Washington State Institute for Public Policy

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March 2024

Guided Pathways: Preliminary Report on Implementation and Student Outcomes

Guided Pathways is a whole-college reform framework designed to help students choose academic paths and earn credentials or transfer on time. Instead of defining strict requirements, the Guided Pathways framework allows community and technical colleges to restructure academic programs, course sequencing, advising, student services, and classroom practices to support the specific needs of their student populations.

In 2019, the Washington State Legislature provided funding for all 34 community and technical colleges in Washington to begin implementing Guided Pathways. In 2021, the legislature directed the Washington State Institute for Public Policy (WSIPP) to publish two reports examining colleges' implementation and the impact of Guided Pathways on student outcomes. This report focuses on implementation efforts to date and short-term student outcomes. WSIPP will publish a final report in 2029.

In Section I, we provide background information on Guided Pathways. In Section II, we describe the methodology we used to examine implementation and outcomes. We describe how colleges are implementing Guided Pathways in Washington in Section III and student outcomes in Section IV. Section V provides key takeaways and future research plans.

Summary

This report describes the implementation of Guided Pathways in Washington. Thirty-three out of 34 colleges reported that they are implementing Guided Pathways to some extent. Eighteen colleges report implementing initiatives in all four legislative requirement areas related to program mapping, advising, data analysis, and student services.

Guided Pathways varies by college, but we observed some common themes. Many colleges started with mapping and added advising reforms after. It was also common for colleges to implement multiple initiatives at the same time. Colleges reported that collaboration increased after beginning Guided Pathways, but noted the COVID-19 pandemic, staff capacity, and data system changes presented challenges to implementation. They also reported the need for ongoing funding in the future.

We also examined retention, course completion, credit accumulation, and GPA outcomes for students in Guided Pathways and non-Guided Pathways colleges. Outcome differences between these groups were small and we cannot say if differences are due to Guided Pathways, other programs, college factors, or student populations.

More research on program effectiveness is needed. To date, there are no evaluations that demonstrate Guided Pathways' causal impact on outcomes.

Suggested citation: Cramer, J., Gibson, C, & Hoagland, C. (2024). *Guided Pathways: Preliminary report on implementation and student outcomes* (Document Number 24-03-2301). Olympia: Washington State Institute for Public Policy. Exhibit 1 describes WSIPP's legislative assignment, and the bolded text shows the requirements for this preliminary report.

To complete this assignment, we surveyed colleges to learn how they are implementing Guided Pathways. In this report, we identify themes from survey responses and summarize the types of Guided Pathways initiatives colleges have completed or are currently working on. We also describe the successes and challenges that colleges reported experiencing while working on Guided Pathways and the resources they reported needing to continue their efforts.

We also received student-level administrative data from the Washington State Board for Community and Technical Colleges (SBCTC) to examine student outcomes. In this report, we describe trends in retention rates, course completion rates, credit accumulation rates, and grade point averages between students enrolled in colleges that were early adopters and later adopters of Guided Pathways.

A final report, due December 2029, will examine the relationship between Guided Pathways and long-term student outcomes like degree completion, four-year institution transfer rates, employment, and earnings.

Exhibit 1 Legislative Assignment

Section 4 (3)(a) The Washington State Institute for Public Policy, in consultation with the Workforce Education Investment Accountability and Oversight Board under RCW 28C.18.200, shall complete an evaluation of the guided pathways model. **To the extent possible, the** *Institute shall complete a preliminary report* that evaluates the effect of the guided pathways model on early student outcomes *including, but not limited to, student* retention and persistence, college level English and math within the first year, and graduation and transfer rates. The preliminary report must review the implementation of the guided pathways model in Washington and any available evidence of the effectiveness of the guided pathways model.

b) The Washington State Institute for Public Policy shall complete a final report that evaluates the effect of the guided pathways on longer-term student outcomes including, but not limited to, degree completion, time to degree, transfer to four-year institutions, employment, and earnings, to the extent possible. The final report must be submitted by December 15, 2029.

c) Both the preliminary and final reports must consider differences in outcomes by racial and ethnic subgroups and socioeconomic status.

> E2SSB 5194, Chapter 272, Laws of 2021 [bold emphasis added]

I. Background

Guided Pathways is a whole-college reform model designed to help students choose academic paths and receive support to earn their desired credentials on time and successfully transfer to four-year universities or the workforce.¹

Nationally, an average of 43% of students entering community colleges complete a credential within six years.² Some researchers say that the community college environment in which students are required to navigate, often without much guidance, can perpetuate low completion rates.³ Students entering colleges must make decisions about the academic programs they want to pursue and the courses they need to enroll in to achieve their goals. If they do not receive the guidance they need from advisors, faculty, or other campus services, students can invest time and money in courses that do not fulfill program requirements or move them toward their goals. Further, if students do not see how courses relate to their academic or career goals, they may decide to leave altogether.⁴

There have been numerous college-wide initiatives to address completion barriers. In 2015, the Community College Research Center (CCRC) introduced Guided Pathways as a framework for colleges to restructure academic programs, course sequencing, advising, student services, and classroom instruction. The goals of the program are to support student progression through college and on-time completion.⁵

Critically, Guided Pathways is not a strictly defined or uniformly implemented program. It is a framework based on four CCRCdeveloped principles, which colleges use to design interventions or reform existing structures. There are common activities across colleges, but Guided Pathways varies because colleges enact initiatives based on the needs of their student population. To date, about 450 community colleges have adopted Guided Pathways nationwide.⁶

On the next page, Exhibit 2 describes CCRC's four principles that define the Guided Pathways framework. The exhibit also includes examples that illustrate common Guided Pathways activities. For more information, see Appendix I for CCRC's Guided Pathways theory of change model.

² This data includes non-degree seeking students and excludes former dual enrollment students, both of which may lower completion rates. Causey, J., Lee, S., Ryu, M., Scheetz, A., & Shapiro, D. (2022). *Completing college: National and state report with longitudinal data dashboard on six- and eight-year completion rates*. National Student Clearinghouse Research Center.
 ³ Ibid.

¹ "Whole-college" or "college-wide" models aim to transform policies and programs across the college campus.

⁴ Levesque. E. (2018). *Improving community college completion rates by addressing structural and motivational barriers*. Brookings Institution.

 ⁵ Bailey, T., Jaggars, S., & Jenkins, D. (2015). What we know about guided pathways. Community College Research Center.
 ⁶ Jenkins, D., Lahr, H., & Mazzariello, A. (2021). How to achieve more equitable community college student outcomes: lessons from six years of CCRC research on Guided Pathways. Community College Research Center.

Exhibit 2

Examples of Guided Pathways Activities Based on CCRC's Guiding Principles

Mapping Paths to Student End Goals

Colleges organize program offerings into categories called meta-majors to help students identify fields of interest. Colleges also create program maps within each meta-major so students know the courses they need to take to achieve a credential or transfer to a four-year university on time.

Example – A college creates meta-major categories like "health sciences," "arts, humanities, and communication," and "business." College faculty, staff, and advisors work together to map programs in each meta-major area, so students know what certificates or degrees are available and what courses to take to earn a credential in a given amount of time.

Helping Students Get On a Path

Colleges create onboarding processes to help students learn about academic options, explore career interests, connect with advisors, and develop education plans.

Example – During new student orientation, students receive career assessments and talk to faculty and advisors to learn how their interests align with career opportunities and what academic paths will help them achieve their career goals.

Helping Students Stay On Their Paths

Colleges reform advising practices and make advising mandatory rather than voluntary. Ongoing advising allows advisors to monitor student progress and intervene if needed. Colleges can also use student education plans when planning future course offerings so students can enroll in the courses they need to graduate or transfer on time.

Example – Advisors are assigned to students based on meta-majors, which allows them to understand what students need to fulfill certificate, degree, or transfer requirements in specific program areas.

Ensuring Students are Learning Across Programs

Colleges can implement many different activities in this practice area. Often, colleges create corequisite math and or English courses so students can earn college credits in foundational courses but also receive additional instructional support if needed. This often includes pairing developmental and college-level math or English courses together. Other activities include reforming pedagogical practices so instructors can effectively teach and engage with students.

Example – A college creates corequisite developmental and college-level math courses. Students assessed below college-level math enroll in a corequisite course where they take a developmental math course and college-level math course either simultaneously or in a sequence. This ensures that students receive the instructional support they need to learn the material and also earn college-level credits.

<u>Note</u>:

Titles in text box like "Mapping Paths to Student End Goals" and "Helping Students Get On a Path" reflect the language that CCRC researchers use to describe each of the four Guided Pathways principles.

Guided Pathways in Washington

Some colleges in Washington have phased in Guided Pathways over the last decade, though some colleges may have also undergone other college-wide reforms prior to or concurrently with Guided Pathways.

In 2015, three Washington colleges joined the American Association of Community Colleges' (AACC) effort to scale Guided Pathways nationally, becoming the first colleges in the state to implement Guided Pathways.⁷ In 2016, College Spark Washington, a foundation that supports postsecondary programs, created the Guided Pathways Initiative, granting \$2.5 million to five colleges over eight years.⁸

In 2017, the Washington State Legislature appropriated \$3 million to SBCTC to provide additional funding to early adopting colleges for academic years (AY) 2018 and 2019.⁹ In 2018, College Spark Washington provided a second round of \$2.5 million to five more colleges to use over five years, and SBCTC matched this amount.¹⁰ SBCTC also provided colleges with training and technical support. In 2019, the legislature passed the Workforce Education Investment Act, providing \$32 million to Washington's 34 community and technical colleges to begin implementing Guided Pathways in AY 2021.¹¹

In 2021, the legislature passed legislation outlining Guided Pathways implementation guidance and directing WSIPP to conduct several studies.¹² The legislature also appropriated \$75.8 million for colleges to continue Guided Pathways work over the 2021-23 biennium.¹³ Exhibit 3 details the legislature's minimum requirements that colleges must incorporate into Guided Pathways efforts. Later in this report, we describe how we used these requirements to create survey questions and summarize responses from colleges. In 2023, the legislature appropriated an additional \$75.8 million for colleges to continue Guided Pathways implementation for the 2023-25 biennium.¹⁴

Over this same period, SBCTC established essential Guided Pathways practices for colleges.¹⁵ We report CCRC's four Guided Pathways principles, the legislatures' minimum requirements, and SBCTC's essential practices together in Appendix II.

⁷ The three colleges were Pierce College District, Skagit Valley College, and South Seattle.

⁸ College Spark Washington website. *Guided Pathways Initiative*. Colleges were Everett Community College, Peninsula College, Pierce College, South Puget Sound Community College, and South Seattle College. SBCTC website. *Washington Guided Pathways*.

⁹ Engrossed Substitute Senate Bill 6032, Chapter 299, Laws of 2018. Academic years are defined by the last year. For example, we call 2018-19 academic year 2019.

¹⁰ Colleges were Clover Park Technical College, Lower Columbia Community College, Renton Technical College,

Spokane Falls Community College, and Tacoma Community College. SBCTC website. *Washington Guided Pathways*.

¹¹ Engrossed Second Substitute House Bill 2158, Chapter 406, Laws of 2019.

¹² E2SSB 5194.

¹³ Engrossed Substitute Senate Bill 5092, Chapter 334, Laws of 2021.

¹⁴ Engrossed Substitute Senate Bill 5187, Chapter 475, Laws of 2023.

¹⁵ SBCTC website. Guided Pathways Implementation Model.

Exhibit 3

Minimum Guided Pathways Implementation Requirements as outlined in Legislation

- a) Comprehensive <u>mapping of student educational pathways</u> with student end goals in mind. These must include transparent and clear career paths that are tightly aligned to the skills sought by employers. Pathways must align course sequences to show clear paths for students, alignment with K-12 and university curriculum, and skill sets needed to enter the workforce;
- b) Dedicated <u>advising and career counseling</u> that helps students make informed program choices and develop completion plans. Advising services may include processes that help students explore possible career and educational choices while also emphasizing early planning. Advising must be culturally competent and with an emphasis on helping historically underserved, low-income, and students of color navigate their education;
- c) <u>Data analysis of student learning</u> as well as program and service outcomes. Data must be used to inform program development, the creation and further refinement of student pathways, and to provide opportunities for early interventions to help students succeed; and
- d) A <u>student success support infrastructure</u> using programs that the State Board for Community and Technical Colleges finds have been effective in closing equity gaps among historically underserved student populations and improve student completion rates. The student success support program must be based on research or documented evidence of success. The student success support programs may include evidence-based elements such as:
 - *i.* Equity competent academic advising services;
 - ii. Equity competent career development programming;
 - iii. Clear information regarding financial aid and financial literacy; and
 - iv. Inclusive curriculum and teaching practices.

E2SSB 5194

Exhibit 4 summarizes the timeline of legislative and other related activities in Washington between 2015 and 2021. Throughout this report, we refer to colleges that implemented Guided Pathways initiatives before 2019 as "early adopters" and colleges that implemented reforms after 2019 as "later adopters."¹⁶

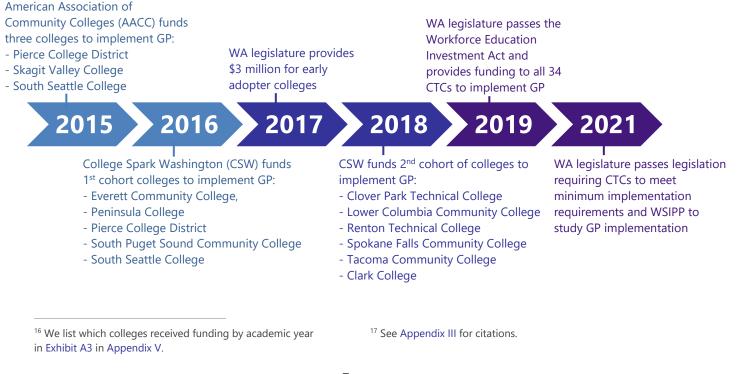
Research on Guided Pathways

Since its development in 2015, researchers at CCRC and elsewhere have published descriptive and case studies about Guided Pathways.¹⁷ These reports describe implementation efforts and lessons learned in states like Tennessee, Ohio, Florida, California, Texas, and Washington. However, to date, there are no statistically rigorous evaluations with comparison groups to demonstrate a causal relationship between Guided Pathways and student outcomes. Guided Pathways is challenging to evaluate for several reasons. First, as mentioned earlier, it is not a strictly defined program but rather a framework. Colleges enact initiatives based on CCRC's principles and the needs of their institutions. This leads to substantial variation in the types of Guided Pathways activities across colleges.

Second, since Guided Pathways is a wholecollege reform model, it is implemented for all students in an institution and, in some states like Washington, implemented in all or most colleges at the same time. This makes it challenging to identify a comparison group of students within colleges (or a state) that have not been affected by the program.

Exhibit 4

Timeline of Guided Pathways in Washington



Finally, Guided Pathways initiatives encompass many reform areas that colleges may be working on separately. For example, many community colleges nationally (and in Washington) have implemented wholecollege initiatives like Achieving the Dream, either before Guided Pathways or concurrently. Guided Pathways and Achieving the Dream involve similar institution-wide initiatives like restructuring advising and shared goals like increasing credential completion rates. This makes it difficult to isolate whether changes in student outcomes are due to Guided Pathways, Achieving the Dream, other programs, or other factors altogether.

Research in Washington

Due to these challenges in rigorously evaluating Guided Pathways, research in Washington has focused on colleges' implementation efforts rather than student outcomes. Below, we summarize some of the main implementation findings in Washington to date.

Implementation Among Early-Adopter

Colleges. A 2018 report summarized implementation efforts for five colleges that began Guided Pathways during AY 2017. Though only preliminary, the report found:

- Leadership and faculty engagement at colleges are strong, but more work is needed to increase buy-in;
- Most colleges applied an equity lens to their work, but there was sometimes confusion about how to do this;

- All colleges identified broad categories to organize academic programs, called meta-majors, had processes for creating program maps, and made entry advising mandatory; and
- SBCTC created dashboards to examine student outcomes and inform programming decisions.¹⁸

Legislative Investments in Guided Pathways.

SBCTC submits annual reports to the legislature describing the implementation of Guided Pathways in Washington.¹⁹ A report describes how colleges used legislative appropriations over AY 2023 and finds that:

- 50% of funds were used to redesign advising and student support activities, including expanding caseload advising and hiring staff like curriculum advisors, educational planners, completion coaches, and peer mentors;²⁰
- 10% of funds were invested in resources to help colleges make data-informed decisions, including hiring research staff and developing data tools; and
- 25% of funds were used for faculty engagement like professional development and for faculty release time used to redesign program pathways and placement practices.

¹⁸ College Spark Washington contracted with third-party evaluators to study Guided Pathways implementation in early adopter colleges. A final report is expected to be published in 2024. Heg, D. & Watrus, B. (2018). *Evaluation baseline summary report*. College Spark Washington.

¹⁹ E2SHB 2158.

²⁰ Caseload advising refers to assigning an advisor to a cohort of students based on meta-major area.

The report also describes that colleges continue to incorporate equity work into Guided Pathways efforts, including increased engagement with communities of color and federally recognized Tribes so colleges can better support indigenous students and students of color.²¹

Implementation in Washington Compared to

Other States. A 2023 report by CCRC compared levels of Guided Pathways adoption between colleges in Ohio, Tennessee, and Washington.²² The report found that colleges in all three states had higher adoption of activities related to meta-majors and program maps and lower adoption of activities related to mandatory advising, student progress monitoring, scheduling, and career assessments.²³ In Washington, colleges implemented high levels of adoption related to:

- The creation of meta-majors,
- Exposure of meta-majors to students,
- The creation of program maps for career and technical education, transfer, and math pathways, and
- The development of caseload advising.

Colleges in Washington had lower levels of adoption related to:

- Career assessments and advising,
- Education plan requirements,
- Ongoing advising,
- Student progress monitoring,
- Scheduling,
- Corequisite math courses, and
- Instructional practices.

While more colleges in Washington are doing Guided Pathways than in Ohio or Tennessee, implementation is further along in the other states because they have been working on initiatives for a longer time.

²¹ SBCTC (2024). Workforce education investment act: update on community and technical college investments in fiscal year 2023.

²² Jenkins, D., Myers, T., & Matin, F. (2023). *Whole-college guided pathways reform practices: scale of adoption by*

community colleges in three states. Community College Research Center.

²³ Authors define wide-scale adoption of a practice if it "affects at least 80% of programs or 80% of first-time students."

II. Methodology

To understand how colleges in Washington are implementing Guided Pathways and how student outcomes have changed during this time, we conducted a survey and examined administrative data.

Implementation Survey

We designed survey questions to learn how colleges are implementing Guided Pathways as it relates to the legislative requirements outlined in Exhibit 3. We asked colleges to describe initiatives they had administered related to:

- Mapping educational pathways,
- Advising and career counseling,
- Data analysis, and
- Student support services.

We also asked colleges to provide timeline information so we could understand how long it took to implement activities. Further, we asked colleges to describe their perceived successes and challenges and what resources they would need to continue Guided Pathways work in the future. See Appendix IV for survey questions.

In December 2022, we sent the survey to administrators at all 34 community and technical colleges and received responses from 33.²⁴

We analyzed survey responses and identified themes within each legislative requirement area (e.g., mapping, advising, data analyses), which we summarize in Section III.

Limitations

The level of information we received in survey responses varied. As a result, we may not have captured a comprehensive account of implementation across all colleges. For example, some colleges may have described all Guided Pathways initiatives, while others may have described only activities they deemed most important. We also did not receive a response from one college and therefore cannot speak to its level of Guided Pathways implementation.

Further, we framed survey questions around the legislative requirement areas. Colleges may be implementing Guided Pathways initiatives beyond these categories that are not captured in our survey results.

As mentioned, Guided Pathways initiatives often overlap with other college reform efforts like Achieving the Dream, which some colleges may have implemented before or concurrently with Guided Pathways. As a result, we may be describing initiatives that occurred because of other college-wide reforms, not solely because of Guided Pathways.

Finally, the survey asked college administrators to describe current and past Guided Pathways initiatives. Administrator turnover, which was reported as a challenge to implementation, may have limited reporting of past Guided Pathways activities.

²⁴ SBCTC staff helped identify contacts at each college.

Student Outcomes

To examine the association between Guided Pathways and early student outcomes, we analyzed student-level administrative data provided by SBCTC.²⁵ Our dataset includes 400,178 students who first enrolled between AYs 2012 and 2019 and includes the following information:²⁶

- Student demographic and background data, including age, race and ethnicity, gender, educational background, and part- and full-time enrollment status.
- Transcript data, including courselevel grade and credit information.
- Completions data on certificates, degrees, and other awards.

Outcomes

We examined the following outcomes for students enrolled in their first year:

- *Retention:* proportion of students who remain enrolled or complete a credential between the fall term of their first year and the fall term of their second year.
- College-level courses: proportion of students who pass college-level math and/or English courses in their first year.
- *Credit accumulation:* proportion of full-time students who obtain 45 credits or complete a credential in their first year.
- GPA: average GPA in their first year.

We focus on these outcomes because they are outlined in the legislative assignment or considered early indicators of student long-term success.²⁷

Identifying Guided Pathways Colleges

We examined outcomes between students in colleges who were Guided Pathways early adopters and later adopters. Early-adopting colleges received funding to implement Guided Pathways before AY 2019, and lateradopting colleges received funding to implement starting in AY 2021. We refer to early-adopting colleges as *GP colleges* and later-adopting colleges as *GP colleges* and later-adopting colleges as *non-GP colleges* since they had not yet implemented Guided Pathways. About 40% of students in our sample were enrolled in early-adopting colleges, and 60% were in later-adopting colleges.

We also examined the change in student outcome measures before and after Guided Pathways funding began. Specifically, we subtract the average outcome measures in the 2012-2015 period from corresponding measures in the 2016-2019 period. We examined outcome changes overall and for specific student populations based on sex, race, ethnicity, need-based aid status, and educational background.

See Appendix V for more information.

 ²⁵ We will examine long-term outcomes, including graduation and transfer rates, in the 2029 report.
 ²⁶ We only examine outcomes through AY 2019 because COVID-19 significantly influenced postsecondary outcomes.

²⁷ Belfield, C., Jenkins, D., & Fink, J. (2019). Early momentum metrics: leading indicators for community college improvement. Community College Research Center.

We report outcomes in Guided Pathways and non-Guided Pathways colleges, despite differences in initiatives the colleges implemented or when they began. Because of the complexity of how and when colleges implemented mapping, advising, data analysis, and student support activities, we cannot accurately identify associations between initiatives and student outcomes. Exhibit 5 shows student characteristics in GP and non-GP colleges between AYs 2016 and 2019.²⁸ The composition of part-and full-time students, female and male students, and students with and without financial aid is similar between colleges. Students also have similar educational backgrounds in both groups. Average enrollment was slightly higher at GP colleges than at non-GP colleges. There were slightly smaller populations of Asian and Hispanic students and larger populations of White students at GP colleges than at non-GP colleges. About 126,000 and 182,000 students were in GP and non-GP colleges (respectively) between 2016 and 2019.

Student characteristics	GP college (early adopter)	%	Non-GP college (later adopter)	%
Average enrollment (headcount)	3,308		2,727	
Full-time enrolled	69,379	55%	99,626	55%
Part-time enrolled	56,121	45%	82,142	45%
Female	67,181	54%	95,316	52%
Male	51,845	41%	81,739	45%
Need-based aid (no)	93,330	74%	135,910	74%
Need-based aid (yes)	32,170	26%	45,858	26%
American Indian/Alaska Native	1,498	1%	2,178	1%
Asian	7,794	6%	17,386	10%
Black/African American	7,325	6%	10,241	6%
Hispanic/Latino	8,719	7%	20,174	11%
Native Hawaiian/other Pacific Islander	1,168	1%	1,246	1%
White	70,204	56%	93,255	51%
Multiracial	16,962	14%	23,738	13%
Dual enrolled student	35,294	28%	50,144	27%
Recent high school, no prior college	37,226	30%	51,942	29%
Adult student, no prior college	15,660	12%	21,087	12%
Some prior college	37,320	30%	58,595	32%
Total sample (N)	125,500		181,768	

Exhibit 5 Student Characteristics for Guided Pathways and Non-Guided Pathways Colleges

Notes:

Gender and race/ethnicity percentages do not equal 100% due to students who did not report.

Total sample represents all students in colleges between 2016-2019. All other figures represent average counts and percentages across years.

 $^{^{\}scriptscriptstyle 28}$ We depict 2016-2019 because it represents the period

when early adopters were implementing Guided Pathways.

Limitations

Readers should be cautious when interpreting student outcome results. Due to challenges in evaluating Guided Pathways, we conducted a descriptive analysis only. We did not statistically control for college or student characteristics between GP and non-GP colleges. Therefore, we cannot determine whether differences in student outcomes are due to Guided Pathways or other programs, policies, or college factors like funding, motivation, and student populations.

III. Guided Pathways Implementation in Washington

In this section, we summarize college survey responses regarding Guided Pathways efforts. We organize information based on legislative requirement areas (as outlined in Exhibit 3):

- Mapping educational pathways,
- Advising and career counseling,
- Data analysis of student learning, and
- Student success supports.

Within these four categories, we describe how long colleges took to implement activities, describe the student populations they targeted, and provide examples illustrating what colleges have done.

In summary, we sent surveys to 34 colleges and received responses from 33. All the responding colleges reported implementing Guided Pathways to some extent. Of the 33 responding colleges:

- 30 implemented mapping initiatives,
- 28 implemented advising activities,
- 22 colleges implemented activities related to data analysis, and
- 26 colleges implemented student support initiatives.

We identified 18 colleges enacting Guided Pathways initiatives in all four legislative requirement areas, half of which were early adopter colleges and half were later adopters. The remaining 14 colleges implemented activities in one to three areas.²⁹ We found that many colleges worked on mapping initiatives first or along with advising activities. This is likely because identifying meta-majors and mapping educational program pathways is foundational to the Guided Pathways framework that other initiatives build on. However, it was common to see colleges work on activities across multiple categories at the same time. For example, many colleges reported simultaneously implementing mapping, advising, and student support service activities.

We also asked colleges to report the time it took to explore, plan, and fully implement mapping, advising, data analysis, and student support initiatives. On average, colleges took about four years to implement each area.³⁰ When we examined implementation timelines between earlyand later-adopting colleges, several early adopter colleges had begun initiatives before they received funding for Guided Pathways. Most later adopting colleges began efforts before they received funding from the legislature in AY 2021. We cannot definitively say why, but this could be because Guided Pathways efforts were ramping up in the state between 2015 and 2019. It may also be because Guided Pathways initiatives encompass wholecollege reforms that colleges may have been working on prior to the formal introduction of Guided Pathways.

²⁹ Eight colleges implemented initiatives in three legislative areas, four colleges in two legislative areas, and two colleges in one area.

³⁰ Some college had not fully implemented initiatives at the time they responded to our survey.

Mapping Educational Pathways

We asked colleges to describe Guided Pathways activities related to the legislative requirement to map academic pathways.³¹

Creating meta-majors and mapping pathways was a priority for colleges and often the first initiative they undertook. Thirty colleges reported that they had fully mapped programs, and the remaining colleges were in the process of doing so. Typically, this work involved staff, faculty, and advisors across departments coming together to identify meta-major areas encompassing all program offerings. Meta majors often include categories like "Business and Accounting," "Social Sciences and Humanities," and "Science, Technology, Engineering, and Math." Afterward, faculty, staff, and advisors develop program maps within meta-major areas. These maps outline the courses students must complete to achieve a credential or transfer to a fouryear institution on time.

On average, it took colleges four years to complete this work, though we found that later-adopting colleges implemented faster than early adopters.³² Most colleges indicated that the pathways they created were aligned with the skills students need to transfer or enter the workforce. All responding colleges list meta-majors on their websites, and at most colleges, students receive an orientation and meet with advisors to identify meta-majors that fit their career interests.

About a third of responding colleges described additional efforts related to mapping academic paths. For example, six colleges described using program maps to schedule courses throughout the year. Five colleges reported using course-taking information and faculty and advisor expertise to redesign English and math courses so students can successfully pass and receive college credits. Exhibit 6 gives examples of these efforts based on survey responses.

Exhibit 6

Examples of Scheduling and Course Redesign Activities

Scheduling

- The college created a system to develop annual schedules and tested these against program maps to ensure students can take classes and complete them within two years.
- > The college is in the process of developing an annual schedule that will allow students to look a year ahead and plan their educational pathway with more clarity.

Course Redesign

The college revised the course learning outcome, curriculum, and pedagogy of English for Academic Purposes 90 (EAP 90) so that instructors can better assess students' readiness for English 101. By demonstrating readiness for English 101 at the end of EAP 90, students can skip EAP 99, which creates a shorter path from ESL into college-level English.

Note:

Examples in text box are paraphrased descriptions of colleges' survey responses.

³¹ For survey questions refer to Appendix IV.

³² Three and a half years on average.

Advising and Career Counseling

Next, we asked colleges to describe Guided Pathways reforms related to advising and career counseling.

Of the 33 responding colleges, 28 reported implementing at least one reform in this area. About two-thirds of these colleges indicated that advising reforms were the first Guided Pathways activity they did, which took colleges about four years to complete.³³ Some colleges implemented mapping and advising activities together.

We found several themes across colleges. About one-third of colleges embedded advisors into meta-majors, which means they assigned advisors to specific metamajors so they would have greater knowledge about student needs in program areas. We also found that colleges often made advising mandatory, rather than students having to seek out advising on their own. It was also common for colleges to increase coordination between advisors and faculty to monitor student progress.

In addition to the themes above, we identified several intake and onboarding activities colleges described alongside their advising initiatives.

New Student Orientation—Eleven colleges revamped their new student orientations, typically by including more information about meta-majors and academic pathways. A few colleges required students to attend orientations rather than keeping them optional. *Course Placement*—Twelve colleges changed their approach to placing students into math or English classes to improve progression through college-level (and thus credit-bearing) courses. In most cases, colleges replaced standard placement tests with self-placement or guided placement methods. Students can choose course levels based on their perceived ability or work with advisors to learn about skill levels. In some cases, students can use a broader set of metrics like high school transcripts, SAT or GED scores, and high school standardized test scores to demonstrate ability and choose appropriate courses.

College Success and Exploratory Courses—

We found that colleges wanted to revise early course-taking experiences so students could build success, explore interests, and learn college readiness skills early on. Twelve colleges reported developing or revising college success courses, which help students navigate the college environment and develop skills to succeed at the higher education level. Some colleges integrated this course into other foundational courses like English 101.

Three colleges created exploratory courses within meta-major areas. These courses introduce students to academic pathways so they can learn more before committing to a specific meta major.

³³ Both early and later adopting colleges took the same amount of time to implement these activities.

Career Exploration—Eight colleges

described efforts to help students explore career interests. Some colleges created career centers, others developed online research tools, some had dedicated career advisors, and some built career exploration activities into orientations and college success courses. Of the 28 colleges reporting advising activities, ten reported implementing initiatives for specific student populations. Some colleges targeted efforts for students of color or low-income students, some focused on students in professional or technical degree programs, some focused on new incoming students, and others focused on students in basic education or individuals with disabilities.

Exhibit 7

Examples of Orientation, Intake, and Other Activities Supporting Advising Reforms

New Student Orientation

The college redesigned student orientation and linked it with intake. During orientation, students complete the intake form, which provides information to staff, faculty, and advisors so they can reach out to students. The orientation is mostly online and educates students about campus resources, course placement, meta-majors, career pathways, financial aid, registration, and campus policies. Students are also connected with advisors so they can develop an educational plan.

Course Placement

- Students can now place into math using their high school GPA, math transcript agreements with local high schools, GED, SAT, or ACT scores, Smarter Balanced assessment scores, or results on locally created placement tests.
- Students can use direct self-placement to choose their first English composition course. This is a short survey where students answer a series of questions, look at readings and student writing samples, and determine for themselves which class works for them.

College Success and Exploratory Courses

College Success Course 103 is a two-credit class that first-time degree-seeking students take. Students explore meta-majors and career paths and create an education plan, which is a degree plan within a given area of study with a list of courses and times to take each course.

Career Exploration

- > The college reinstated the career office in 2020 to match students with careers and provide two career assessments as part of an effort to establish pathways and clear goals for students.
- In 2020, the college started providing specialized advising to undecided students. Students are assigned an exploratory advisor to help make informed decisions about academic and career paths and then are assigned to an advisor within a meta-major area.

Note:

Examples in text box are paraphrased descriptions of colleges' survey responses.

Additionally, seven colleges reported prioritizing an equity framework. For example, three colleges described the need to use self-placement models to increase the placement of historically underserved student populations in college-level courses so they can earn credits and progress in their academic careers. Exhibit 7 offers examples of what colleges are doing in each of these categories.

Data Analysis of Student Learning

Next, we asked colleges to describe initiatives related to the legislative requirement to conduct data analysis to inform student learning.

Of 33 responding colleges, 22 reported activities focused on data analysis and technology. Typically, colleges reported implementing these activities to understand student learning better and track student progress, to inform course scheduling and advising practices, to identify equity gaps, to educate faculty, and to inform strategic planning.

On average, it took colleges four years to implement these efforts, but we found that early-adopter colleges implemented initiatives quicker than later-adopting colleges.³⁴ One reason may be because of data changes that occurred across the community and technical college system between 2019 and 2022. Some lateradopting colleges reported waiting to implement data and technology initiatives until data transitions were completed to avoid disruptions.

³⁴ On average, early adopters took three and a half years to implement data-related initiatives while later adopters took five years. Of the 22 colleges implementing data and technology initiatives, four reported targeting initiatives to specific student populations like those who are academically at risk, students missing classes, and lowincome students. The remaining colleges included all students in their efforts.

We also identified several themes in the types of activities colleges used to support their data analysis efforts.

Data Dashboards–Nine colleges revised old or created new dashboards so staff and faculty can understand trends in student outcomes. They also used dashboards to inform program and policy decisions.

Early Alert Systems–Twelve colleges created early alert systems that advisors and faculty can use to track student academic progress. If students are struggling, advisors and faculty can connect and refer them to campus services.

Software–Sixteen colleges purchased or updated existing software to allow staff and faculty to track student academic progress, communicate with students, and connect them with campus services.

Data-Informed Culture–Five colleges described efforts to create a data-informed culture by providing staff and faculty training to increase data literacy, developing workgroups to analyze student data and learning outcomes, or hiring staff to collect data, research, and share information.

Exhibit 8 provides examples of the activities colleges reported in these areas.

Exhibit 8

Examples of Other Activities Supporting Data Analysis Efforts

Dashboards

Guided Pathway funding supported the expansion of dashboards to make data more accessible. For example, the Program Success Dashboard shows student enrollment and progress within program areas. The Enrollment Pipeline Dashboard shows patterns of students moving from application to enrollment and informs our Guided Pathways intake and onboarding goals. All dashboards can be disaggregated to pinpoint equity gaps.

Early alert systems

Progress Report Alerts allow the college to reach out to students early on to change at-risk behaviors that may influence academic success. Alerts are issued to students who are not responsive or when needs are beyond what an instructor can help with. It is a team effort between faculty and staff.

Software

Starfish allows advisors to make appointments with students, send messages, issue tracking items like referrals or flags, and record notes about students. This information allows us to deliver targeted support to students. It has an academic planning feature so students can explore interests and develop academic plans. Advisors track these plans and student progress.

Data analysis culture

All faculty were trained to use the course success dashboards and disaggregate information by student groups like race and ethnicity, sex, age, dual-enrollment status, type of student (transfer, workforce, basic skills), and socio-economic status. Faculty can then make changes to their courses to improve student outcomes based on this information.

Note:

Examples are paraphrased descriptions of colleges' survey responses.

Student Success Supports

Finally, we asked colleges to describe Guided Pathways reforms related to the legislative requirement to build student success support infrastructures. Twenty-six colleges reported activities in this area.

We observed wide variation in the types of student support activities colleges implemented. For example, some colleges focused on providing professional development to staff and faculty, others focused on support services for students like tutoring, and others implemented activities targeting students and faculty.

Overall, it took colleges an average of about four years to implement student support activities.³⁵

Corequisite Courses–The most common activity reported by colleges related to corequisite courses. Eighteen colleges developed corequisite math and/or English courses so students can enroll in a developmental and college-level course simultaneously or over several quarters. This allows students to receive additional instructional support to learn course content while also receiving college credits.

Professional Development–Seventeen colleges invested in faculty and staff professional development to support teaching and curriculum practices. Training was provided on topics like Guided Pathways principles, equity, and incorporating technology into instruction. Faculty also received release time to work in groups or attend workshops focused on student learning outcomes, course redesign, and teaching practices.

Support Services–Ten colleges implemented services like learning centers and tutoring. A few colleges increased students' access to housing, food, healthcare, and financial aid information.

Targeted Programming–Thirteen colleges described developing new services or revised existing ones to serve specific student populations, including students of color, students in basic education, veterans, athletes, students with disabilities, lowincome students, and students learning English. We also found that some colleges focused specifically on students in professional or technical degree programs or students planning to transfer to four-year universities. Some colleges targeted support for international students and basic education students.

Welcome Centers–Five colleges created or revised welcome centers, which support students with onboarding activities like applications, learning about academic pathways, and enrollment. Some centers provided services like peer mentoring, information about financial aid, technology support, connected students and advisors, and provided orientations.

Exhibit 9 provides examples of the student support activities colleges reported. Exhibit 10 summarizes the initiatives colleges reported implementing in each of the four legislative requirement areas.

³⁵ Both early and later adopting colleges took the same amount of time to implement these activities.

Exhibit 9

Examples of Student Success Support Activities

Corequisite courses

The college created a two-credit course Math 99 (Essentials of Intermediate Algebra), which is taken alongside Math 107 (Math in Society) or Math 146 (Introduction to Statistics) to create a corequisite model. Math 99 and the college-level course takes one quarter, instead of one quarter for the prerequisite course and another quarter for the college-level course. This shortens the developmental pathway so students can progress to college-level math more quickly.

Professional development

The college offers a Teaching and Learning Center that provides regular professional development for faculty, related to improving equitable student outcomes in the classroom. Our Guided Pathways funding supports faculty renumeration, speakers, books and other materials, and infrastructure for the physical location. Faculty participate in ongoing communities of practices and have participated in projects to increase inclusive classroom practices, improve curriculum and grading, and infuse concepts of power, privilege, and inequity into the classroom.

Support services

The college determined that a huge barrier for students was access to basic needs like housing and food. The college created a basic needs referral guide and website that is regularly used by students, faculty, and staff. There is now a basic needs subcommittee focused on furthering this work and interventions on the campus.

Targeted programming

The college adopted the UMOJA and PUENTE programs to support African American/Black and Latinx students. These are nationally recognized programs improve success for students. The programs provide academic and social supports and students take classes together and participate in activities outside of class.

Welcome centers

The college created a welcome center staffed by two professional staff and four student staff. The center assists prospective and admitted students as they go through the application, funding, advising, and registration processes. Staff work closely with our multicultural recruiter, enrollment services, advisors, and the student success center to ensure students have the resources and information they need to be onboarded prior to their first quarter.

<u>Note:</u> Examples are paraphrased descriptions of colleges' survey responses.

Exhibit 10

Summary of Guided Pathways Initiatives Reported by Colleges

Mapping Educational Pathways 30 colleges	 Description: Colleges identify meta-majors and create program maps so students can select academic programs and know what courses to enroll in to achieve credentials or transfer on time. <u>Common Activities Colleges Reported In this Area:</u> Using program maps to plan course scheduling. Using course learning outcomes, curriculum, instructional practices, and faculty guidance to redesign courses.
Advising and Career Counseling 28 colleges	 Description: Colleges reform advising practices to ensure students progress along their chosen academic paths. <u>Common Activities Colleges Reported In this Area:</u> Redesigning orientations so students learn about programs, meet faculty and advisors, and complete intake processes. Expanding course placement options so students enroll in courses aligned with their knowledge and skills. Creating college success and exploratory courses so students can explore interests and gain college readiness skills. Expanding career exploration services.
Data Analysis of Student Learning 22 colleges	 Description: Colleges use data to monitor student progress and inform policy and program decisions. <u>Common Activities Colleges Reported In this Area:</u> Creating data dashboards to inform faculty and advisors about trends in outcomes and inform decisions. Developing early alert systems so faculty and advisors can monitor student progress and intervene when necessary. Using software to improve progress monitoring and communication between faculty, advisors, and students. Using data to inform staff and build data-informed cultures.
Student Success Supports 26 colleges	 Description: Colleges reform campus, course, and classroom practices to support students during their academic journeys. <u>Common Activities Colleges Reported In this Area:</u> Creating corequisite courses so students receive support and college credits. Investing in professional development for faculty and advisors. Providing support services like tutoring and access to information about housing, food, and financial aid. Targeting programming to specific student populations. Using welcome centers to onboard students and provide services like mentoring, financial aid, and technology support.

Successes, Challenges, & Resources

We asked colleges to describe the successes and challenges they experienced while implementing Guided Pathways. We also asked colleges to describe the resources they need to continue work in the future.

Successes

More than half of the 33 responding colleges reported major successes in three or more legislative requirement areas. There is a large range in the type of successes colleges reported. In Exhibit 11, we offer examples of successes organized by area. Beyond the examples in Exhibit 11, we also heard from several colleges that Guided Pathways has naturally led to greater collaboration between staff, faculty, and advisors. For example, one college reported having over 100 faculty and staff involved in Guided Pathways across many departments. Several other colleges reported successes related to equity. For example, one college reported increasing the practice of disaggregating data to better understand the experiences of students of color on campus, identify service gaps, and develop programs to better serve student populations.

Exhibit 11

Examples of Guided Pathways Implementation Successes

Mapping Educational Pathways

The college has been very successful in implementing meta-majors (called Areas of Study). These classifications have been embraced by faculty, staff, and students, and are especially useful in admissions presentations, intake advising, and working with undecided students.

Advising and Career Counseling

The college has received very positive feedback from students, staff, and faculty about the new advising model. Students have mentioned that they are experiencing a higher level of engagement with advising, feeling more knowledgeable and prepared to start programs, and feeling more supported.

Data Analysis of Student Learning

One major accomplishment is the availability and easy access of Tableau Dashboards for the college community to look at institutional metrics and indicators of Guided Pathways work.

Student Success Supports

- The college has been successful in revising intake and onboarding processes and the creation of a Welcome Center, which has been well received on campus.
- The college has transformed the culture of the institution from one that expected students to be 100% college ready and "had a right to fail" to an institution committed to serving the type of students who enroll in community colleges, meeting students where they are, and ensuring that all students have a right to succeed. Student lack of success is now seen as an indication of need for institutional change, rather than student change.

Note:

Examples are paraphrased descriptions of colleges' survey responses.

Challenges

We found several themes that forced colleges to narrow their focus or delay Guided Pathways implementation.

COVID-19 Pandemic—Twenty-five colleges reported that the pandemic negatively impacted implementation efforts. Colleges described delaying Guided Pathways work to address concerns related to the pandemic. Several colleges reported that decreased enrollments and related financial strain reduced their focus on Guided Pathways.

However, a few colleges said the pandemic helped their approach. For example, several colleges reported that the pandemic created the need to develop virtual courses more quickly than they would have otherwise. Some colleges also made advising more accessible during the pandemic.

Staff Capacity—Eighteen colleges reported that low staffing levels and turnover among administrators, college leaders, and advisors hindered Guided Pathways efforts.

CtcLink Transition—Twelve colleges reported the ctcLink transition as a challenge. CtcLink is an online platform used by all colleges. It is designed to consistently manage student and college administrative functions like course enrollment, scheduling, tuition payment, payroll, and data collection. Between 2019 and 2022, ctcLink was rolled out to all colleges and overlapped with Guided Pathways implementation. Some colleges reported that the transition pulled capacity from Guided Pathways work. Several colleges also reported that some processes in ctcLink are not aligned with the Guided Pathways work they need to do.

Program Buy-In—Ten colleges reported that staff and faculty had little or no shared understanding or commitment to Guided Pathways and were resistant to replacing existing policies or practices with new Guided Pathways initiatives.

Exhibit 12 provides examples of the main challenges colleges reported.

Exhibit 12

Examples of Guided Pathways Implementation Challenges

COVID-19 pandemic

Major external changes, like the COVID-19 pandemic, and the impact of decreasing enrollments have delayed or complicated the Guided Pathways work.

Staff capacity

Administrative turnover has been one of the biggest challenges to having consistent Guided Pathway leadership over the years. Layoffs have left employees with an unreasonable workload, which perpetuates turnover and leads to positions being left open for long periods of time.

ctcLink transition

> The ctcLink transition took priority over Guided Pathways work. For example, the college had to slow down the current mapping efforts during ctcLink implementation.

Program buy-in

Change is the hardest part, especially for faculty who do not want to give up the course options they believe are necessary for students to consider as they make choices about programs.

Note:

Resources Colleges Report Needing

Finally, we asked colleges what resources they would need for Guided Pathways work in the future. Most colleges mentioned ongoing funding as an important factor for continuing or scaling their Guided Pathways efforts. We describe several categories of resources that colleges reported to us.

Staffing—Twelve colleges reported that additional staff were needed to support the comprehensive work they envision. For example, several colleges wanted to hire additional advisors so more students could receive guidance to learn about career opportunities and choose program paths.

Technology and Software—Six colleges reported needing funding to support technology and software. For example, several colleges described the need for ongoing funding to maintain the Education Advisory Board's Navigate software, a platform some colleges use to manage student information.

Continued Support from SBCTC—Several colleges mentioned their appreciation for the ongoing support they have received from SBCTC in the form of workshops, training, materials, and events. Some colleges wanted more of this support in the future.

Additionally, six colleges described the need to enhance ctcLink to increase functionality and align it with Guided Pathways goals.

Learning from Others—Four colleges were interested in collaborating with other colleges to share tools and lessons learned to support implementation. Reducing Reporting Burdens—Four colleges mentioned that reporting requirements have created administrative burdens and would like requirements to be limited. As mentioned earlier, multiple agencies (including WSIPP) are researching Guided Pathways in Washington and have surveyed colleges to learn about implementation. Colleges reported that these surveys are time-consuming to fill out. Further, since the goals of these research projects are different, colleges experienced confusion about program and implementation expectations.

Exhibit 13 provides examples of the resources colleges reported needing.

Exhibit 13

Examples of Resources Colleges Need to Continue Guided Pathways Work

Staffing

Guided Pathways' transformational work needs more time to build momentum. With the past few years being so destabilizing for many institutions, the college is in a period of still trying to make progress while institutions heal. Scaling efforts is difficult when staff and faculty are still recovering. The community and technical colleges will need continued resources to stabilize infrastructure and continue the momentum of this work.

Technology and software

- > The college needs long-term funding for case management software needs.
- > The college needs technology support for reporting and data collection work.

Continued support from SBCTC

- There is a need for more guidance and structure from SBCTC so that colleges are not having to reinvent the wheel as it relates to Guided Pathways.
- The college would like the ability for more functions in ctcLink as opposed to having to request additional functions piecemeal. It was much easier in the previous legacy system to pull student reports. Not having this same capability in ctcLink leads to a log jam when only one person at our college can pull these reports, which leads to lags when making data-informed decisions.

Learning from others

- With the amount of project management required to execute the strategies of this work, having more resources dedicated to implementation tools would be helpful. It would be helpful to have a repository of strategies being implemented at different colleges as well as opportunities for colleges to meet more often. Having more access to discussions could help the momentum.
- A database of shared tools and strategies from across the state would be extremely helpful. There are workshops, but institutions are not always ready to implement various Guided Pathways goals at the same time, and when you are ready to implement, it is difficult to get workshop materials.

Reducing reporting burdens

The college would like the ability to do fewer reports and questionnaires/surveys. There have been at least seven different surveys in four years that result in confusing expectations and are incredibly time consuming for the campuses to fill out. Often, the questions are similar but different enough that the college must spend a lot of time filling them out and reporting.

Note:

Examples are paraphrased descriptions of colleges' survey responses.

IV. Student Outcomes

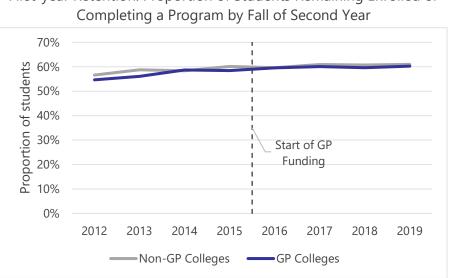
In this section, we summarize retention, course completion, credit accumulation, and GPA outcomes for students in colleges that were early adopters of Guided Pathways (GP colleges) and later adopters (non-GP colleges).³⁶ Overall, outcomes for both college groups and most student populations increased over time. We found that any outcome differences between GP and non-GP colleges were small.

For overall trends, we report outcomes between AYs 2012 and 2019. We also examined the change in average outcome measures before and after early Guided Pathways funding was implemented.³⁷ We calculate these changes separately for the GP and non-GP colleges and student populations. See Appendix V for more information.

First-Year Retention

We first report trends in retention.³⁸ The overall retention rate was slightly higher at non-GP colleges than at GP colleges for most AYs between 2012 and 2019. During this time, the rate increased in both college groups, from 57% to 61% at non-GP colleges and 55% to 60% at GP colleges (Exhibit 14). As a result of the slightly higher growth at GP colleges, the outcome gap between groups shrank.

We also examined changes in retention rates for specific student populations. For the most part, we see an increase in retention across GP and non-GP schools for these populations. These small changes in retention were sometimes higher among GP schools, sometimes lower, and sometimes the same.³⁹



First-year Retention: Proportion of Students Remaining Enrolled or

Exhibit 14

³⁶ See Appendix V for information about the student populations included in our sample.

³⁸ Measured as the proportion of students who remain enrolled or complete a credential between fall term of their first year and fall term of their second year. ³⁹ Exhibit A4 in Appendix V.

³⁷ We subtract the average annual outcome measures in the 2012-2015 period from the corresponding measures in the 2016-2019 period. The first colleges received Guided pathways funding in AY 2015-16.

College-Level Courses

Next, we examined trends in first-year English and math course completion.⁴⁰

English Courses

The first-year English course completion rate was higher at GP colleges than at non-GP colleges for AYs 2012 through 2019. During this time, the rate increased at both groups of colleges, from 38% to 55% at GP colleges and from 38% to 53% at non-GP colleges (Exhibit 15). When we examined changes in completion rates by specific student population, we found that rates increased over time for all student groups, with stronger growth sometimes occurring at GP colleges and sometimes at non-GP colleges.⁴¹

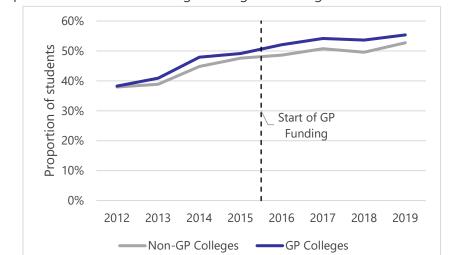


Exhibit 15

Proportion of Students Passing a College-Level English Course in First Year

⁴⁰ The proportion of students who pass college-level math or English courses in their first year.

⁴¹ Exhibit A5 in Appendix V.

Math Courses

Next, we examined trends in first-year math course completion. The overall completion rate was slightly higher at non-GP colleges than at GP colleges for most AYs between 2012 and 2018, with rates at GP colleges surpassing rates at non-GP colleges in 2019. During this time, the rate increased at both groups of colleges, from 23% to 31% at non-GP colleges and 21% to 32% at GP colleges (Exhibit 16).⁴² When examining this outcome for specific student populations, we found that rates increased for most populations, with stronger growth occurring more often at GP colleges than at non-GP colleges.⁴³ As a result of the slightly higher growth at GP colleges, the outcome gap between college groups shrank.

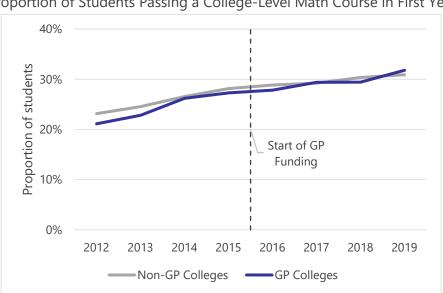


Exhibit 16 Proportion of Students Passing a College-Level Math Course in First Year

⁴² Between AYs 2011-12 and 2018-19.

⁴³ Exhibit A6 in Appendix V.

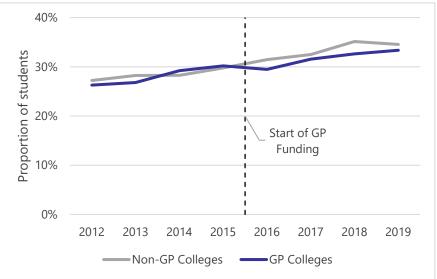
Credit Accumulation

Next, we examined trends in the proportion of full-time students who obtain 45 credits or complete a credential in their first year.

The overall rate was higher at non-GP colleges than at GP colleges for most AYs between 2012 and 2019. During this time, the rate increased at both groups of colleges, from 27% to 34% at non-GP colleges and from 26% to 33% at GP colleges (Exhibit 17).

We also examined changes in credit accumulation rates for specific student populations during early Guided Pathways implementation. Rates increased over time for most student populations, with stronger growth more often occurring at non-GP colleges than at GP colleges.⁴⁴

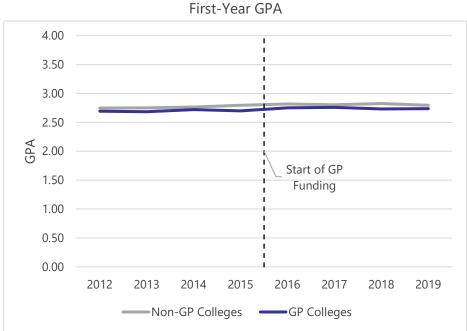
Exhibit 17 Proportion of Full-Time Students Accumulating 45 Credits or Completing a Program Within First Year



⁴⁴ Exhibit A7 in Appendix V.

Grade Point Average (GPA)

Finally, we examined trends in first-year GPA. Overall GPA was slightly higher at non-GP colleges than at GP colleges for AYs 2012 through 2019. During this time, the average GPA increased slightly at both groups of colleges, from 2.74 to 2.79 at non-GP colleges and from 2.69 to 2.73 at GP colleges (Exhibit 18). We also examined changes in average GPA for specific student populations. Average GPA improved for most student populations over time, with stronger growth sometimes occurring at GP colleges and sometimes at non-GP colleges.⁴⁵





⁴⁵ Exhibit A8 in Appendix V.

V. Conclusion

We sent surveys to all 34 community and technical colleges in Washington to learn about Guided Pathways implementation. We also received data from SBCTC to examine outcomes between students in early- and later-adopting colleges.

<u>Guided Pathways Implementation in</u> <u>Washington</u>

The 33 colleges responding to our survey are implementing Guided Pathways to varying degrees. This includes:

- 30 colleges reporting initiatives related to mapping educational pathways,
- 28 colleges reporting advising initiatives,
- 22 colleges reporting data analysis initiatives, and
- 26 colleges reporting activities related to student support activities.

While there is high adoption across all four legislative areas, the focus on activities specifically related to mapping, advising, and student supports reflects recent findings by SBCTC—that colleges have prioritized recent investments on initiatives related to advising, mapping, and activities that improve student supports like professional development for faculty.⁴⁶ Of the 33 responding colleges, 18 reported implementing activities in all four legislative requirement areas. Colleges often implemented mapping initiatives first, which reflects recent findings from CCRC researchers focused on implementation patterns in Washington and other states.⁴⁷ We also observed that it took colleges about four years on average to fully implement initiatives in each requirement area. Notably, many colleges, particularly later adopters, began working on Guided Pathways activities before they received funding.

In terms of reported success, many colleges highlighted increased collaboration between faculty, staff, and advisors. They also described positive changes in campus culture as a result of the program.

Regarding challenges, most colleges reported that the COVID-19 pandemic disrupted implementation efforts. Many colleges also reported difficulties resulting from staff turnover and low faculty buy-in. Some colleges also reported that systemwide data changes that coincided with the rollout of Guided Pathways made implementation challenging.

Some colleges reported the need for ongoing funding to build staffing capacity and/or purchase or improve technology. Several colleges reported needing ongoing support from SBCTC, and a handful of colleges reported the desire to have fewer reporting requirements, citing administrative burden.

⁴⁶ SBCTC (2024).

⁴⁷ Jenkins et al. (2023).

While we identified themes in survey responses across colleges, overall, Guided Pathways varies from college to college. Survey responses offer details about implementation so far, but we may not have comprehensively captured colleges' efforts. Also, we did not hear from one college and cannot speak to its implementation status.

Early Student Outcomes

Overall, we observed that first-year retention, course completion, credit accumulation, and GPA outcomes increased between AYs 2012 and 2019 for students enrolled in both Guided Pathways and non-Guided Pathways colleges. While there were slight differences for outcomes between groups, sometimes favoring Guided Pathways colleges and sometimes favoring non-Guided Pathways colleges, differences were small.

We also examined outcomes by specific student populations, observing changes over time for different student groups in Guided Pathways and non-Guided Pathways colleges. Overall, most student populations experienced growth in retention, course completion, credit accumulation, and GPA outcomes over time at both college types.

It is important to note that our analysis of student outcomes is descriptive and not causal. Any differences in outcomes between students in Guided Pathways and non-Guided Pathways colleges should not be interpreted as the effect of Guided Pathways. Outcome differences could result from Guided Pathways but could also be affected by other programs, policies, college factors, or student characteristics. Further, we could not identify associations between the types of initiatives that colleges implemented, as reported in survey responses, and student outcomes. For this preliminary study, reporting outcomes at this level would be misleading because of the complexity of how and when colleges implemented mapping, advising, data analysis, and student support initiatives.

Future Research

WSIPP will publish a final report in 2029, building upon the current report. We will provide an update on colleges' implementation efforts and, to the extent possible, examine additional student outcomes, including degree completion, four-year institution transfer rates, employment, and earnings.

To date, no rigorous outcome evaluations have estimated a causal relationship between Guided Pathways and student outcomes. More research is needed to understand program effectiveness in the future. WSIPP researchers will consider what methodological options might allow us to evaluate program effects in the final report more rigorously.

Appendices

Guided Pathways: Preliminary Report on Implementation and Student Outcomes

Ι.	Guided Pathways Theory of Change	34
II.	Guided Pathways Implementation Guidance	
III.	Citations of Descriptive and Case Studies	
IV.	Survey Questions.	37
V.	Methodology of Student Outcome Analysis	

I. Guided Pathways Theory of Change

Exhibit A1 illustrates the Community College and Research Centers' Guided Pathways theory of change model.⁴⁸ It includes practices associated with each principle area (e.g., mapping paths to student goals, helping students get on a path) and expected metrics they aim to impact.

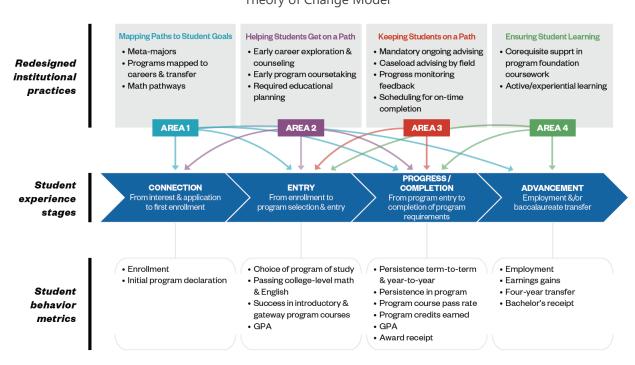


Exhibit A1 Theory of Change Model

II. Guided Pathways Implementation Guidance

Exhibit A2 shows legislative minimum requirements in Washington, the State Board for Community and Technical College's (SBCTC's) essential practices, and the Community College Research Center's (CCRC's) guiding principles, all of which inform how colleges implement Guided Pathways in the state.

Legislative Requirements*

Comprehensive **mapping** of student educational pathways with student end goals in mind.

Dedicated **advising and career counseling** that helps students make informed program choices and develop completion plans.

Data analysis of student learning as well as program and service outcomes.

A student success support

infrastructure using programs that the SBCTC finds have been effective in closing equity gaps among historically underserved student populations and improve student completion rates.

Exhibit A2

CCRC's 4 Principles[^]

Mapping paths to student end goals

- Meta-majors
- CTE program maps
- Transfer program maps
- Math pathways

Helping students get on a program path

- Meta-major exposure
- Required career assessment and advising
- Early program-related coursework
- Mandatory educational planning

Keeping students on a program path

- Mandatory ongoing advising
- Caseload advising by field
- Progress monitoring and feedback
- Scheduling to facilitate ontime completion

Ensuring students are learning across programs

- Corequisite support in program foundation coursework
- Program foundation course improvement

SBCTC's Essential Practices#

Pathway design essential practices

- Pathways (meta-majors), programs of study, and program maps
- Math pathways
- Outcomes alignment
- Structured exploratory experiences
- Predictive courses
- Scheduling

Student experience essential practices

- Intake
- Placement
- Educational Planning
- Degree math and collegelevel English within one year
- Progress monitoring
- Engaging students in support of completion
- Classroom environment and course design

Notes:

* E2SSB 5194.

^ Jenkins et al. (2023).

[#] SBCTC Guided Pathways site.

III. Citations of Descriptive and Case Studies

The citations below are not an exhaustive list of all publications related to Guided Pathways. These publications represent a sample of descriptive and case studies.

- Brown, A., & Lahr, H. (2019). Approaching institutional change with clarity and commitment: Guided Pathways at Wallace State Community College. Community College Research Center. Teachers College, Columbia University.
- CCRC. (2015). *Implementing Guided Pathways at Miami Dade College: A case study*. Community College Research Center. Teachers College, Columbia University.
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IV. Survey Questions

Basic Information

- 1. What is the name of your institution?
- 2. Who participated in completing this form (name/ title)?

Initial Implementation

- 3. When did your institution begin discussions about implementing Guided Pathways reforms?
- 4. What teams/departments were involved in these discussions?
- 5. Briefly describe your institution's main objectives when it first implemented Guided Pathways.
 - a. Have these objectives changed over time? How?

Implementation Details

We would like to have more information about the timing of specific interventions implemented. Please describe all interventions your institution has implemented that:

- were a key part of your institution's Guided Pathway reforms,
- related to the minimum standards described in E2SSB 5194, and/or
- were designed to impact outcomes for all students or specific subpopulations of students.
- 6. Has your institution implemented mapping of student pathways? If yes:
 - a. Please provide a list of your meta-majors.
 - b. What teams/departments have been involved with this work?
 - c. Are pathways aligned with K-12 and university curricula? If yes, describe alignment.
 - d. Are pathways aligned to meet the skills needed to enter the workforce? If yes, describe.
 - e. Enter the year (and term if possible) you began the following phases of implementation:
 - i. Exploring and preparation
 - ii. Planning and resourcing
 - iii. Implementation and operationalization
 - iv. Full implementation
 - f. Have there been any significant changes to your institution's meta-majors since initial implementation? If yes, describe how meta-majors have changed.
- 7. Please describe how first-time entering students are directed (and redirected) to these paths.

Intervention Timing

- 8. Please describe interventions your institution has implemented as part of Guided Pathways.
 - a. Does this intervention target all students or a specific student population? If a specific population, please select the box that best describes the population.
 Sex □ Female □ Male □ Other (write in)_____

Race/Ethnicity - \Box American Indian/Alaska Native \Box Asian \Box Black/African American \Box Hispanic \Box Pacific Islander \Box 2+ races

Other (write in)_____

Mission Area -
Basic Education
Professional/Technical
Transfer
Other (write in)_____

Socio-economic status -
Low-income
Enrollment status -
Full-Time
Part-Time
Meta major/program -
(write-in) _____
Other -
(write-in) _____

- b. Select categories that best match the goals of the intervention.
 - □ Mapping of student educational pathways
 - □ Advising and career counseling reforms
 - Developing/supporting data analysis of student learning
 - □ Student success support infrastructure
 - □ Closing equity gaps
 - 🗆 Intake
 - \Box Other (write-in)
- c. Enter the year (and term if possible) you began the following phases of implementation.
 - i. Exploring and preparation
 - ii. Planning and resourcing
 - iii. Implementation and operationalization
 - iv. Full implementation
- d. Are there any other changes to the intervention that we should be aware of (e.g., were there significant revisions, did you stop the intervention, etc.)

Advising and Career Counseling

- 9. If not already discussed, please describe any additional ways your institution has reformed advising and career counseling to support students in their program choices and completion plans because of your participation in Guided Pathways. Please include information about:
 - a. The entry advising process for first-time incoming students.
 - b. Orientation programming and activities for first-time incoming students.
 - c. Processes that help students explore career and educational choices.

Student Success Supports

10. If not already discussed, please describe any additional ways your institution has reformed student success supports because of your participation in Guided Pathways.

Data Analysis

- 11. If not already discussed, please describe how your institution is using data analysis and tracking technology to inform the following:
 - a. Program development.
 - b. Refinement of student pathways.
 - c. Determine opportunities for early intervention for students.
 - d. Help advisors support students.

Related Activities

- 12. Is your institution participating in other interventions and/or using resources outside of those allocated directly for Guided Pathways to meet your institution's goals for Guided Pathways?
- 13. How did the COVID-19 pandemic impact your institution's implementation of Guided Pathways?
- 14. Were there other factors that might have influenced the impact of your institution's Guided Pathways work (positively or negatively)?

Final Questions

- 15. What major successes has your institution had so far?
- 16. What are/were major challenges or obstacles faced during your implementation?
- 17. What resources are needed going forward to support your institution's goals?
- 18. Are there any other things that you would like us to know about your institution's experience with the Guided Pathways model?

V. Methodology of Student Outcomes Analysis

This section describes our methodological approach for examining trends in outcomes for students enrolled in early- and late-adopting Guided Pathways colleges.

<u>Data</u>

We received administrative data from SBCTC, which included anonymous student-level data between academic years (AYs) 2012 and 2023. SBCTC provided us with the following key data files for our analysis:

Entry Cohort Common Reporting (ECCR) data file includes one record for each student's new entry at a community or technical college. Some students enrolled at multiple colleges throughout their academic careers. In these cases, we retained the demographic and academic intent information associated with their first enrollment at a Washington community and technical college.

Transcript data file includes one record for each graded course for each student.

Completions data file includes one record for each degree or certificate earned by each student.

We cleaned the data files above to create an analytic sample. Students in our sample met the following criteria:

- The student was award-seeking or dual-enrolled,⁴⁹
- The student first enrolled at a college between the summer of 2011 and the fall of 2018, and
- The student first enrolled during the summer or fall quarter.

Our final analytic sample includes 400,178 students. The sample does not include international students, students enrolled in basic education, students in Department of Corrections custody, students enrolled in baccalaureate programs, or students in apprenticeship programs.

<u>Outcomes</u>

We constructed outcome measures in the following ways:

- **Retention**: measured as the proportion of students who remain enrolled (or complete a credential) between the fall term of their first year and the fall term of their second year.
- **College-level course completion**: measured as the proportion of students who pass college-level math and/or English courses in their first year.⁵⁰
- **Credit accumulation**: measured as the proportion of full-time students who obtain 45 credits (or complete a final credential) in their first year.⁵¹
- **Grade point average**: measured as the average GPA in a student's first year.

⁴⁹ Dual enrolled students include students in Alternative High School, College in the High School, and Running Start.

⁵⁰ Course completion entails that students earned credits, course was college-level, their decimal grade was 1.0 or higher or they received a satisfactory, pass, or credit grade.

⁵¹ After consultation with SBCTC staff, students were considered to have completed a final credential if they had no subsequent enrollments after completing the credential.

Defining Guided Pathways Colleges

To compare trends in outcomes between students enrolled in colleges that were early adopters of Guided Pathways and students enrolled in colleges that adopted later, we assigned each student to one of two groups. Students whose first enrollment was at a college that received Guided Pathways funding before AY 2021 were placed in the "Guided Pathways college" group. Students with first enrollments at colleges that received Guided Pathways funding during or after AY 2021 were placed in the "non-Guided Pathways college" group. Approximately 40% of students in our sample were enrolled in Guided Pathways colleges, and 60% were enrolled in non-Guided Pathways colleges.

One issue that arose with our construction of college groups is that early adopter colleges received funding to implement Guided Pathways over a period of years. For example, some colleges first received funding in AY 2016, while others received funding in AY 2017 or 2018 (see Exhibit A3). As a result, students enrolled in early adopter colleges funded at different times are combined into the same college group. For example, students at a college that received funding in 2016 and students at a college that received funding in 2018 are both in the "Guided Pathways college" group. A limitation of this approach is that potential changes in student outcomes caused by Guided Pathways could be masked. For example, suppose outcomes improved in AY 2016 for students at the four colleges that received funding in AY 2016. In that case, this might be masked because the group also includes nine colleges that did not actually receive funding until AY 2018. Despite this limitation, a benefit of this approach is that it allows for a straightforward description of trends. We also considered one college group for each funding year cohort but found smaller group sizes and more volatility in outcome measures.

Another issue is that not all students remain at one college over time. In our sample, 78% of students only attended one college, 18% attended two, and 4% attended three or more over the course of their academic careers. Some students started at a Guided Pathways college and moved to a non-Guided Pathways college. Others did the opposite. It would be difficult to assess how much Guided Pathways "exposure" students in this situation experienced. For simplicity, and because Guided Pathways practices aim to reach all students upon enrollment, we considered only the college a student first enrolled at.

Early Adopting and Late Adopting Guided Pathways Colleges by First Funding Year

Early adopting colleges	Later adopting colleges				
2015-16	2020-21				
Pierce College Fort Steilacoom	Bates Technical College				
Pierce College Puyallup	Bellevue College				
Skagit Valley College	Bellingham Technical College				
South Seattle College	Big Bend Community College				
	Cascadia College				
2016-17	Centralia College				
Everett Community College	Columbia Basin College				
Peninsula College	Edmonds Community College				
South Puget Sound Community College	Grays Harbor College				
	Green River College				
2017-18	Highline College				
Clark College	Lake Washington Institute of Technology				
Clover Park Technical College	Lower Columbia College				
Lower Columbia College	North Seattle College				
Renton Technical College	Olympic College				
Spokane Falls Community College	Seattle Central College				
Tacoma Community College	Shoreline Community College				
	Spokane Community College				
	Walla Walla Community College				
	Wenatchee Valley College				
	Whatcom Community College				
	Yakima Valley Community College				

<u>Note</u>: Years refer to academic years.

Subgroup Results

We also examined outcomes by specific student populations, including sex, financial aid receipt, race, ethnicity, and educational background. We compared outcomes for each student group before and after early Guided Pathways funding was implemented and by Guided Pathways and non-Guided Pathways college types. Specifically, we calculated the average annual outcome measures before funding (i.e., 2012 through 2015) and after funding (i.e., 2016 through 2019). We then subtracted the average outcome from the 2012-2015 period from the 2016-2019 period to estimate the average change in outcomes before and after funding. Exhibits A4-A8 illustrate average outcome measures for each student population in both Guided Pathways and non-Guided Pathways colleges.

Retention: Proportion of Students Remaining Enrolled or Completing a Program by Fall of Second Year (Before and After First Year of Guided Pathways Funding)

Student population	College type	N	Average before funding (2012-2015)	Average after funding (2016-2019)	Percentage point difference
Overall	Non-GP	241,069	58%	61%	+2
Overall	GP	159,109	57%	60%	+3
Female	Non-GP	127,349	59%	62%	+3
remale	GP	87,431	59%	62%	+3
Male	Non-GP	109,782	57%	59%	+2
IVIAIE	GP	67,027	54%	57%	+3
Need-based aid (no)	Non-GP	176,454	58%	61%	+2
Need-based and (no)	GP	114,016	58%	61%	+3
Need based aid (yes)	Non-GP	64,615	58%	60%	+2
Need-based aid (yes)	GP	45,093	55%	57%	+2
American Indian/Alaska Native	Non-GP	2,740	50%	52%	+2
American Indian/Alaska Native	GP	1,905	49%	50%	+1
Acian	Non-GP	21,009	65%	67%	+2
Asian	GP	9,152	64%	67%	+3
Black/African American	Non-GP	12,176	49%	54%	+5
Black/African American	GP	9,082	45%	50%	+4
Lienonic/Lating	Non-GP	24,594	62%	62%	0
Hispanic/Latino	GP	9,373	55%	57%	+1
Multiracial	Non-GP	28,269	56%	59%	+3
Multiracial	GP	19,414	54%	58%	+4
Native Llaugier (other Desific Islander	Non-GP	1,521	50%	52%	+2
Native Hawaiian/other Pacific Islander	GP	1,359	50%	51%	+1
White	Non-GP	133,531	59%	61%	+2
white	GP	95,763	58%	61%	+3
	Non-GP	69,098	68%	68%	+1
College in HS	GP	43,410	71%	73%	+2
Percent US no college	Non-GP	79,176	59%	59%	+1
Recent HS no college	GP	55,303	55%	56%	+1
Adult student no college	Non-GP	24,010	56%	57%	+1
Adult student, no college	GP	18,296	54%	55%	+1
	Non-GP	68,785	52%	53%	+1
Some college	GP	42,100	49%	50%	+1

English Course Completion: Proportion of Students Passing a College-Level English Course in First Year (Before and After First Year of Guided Pathways Funding)

Student population	College type	N	Average before funding (2012-2015)	Average after funding (2016-2019)	Percentage point difference
Overall	Non-GP	241,069	42%	50%	+8
Overall	GP	159,109	44%	54%	+10
Fomale	Non-GP	127,349	44%	53%	+9
remale	GP	87,431	45%	56%	+11
Mala	Non-GP	109,782	40%	49%	+8
Male	GP	67,027	42%	50%	+8
Need based aid (ap)	Non-GP	176,454	44%	52%	+8
overall emale Male Male Male Male Male Male Deed-based aid (no) Meed-based aid (yes) merican Indian/Alaska Native sian Mative Mawaiian/Alaska Native sian Mative Mawaiian/Alaska Native Mative Mawaiian/Alaska Native Mative Mawaiian/Alaska Native Mative Mawaiian/Alaska Native Mative Mawaiian/Alaska Native Mative Mawaiian/Alaska Native	GP	114,016	47%	57%	+10
Need-based aid (yes) American Indian/Alaska Native	Non-GP	64,615	39%	46%	+7
Need-based and (yes)	GP	45,093	37%	46%	+8
	Non-GP	2,740	30%	42%	+13
American Indian/Alaska Native	GP	1,905	32%	40%	+8
	Non-GP	21,009	46%	56%	+10
Asian	GP	9,152	44%	57%	+12
	Non-GP	12,176	29%	43%	+15
Black/African American	GP	9,082	26%	39%	+13
	Non-GP	24,594	43%	51%	+8
Hispanic/Latino	GP	9,373	40%	49%	+9
NATION STAT	Non-GP	28,269	43%	51%	+8
Multiracial	GP	19,414	45%	55%	+9
Native Herreiter (ether Desifie Jalender	Non-GP	1,521	34%	42%	+8
Native Hawallan/Other Pacific Islander	GP	1,359	37%	45%	+8
Muito	Non-GP	133,531	43%	51%	+8
white	GP	95,763	45%	55%	+10
	Non-GP	69,098	72%	75%	+3
College In HS	GP	43,410	78%	82%	+5
	Non-GP	79,176	49%	53%	+4
Recent HS no college	GP	55,303	48%	55%	+7
	Non-GP	24,010	32%	35%	+4
Adult student, no college	GP	18,296	32%	36%	+4
	Non-GP	68,785	17%	18%	+2
Some college	GP	42,100	17%	21%	+3

Math Course Completion: Proportion of Students Passing a College-Level Math Course in First Year (Before and After First Year of Guided Pathways Funding)

Student population	College type	N	Average before funding (2012-2015)	Average after funding (2016-2019)	Percentage point difference
Overall	Non-GP	241,069	26%	30%	+4
Overall	GP	159,109	24%	30%	+6
Female	Non-GP	127,349	23%	28%	+5
Female	GP	87,431	23%	28%	+5
Mala	Non-GP	109,782	28%	32%	+4
Male	GP	67,027	26%	31%	+5
	Non-GP	176,454	26%	31%	+5
Need-based aid (no)	GP	114,016	26%	31%	+5
	Non-GP	64,615	24%	28%	+4
Need-based aid (yes)	GP	45,093	20%	26%	+6
	Non-GP	2,740	16%	22%	+6
American Indian/Alaska Native	GP	1,905	16%	21%	+5
	Non-GP	21,009	38%	43%	+5
Asian	GP	9,152	36%	43%	+7
	Non-GP	12,176	15%	20%	+5
Black/African American	GP	9,082	15%	21%	+6
	Non-GP	24,594	19%	22%	+3
Hispanic/Latino	GP	9,373	19%	24%	+5
	Non-GP	28,269	23%	28%	+5
Multiracial	GP	19,414	23%	28%	+5
	Non-GP	1,521	21%	19%	-2
Native Hawaiian/other Pacific Islander	GP	1,359	21%	25%	+4
	Non-GP	133,531	26%	31%	+5
White	GP	95,763	25%	30%	+5
	Non-GP	69,098	33%	37%	+4
College in HS	GP	43,410	32%	37%	+5
	Non-GP	79,176	28%	31%	+3
Recent HS no college	GP	55,303	25%	30%	+5
	Non-GP	24,010	18%	19%	+1
Adult student, no college	GP	18,296	16%	20%	+4
	Non-GP	68,785	20%	23%	+3
Some college	GP	42,100	21%	24%	+3

Credit Accumulation: Proportion of Full-Time Students Accumulating 45 Credits or Completing a Program Within First Year (Before and After First Year of Guided Pathways Funding)

Student population	College type	N	Average before funding (2012-2015)	Average after funding (2016-2019)	Percentage point difference
Overall	Non-GP	241,069	28%	33%	+5
Overall	GP	159,109	28%	32%	+4
Female	Non-GP	127,349	27%	34%	+6
Female	GP	87,431	28%	33%	+4
Male	Non-GP	109,782	30%	33%	+4
Male	GP	67,027	28%	31%	+3
Need based aid (as)	Non-GP	176,454	32%	37%	+5
Need-based aid (no)	GP	114,016	33%	36%	+3
Need beend and (see)	Non-GP	64,615	23%	25%	+3
Need-based aid (yes)	GP	45,093	21%	22%	+1
	Non-GP	2,740	20%	24%	+4
American Indian/Alaska Native	GP	1,905	17%	24%	+7
Asian	Non-GP	21,009	34%	44%	+10
Asian	GP	9,152	37%	41%	+4
Plack (African American	Non-GP	12,176	21%	21%	0
Black/African American	GP	9,082	21%	22%	+1
Hispanic/Latino	Non-GP	24,594	19%	24%	+5
hispanic/Latino	GP	9,373	19%	23%	+4
Multiracial	Non-GP	28,269	24%	29%	+6
Multiaciai	GP	19,414	23%	28%	+5
Native Hawaiian/other Pacific Islander	Non-GP	1,521	20%	21%	+1
	GP	1,359	22%	24%	+1
White	Non-GP	133,531	30%	36%	+5
white	GP	95,763	29%	33%	+4
	Non-GP	69,098	37%	43%	+6
College in HS	GP	43,410	43%	45%	+2
Becont US no college	Non-GP	79,176	19%	23%	+4
Recent HS no college	GP	55,303	17%	19%	+2
Adult student no college	Non-GP	24,010	33%	34%	+1
Adult student, no college	GP	18,296	27%	32%	+5
Some college	Non-GP	68,785	34%	37%	+3
Some college	GP	42,100	33%	33%	0

GPA: Average GPA in First Year (Before and After First Year of Guided Pathways Funding)

Student population	College type	N	Average before funding (2012-2015)	Average after funding (2016-2019)	Point difference
Overall	Non-GP	241,069	2.76	2.81	+0.05
Overall	GP	159,109	2.70	2.75	+0.05
Female	Non-GP	127,349	2.86	2.92	+0.06
remale	GP	87,431	2.81	2.84	+0.04
Male	Non-GP	109,782	2.65	2.67	+0.02
	GP	67,027	2.56	2.62	+0.06
Need-based aid (no)	Non-GP	176,454	2.84	2.87	+0.03
Need-based and (110)	GP	114,016	2.77	2.79	+0.02
Need-based aid (yes)	Non-GP	64,615	2.59	2.62	+0.03
Need-based ald (yes)	GP	45,093	2.54	2.61	+0.07
American Indian/Alaska Native	Non-GP	2,740	2.44	2.53	+0.08
American Indian/Alaska Native	GP	1,905	2.28	2.37	+0.09
Asian	Non-GP	21,009	2.97	3.08	+0.12
Asian	GP	9,152	2.96	3.00	+0.04
Black/African American	Non-GP	12,176	2.36	2.44	+0.08
Blacky Afficiant Affiencian	GP	9,082	2.27	2.38	+0.12
Hispanic/Latino	Non-GP	24,594	2.51	2.51	0.00
hispanic/ Latino	GP	9,373	2.50	2.49	-0.01
Multiracial	Non-GP	28,269	2.61	2.65	+0.04
Muthacia	GP	19,414	2.52	2.61	+0.09
Native Hawaiian/other Pacific Islander	Non-GP	1,521	2.44	2.48	+0.04
Native Hawalian/other Pacific Islander	GP	1,359	2.39	2.39	0.00
White	Non-GP	133,531	2.82	2.89	+0.07
White	GP	95,763	2.76	2.81	+0.05
	Non-GP	69,098	2.86	2.89	+0.03
College in HS	GP	43,410	2.79	2.82	+0.03
Pacant US no college	Non-GP	79,176	2.49	2.50	+0.02
Recent HS no college	GP	55,303	2.43	2.47	+0.04
Adult student no college	Non-GP	24,010	2.97	3.01	+0.05
Adult student, no college	GP	18,296	2.89	2.97	+0.08
Some college	Non-GP	68,785	2.92	3.03	+0.10
Some college	GP	42,100	2.87	2.96	+0.09

Additional Analyses

We also conducted additional analyses to observe if results were sensitive to the inclusion or exclusion of part-time and full-time students and students who started college in a term other than fall.

- Exhibit A9 shows the first-year retention rate between full-time and part-time students (among students who entered during the fall term).
- Exhibit A10 shows the proportion of students passing college-level English courses in their first year between full-time and part-time students. Exhibit A11 shows the same but compares students who started in the fall term and students who started in a term other than fall.
- Exhibit A12 shows the proportion of students passing college-level math courses in their first year between full-time and part-time students. Exhibit A13 shows the same but compares students who started in the fall term and students who started in a term other than fall.
- Exhibit A14 shows the proportion of students obtaining 45 credits (or completing a credential) in their first year between full-time and part-time students.
- Exhibit A15 shows the average first-year GPA between full-time and part-time students. Exhibit A16 shows the same but compares students who started in the fall term versus a term other than fall.

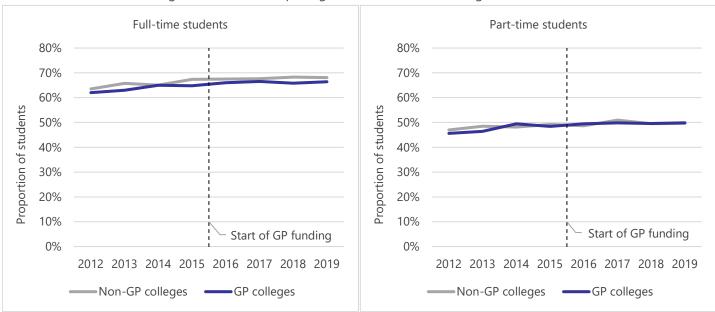


Exhibit A9

Percentage of Students Completing a Credential or Remaining Enrolled After 1 Year

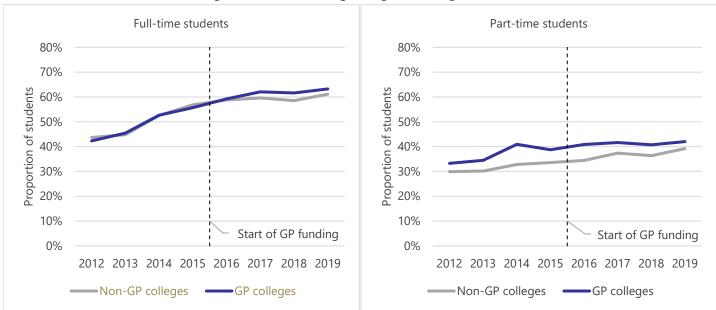
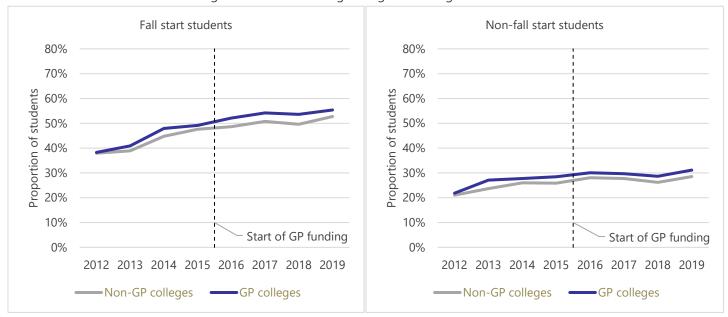


Exhibit A10 Percentage of Students Passing College-Level English in Their First Year

Exhibit A11 Percentage of Students Passing College-Level English in Their First Year



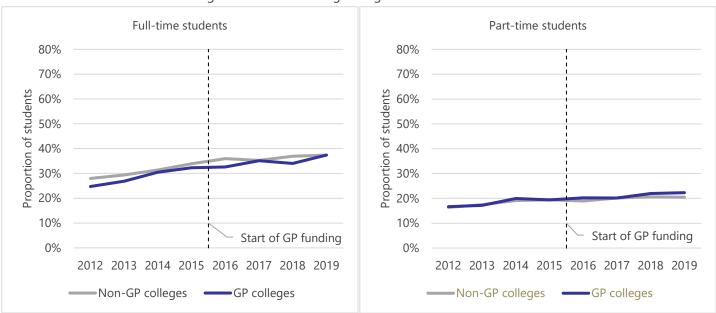
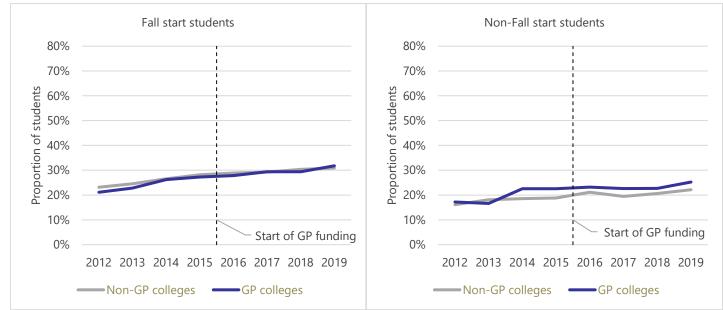


Exhibit A12 Percentage of Students Passing College-Level Math in Their First Year

Exhibit A13 Percentage of Students Passing College-Level Math in Their First Year



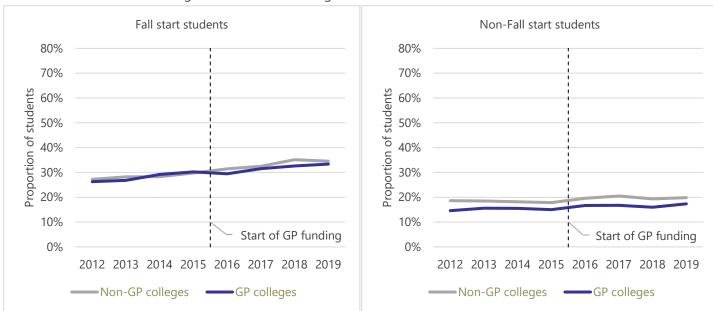
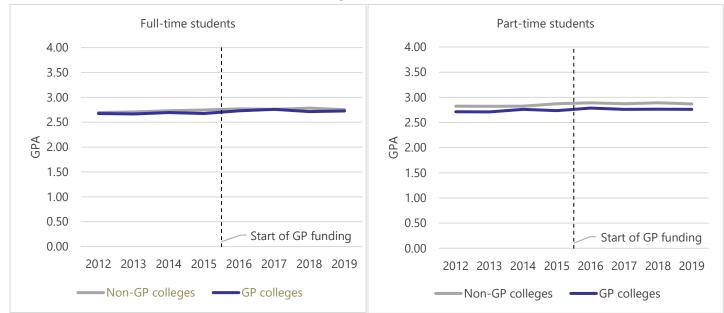


Exhibit A14 Percentage of Students Obtaining 45 Credits or a Credential in Their First Year

Exhibit A15 Average First-Year GPA



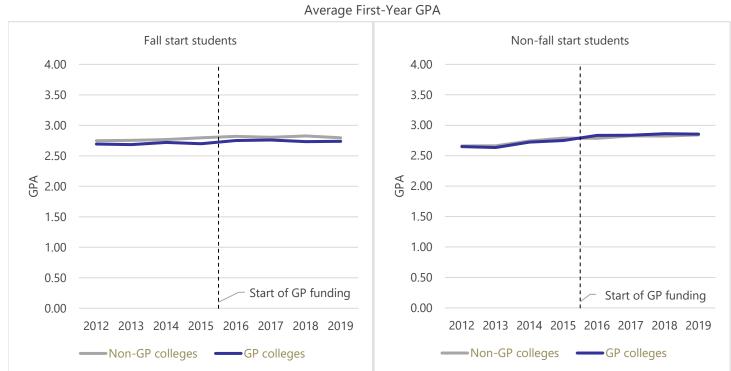


Exhibit A16

Acknowledgments

The authors would like to thank SBCTC's Research and Planning Commission members for reviewing and providing feedback on the survey questions. We also thank the community and technical college administrators who responded to our survey. We so appreciate their time and thoughtful answers.

We also want to thank the staff at SBCTC for their support throughout this project. We are particularly grateful to Monica Wilson for answering our programming questions, connecting us with college administrators and Guided Pathways leaders, and for her feedback on an earlier draft of this report. We also thank Summer Kenesson and Diana Knight for providing us with administrative data to examine student outcomes. We appreciate their expertise and ongoing support while working with the data and their feedback on an earlier draft of this report.

Finally, we thank WSIPP researchers Chasya Hoagland, Rebecca Goodvin, and Cory Briar for contributing to earlier drafts of this report.

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Document No. 24-03-2301

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