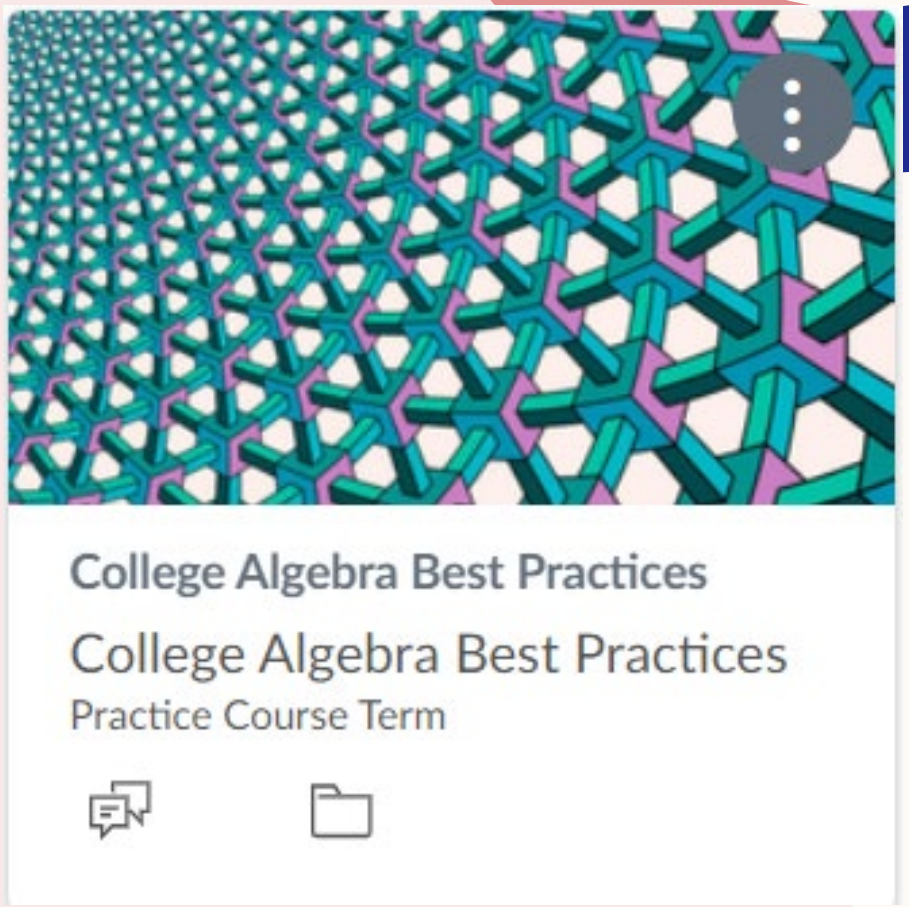
Instructional Strategies *A* CAP Webinar
A panel of presenters which included Linda Hintzman, Pasadena Community College, and Analinda Arrozo, Cuyamaca College,

Suggestions from the Panel:

- Teachers hold office hours in the tutoring center.
- Call office hours “Student Visitation Hours.”
- Shared office hours with any teacher with the same course.
- The theme or message in the syllabus: “We are doing this together.”
- Contract grading
- “Check-in so students don’t’ check-out.”
- Students need a sense of belonging to counter act their feelings of “Am I the only one?”

BEST PRACTICES

Moorpark College Math Department
Share best practices and other information with each other in a CANVAS course for our different classes.



SUMMER PROGRAMS

CSUN
PATHWAYS TO EXCELLENCE
Math and First-Year Connection

A four week summer program four days a week four hours a day Students will meet with peer mentors, receive tutoring, and participate in social activities.

CABRILLO COLLEGE

MATH PLUS PROGRAM

Designed to prepare students for their fall or spring math courses.

In person for
1 week, 6 hrs/day
Evening and online
2 weeks, 3 hrs/day

CAL POLY SLO

SUMMER SPRINGBOARD

Offers a rich taste of life on campus and a rich academic curriculum with dynamic workshops and projects that foster self-discovery.

EXPLO

A pre-college Summer Program

Helps students take charge of their own learning, discover their interests in different subjects, and makes lifelong friends.

MOORPARK COLLEGE

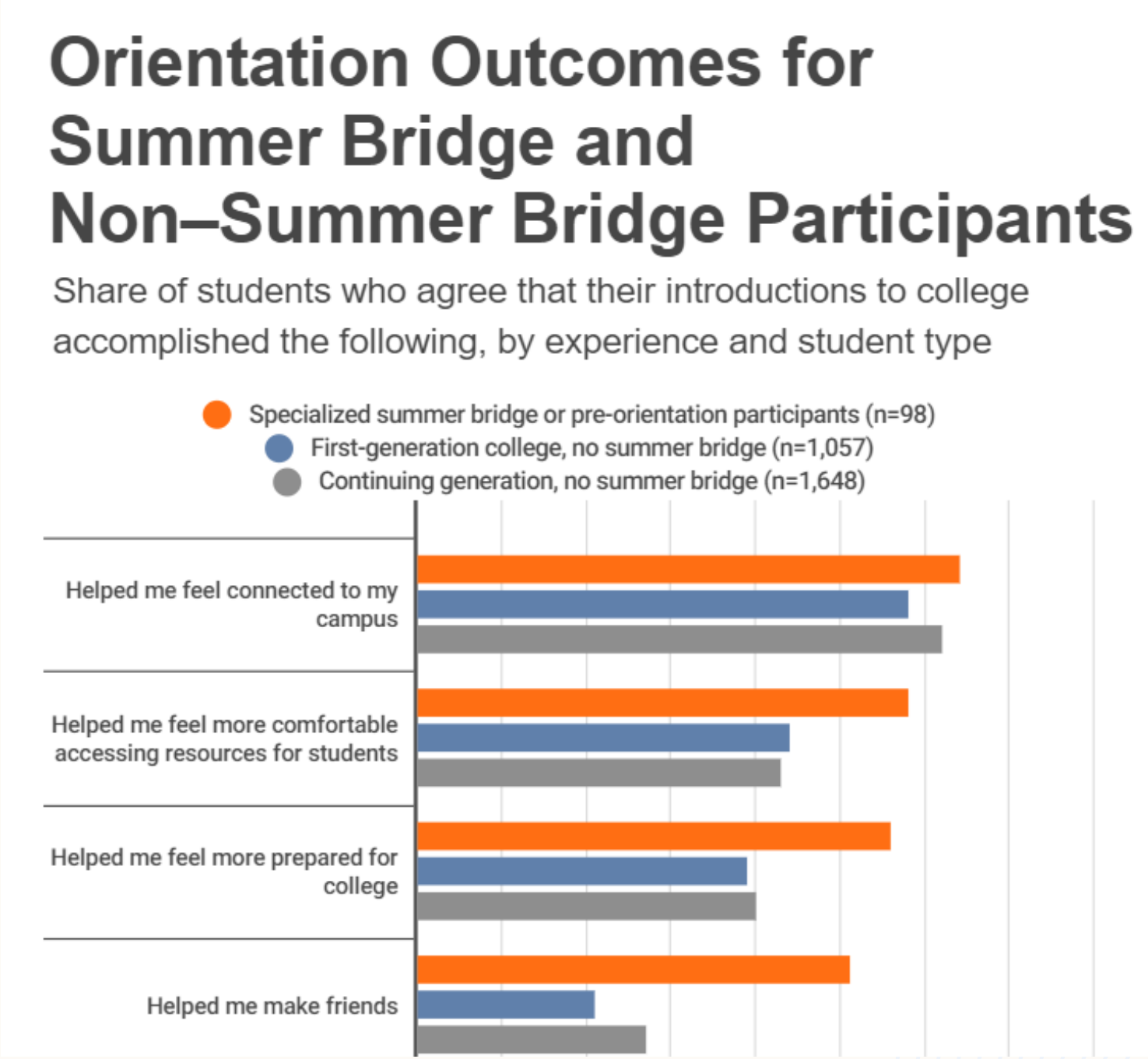
Gear Up for Success

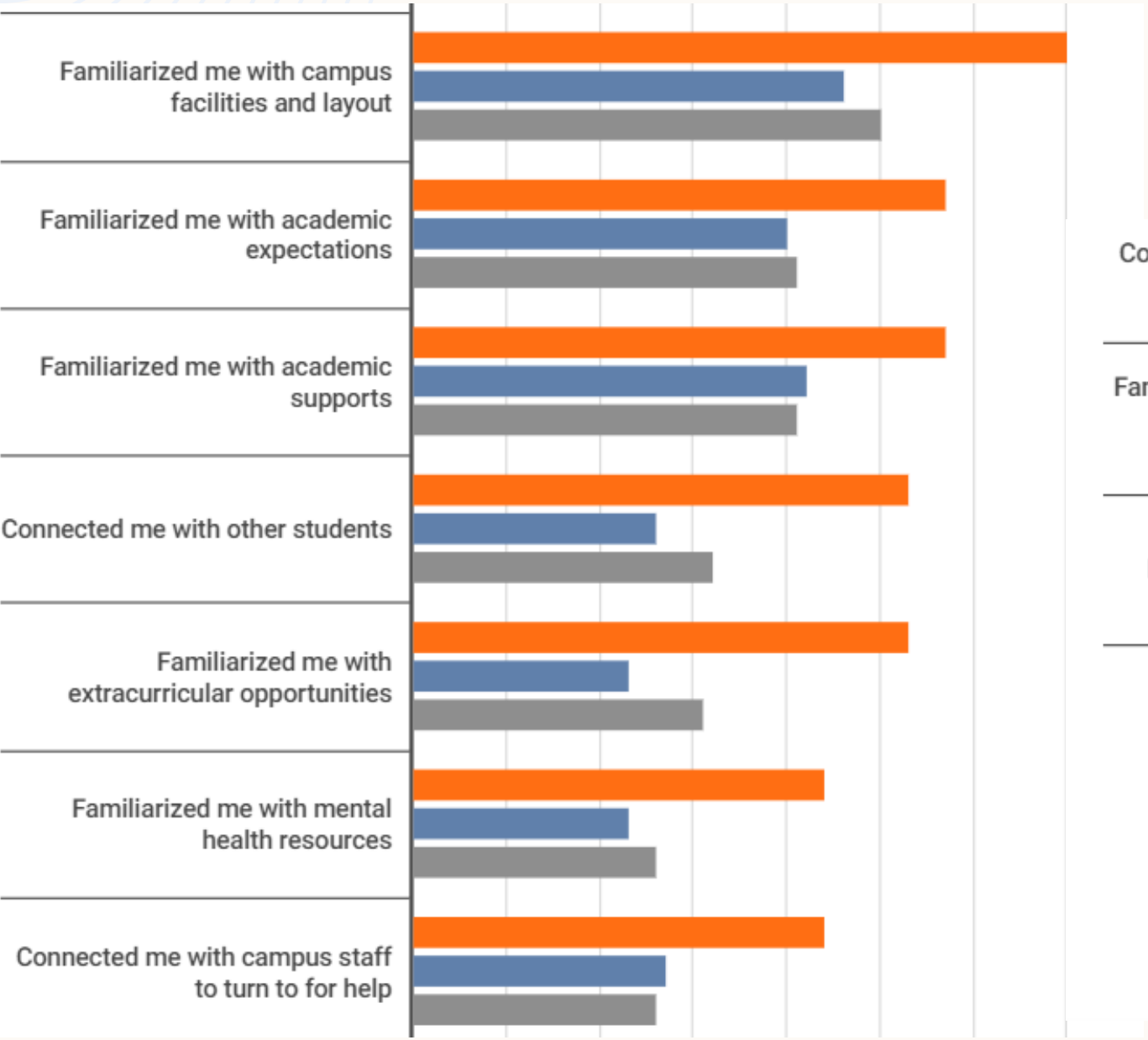
I propose, and have worked on, creating a 2-week summer program, 4 hrs/day, four days a week
Algebra Topics
Study skills
College life and expectations
Faculty & Counselors

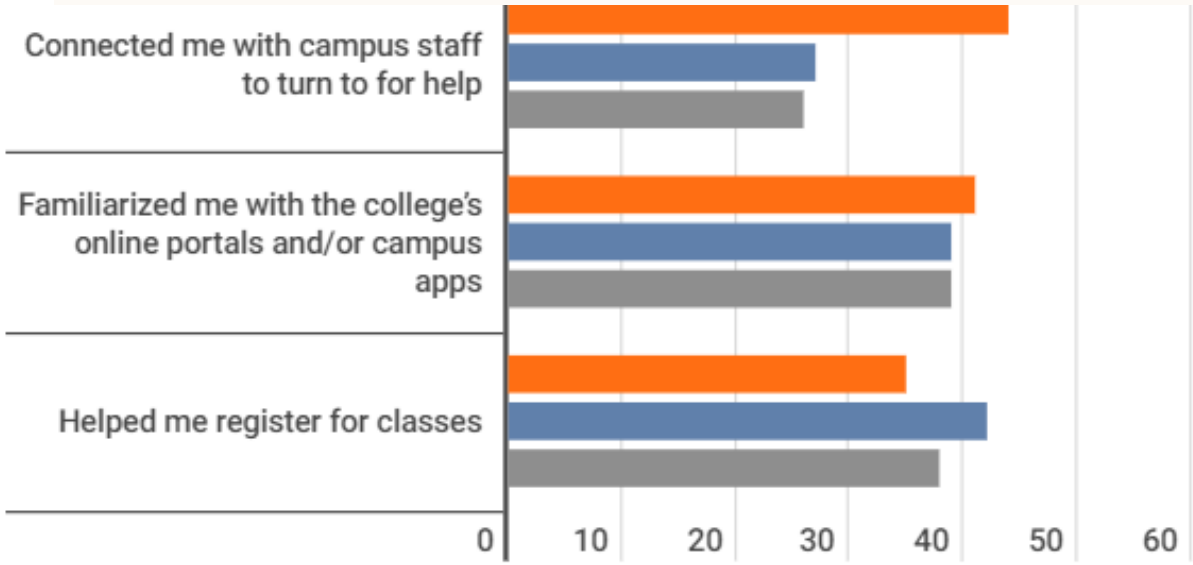
SUMMER BRIDGES BUILDS FIRST GEN CONNECTIONS

BY COLLEEN FLAHERTY , THE STUDENT SUCCESS NEWSLETTER, INSIDE HIGHER ED, SEPTEMBER 15, 2023

The Student Voice surveyed 3,000 two- and four-year college students. Summer bridge program participants feel more comfortable accessing resources, more prepared for college and more socially connected than other first-gen and even continuing-generation students.







Source: Inside Higher Ed/College Pulse survey of 3,000 college students.

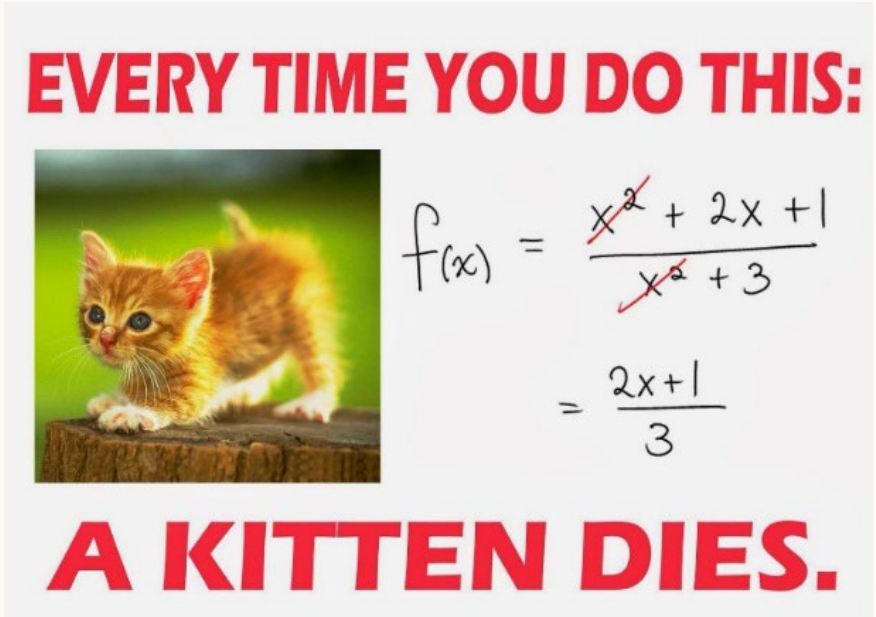
STUDENT VOICE | Inside Higher Ed | COLLEGE PULSE

Student Voice is an Inside Higher Ed and College Pulse collaboration.

AB-705 SUPPORT GROUP

Facebook: AB 705 Math Forum

- Hao-Nhien Vu: "If the college can't prove X then the college must say 'X is false'" is a logical fallacy.
- Max Sklar: the AB-1705 FAQs link
- Others shared job postings and free webinars.
- And there are some mems:



ONLINE PLATFORMS AND PROGRAMS

Texas Instruments Family of Functions modular course

These are videos on graphing functions that are on the Texas Instruments website.

Sowiso

An online learning & testing environment for STEM, engaging students and saving teachers time. This online platform includes interactive math exercises.

ONLINE PLATFORMS AND PROGRAMS

Grasple is an open collaboration for teachers to create content together; connected to OpenStax with the same homework problems. The book is on one side of the screen and the homework is on the other side. Teacher accounts are free. School needs to purchase for students to use for free.

Game-Based Learning in College Mathematics by Kathleen Hoffenholly is a free interactive online learning tool using games and activities to review and reinforce math concepts.

Maple Learn is an online mathematics teaching and learning platform developed by Maplesoft. The program is highly interactive with simplification capabilities to use for both advance students and those struggling with math.

THE MATH TRANSLATOR

Created by Professor Melissa McNickle

THE MATH TRANSLATOR

Format of The Math Translator

- The website is designed in a courses format for each supported OpenStax math textbook (Prealgebra, Elementary Algebra, Intermediate Algebra, College Algebra, Algebra and Trigonometry, and Precalculus)
- Every section of every book has at least a 1-hour lecture associated with it with some sections being split into two parts to cover the material comprehensively
- Lectures are exactly what I would deliver in a face to face setting
- Homework videos provide additional support for questions on the homework and are a critical part of the success of the website
- Written Solutions manuals are provided for the Practice Tests in each chapter of each book
- Pairs nicely with LMS homework systems like Knewton
- The videos are not intended to replace math teachers, they are meant to support math teachers. As such, the videos are for individual consumption by students and are not to be projected onto a screen for group viewing in a classroom setting

www.themathtranslator.com

THE MATH TRANSLATOR

Created by Professor Melissa McNickle

Slides MATH TRANSLATOR

Structure of Subscriptions

- Math Instructors using the videos in their courses receive free instructor logins
  - 2 week access initially
  - Renewals are every 6 months after that
- Student subscriptions are as follows:
  - $18.99 a month with autorenewal
  - $56.98 for 3 months
  - $75.98 for 4 months
  - $199.98 for 1 year
- Logins may only be used on one device at a time
- All courses/videos are available with the subscription fee

www.themathtranslator.com

HIGH SCHOOL CONNECTIONS

There are 15 high schools near Moorpark College that I found on the Ventura County Office of Education. Five math teachers, that is one-third, responded with a “Yes” that they would like to meet with Moorpark College math teachers. All 5 teachers prefer meeting on Zoom rather than meeting at Moorpark College.

Conejo Valley USD		
Conejo Valley High School	Cameron White, math chair	
Newbury Park High School	Kristina Keener, AP of Instruction	
Thousand Oaks High School	David Nystrom	
Westlake High School	Lisa Ryder, math chair	responded: YES
Thousand Oaks (private school)		
Hillcrest Christian School	Charlie Lee	

HIGH SCHOOL CONNECTIONS

Moorpark USD		
Moorpark High School	Scott Mangers, math chair	
Simi Valley USD		
Royal High School	Bob Willging, math chair	
Santa Susana High School	Matthew Duda, math chair	responded YES
Simi Valley High School	Pam Atkison	
Apollo High School	Dean May, principal	
Simi Valley (private school)		
Grace Brethren High School	Joy Tsang, math chair	responded YES
Oak Park USD		
Oak Park High School	Robin Midiri, math chair	responded YES
Oaks Christian School	Sarie Anderson, math chair	
Las Virgenes USD		
Agoura High School	Anna Robinson	responded YES
Calabasas High School	Michael Yeung, math chair	

SUGGESTIONS

- Acquire our Complement Throughput data to find our own unit rate of complete to noncomplete
- Self guided Placement survey for entering students
- Corequisite design course / Support classes connected to classes
- Connect a 2-unit lab to our classes instead of support classes
- Smaller class sizes
- Math webpage – add videos and success stories
- Analyze our own disaggregated data
- Utilize CANVAS Best Practice course
- Create a Summer Program: Math & Study Skills
- Attend OpenStax and other online webinars

SUMMARY

Reviewing my timeline in my sabbatical proposal, I checked off almost everything that I set out to do.

I was able to gather data on the effects of AB 705 /1705, research various models of curriculum, attend workshops and webinars on support classes and successful best practices, and gathered information from other community colleges and from online programs.

I was unable to attend math conferences due to the cost, and I did not work on a non-credit math course since AB 1705 does not allow students to take such a class. Students must take concurrent support classes.

I am ready to work together with my math department, our dean, and VP of AA to develop the best plan for support for our students. We can collaborate on forming plans proposed in my suggestions and from my research, to obtain the goal of improving the success rates of our students in their transferable math class within a year since the implementation of the new law AB-1705.

Questions?
Comments
Concerns

THANK YOU

Renée Butler
dbutler@vcccd.edu