Supporting Researchers into and through AB 705 Implementation and Evaluation

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Agenda

• 9:00-9:05   - Welcome and overview of agenda
• 9:05-9:20   - Expectations icebreaker
• 9:20-10:00  - Political, social, and organizational elements of implementation
• 10:00-10:30 - Evaluating innovative curriculum
• 10:30-11:40 - Statistical Methods Used to Assess Outcomes
•  - Foothill College to share their experience with analyzing AB 705 outcomes
• 11:40-12:00  - Questions for the Chancellor’s Office with Alice Perez
• 12:00-12:30 - Lunch
• 12:30-1:00  - Pulling it all together: Can we do well by doing good?
Political, Social, and Organizational Elements of AB 705
Moving from hypothesis to conclusion to action

What does it mean when a project or initiative is political?
What is the role of data in these conversations?
How have close relationships been helpful in moving the work?
Have you ever brought in an outside expert? What was their role and was it helpful?
How can you move the work when the executive administration is MIA?
Have you ever had to address missteps or mistakes? Any advice on how to recover?
Was the Chancellor’s Office guidance helpful in this work?
Have you celebrated victories?
Did you ever have an “ah ha” moment? If so what led to that moment?
How do you work with those who don’t want to believe the research findings?
How does integration of student voice and qualitative research support the work?
How do you support the development of a capacity mindset?
What strategies do you use to not take criticism of the data personally and stay focused on the work?
How do you develop and support a community of stakeholders doing the work?
Evaluating Innovative Curriculum
What is innovation?

- It is not something you have already been doing.
- It is something NEW.
- There are two basic types of innovations that could possibly be compliant with AB705:
  - Corequisite
  - Two-course sequence
- Must maximize throughput
What is a “Throughput Rate”?

• The probability of getting to and through a transfer-level or gateway course within a specified period of time.

• Throughput rate (AB 705): The proportion of a cohort of students who complete the transferable or gateway math or English course within two semesters or three quarters of entering their first course in the sequence.
Establishing baseline or comparison rate

• Development of comparison cohorts
  – You’ll need HS data, as required by law. Sources include:
    • Submit list of students to CalPASS Plus as prospective students
    • Turn on self-reported HS module in CCCApply
  – Method for identification of probability of completion of gateway courses:
    • Disaggregate your data on transfer-level course success by the default placement rule bands for a period of time (e.g., past five years)
    • Calculate success rates for each band for each course
    • These are your baseline rates
    • As results from corequisite models continue to accumulate, the baseline will likely increase
Corequisite remediation vs. 2-term remediation

- Corequisite remediation has a special status in AB 705
  - Need only show that students who participate in the corequisite have a higher pass rate than similar students who do not (disaggregated by HS GPA group)

- Two-term remediation has a higher bar
  - Must show that students are highly unlikely to succeed without the prerequisite course
  - And that they have higher throughput with prereq. than w/out
Piloting tips

• Clearly define how students become eligible for a pilot
• Consider having informed consent
• Size of the pilot should be limited but large enough to allow for reliable conclusions
• Only students with low probably of success when directly placed in transfer (i.e., “lowest node” students) should be considered for pilots
Perceptions of Probability

- Almost Certainly
- Highly Likely
- Very Good Chance
- Probable
- Likely
- We Believe
- Probably
- Better Than Even
- About Even
- We Doubt
- Improbable
- Unlikely
- Probably Not
- Little Chance
- Almost No Chance
- Highly Unlikely
- Chances Are Slight

Assigned Probability

Planning Phase

• Identify
  – objectives (process vs. outcome)
    • Outcome: increase gateway course completion
    • Process: monitor/maintain stakeholder satisfaction (cf. Mt. SAC)
  – resources needed
    • data/methods/comparisons
  – responsible parties and their roles
  – expected start and completion dates
  – outcomes/metrics to be tracked
Determination

• Compare your pilot group’s throughput rate to the baseline throughput rate. It must be higher to justify scaling up the pilot.

• Be aware that the baseline (or target throughput rate to beat) will be shifting up as other innovations continually raise the bar.

• Be engaged in the community of practice and learn from what others are doing—no need to reinvent wheels
Frequent questions about evaluation and implementation
Can we place students one or more levels below?

- Yes but only under **very limited** conditions
- You have to use evidence based on high school data that demonstrates that they are highly unlikely to successfully complete the transfer-level course
  - Plain meaning interpretations ([https://en.wikipedia.org/wiki/Plain_meaning_rule](https://en.wikipedia.org/wiki/Plain_meaning_rule)) would typically place highly unlikely around 10% on average.
  - When asked to interpret range of probabilities indicated by “highly unlikely”, both those using such words professionally (e.g., Kent, 1964) and lay audiences (e.g., [bit.ly/HighlyUnlikely](https://bit.ly/HighlyUnlikely)) interpreted highly unlikely to represent outcomes that happen 5-10% of the time on average. Except for significant outliers, highest individual estimates range between 20-30%
  - CCCC Guidance currently defaulting to synonymous with maximization of likelihood
- Has to maximize their likelihood of completion of transfer-level course (compared to students with similar levels of high school performance)
Can we continue to offer courses one or more levels below?

• Yes
  — Such courses may serve specific subsets of a college’s student population

• However:
  — Very likely cannot be required
  — Worth careful consideration whether it’s good practice to offer paths that might attract certain types of students when we have evidence that that path may not be best for them
  — Construction, entrances, and ease, candy placement and deliciousness
Do we have 2 years starting in Fall 2019 to study our current placement/sequence to determine whether it complies with AB705?

• No

• A fair amount of data exists on your existing curriculum that can be reasonably used to determine whether your current placement/sequence might comply

• In addition to your local data/IR team, CalPASS Plus has retrospective datasets immediately available to support local exploration.
Can we adopt new placement rules and prerequisites and study them for two years?

- Possibly but such rules/curriculum would require:
  - evidence-based use of high school achievement data
  - only students demonstratively highly unlikely to succeed be required to take pre-transfer-level courses
  - a meaningful logic model with supportive evidence to explain how the new pre-transfer level courses would be likely to achieve sufficiently higher success rates and persistence rates to maximize students’ likelihood of completing the transfer-level course

- Local placement rules into transfer-level courses with varying required or recommended supports would be easier - don’t need to meet the highly unlikely standard
  - Possibly couldn’t require them for students highly likely to succeed (such as those identified by earlier MMAP research)

- More specific guidance on this will be coming later this Fall.
Do we just have to meet the minimum successful completion rate when students are placed directly in transfer-level per the guidance for a new sequence to be acceptable?

• Not exactly

• It must meet that rate specifically among students that are highly unlikely to succeed (the only students allowed to be assigned to developmental courses) – you cannot use the overall success rates for the sequence if you allow students more likely to succeed to opt to take it
Can we use a standardized test as part of our placement method?

• Right now, barring action from the Board of Governors, no.
Can we require corequisite courses?

• Yes
• The AB705 legislation expressly allows colleges to require concurrent support
  ─ As a law, supersedes existing regulation (e.g., Title 5) if in conflict
  ─ Should be able to demonstrate likelihood that required concurrent support
    • will improve student outcomes AND
    • not adversely impact unit requirements/financial aid
• The guidance uses recommended language to speak to the colleges not as examples of language that must be used with students
What happens to students who fail 3 times? Do we have data on what happens after they fail the third time (do they go to different colleges, or do they quit college entirely)?

• Interesting research question that can’t be easily answered.
• However, many, many more “quit college” before completing the sequence when they begin below transfer-level, including students who would have been successful at transfer-level if given the chance.
• Further, colleges have lots of freedom to innovate before a student fails a third or even a second time.
• Students failing classes is not a new issue brought on by AB 705 implementation. What is your college currently doing to support students who have failed a developmental or transfer level course?
Statistically, how does this play out at very different institutions with very different students and environments? In other words: what is a statistical difference in this kind of work, and what is not?

• It tends to play out very similarly virtually everywhere people do the work to check, even amongst students who are the least prepared using whatever metric they use (various standardized tests, HSGPA, etc.)

• The statistical differences are actually quite easy to check – comparisons of proportions calculators are widely available and free on the internet.
Can you wipe a non-passing grade off of a student's record for a basic skills course if they are now eligible for transfer-level course?

- Colleges can alleviate the previous grade in a basic skills course with the performance in a transfer level course under your local policy related to academic renewal without course repetition.
- It is a local decision if you permit this practice.
What if a student graduated over 10 years ago or they did not take Algebra I or II in high school? How do we place them?

• The 10 year recommendation is only a recommendation. Colleges can place students with HS transcripts older than 10 years.

• If students do not have the appropriate Algebra course, you can use other means to place them, such as guided self-placement.

• Also, students who do not have Algebra I or II will be a small population, so you should check this locally.
The guidance does not indicate the starting point, it rather mentions the transfer level course. For BSTEM, can the college decide the starting point? Or, are we to give access to all levels of math?

- Colleges continue to control their local curriculum in determining the starting point of their transfer-level curriculum. Some colleges begin their transfer-level coursework post-intermediate algebra at college algebra, some at trigonometry, some at pre-calculus.
  - Colleges will continue to control that starting point.
  - Colleges will have ability locally to innovate on the most effective structure for their mathematics pathway, including placement above transfer-level.
Can a standardized test be used to discriminate between transfer-levels (e.g. Precalculus and Calculus) post initial placement into transfer-level, for students that want to prerequisite challenge their ability to succeed at an even higher level than the default rules?

- Not until the CCCCCO approves its use.
- MMAP rules exist for placing students into Calculus I.
Statistical Methods Used to Assess Outcomes
Validation vs. Evaluation

• Placement tests require validation
• Evaluation determines efficacy of implementation
Data Sources

- CCCApply
- CalPASS
- Local high school data exchange
- Manual submission of transcripts
- Local data system(s)
  - ERP
  - Learning Center usage
- Surveys and focus groups
Validating Self-Reported HS GPA

Option 1: Correlate self-reported GPA with official high school transcripts
Option 2: Correlate self-reported GPA with unofficial high school data such as Cal-PASS
Option 3: Rely upon research done by ACT, College Board, RP Group, other colleges (e.g. Citrus)
Be Sure to Document Changes

- Placement changes
- Orientation upgrades
- Curricular and sequence modification and creation
- Pedagogical changes
- Enhancements to classrooms
- New supports
What is success?

- Success rates
- Percent of students in transfer level
- Volume of students succeeding
- **One year throughput = percentage of a cohort successfully completing target course in one year**
- Subsequent course success
- Transfer / Graduation
- Learning Outcomes
Comparison Groups

- Pre-Post
- Compare math statistics to non-math statistics (e.g. psychology statistics)
- Student level matching
Statistical Methodologies used to Assess Outcomes

• Compare throughput rate, volumes of completers, and success rates over time before and after implementation
  – The focus on counts of completions for a cohort of students as more important than success rates is new(ish)
• Disaggregate rates and volumes
• Mixed methods quasi-experimental approach
  – multivariate models
  – surveys and focus groups of students and faculty
Disaggregation Categories

• Method of entry into course
  – Took prerequisite course at your college
  – Took prerequisite course at another college
  – Second or more attempt in same course
  – Placed into course (first attempt)
• With and without corequisite
• Demographics
• HS GPA
• Other?
Univariate Methods

• Comparing success rates pre and post implementation
  – Working with population data so no statistics needed, but…
  – Could use Chi-square, arbitrary thresholds of differences, or other methods to guide interpretation of how substantial the differences are
  – Disaggregate
Multivariate Methods

- Method will depend on outcome and purpose
- If predicting success:
  - Binary Success could use Logistic Regression
  - Grade Points could use Linear or Ordinal Regression
- Input variables
  - Prior courses
  - Support usage
  - Demographics
  - Other
Alternatives to Regression

- ANCOVA
- Structural Equation Modeling
- Path Analysis
- Decision Trees
- Neural Networks
- Other machine learning techniques
- Disagggregation displays
Displaying Results

Consider a 3 tier approach:

1. Executive Summary
2. Bar Charts (show counts!)
3. Technical Appendix
Evaluating New Academic Supports for AB 705 with Matching

Doreen Finkelstein, Foothill College
finkelsteindoreen@foothill.edu
In Fall 2018, Foothill College fully implemented AB 705 for math.

New academic supports were added:

• Corequisite for Precalculus
• Tutors for Statistics (except online-only sections)
Evaluation question:

Did the new academic supports improve student success?
Precalculus + Corequisite

Open enrollment

Stand-alone Precalculus

Enrollment based on: HS GPA, HS coursework, passing prerequisite (algebra), Accuplacer, clearance
Straight comparison of success in corequisite sections to success in stand-alone sections?
HS GPA was higher in stand-alone sections than in corequisite sections:

HS GPA of Students Enrolled in Precalculus: Fall 2018

GPA >= 3.4: 19% (Stand-alone) 48% (Corequisite)
GPA 2.6-3.3: 15% (Stand-alone) 48% (Corequisite)
GPA <2.6: 14% (Stand-alone) 37% (Corequisite)
Problem:

• Difference in HS GPA between groups

• HS GPA is a strong predictor of course success
Approach:

• **Matched** students from corequisite sections with similar students from stand-alone sections.

“How would corequisite students have done if they had taken the stand-alone class?”
By matching students:

Control for matched variables, which leads to:

Better causal inferences
Matched on three variables:

- HS GPA
- Ethnicity (White or Asian vs. Not White or Asian)
- Gender (Male vs. Female)

Used exact matching (Mahalanobis Distance), which allows for analyses of these subgroups within the matched data.
Before matching:

<table>
<thead>
<tr>
<th></th>
<th>Stand-alone</th>
<th>Corequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS GPA</td>
<td>2.96</td>
<td>2.75</td>
</tr>
<tr>
<td>% Female</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>% White or Asian</td>
<td>47%</td>
<td>29%</td>
</tr>
</tbody>
</table>

After matching:

<table>
<thead>
<tr>
<th></th>
<th>Stand-alone</th>
<th>Corequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS GPA</td>
<td>2.78</td>
<td>2.75</td>
</tr>
<tr>
<td>% Female</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>% White or Asian</td>
<td>29%</td>
<td>29%</td>
</tr>
</tbody>
</table>
Logistic regression results:
• The corequisite was a significant predictor of course success ($p < .01$)

Success rates (Fall 2018 matched data):

<table>
<thead>
<tr>
<th>HS GPA</th>
<th>Stand-alone</th>
<th>Corequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA &gt;= 3.4</td>
<td>55%</td>
<td>77%</td>
</tr>
<tr>
<td>GPA 2.6 – 3.3</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>GPA &lt; 2.6</td>
<td>41%</td>
<td>47%</td>
</tr>
</tbody>
</table>
What difference did the matching make?
Matched data (Precalculus):

<table>
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<td>GPA &lt; 2.6</td>
<td>41%</td>
<td>47%</td>
</tr>
</tbody>
</table>

Unmatched data (Precalculus):

<table>
<thead>
<tr>
<th>HS GPA</th>
<th>Stand-alone</th>
<th>Corequisite</th>
</tr>
</thead>
<tbody>
<tr>
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<td>55%</td>
<td>77%</td>
</tr>
<tr>
<td>GPA 2.6 – 3.3</td>
<td>46%</td>
<td>65%</td>
</tr>
<tr>
<td>GPA &lt; 2.6</td>
<td>40%</td>
<td>45%</td>
</tr>
</tbody>
</table>
What difference did the matching make for Statistics?

(Same procedure, but did not match on gender)
Matched data (Statistics):

<table>
<thead>
<tr>
<th>HS GPA</th>
<th>No tutors</th>
<th>Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA &gt;= 3.0</td>
<td>72%</td>
<td>79%</td>
</tr>
<tr>
<td>GPA 2.3 – 2.9</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>GPA &lt; 2.3</td>
<td>44%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Unmatched data (Statistics):

<table>
<thead>
<tr>
<th>HS GPA</th>
<th>No tutors</th>
<th>Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA &gt;= 3.0</td>
<td>69%</td>
<td>78%</td>
</tr>
<tr>
<td>GPA 2.3 – 2.9</td>
<td>50%</td>
<td>48%</td>
</tr>
<tr>
<td>GPA &lt; 2.3</td>
<td>29%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Data excludes online-only sections
Math 10 predicted probability of success, regression of unmatched data
(Tutors: grey; No tutors: blue)

White or Asian

Not White or Asian
Advantages to matching:

• Simultaneously control for multiple variables.

• Can disaggregate by matched variables.

• Concept of matching is easy to understand; makes intuitive sense.
Caveats to matching:

• Does **NOT** include all students. Compares outcomes for the treatment group against outcomes for similar students in the control group.

• “Similar” is defined by the variables used during matching.

• Students cannot have missing data on any of the variables used for matching.

• May be difficult to find good matches with a large number of matching variables.
Matching software:

**MatchIt package in R**


[https://gking.harvard.edu/matchit](https://gking.harvard.edu/matchit)
Q & A
with Alice Perez, Vice Chancellor for Academic Affairs, CCCCCO
Lunch

At your tables, brainstorm on the following question:

● What do you still need to know to fully implement AB 705?
● And/or what support do you still need?

There are paper and pens at your table to record your responses.
Report out from Lunch Discussions
Pulling it all together:
Can we do well by doing good?
Can we do well by doing good?

- The student centered funding formula (SCFF) now remunerates colleges for each student to complete transfer-level math and English in their first year.
- Each student to do this is worth 2 success points.
- Each success point is currently valued at $111, this valuation will double to $222 (plus COLA) in 2020-21.
A Case Study

Transfer-level completion in first year

- Transfer-level English
- Transfer-level Math
- Transfer-level Math & English

<table>
<thead>
<tr>
<th>Year</th>
<th>Transfer-level English</th>
<th>Transfer-level Math</th>
<th>Transfer-level Math &amp; English</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>17%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>2015-16</td>
<td>16%</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>2016-17</td>
<td>17%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>2017-18</td>
<td>14%</td>
<td>14%</td>
<td>9%</td>
</tr>
</tbody>
</table>

2014-2015 to 2017-2018
Throughput by HS GPA

Actual Throughput

<table>
<thead>
<tr>
<th>HS GPA Range</th>
<th>Math B70</th>
<th>Math B65</th>
<th>Math B1A</th>
<th>Math B22</th>
<th>Math B4A</th>
<th>Psyc B5</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2.30</td>
<td>10%</td>
<td>9%</td>
<td>11%</td>
<td>40%</td>
<td><strong>67%</strong></td>
<td><strong>67%</strong></td>
</tr>
<tr>
<td>2.30-2.99</td>
<td>7%</td>
<td>12%</td>
<td>39%</td>
<td>44%</td>
<td>63%</td>
<td><strong>86%</strong></td>
</tr>
<tr>
<td>≥ 3.0</td>
<td>20%</td>
<td>18%</td>
<td>46%</td>
<td><strong>69%</strong></td>
<td><strong>92%</strong></td>
<td><strong>88%</strong></td>
</tr>
</tbody>
</table>
Growth in High Throughput Options

Sections of Statistics for the Social Sciences

<table>
<thead>
<tr>
<th>Year</th>
<th>Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>11</td>
</tr>
<tr>
<td>2014-15</td>
<td>16</td>
</tr>
<tr>
<td>2015-16</td>
<td>14</td>
</tr>
<tr>
<td>2016-17</td>
<td>17</td>
</tr>
<tr>
<td>2017-18</td>
<td>25</td>
</tr>
<tr>
<td>2018-19</td>
<td>45</td>
</tr>
<tr>
<td>2019-20</td>
<td>61</td>
</tr>
</tbody>
</table>
Taking the lid off enrollment

• In 2019-2020 virtually all students will be eligible to take Statistics for Social Sciences.
• In the past access to transfer-level courses had been regulated by restrictive placement rules and only about one third of incoming students were able to take Statistics as their first math course.
Projecting the impact

Adjusted $R^2$-square of .89
Projecting the impact

Transfer-level completion in first year

- Transfer-level English
- Transfer-level Math
- Transfer-level Math & English
- Projected impact Math & English

2014-2015: 10%
2015-2016: 13%
2016-2017: 12%
2017-2018: 14%
2018-19: 17%
2019-20: 18%
2020-21: 25%

2014-2015: 5%
2015-2016: 7%
2016-2017: 8%
2017-2018: 9%
2018-19: 12%
2019-20: 18%
2020-21: 25%

2014-2015: 17%
2015-2016: 16%
2016-2017: 22%
2017-2018: 24%
2018-19: 30%
2019-20: 30%
2020-21: 30%

2014-2015: 0%
2015-2016: 10%
2016-2017: 0%
2017-2018: 0%
2018-19: 0%
2019-20: 0%
2020-21: 50%
Okay, show me the money!

• What is the fiscal return on increasing transfer-level math and English completion from 9% to 12%?
  – This college has an average incoming first-time student population of 5,000
  – 3% * 5,000 * $111 * 2 = $33,300
  – .75 are Pell/BOG recipients
  – Grand total = [$33,300 + 37,462.50 + 24,975] = $95,737.50

• How about from 12% to 25%?
  – 13% * 5,000 * $222 * 2 = $288,600  {success points valued at $222 in 2020-21}
  – Grand total = [$324,675 + $216,450 + $288,600] = $829,725
It’s a win-win situation

• Momentum point research shows that students who complete transfer-level math and English in their first year are more likely to complete than those who don’t.
• Denley (2016) found that this momentum point was associated with a 30% gain in six-year completion rates.
• Also see Jaggars, Edgecombe, & Stacey, 2014; Scott-Clayton & Rodríguez, 2012.
Yes, we can! Si, se puede!

- Increased throughput will boost college funds under the new SCFF
- As we do better by our students, we will also be able to increase institutional funding which will further help us in many ways to achieve our mission.
- Conclusion: We're doing the right thing for our students.
Results from Early Adopters
Statistics – Throughput vs. Fall 2018

Pretransfer math includes 3 levels below transfer tracked for three terms, fall 2016 to spring 2017. Fall 2018 statistics became open enrollment with no coreq, represents one-term success rates.
Pretransfer English and Reading includes 2 levels below transfer for each course tracked for three terms, fall 2016 to spring 2017. Fall 2018 reading was integrated into English and open to > 2.6 HSGPA with no coreq, represents one term success rate.
ENGL1A Success Rate and Volume of Successful Completions
Fall 2017 vs. Fall 2018

The overall success rate increased by 1% and total successful completions increased by 218 total students. <2.6 HSGPA eligible in fall 2018
The overall success rate remained the same and the total successful completions increased by 398 total students. Open access to statistics in fall 2018.
Open enrollment in Fall 2018, with tutors added to some sections. Overall success rate declined from 71% to 62%, but the number of successful completions increased.
Precalculus: # of Successful Completions
Fall 2017 vs. Fall 2018

Open enrollment into sections offered with a corequisite in Fall 2018. Overall success rate declined from 63% to 60%, but the number of successful completions increased.
Cabrillo College
Math Success Rates and Volume of Completions

While the overall success rate for Statistics decreased, total completions increased by 312 students. Open access to statistics in fall 2018. Success in 1st calculus course increased 18% and by 133 total students. Default placement rules.
The overall success rate for English1A + corequisite remained the same but the stand alone English1A decreased 1%, total completions increased by 633 students. Default placement rules.
Initial Math & English Level: Of students beginning the Math or English sequence at CR, what percent began in a transfer-level course?
One-Year Throughput Rate: Of the students who began the Math or English sequence one level below transfer, what percent successfully completed a transfer-level course within one year?

English courses: ENGL-102, and ENGL-150.
Math courses: MATH-102, MATH-120, and MATH-194...
Transfer-Level Enrollment & Success: How many transfer-level enrollments result in success?

<table>
<thead>
<tr>
<th>ENROLLMENT #</th>
<th>220</th>
<th>259</th>
<th>288</th>
<th>281</th>
<th>339</th>
<th>426</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUCCESSFUL #</td>
<td>145</td>
<td>172</td>
<td>207</td>
<td>177</td>
<td>214</td>
<td>274</td>
</tr>
<tr>
<td>SUCCESS RATE</td>
<td>66%</td>
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<td>72%</td>
<td>63%</td>
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</tr>
</tbody>
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<tr>
<th>Transfer-Level English</th>
<th>Fall 2013</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
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<th>Fall 2017</th>
<th>Fall 2018</th>
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<td>195</td>
<td>190</td>
<td>195</td>
<td>185</td>
<td>352</td>
</tr>
<tr>
<td>SUCCESSFUL #</td>
<td>127</td>
<td>132</td>
<td>126</td>
<td>104</td>
<td>107</td>
<td>206</td>
</tr>
<tr>
<td>SUCCESS RATE</td>
<td>71%</td>
<td>68%</td>
<td>66%</td>
<td>53%</td>
<td>58%</td>
<td>59%</td>
</tr>
</tbody>
</table>

Initial course in subject at CR?
- No
- Yes
One-Year Completion Rate in Transfer-Level Courses

- **Transfer Level Math**
  - Fall 15-Spring 16: 19%
  - Fall 16-Spring 17: 23%
  - Fall 17-Spring 18: 28%
  - Fall 18-Spring 19: 32%

- **Transfer Level English**
  - Fall 15-Spring 16: 49%
  - Fall 16-Spring 17: 55%
  - Fall 17-Spring 18: 54%
  - Fall 18-Spring 19: 65%

Fall 18 actual
Upcoming Events:

**NAVIGATING AND NETWORKING THROUGH AB 705 IMPLEMENTATION: WE’RE ALL IN THIS TOGETHER**

The MMAP Research Team in collaboration with the Chancellor’s Office for California Community Colleges, The RP Group, and Educational Results Partnership would like to invite up to 8 members from your AB 705 implementation team to join us for a half-day of discussion, learning and networking regarding the various ways colleges are implementing AB 705 requirements. The event will bring together colleges within your region at this in-person convening to share their experiences, challenges and opportunities. A CCCCO representative, as well as members of the MMAP Team will be available to address questions. Lunch will be provided.

**APRIL 12 | DE ANZA COLLEGE**
10 a.m. - 3 p.m.

**APRIL 19 | IRVINE VALLEY COLLEGE (Full)**
10 a.m. - 3 p.m.

**APRIL 26 | SIERRA COLLEGE**
10 a.m.- 3 p.m.

**MAY 3 | SAN DIEGO MESA COLLEGE**
9 a.m.- 2 p.m.