Transitioning Learners to Calculus in Community Colleges

NATIONAL SURVEY OF COMMUNITY COLLEGE MATHEMATICS CHAIRS TECHNICAL REPORT AND SUMMARY

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INTRODUCTION TO THE TLC3 NATIONAL SURVEY

Transitioning Learners to Calculus in Community Colleges (TLC3) is a research project aimed at transforming institutional approaches to matriculating underrepresented racial minority (URM) students into and through Calculus II in the nation's 1,023 public associate degree-granting institutions (community colleges).[1] These institutions are crucial to meeting the nation's demand for talent in science, mathematics, engineering, and technology (STEM) and overwhelmingly serve as the primary pathway into postsecondary education for historically underserved students, including URM students. Although URM students are overrepresented in community colleges, they are underrepresented among STEM majors at these institutions.[2] Further, national data shows that only 24% of community college STEM majors who enrolled in mathematics courses completed a calculus or advanced math course during their first year. In contrast, the largest percentage completed a developmental mathematics course (42%).[3] These data suggest that studies of STEM student persistence in the community college context require a broad focus on the full sequence of courses from Developmental to Precalculus to Calculus II (DPC2) and initial math placement. The broader goal of the TLC3 project is to develop tools to help community colleges examine institutional readiness to facilitate successful outcomes for URM students in the DPC2 sequence.

This report focuses on a national survey of community college mathematics department chairs conducted by the TLC3 research team during 2017 (TLC3 National Survey). The 51-question survey captured the types of programs, structures, and instructional strategies that community colleges currently implement in the DPC2 sequence. In total, 500 respondents from 455 unique campus sites completed the survey, for a 44% response rate (455/1023). This report details the survey methods and presents tabulated responses organized around the major focal areas of the survey. The focal areas include: 1) courses, instruction, and faculty coordination in DPC2; 2) mathematics placement practices and policies; 3) student support in DPC2 courses; 4) access to and use of local data; 5) faculty professional development; and 6) improvement priorities and changes initiatives. The purpose of this report is to provide researchers with an overview of the data collected in the TLC3 National Survey and to provide practitioners with an opportunity to compare their college to the national landscape.

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TLC3 NATIONAL SURVEY METHODS

The TLC3 National Survey aimed to answer the research question: What types of programs, structures, and instructional strategies are community colleges currently implementing in the DPC2 sequence? The 51-question survey drew from prior research, including findings from Characteristics of Successful Programs in College Calculus (NSF DRL REESE #0910240) and Progress through Calculus (NSF DUE I-USE #1430540). Survey questions on student support and faculty professional development drew from research on enhanced practices for underserved students conducted by the College Equity and Assessment Lab (CCEAL) at San Diego State University.

The TLC3 National Survey was cast to mathematics chairs or their designees at the nation's 1,023 community colleges identified through the Integrated Postsecondary Education Data Set (IPEDS). Letters of invitation to participate in the survey were sent to community college mathematics department chairs identified through college websites. However, not all websites contained this information, or in some cases, the information was out of date. To increase our reach, we informed

1. Colleges primarily offering associate degrees in addition to some baccalaureate/applied baccalaureate degrees are classified in the Integrated Postsecondary Data Set (IPEDS) as 4-year institutions. Associate degree-granting colleges in this study include associate degree- and certificate-granting public 2-year institutions and public 4-year colleges that primarily award associate and not baccalaureate degrees.
2. National Postsecondary Student Aid Study (NPSAS) (2012)
3. Beginning Postsecondary Students (BPS) (2015)

campus leadership about the survey through a list of presidents and vice-presidents of community colleges possessed by researchers at CCEAL, alerting them to the survey and asking them to encourage their current math department chair to complete it. There were four recasts between March and July of 2017. To further increase our response rate, the survey was recast one final time in August of 2017 to a random sample of non-responders through robocalls conducted by CCEAL staff and through personal communications to non-responders by selected TLC3 Advisory Board members. The survey closed on September 8, 2017, with 519 responses.

During data cleaning, 19 responses (4%) were deleted because of substantial missing data or because of duplicate responses. For duplicate responses from the same individual, we examined both responses and kept the most complete or recent response. In cases of duplicate responses from a single campus (n = 45), we kept the response from the person identified as either the mathematics chair or the dean of science and mathematics. We used single imputation when less than 5% of responses were missing for several scale items, and for all other items we added -2 for missing values. In addition, some items were if-then questions. If respondents were not presented with those questions, they received a -3 for not applicable. On demographic questions, some respondents had missing values, but we were able to identify race and gender based on web searches. There were several items for which respondents selected "yes" or left it blank throughout the data set. For these items, blank answers were replaced with zeroes and recoded as "no." The final response rates for individual survey questions ranged from a high of 455 (100%) to a low of 446 (98%).

For each college in the sample, we added IPEDS data, including institutional characteristics, enrollment and graduation rates, and student demographics. Responses from unique campus sites that are part of multi-campus institutions with identical IPEDS IDs were identified to facilitate future analysis. To identify an institution's Minority-Serving Institutional (MSI)[4] designation, we used public information on HBCUs and Tribal Colleges, enrollment data and definitions for HSI colleges used by Excelencia in Education (https://www.edexcelencia.org), and institutional listings for AANAPISI (https://www2.ed.gov/programs/aanapi/aanapi-eligibles-2016.pdf).

DESCRIPTION OF TLC3 NATIONAL SURVEY RESPONDENTS

The final TLC3 National Survey sample comprised 500 responses from 455 unique campus sites (44% response rate; 455/1023). The majority of the colleges in the final sample (94%, *n* = 429) taught on the semester system and were diverse in terms of the number of faculty in their mathematics programs, with a median of eight full-time faculty (min = 0, max = 75) and 14 part-time faculty (min = 0, max = 200). The typical survey respondent was a full-time mathematics faculty member (85%, *n* = 389) who identified as a woman (49%, *n* = 225).[5] Most respondents (72%, *n* = 326) held a master's degree, and 16% (*n* = 73) held a PhD or other research doctorate, and 6% (*n* = 27) held a practitioner doctorate. The majority of respondents (77%, *n* = 352) identified their racial affiliation as White, 5% (*n* = 22) identified as African-American, 3% (*n* = 13) identified as Mexican American or Hispanic/Latino, and 3% (*n* = 12) identified as Asian, Southeast Asian, or Pacific Islander.[6]

In the final sample, 259 colleges (57%) were MSIs based on enrollment data from IPEDS (see Table 1). The largest group was HSIs, representing 24% (*n* = 109) of the overall sample. An additional 12% (*n* = 56) of colleges were emerging HSIs. The sample included seven Tribal Colleges, five HBCUs, 10 PBI awardees, and seven PBI-eligible institutions. The sample also included 65 (14%) AANAPISI colleges, including institutions that were 2016 AANAPISI grantees (*n* = 6), identified on the AANAPISI website[7] as eligible (*n* = 31), or identified as AANAPISI eligible based on enrollment (*n* = 28).

4. The MSI designations in this study are: a) Predominantly Black Institutions (PBIs) and Historically Black Colleges and Universities (HBCUs), b) Hispanic-Serving Institutions (HSIs), c) Tribal Colleges and Universities (TCUs), and d) Asian American, Native American and Pacific Islander-Serving Institutions (AANAPISIs).
5. 7% (n = 30) of respondents declined to state their gender.
6. Race/ethnic groups included Filipino, West African, East African, Middle Eastern, Multiethnic, Other, and Decline to State.
7. https://www2.ed.gov/programs/aanapi/aanapi-eligibles-2016.pdf

Table 1

National Survey respondents by MSI designation[a] and states represented (*n* = 455)

National Survey Respondent MSI Designation	*N*	*%*	*N* of States
Tribal College	7	2%	6
HBCU	5	1%	3
PBI Award	10	2%	7
PBI Eligible (>=40% African-American)	7	2%	7
HSI (>=25% Hispanic/Latino)	109	24%	13
HSI Emerging (15-24% Hispanic/Latino)	56	12%	22
AANAPISI Grantee	6	1%	4
AANAPISI Eligible (per AANAPISI website)	31	7%	11
AANAPISI Eligible (>=10% AA, NA, PI)	28	6%	14
Total	259	57%	38

[a] For information about and current listings of MSI institutions, see https://www2.ed.gov/about/offices/list/ope/idues/eligibility.html#el-inst. Among public 2-year colleges only (*n* = 958), the 2017 MSI grantees included 85 HSIs, 18 TCUs, 11 HBCUs, 28 PBIs, 13 AANAPISIs.

REPRESENTATIVENESS OF THE TLC3 NATIONAL SURVEY SAMPLE

The final sample was representative of the nation's community colleges in terms of location, urbanicity, and size and setting. Specifically, 49 states were represented in the sample (all but Nevada), and the distribution of respondents by state was within three percentage points of the national distribution. California was the most underrepresented (12% nationally; 9% of the sample), and Texas was the most overrepresented (6% nationally; 8% of the sample). The sample was also within three percentage points of the national distribution in terms of urbanicity, as shown in Table 2. Large, suburban campuses were the most overrepresented (15% nationally; 18% of the sample), and remote towns were the most underrepresented (11% nationally, 9% of the sample).

Table 2

Urbanicity of TLC3 National Survey sample (*n* = 453)[a]

Urbanicity		*N*	*%*
City	Large	48	11%
	Midsize	43	9%
	Small	70	15%
Suburb	Large	80	18%
	Midsize	13	3%
	Small	10	2%
Town	Fringe	8	2%
	Distant	44	10%
	Remote	40	9%
Rural	Fringe	75	16%
	Distant	17	4%
	Remote	5	1%

[a] Degree of urbanicity unavailable for two associate degree-granting colleges in U.S. territories. For IPEDS Glossary, see https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx

The sample was also representative of the nation's community colleges in terms of size and setting, being within five percentage points of the national distribution. Very large 2-year institutions were the most overrepresented (7% nationally; 12% of the sample), and small 2-year institutions were the most underrepresented (29% nationally; 26% of the sample). In terms of primary degree granted, all colleges represented in the sample were associate degree-granting colleges, and 7% (n = 30) offered baccalaureate degrees in addition to associate degrees. Institutions offering baccalaureate degrees were underrepresented in the TLC3 National Survey sample. Specifically, whereas 13% of the colleges in the IPEDS universe are 4-year public, not primarily baccalaureate granting, a statistically significant smaller 7% of the TLC3 National Survey sample included institutions of this type ($\chi^2 = 18.268$, $p < .000$).

Courses, Instructional Format, and Faculty Coordination in DPC2

This section summarizes TLC3 National Survey questions about DPC2 courses, instructional format, and course coordination. Each table caption contains the exact wording of the survey question and the response rate.

Table 3

Which of these options does your campus offer at a developmental mathematics level? (Mark all that apply) (n = 455)

Developmental Course Options	*N*	*%*
Traditional lecture courses	360	79%
Online[a]	262	58%
Compressed courses (e.g., option to complete a 16-week course in 8 weeks)	213	47%
Differentiated pathways for STEM and non-STEM students	216	47%
Modularized or Emporium model	170	37%
Self-paced	118	26%
Co-requisite model I (e.g., students co-enroll in intermediate algebra and college algebra)	101	22%
Co-requisite model II (e.g., students co-enroll in developmental math linked with a study-skills course)	73	16%
Other (responses included review of arithmetic, hybrid/blended, flipped, college algebra with review)	65	14%
Learning community (e.g., students co-enroll in a developmental math and writing course)	55	12%

[a] For respondents who reported offering online developmental math courses, the median percentage of online developmental math courses was 10% (Q1 = 5%; Q3 = 20%).

Table 4

Select the precalculus courses offered at your college. (Mark all that apply)[a] (n = 455)

Precalculus Course Options	*N*	*%*
College Algebra	321	71%
Trigonometry (etc.)	285	63%
Precalculus, Elementary Functions, Analytic Geometry	210	46%
Precalculus and Trigonometry, combined	149	33%
College Algebra and Trigonometry, combined	80	18%
Other (responses included algebra for calculus, finite math, precalculus with support)	40	9%
Introduction to Math Modeling	7	2%

[a] This survey question included the following definition: "Precalculus refers to any transfer-level college mathematics course above the level of intermediate algebra that students may be required to take prior to their initial calculus course (e.g., Trigonometry, Precalculus I, and College Algebra)."

Table 5

Select the courses that your campus offers at the calculus level for a typical STEM-interested student. (Mark all that apply) (*n* = 455)

Calculus Course Options	*N*	*%*
Calculus I and Calculus II (one term for each course)	420	92%
Other (e.g., compressed calculus, applied calculus, accelerated Calculus I & II, math for engineering)	86	19%
Honors Calculus I or II (Honors option for Calculus I or II offered in addition to traditional Calculus I and II)	55	12%
Calculus tailored to STEM majors (e.g., calculus for biology, calculus for computer science)	31	7%
Calculus 3 - Differential Equations or Higher	17	4%
Calculus for first-timers (a separate course explicitly designed for students who have not seen calculus before)	9	2%
Co-requisite Calculus (a course taken concurrently with single-variable calculus that covers selected precalculus topics, coordinated with the content of the calculus course)	6	1%
Stretched Out Calculus I (two courses which, when taken together, are the equivalent of a single calculus course)	4	1%

Table 6

Indicate the primary instructional format during regular class meetings in each of the DPC2 areas. (*n* = 455)[a]

Primary Instructional Modality	Developmental		Precalculus		Calculus I & II	
	N	*%*	*N*	*%*	*N*	*%*
Lecture and answering student questions	77	17%	180	40%	234	51%
Lecture incorporating some active learning techniques (e.g., clickers, student-to-student interactions)	76	17%	140	31%	112	25%
Minimal lecture with mainly active learning techniques (include flipped)	41	9%	17	4%	11	2%
Lecture plus computer-based instruction	116	25%	60	13%	52	12%
There is too much variation across sections to identify one style	120	26%	46	10%	28	6%
Other (responses included online, modular/Emporium)	25	6%	12	3%	18	4%

[a] Percentages may not add to 100% due to rounding.

Table 7

Please estimate the percentage of courses in the DPC2 sequence taught by full-time mathematics Instructors. (*n* = 455)

Course Coordination	Dev. Math	Precalculus	Calculus / Calculus II
Q1 (25th percentile)	30%	55%	80% / 89%
Median	49%	79%	98% / 100%
Q3 (75th percentile)	66%	99%	100% / 100%

Table 8

For courses in the DPC2 sequence with multiple sections, who coordinates any uniform aspects (e.g., syllabi or final exams) across the sections? (*n* = 455)

Course Coordination	Dev. Math		Precalculus		Calculus I & II	
	N	*%*	*N*	*%*	*N*	*%*
Department committee	166	36%	149	33%	131	29%
Someone for whom this is part of their official responsibilities for multiple years	177	39%	138	30%	131	29%
Someone who happens to be teaching these courses in a given term	25	6%	40	9%	49	11%
There is no formal course coordinator	59	13%	102	22%	117	25%
Other (responses included dean, chair, district coordinator)	28	6%	26	6%	27	6%

Table 9

When several instructors are teaching the same course in the same term, how often do they typically meet as a group to discuss the course? (*n* = 455)[a]

Frequency of Faculty Conferring	Dev. Math		Precalculus		Calculus I & II	
	N	*%*	*N*	*%*	*N*	*%*
Never	48	11%	92	20%	101	22%
Once per term	133	29%	116	25%	110	24%
Several times per term	130	29%	82	18%	75	16%
Once a month	35	8%	24	5%	24	5%
Weekly	14	3%	9	2%	6	1%
Several times a week	5	1%	5	1%	6	1%
Informal conversations only	90	20%	127	28%	133	29%

[a] Percentages may not add to 100% due to rounding.

Mathematics Placement Practices and Policies

This section summarizes TLC3 National Survey questions related to mathematics placement practices and policies.

Table 10

Select the three options mostly used in your college to place students into the DPC2 sequence. (*n* = 453)

Placement Method Used	*N*	*%*
Accuplacer	308	68%
ACT or SAT scores	264	58%
High school grades in math	106	23%
High school GPA	95	21%
Placement exams developed by the department (including customized MyMathTest)	72	16%
Placement exams created by the state	72	16%
AP exam results	67	15%
COMPASS	57	13%
Individual advising	59	13%
Other (responses included Smarter Balanced Assessment, prerequisite course from another college)	56	12%
ALEKS	40	9%
Directed self-placement	7	2%
MAA placement exam	2	0%
MyMathTest (uncustomized)	2	0%

Table 11

Please indicate whether your college currently has any of the following placement policies or processes. (*n* = 453)

Placement Policies	Dev. Math		Precalculus		Calculus I & II	
	N	*%*	*N*	*%*	*N*	*%*
Higher placement by colleges staff[a]	231	51%	209	46%	194	43%
Adjustment during term[b]	242	53%	189	42%	167	37%
Process to test out of DPC2 courses[c]	340	75%	296	65%	255	56%

[a] Policies that allow individual instructors, counselors, or administrators to enroll a student in a course higher than his or her placement recommendation

[b] Process to revisit and, as necessary, adjust student placement after the term has begun

[c] Process for a student to challenge or test out of courses in the DPC2 sequence

Student Support in DPC2 Courses

This section summarizes TLC3 National Survey questions around student support in DPC2, including availability of tutoring, faculty involvement in tutoring, support programs for STEM students, and additional supports offered.

Table 12

Is there a math lab or tutoring center available to students enrolled in the DPC2 sequence? (*n* = 453)

	Dev. Math		Precalculus		Calculus I & II	
	N	***%***	***N***	***%***	***N***	***%***
Math lab or tutoring center available	317	70%	321	71%	334	73%

Table 13

What proportion of your full-time mathematics faculty engage in the tutoring center (e.g., devoting office hours in the tutoring center, coordinating/hiring tutors)? (*n* = 452)

% FT Faculty that Engage in Tutoring	***N***	***%***
All	60	13%
More than half but not all	40	9%
Many but less than half	178	39%
None	174	38%

Table 14

On your campus, are there special support services (e.g., TRIO/MESA programs) for students from traditionally underserved or underrepresented groups in STEM (either within or outside the department)? (*n* = 450)

Special Support Services for STEM[a]	***N***	***%***
Yes	235	52%
No	142	32%
Don't Know	73	16%

[a] Services included Federal TRIO programs, Upward Bound, Louis Stokes Alliance for Minority Partnerships (LSAMPS), Math Science Engineering Achievement (MESA), cohort groups, Tribal Colleges grants, and Extended Opportunity Programs and Services (EOPS).

Table 15

Which of the following ADDITIONAL supports are offered to students in the DPC2 sequence? (Mark all that apply) (*n* = 446)

Additional Supports	Developmental Math		Precalculus		Calculus I or II	
	N	*%*	*N*	*%*	*N*	*%*
Space on campus for students to informally gather to work on assignments and/or socialize	337	76%	325	73%	324	73%
Math clubs/opportunities to take part of in mathematics competitions (e.g., AMATYC competition)	62	14%	161	36%	187	42%
Optional supplemental instruction (e.g., additional scheduled class, extra out-of-class workshops)	191	43%	136	30%	108	24%
In-class peer tutors	149	33%	77	17%	58	13%
Online tutoring	260	58%	231	52%	215	48%
Practice exams	224	50%	168	38%	137	31%
Early alert warning systems (during enrollment, prior to placement)	96	22%	86	19%	80	18%
Early alert systems (after enrollment, during the term)	337	76%	314	70%	302	68%
Other (responses included department-created videos, academic coaching)	27	6%	24	5%	23	5%

Access To and Use of Local Data

This section summarizes TLC3 National Survey questions on access to and use of local data.

Table 16

Does your department have access to data to help inform decisions about your mathematics program? (*n* = 452)

Math Program Access to Data	*N*	*%*
Yes, but not readily available	222	49%
Yes, readily available	203	45%
No (not currently)	27	6%

Table 17

Which types of data does your department review on a regular basis to inform decisions about your DPC2 sequence? (Mark all that apply) (*n* = 452)

Data Regularly Reviewed by the Department	*N*	*%*
Student performance in mathematics courses (e.g., grades)	363	80%
Effectiveness of developmental mathematics courses (e.g., persistence, correlation with completing college math)	290	64%
Student evaluations	288	64%
Student learning outcomes	253	56%
Effectiveness of placement recommendation (e.g., correlation of placement recommendation with student performance in course)	198	44%
Tutoring center data (e.g., attendance frequencies)	195	43%
Transfer data (e.g., transfer rates or student performance at transfer institutions)	110	24%
Other (responses included effects of supplemental instruction)	21	5%
Student exit interviews	18	4%

Table 18

Please indicate the ways in which these data are commonly disaggregated. (Mark all that apply) (*n* = 452)

How data are commonly disaggregated	*N*	*%*
Not disaggregated	245	54%
By race/ethnicity	78	17%
By age	59	13%
By gender	77	17%
By time status (e.g., full-time/part-time)	77	17%
By BOTH race/ethnicity and gender	64	14%
By BOTH race/ethnicity and age	38	8%
By BOTH gender and age	38	8%
Other disaggregation (responses included class format: live, hybrid, online; student major; high-school GPA)	58	13%

Faculty Professional Development

This section summarizes TLC3 National Survey questions about types of faculty professional development offered and the availability and format of professional development for part-time faculty offered by the department.

Table 19

Does your college offer mathematics faculty professional development opportunities on the following concepts? (*n* = 449)

Professional Development for Full-Time Faculty	Yes		Don't Know	
	N	*%*	*N*	*%*
Using technology in the classroom	362	81%	18	4%
Using a new textbook/online system	281	63%	47	10%
Collaborative learning	277	62%	51	11%
Culturally relevant teaching	155	35%	89	20%
Performance monitoring	151	34%	112	25%
Building personal relationships	148	33%	95	21%
Intrusive practices	104	23%	121	27%
Validating practices	94	21%	142	32%
Implicit bias	82	18%	128	29%
Racial microaggressions	71	16%	117	26%

Table 20

Does your department provide faculty professional development for your part-time mathematics faculty? (*n* = 449)[a]

Professional Development for Part-Time Faculty	*N*	*%*
Yes, required of all part-time mathematics faculty	57	13%
Yes, strongly recommended	161	36%
Yes, not strongly recommended	133	30%
No	98	22%

[a] Percentages may not add to 100% due to rounding

Table 21

What proportion of your part-time mathematics faculty members participate in the department-specific professional development program? (*n* = 449)[a]

Part-Time Mathematics Faculty Participating in Professional Development	*N*	*%*
All	53	12%
More than half but not all	111	25%
Many but less than half	161	36%
None	27	6%
Not applicable	97	22%

[a] Percentages may not add to 100% due to rounding

Table 22

Which of the following best describes the format of your department-specific faculty professional development program for part-time mathematics faculty? (Mark all that apply) (*n* = 449)

Professional Development Format for Part-Time Faculty	*N*	*%*
Short workshop or orientation (1-4 hours)	247	55%
One-on-one mentoring from a full-time mathematics faculty member for at least one term	139	31%
Occasional seminars or workshops	179	40%
One-day workshop	80	18%
Other (responses included district meetings, books, informal discussion, online training, weekly tips by email, faculty learning communities)	49	11%
Multi-day workshop	29	6%
Term-long course or seminar	14	3%

Priorities and Change Initiatives

This section summarizes TLC3 National Survey question about top characteristics contributing to STEM student success and changes made in DPC2 courses, math placement, or tutoring centers.

Table 23

From the list below of ten options, select the top three characteristics that you believe contribute to the success of STEM-interested students in the DPC2 sequence at your campus. (*n* = 447)

Characteristic	Selected in Top 3		Ranked 1st		Ranked 2nd		Ranked 3rd	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
High-quality instruction	362	81%	221	49%	90	20%	51	11%
High-quality student academic support programs (e.g., tutoring)	266	60%	45	10%	117	26%	104	23%
Accurate placement of students into initial mathematics course	262	59%	102	23%	83	19%	77	17%
Active learning strategies	150	34%	37	8%	58	13	55	12%
Uniform course components (e.g., textbook, schedule)	100	22%	17	4%	36	8%	47	11%
High-quality professional development for mathematics faculty	56	13%	7	2%	20	4%	29	6%
Effective student advising related to transfer	53	12%	5	1%	15	3%	33	7%
Regular instructor meetings about course delivery	33	7%	6	1%	13	3%	14	3%
Effective use of local data to monitor the DPC2 course sequence	31	7%	2	.4%	8	2%	21	5%
High-quality student social support programs (e.g., MESA/TRIO)	28	6%	5	1%	7	2%	16	4%

Table 24

In the past two years, which of the following best characterizes any changes made to: courses in the DPC2 sequence, procedures for placing students in the DPC2 sequence, or your math lab or tutoring center? (Mark all that apply) (*n* = 455)

Change indicators[a]	Courses		Placement		Lab/Tutoring	
	N	*%*	*N*	*%*	*N*	*%*
No changes made	132	29%	143	31%	266	58%
Changes currently taking place/being piloted	204	45%	151	33%	84	18%
Changes have been implemented	191	42%	187	41%	111	24%

[a] Respondents provided written description of changes that are not included in this report. Percentages may not add to 100% because the categories "taking place/piloted" and "implemented" are not mutually exclusive.