

The Impact of Excused Withdrawals on Throughput, with a Focus on Transfer-Level Math

AB 705 Implementation Report

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Introduction

In March 2020, the COVID-19 pandemic required that virtually all in-person instruction move suddenly to an online format. Given the unprecedented nature of this disruption, the California Community Colleges (CCC) issued an emergency regulation allowing all students to drop spring 2020 courses without incurring a withdrawal or "W" notation on their transcripts. Instead, they received an Excused Withdrawal or "EW" notation, which shields students from possible negative repercussions of a W notation on their transcript.

While the system allowed colleges to grant EWs beginning in 2018, few students pursued this notation (CCC, 2021). In the context of the pandemic, more students began leveraging this alternative. In fall 2022, Title 5 educational regulations changed to make permanent the option for students to request an EW up until the last day of the term due to events beyond their control affecting their ability to complete a course.¹

The EW is not factored into academic progress calculations, and it is treated as if the student never enrolled in the course. However, an EW still indicates an unsuccessful attempt to complete a class, and a student who receives this notation will need to retake the course in a future term, if the course is required to fulfill their educational goal.

The Multiple Measures Assessment Project (MMAP) (see sidebar) historically included EW notations as indicators of non-successful course attempts in the calculation of throughput and course success in our research papers, within the California Community

Multiple Measures Assessment Project Overview

The RP Group launched MMAP in 2014 to contribute to the advancement of developmental education reform in the California Community Colleges (CCC). In partnership with the California Community Colleges Chancellor's Office (CCCCO) and Ed Results Partnership, we demonstrated the benefit of using multiple measures for students' placement into transferlevel math or English, otherwise known as "gateway" courses, and the transformational impact of this approach on equitable student outcomes.

This seminal research supported the passage of AB 705, legislation designed to improve student success and equity by requiring colleges to use high school coursework and GPA as the primary determinants of placement in gateway courses. MMAP now supports the CCCCO with AB 705 implementation research and recommendations on maximizing the likelihood that students complete gateway courses in a timely way.

Find more about AB 705 implementation at https://assessment.cccco.edu/.

Colleges Chancellor's Office (CCCCO) <u>Gateway Completion Transfer-Level Dashboard</u>,² and AB 705 compliance reporting templates. Given this changing context, MMAP examined how including or excluding EWs impacted the calculations of students' throughput in transfer-level English and math courses.

² <u>https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Educational-Services-and-Support/transfer-level-dashboard</u>

¹ <u>https://www.law.cornell.edu/regulations/california/5-CCR-55024</u>

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Further, some educators are concerned about how this policy shift will specifically influence the proportion of students receiving an EW in a transfer-level math course, and how students' increased use of EWs may affect success and throughput rates within math pathways. In turn, we additionally examined the distribution of non-passing grades of students in their first gateway math course over time to shed light on the emerging impact of EWs on math throughput. The following report summarizes these results for system-level leaders and college educators to support decision-making about equitable placement and completion in the CCC system.

Report Layout

The organization of this report first includes the methodology used to calculate success and throughput with and without EW notations. Second, it explores the impact of excluding EW grades in success and throughput calculations. Third, key findings are summarized for success and throughput rates overall and for math outcomes disaggregated by statistics and precalculus course enrollment and for disproportionatly impacted student groups. Fourth, an analysis of the impacts of including or excluding EW notations in success and throughput calculations. The report wraps up with a conclusion and directions for future research.

Methodology

The RP Group obtained data for this analysis from the Ed Results Partnership's Cal-PASS (Partnership for Achieving Student Success) Plus data system using the MMAP data file methodology.³ We defined English courses by the Taxonomy of Program (TOP) code 1501.00 (English). We defined math courses by the TOP code 1701.00 (Mathematics) as well as specific "non-math department" courses in other TOP code areas, including 0103.00 (Plant Science), 0501.00 (Business), 0505.00 (Business Administration), 0506.00 (Business Management), 0707.10 (Computer Programming), 1799.00 (Other Math), 2001.00 (Psychology), 2003.00 (Behavioral Science), 2099.00 (Other Psychology), 2201.00 (Social Sciences), 2204.00 (Economics), and 2208.00 (Sociology). We identified the math courses within other TOP codes in collaboration with the Academic Senate for the California Community Colleges. Transfer-level courses with math TOP codes were those

Key Terms

Throughput: number of students who enrolled at a particular starting level then successfully completed the transfer-level English or math course within one year, OR who successfully completed either a transfer-level English or an ESL course equivalent to transfer-level English within three years.

Course success: completion of a course in one term, with a grade of A, B, C, or P, regardless of starting level, at or below transfer-level.

One-term throughput: successful completion of a transfer-level English or math course within one term, which requires the student to start at the transfer level.

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https://rpgroup.org/Portals/0/Documents/Projects/MultipleMeasures/AB705 Workshops/AccessEnrollmentSuccess RPGroup Final2020-1.pdf?ver=2021-04-28-082835-143

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courses with a CB21 code of "Y" (not prior to college level) and a CB05 transfer status code indicating that the course transfers to the University of California (UC) and/or California State University (CSU) systems.

To understand the overall impact of including EWs, we analyzed the differences in throughput rates with and without the inclusion of EW notations for CCC students who enrolled at any starting level in fall 2020 and successfully completed transfer-level English or math within one year. We then looked at students whose first math course was at the transfer level to extend our analysis and consider the impact of EWs on students' experiences in math pathways over time.

Key Findings

This analysis indicates that it is **appropriate to include EWs in transfer-level English and math throughput and course success calculations**. In math specifically, the overall pattern of EWs received shows that **EWs are largely replacing other non-passing grades** (i.e., D, F, or W).

Overall Impact of EWs on Transfer-Level Course Throughput Rates

Including EW notations for students who started in fall 2020 showed a slight decrease in transfer-level course throughput:

- For English, including EWs for the fall 2020 cohort resulted in throughput rates of 66%, compared to 69% when excluding the notation, a difference of 3 percentage points.
- For math, including EWs for the fall 2020 cohort resulted in throughput rates of 54% compared to 57% when excluding the notation, a difference of 3 percentage points.

At the same time, including students receiving EWs in these calculations offers a truer representation of the overall cohort and transfer-level English and math throughput.

Emerging Impact of EWs on Math Pathways

When looking at students whose first math course was at the transfer level:

- The impact of EWs on fall and spring one-term throughput rates in gateway math was small. For example, the average success rate for all math classes in spring 2019 was 56%, while in spring 2020, it was 59% (counting the EW as a non-passing grade).
- Students who received an EW were most likely on path to receive either a W, D, or F. As EWs increased, Ws, Ds, and Fs decreased.

- Overall withdrawal rates in transfer-level math courses were substantially higher for disproportionately impacted⁴ students than non-disproportionately impacted students in spring 2020 than in spring 2019. At the same time, disproportionately impacted students were much more likely to receive an EW in spring 2020 in transfer-level math courses than non-disproportionately impacted students.
- Students passed their first statistics course at a lower rate in spring 2020, resulting in a three-percentage point increase in non-passing grades between spring 2019 and spring 2020. On the other hand, more students passed their first calculus course in spring 2020 compared to the prior year, resulting in a six-percentage point decline in non-passing grades during that period.

The COVID-19 pandemic led to the drastic increase in EW notations on students' transcripts starting in spring 2020, peaking in fall 2020, and steadily declining thereafter, according to the Chancellor's Office Data Mart.⁵ As a result, many colleges struggle with the decision to include or exclude EW notations in course success and throughput calculations during this timeframe and many consumers of data question whether data during this timeframe can even be used within longitudinal analyses. This analysis indicates that it is **appropriate to include EWs in transfer-level English and math throughput and course success calculations**, and **in math specifically, EWs are largely replacing other non-passing grades** (i.e., D, F, or W), using data within spring 2020 to fall 2020 terms is appropriate within longitudinal studies exploring course success and throughput.

Analysis

Overall Impact of EWs on Transfer-Level English and Math Throughput Rates

Figure 1 on the next page displays throughput trends for students who enrolled at a CCC in any level English or math course and then successfully completed the transfer-level course within one year. Five-year trends show improvements in throughput rates over time, with a leveling off of rates in the last year displayed. However, looking specifically at students who started in fall 2020, we compared how the number in the cohort and their throughput differed when including or excluding EW notations. See Table 1 for all the counts and percentages.

English. When including EWs as part of the starting cohort for fall 2020, throughput rates for English were 66%. Excluding EWs from the starting cohort resulted in throughput rates of 69%, 3 percentage points more. The exclusion of EWs also reduced the overall cohort from

⁴ According to the California Community Colleges Chancellor's Office (CCCCO), "disproportionate impact is a condition where some students' access to key resources and supports and ultimately their academic success may be hampered by inequitable practices, policies and approaches to student support" (Harris, 2013). ⁵ https://datamart.cccco.edu/Outcomes/Grades Distribution Summary.aspx

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161,830 to 155,864, a decrease of 5,966 students who were no longer part of the throughput calculation.

Math. When including EWs as part of the starting cohort for fall 2020, throughput rates for math were 54%. Excluding EWs from the starting cohort resulted in throughput rates of 57%, 3 percentage points more. The exclusion of EW notations also reduced the overall cohort from 137,529 to 131,219, a decrease of 6,310 students who were no longer part of the throughput calculation.

Key Takeaways

Including EWs in throughput calculations resulted in:

- A more inclusive and accurate cohort of students, and
- A slight, but not significant, decline in throughput rates for transfer-level English and math courses.



Figure 1. Trends in Throughput Rates with and without EWs, 2016-2017 through 2020-2021

	Course	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Math	Throughput <i>without</i> EW	49%	52%	56%	63%	68%	69%
	Throughput <i>with</i> EW	49%	52%	56%	63%	68%	66%
	Total Enrollment without EW	169,638	171,638	174,492	176,904	182,757	155,864
	Total Enrollment with EW	169,638	171,638	174,493	176,926	182,868	161,830
	Throughput <i>n</i>	83,287	89,891	97,506	110,652	124,426	106,853
English	Throughput <i>without</i> EW	26%	27%	30%	36%	51%	57%
	Throughput <i>with</i> EW	26%	27%	29.6%	36%	51%	54%
	Total Enrollment without EW	168,240	169,456	170,525	165,030	148,500	131,219
	Total Enrollment with EW	168,241	169,457	170,526	165,062	148,637	137,529
	Throughput <i>n</i>	44,305	46,482	50,425	58,659	75,318	74,656

Table 1. Throughput Rates with and without EW Notations, 2015-20216 through 2020-2021

Note: Fall cohort tracked for one year; any starting level

Overall Impact of EWs on One-Term Throughput in Transfer-Level Math

To further understand the impact of EW notations on students' experiences in math pathways, we then looked at course success – or "one-term throughput" – for students who started in transfer-level math over time. We separately examined student outcomes for the spring and fall terms between 2015 and 2020.

Spring Term Trends

Figure 2 on the next page shows the percentage of students completing transfer-level math in one term for the spring terms during that period. In addition, it displays the percentage of students who did *not* pass transfer-level math in one term, including students who received Ds, Fs, Ws, and as of spring 2020, EWs.

One-term throughput in transfer-level math was stable at 61% between spring 2015 and spring 2018, dropping three percentage points to 58% in spring 2019, and decreasing only one additional percentage point to 57% in spring 2020 – the first term affected by the COVID-19 pandemic. Essentially, one-term throughput for gateway math remained relatively stable in spring 2020 when considering the effects of the pandemic on instruction and learning.

Prior to spring 2019, the proportion of Ws and D or F grades remained mostly flat, each comprising around 20% of total transfer-level math grades. Despite their introduction in 2018, EWs comprised 0% of all grades prior to spring 2020.

In spring 2020, overall withdraws, including both Ws and EWs, increased to 31% of all grades received in transfer-level math. Breaking withdrawals further, while Ws dropped from 22% in spring 2019 to 8% in spring 2020 (a decrease of 14 percentage points), EWs increased from 0% to 23%. In addition, D or F grades dropped from 20% to 12%, a decrease of eight percentage points.

Essentially, as EWs increased, Ws nearly disappeared. The growth in EWs was greater than the decline in Ws; however, when we include the decrease in D or F grades, the increase in EWs was offset by the reduction of other non-passing grades. Ultimately, this analysis showed a net decrease of one percentage point in overall non-passing grades in spring 2020 compared to spring 2019. See Table 2 for all the counts and percentages.



Figure 2. Trends in Spring One-Term Throughput and Non-Passing Grades in Transfer-Level Math, 2015 - 2020

Table 2. Spring One-Term Throughput and Non-Passing Grades in Transfer-Level Math, 2015 - 2020

Term	Total Enrollments	One-Term Throughput	EWs	D or F Grades	Ws	Overall Withdrawals (EWs + Ws)
Spring 2015 Mean	100%	61%	0%	19%	20%	20%
Spring 2016 Mean	100%	61%	0%	19%	20%	20%
Spring 2017 Mean	100%	61%	0%	19%	20%	20%
Spring 2018 Mean	100%	61%	0%	19%	20%	20%
Spring 2019 Mean	100%	58%	0%	20%	22%	22%
Spring 2020 Mean	100%	57%	23%	12%	8%	31%
Spring 2015 N	64,151	39,211	0	12,178	12,762	12,762
Spring 2016 N	67,961	41,480	0	12,901	13,580	13,580
Spring 2017 N	69,382	42,514	0	13,194	13,674	13,674
Spring 2018 N	72,723	44,438	0	13,789	14,495	14,495
Spring 2019 N	85,546	49,601	60	17,390	18,495	18,555
Spring 2020 N	96,939	54,874	22,687	11,557	7,821	30,508

Fall Term Trends

Trends in non-passing grades in fall terms mirror those seen in spring (see Figure 3). However, one-term throughput rebounded to 57% in fall 2020 from a low of 52% in fall 2019 – the first term of AB 705 implementation. Ws were 23% and D or F grades were 25% of all grades in fall 2019 prior to the onset of COVID-19, while EWs represented 0% of total course outcomes.

In fall 2020, overall withdrawals were relatively stable at 23%; while Ws decreased by seven percentage points to 16%, EWs increased to 7% from 0%. D or F grades decreased by five percentage points to 20%. The net result was an overall reduction of five percentage points in non-passing grades for transfer-level math in fall 2020 relative to fall 2019. See Table 3 for the all counts and percentages.

Key Takeaways

SPRING

- One-term throughput in transfer-level math remained stable in spring 2020, dropping by just one percentage point compared to the prior year.
- The increase in EWs essentially offset the decrease in other non-passing grades in spring 2020.

FALL

- One-term throughput in transfer-level math *increased* by five percentage points in fall 2020 compared to fall 2019.
- For students who did not pass their transfer-level math class in fall 2020, the proportion receiving EWs increased while the proportion receiving Ws, Ds, or Fs decreased compared to the prior year.



Figure 3. Trends in Fall One-Term Throughput and Non-Passing Grades in Transfer-Level Math, 2014 - 2020

Table 3. Fall One-Term Throughput and Non-Passing Grades in Transfer-Level Math, 2014 - 2020

Term	Total Enrollments	One-Term Throughput	EWs	D or F Grades	Ws	Overall Withdrawals (EWs + Ws)
Fall 2014 Mean	100%	61%	0%	19%	19%	19%
Fall 2015 Mean	100%	61%	0%	19%	20%	19%
Fall 2016 Mean	100%	61%	0%	19%	19%	19%
Fall 2017 Mean	100%	60%	0%	20%	20%	20%
Fall 2018 Mean	100%	59%	0%	21%	20%	20%
Fall 2019 Mean	100%	52%	0%	25%	23%	23%
Fall 2020 Mean	100%	57%	7%	20%	16%	23%
Fall 2014 N	74,859	45,980	0	14,304	14,575	14,575
Fall 2015 N	78,453	48,071	0	14,972	15,410	15,410
Fall 2016 N	83,256	51,065	0	16,016	16,175	16,175
Fall 2017 N	90,254	54,383	0	17,874	17,997	17,997
Fall 2018 N	105,946	62,415	36	22,042	21,453	21,489
Fall 2019 N	160,166	83,755	221	39,242	36,948	37,169
Fall 2020 N	101,505	58,321	6,972	20,301	15,911	22,883

Impact of EWs on Equitable Outcomes in Transfer-Level Math

To understand the impact of EWs on equitable outcomes in transfer-level math, we looked at overall withdrawals (Ws and EWs combined), disaggregated by disproportionately impacted and non-disproportionately impacted students over time (see Figure 4).

In spring 2019, disproportionately impacted students had a higher overall withdrawal rate (24%) compared non-disproportionately impacted students (18%), resulting in a six-percentage point gap. In spring 2020, overall withdrawal rates ju%mped to 35% for disproportionately impacted students and 26% for non-disproportionately impacted groups, increasing the gap to nine percentage points.

In spring 2020, EWs comprised 27% of all grades received by disproportionately impacted students compared to 18% for non-disproportionately impacted students (a nine-percentage point gap). Correspondingly, disproportionately impacted groups received fewer Ws compared to the prior spring (24% vs. 9%, respectively); similarly, the proportion of non-disproportionately impacted groups received groups receively). See Table 4 for all counts and percentages for disproportionately impacted students.

Key Takeaways

- Overall withdrawal rates in transfer-level math courses were substantially higher for disproportionately impacted students than non-disproportionately impacted students in spring 2020 than in spring 2019.
- At the same time, disproportionately impacted students were much more likely to receive an EW in spring 2020 in transfer-level math courses than non-disproportionately impacted students.



Figure 4. Trends in Spring Term Math Withdrawal Rates for Disproportionately Impacted and Non-Disproportionately Impacted Students, 2015 - 2020

Table 4.Spring Term Math Withdrawal Rates for Disproportionately Impacted Students, 2015 -2020

Term	Total Enrollments	One-Term Throughput	EWs	D or F Grades	Ws	Overall Withdrawals (EWs + Ws)
Spring 2015 Mean	100%	55%	0%	23%	22%	22%
Spring 2016 Mean	100%	55%	0%	22%	23%	23%
Spring 2017 Mean	100%	55%	0%	23%	23%	23%
Spring 2018 Mean	100%	55%	0%	22%	23%	23%
Spring 2019 Mean	100%	52%	0%	23%	24%	24%
Spring 2020 Mean	100%	51%	27%	14%	9%	35%
Spring 2015 N	30,066	16,566	0	6,784	6,716	6,716
Spring 2016 N	32,345	17,785	0	7,190	7,370	7,370
Spring 2017 N	34,208	18,774	0	7,713	7,721	7,721
Spring 2018 N	36,960	20,352	0	8,216	8,392	8,392
Spring 2019 N	46,783	24,459	27	10,968	11,329	11,356
Spring 2020 N	55,288	28,104	14,795	7,686	4,703	19,498

Statistics and Calculus Course Success and the Impact of EWs

To explore the impact of EW notations based on a student's math journey, we further disaggregated the data by statistics and calculus courses to explore any variations that may exist between the Statistics-Liberal Arts Math (SLAM) pathway compared to the Business-Science, Technology, and Math (B-STEM) pathway.

Statistics

Figure 5 focuses on trends in students' success in their first statistics course, specifically during the spring terms between 2015 and 2020. As displayed, statistics course success decreased slowly prior to spring 2020, then dipped to 58% in spring 2020, a two-percentage point decrease over the prior year.

Prior to spring 2019, W notations and D or F grades remained rather flat, each comprising around 17% and 20% of all statistics grades received, respectively. EWs comprised 0% of all grades prior to spring 2020. In spring 2020, overall withdrawals (Ws and EWs combined) increased by 11 percentage points from 20% to 31%. EWs increased from 0% in spring 2019 to 23% in spring 2020, while Ws dropped from 20% to 7% during the same period, a decrease of 13 percentage points. D or F grades also dropped from 19% to 12%, a decrease of seven percentage points. See Table 5 for all the counts and percentages.

Essentially, as EWs increased, Ws nearly disappeared. The growth in EWs was greater than the decline in Ws. However, when including the decrease in D or F grades, the increase in EWs was balanced by the reduction in Ws, Ds, and Fs. Ultimately, students received three percentage points more non-passing grades in spring 2020 compared to spring 2019.



Figure 5. Trends in Spring Term Statistics Course Success and Withdrawal Rates, 2015 - 2020

Term	Total Enrollments	One-Term Course Success	EWs	D or F Grades	Ws	Overall Withdrawals (EW + W)
Spring 2015 Mean	100%	64%	0%	17%	19%	19%
Spring 2016 Mean	100%	64%	0%	17%	19%	19%
Spring 2017 Mean	100%	64%	0%	18%	18%	18%
Spring 2018 Mean	100%	63%	0%	18%	19%	19%
Spring 2019 Mean	100%	60%	0%	19%	20%	20%
Spring 2020 Mean	100%	58%	23%	12%	7%	31%
Spring 2015 N	31,773	20,270	0	5,497	6,006	6,006
Spring 2016 N	33,975	21,605	0	5,930	6,440	6,440
Spring 2017 N	36,801	23,378	0	6,647	6,776	6,776
Spring 2018 N	39,587	25,117	1	7,033	7,436	7,437
Spring 2019 N	49,490	29,807	35	9,635	10,013	10,048
Spring 2020 N	57,522	33,117	13,416	6,682	4,247	17,663

Table 5. Spring Term Statistics Course Success and Withdrawal Rates, 2015 – 2020

Calculus

Figure 6 focuses on trends in students' success in their first calculus course, specifically during the spring terms between 2015 and 2020. As with statistics, the one-term course success rate in calculus started to decline as of the spring 2018 term and dipped three percentage points to 58% in spring 2019. Then, in spring 2020, it rebounded by six percentage points to 64%.

Beginning in spring 2018, the withdrawal rate slowly increased, reaching 25% in spring 2019. Ds and Fs remained rather flat at 16 to 17% of all calculus grades. EWs comprised 0% of all notations received prior to spring 2020.

In spring 2020, overall withdrawals in calculus courses, including Ws and EWs, increased by only two percentage points from 25% to 27%. While EWs increased to 20% of all grades received, Ws dropped precipitously from 25% in spring 2019 to just 7% in spring 2020 (an 18-percentage point decrease). D or F grades also dropped from 17% to 9% (an eight-percentage point decrease).

While EWs increased in spring 2020, the cumulative decrease in other non-passing grades was greater. As a result, students received fewer non-passing grades in spring 2020 overall – an improvement six percentage points compared to the prior year.

Key Takeaways

STATISTICS

• One-term course success rates in statistics started a gradual decline as of spring 2018; in spring 2020, these rates dropped by two additional percentage points over the prior term.

• Students received more non-passing grades in statistics courses in spring 2020, with EWs making up an increased proportion of those grades.

CALCULUS

- More students passed calculus in spring 2020 compared to the prior year. One-term course success rates in calculus decreased in spring 2019, then rebounded in spring 2020.
- Students' receipt of non-passing grades in calculus declined in spring 2020 by six percentage points compared to spring 2019, with EWs making up a greater proportion of those non-passing grades.



Figure 6. Trends in Spring Term Calculus Course Success and Withdrawal Rates, 2015 - 2020

Term	Total Enrollments	One-Term Course Success	EWs	D or F Grades	Ws	Overall Withdrawals (EW + W)
Spring 2015 Mean	100%	63%	0%	17%	20%	20%
Spring 2016 Mean	100%	63%	0%	16%	21%	21%
Spring 2017 Mean	100%	64%	0%	16%	21%	21%
Spring 2018 Mean	100%	61%	0%	17%	22%	22%
Spring 2019 Mean	100%	58%	0%	17%	25%	25%
Spring 2020 Mean	100%	64%	20%	9%	7%	27%
Spring 2015 N	4,048	2,547	0	698	803	803
Spring 2016 N	4,191	2,654	0	668	869	869
Spring 2017 N	4,446	2,833	0	699	914	914
Spring 2018 N	4,465	2,742	0	759	964	964
Spring 2019 N	4,361	2,522	3	747	1,089	1,092
Spring 2020 N	4,075	2,595	815	377	288	1,103

Table 6. Spring Term Calculus Course Success and Withdrawal Rates, 2015 - 2020

Conclusion

Exploring the differences in throughput rates for transfer-level English and math during the 2020-2021 academic year indicates that including EW notations impacts the cohort size and throughput somewhat. The inclusion of students receiving EWs will always naturally increase the denominator (total cohort) and thus reduce the success or throughput rate. Inversely, excluding students with EWs reduces the denominator and artificially increases success or throughput rates. The inclusion or exclusion of EW notations depends on the purpose of the analysis. In the case of AB 705 implementation, including EW notations provides a transparent comparison across cohorts of all students who did not successfully complete a course. Further, it does not inflate success or throughput rates by excluding students who requested EWs at end of term instead of receiving a D or F grade.

No doubt, the COVID-19 pandemic led to the drastic increase in EW notations on students' transcripts. While available as of 2018, the awarding of EW notations began in spring 2020, peaked in fall 2020, and has steadily declined since, according to the Chancellor's Office Data Mart. At the same time, continuing to monitor students' use of this option given recent changes to Title 5 may be helpful in determining trends and impacts on throughput over time.

For math pathways specifically, an analysis of the trends in grade notations for transfer-level math across six years revealed a clear pattern. Increases in EWs coincided with decreases in other non-passing grades, including Ws, Ds, and Fs, thus the inclusion of EWs for math inparticular is appropriate since EWs essentially replaced other non passing grades.

Trends in math outcomes are similar for disproportionately impacted students and nondisproportionately impacted students, though disproportionately impacted students tended to receive EW notations at a higher rate than non-disproportionately impacted students.

Future Research

The results of this current analysis of the impact of EWs on throughput generally and math pathways specifically in the context of AB 705 implementation point us to areas for future research, including:

- Exploring the impact of EWs on calculus course success. Given the recent increase in passing grades and the simultaneous rise in EWs among students in those courses, we are interested in learning if this increase in calculus course success continues over time and how the availability of EWs interplays with those rates.
- Better understanding the impact on Ws and EWs on disproportionately impacted students' math pathways. Given the increased use of the EW notation among these student groups in spring 2020, we are curious to learn how the presence of the EW positively or negatively affects disproportionately impacted students' completion of transfer-level math in a timely manner.
- Monitoring the impact of EWs on overall transfer-level English and math throughput over time. While the use of EWs appears to be decreasing, continuing to track students' use of this notation over time will be important given the recent change to Title 5 which made this option permanent.

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The Research and Planning Group for California Community Colleges

As the representative organization for Institutional Research, Planning, and Effectiveness (IRPE) professionals in the California Community Colleges (CCC) system, the RP Group strengthens the ability of CCC to discover and undertake high-quality research, planning, and assessments that improve evidence-based decision-making, institutional effectiveness, and success for all students.

Project Team

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