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Whole-College Guided Pathways Reform Practices

Scale of Adoption by Community Colleges in Three States

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Overview

Guided pathways is arguably the most widespread whole-college community college reform movement in decades. In this report, we present findings from a study on the scale of adoption of guided pathways practices across community and technical colleges in three states where there are state-level efforts to support adoption among colleges system-wide. These findings are based on an institutional survey we developed and administered to these colleges in 2022 to more precisely measure the scale at which they have adopted guided pathways model practices. By May 2022, only a minority of colleges in each of the three states had adopted at least one practice at scale from each of the four guided pathways practice areas. Most commonly, colleges adopted a few practices at scale across one or more practice areas, while other practices were still in the process of being scaled. We know from interviews with college leaders in these and other states that many colleges had put guided pathways reforms on hold because of the COVID pandemic. There is evidence, however, that most colleges in the three states are now continuing to scale guided pathways reforms. This report provides an interim look at a reform movement that will continue to play out in these and other states for several years to come.

1. Introduction

Eight years ago, the Community College Research Center's book *Redesigning America's Community Colleges: A Clearer Path to Student Success* (Bailey et al., 2015) provided a blueprint for what has become a national community college reform movement. Since its publication, hundreds of community colleges have sought to implement systemic reforms following the guided pathways model outlined in the book (CCRC, 2021). Community college agencies and associations in several states have spearheaded efforts to provide technical assistance to colleges across their systems to adopt guided pathways reforms.

In fall 2019, CCRC launched research funded by the National Science Foundation (NSF) to examine—in greater depth and more rigorously than had been done before—the implementation and scale of adoption of guided pathways reforms, as well as their effects on participation and success of students in programs of study generally and in STEM programs in particular. To do this, we partnered with state agencies or associations in three states—Ohio, Tennessee, and Washington—that together encompass 70 public two-year colleges.

In this report, we present findings on the scale of adoption of guided pathways practices across the community and technical colleges in these three states. The findings are based on an institutional survey we developed and administered to these colleges to more precisely measure the scale at which colleges have adopted guided pathways model practices. The paper addresses three research questions:

1. At what scale have community and technical colleges in these states adopted particular guided pathways practices?
2. To what extent have colleges in these states adopted complementary sets of guided pathways practices that make up the whole-college guided pathways model at scale?
3. Is there a salient sequence or pattern by which colleges in these states adopted guided pathways practices over time?

In the next section of the report, we describe the guided pathways model practices and the theory of change associated with them, and we review prior research that supports them. In the third section, we describe the institutional survey and particular measures we developed to gauge the scale of adoption of guided pathways practices and the full model by the colleges in the three states, and we summarize how we administered the survey. In the fourth section, we present findings from our scale of adoption survey on our three research questions. In the fifth section, we discuss the implications of the findings for college and college-system-wide efforts to scale the adoption of guided pathways reforms. We will assess the effects of adopting guided pathways practices on student progress and outcomes in a future report.

2. Guided Pathways Model Practices and Theory of Change

In *Redesigning America's Community Colleges*, CCRC researchers sought to address why, despite over a decade of reform among colleges across the country as part of the community college completion agenda, community colleges had not been able to achieve substantial gains in completion rates for students generally or reduce persistent gaps in achievement among students by race/ethnicity, family income, age, and other factors.

The authors pointed out that most of the innovations implemented as part of the completion agenda consisted of relatively small-scale, often disconnected interventions (see also, e.g., Zachry Rutschow et al., 2011), with a heavy focus on strengthening orientation, advising, and remediation for new students. Research suggested that while many of these interventions benefited small groups of students, they were not sufficient to improve outcomes for students overall. Indeed, the majority of community college students were not benefitting from such interventions. What is more, the *Redesigning* authors raised concerns about the fundamental organization of community colleges and how they offered courses and programs of study in the first place.

The *Redesigning* authors maintained that to improve outcomes for large groups of students, colleges need to do something more than or different from scaling well-intentioned discrete interventions per se—they need to rethink their larger organizational and educational models at scale. They argued that colleges should move away from the "cafeteria college" model that had evolved during the 1960s and 1970s when community colleges played an integral role in the national effort to dramatically expand access to higher education. Instead, colleges should implement practices at scale—that is, for all or nearly all students—that help students enter and succeed in programs of study and that prepare them for jobs and further education in fields aligned with their interests, strengths, and aspirations.

Redesigning identified at least four features of the cafeteria college model that, while helpful in expanding access to college coursework, also tend to create barriers to student persistence and success in programs aligned with jobs and further education. First, the programmatic paths to career and further education opportunities are often unclear, and students are overwhelmed by too many choices. Second, support to entering students for career and college exploration and planning is typically limited, so many students lack direction and the motivation that comes with having a clear plan. Third, because students' progress is generally not monitored, they often self-advise and meander, taking courses that do not apply to a degree related to their interests and goals. Fourth, too many students are diverted by standardized placement tests into a track of prerequisite remedial (or developmental) courses rather than helped to succeed in college-level courses in mathematics and other subjects that are foundational to their field of interest. Moreover, instructional innovation under the cafeteria model is typically focused on improving particular courses rather than on ensuring that students are building essential skills and know-how across their programs.

Redesigning urged community colleges to implement at-scale practices that research suggests help to overcome these barriers to student success in programs of study. Specifically, *Redesigning* recommended that colleges redesign practices, policies, and systems in four areas: (1) mapping paths to student end goals; (2) helping students get on a program path; (3) keeping students on a path to completion; and (4) ensuring that students are learning across their programs. These four areas of reform have become known as the guided pathways pillars and are also commonly referred to as guided pathways practice areas.

2.1 Research in Support of Guided Pathways Practices

Research by CCRC and others in the eight years since *Redesigning* was published has refined our understanding of practices that may help remove barriers to student success created by colleges and better help students enter and complete programs that prepare them to advance in the labor market and pursue further education (Jenkins et al., 2021). These practices and the research that supports them are described below, organized by the four guided pathways practice areas.

Practice Area 1: Mapping paths to student end goals

Meta-majors. Behavioral science research on choice architecture indicates that organizing numerous complex options into sets and asking individuals to pick from among these sets can improve satisfaction with their eventual choices and their follow-through on decisions (Keller et al., 2011). Guided pathways helps students to make their choice of program in two stages: In the first stage, all available options are organized into broad fields or meta-majors that students select from; in the second, students choose a specific program from within their meta-major. Guided pathways meta-majors explicitly structure the decision-making environment so that students choose their program after having gotten a taste of fields of interest through introductory coursework and connecting with faculty, students, and others in those fields. This process encourages students to actively explore and engage with others in fields of interest rather than merely receiving information about them.

Programs mapped to related job and transfer opportunities. The paths into and through community college programs are often unclear. As a result, community college students' progression has been described as a "shapeless river" (Scott-Clayton, 2015). Information on college websites on program requirements and their connection to job and baccalaureate transfer opportunities in related fields is often unreliable and hard to navigate (Jaggars & Fletcher, 2014; Schudde et al., 2018). Research by CCRC and others indicates that the conventional community college advice for students seeking to transfer to a bachelor's program—to "get your gen eds out of the way" rather than follow a pre-major plan—too often leads to students taking more credits than they need to earn a bachelor's degree in their field of interest (Cullinane, 2014; Fink et al., 2018; Xu et al., 2018). Having to take and pay for many credits that do not count toward their degrees discourages students from completing (Monaghan & Attewell, 2015). Other research suggests that transfer students are more likely to be able to transfer and earn a bachelor's degree in a field of interest

without excess credits if they are helped to follow a more structured pre-major curriculum in which they take the right lower division courses for their major (Baker, 2016; Washington State Board for Community and Technical Colleges, 2021).

Colleges are more likely to map career and technical (CTE) programs, but these programs are often mapped separately from transfer-oriented degree programs. One result is that, despite much talk in the field about stacking credentials, too few community college students who earn a certificate go on to earn an associate degree, much less a bachelor's degree (Bailey & Belfield, 2017). Colleges also limit students' access to credential programs (and thus neglect to capitalize on a pool of potential students to recruit into credential programs) by failing to help students in noncredit workforce and adult basic education programs bridge into credit-bearing CTE programs.

To avoid these problems, guided pathways colleges organize all programs, including both transfer and CTE programs and credit and noncredit programs, by meta-major. And they backward map all programs, starting with the learning requirements of good jobs and transfer programs in related fields, to ensure that their programs prepare students for direct entry to good jobs and further education needed for career advancement (Jenkins et al., 2018). Ideally, these maps serve as guides to full-program plans that all entering students develop in collaboration with their advisors (more on plans below).

Math pathways. Knowing which math courses to take for a student's intended program of study is especially important. Research on efforts to accelerate poorly prepared students into college-level math indicates that such efforts are facilitated if entering students are guided to take introductory math courses relevant to their field of interest (Ran & Lin, 2022). So, a key part of program mapping is indicating which math course sequences students should take to be prepared for success in their desired program of study.

Practice Area 2: Helping students get on a program path

Early career and college exploration and counseling. Research on undergraduates generally indicates that students who choose a major that is a good fit for their interests are more likely to complete their programs of study (Allen & Robbins, 2010; Tracey & Robbins, 2006). In a survey of entering community college students, more than a quarter indicated that they did not discuss career plans with an advisor (CCCSE, 2018). Instead of onboarding new students to the college and first-term classes (as is conventional practice under the cafeteria college model), colleges that have implemented guided pathways have redesigned the entire student onboarding process—from initial application to the time the student chooses a program of study—around meta-majors to help students explore interests and options, choose a program direction, and develop a full-program plan (see Jenkins et al., 2020, for a literature review and college examples). Instead of making career and transfer advising available to students who seek it out, colleges that have implemented guided pathways help all entering students explore career and academic interests and develop an educational plan. In addition to providing career and transfer information and assistance with career assessment and counseling to students, colleges are organizing

new student orientation by meta-major so students can meet faculty, existing students, and others in programs of interest to them. Some colleges require students to take a first-year experience course organized by meta-major, while at others, faculty and staff organize events during the school year where undecided students can learn about their field.

Early program-related coursetaking. Research suggests that the process by which students explore and choose a program of study that is a good fit for them is developmental and often plays out over multiple terms (see Bailey et al., 2016, for a review of the literature). As part of this process, students benefit from taking courses early on in a field or topic of interest so they can determine for themselves if they are really interested in this field and if they are good at it. If students decide that a field is not a good fit for them and want to switch directions early on, this should not deter them, as research on program choice among students in community colleges indicates that changing programs early does not hurt, and may potentially increase, students' chances of completion (Liu et al., 2021). Wang (2016) examined how coursetaking patterns are related to whether or not community college students pursue pathways in STEM based on analysis of survey and transcript data from a nationally representative sample of baccalaureate-seeking community college students; she found that the early coursetaking pattern most common among students who transferred to a bachelor's program in STEM was taking a transferable STEM course in the first term and math courses in subsequent terms. Too many community college students drop out in the first couple of terms (Crosta, 2014), and recent research shows the benefits of achieving early momentum for longer term success, with stronger benefits for students of color and low-income students (Lin et al., 2020). To engage students early and prevent them from dropping out, the guided pathways model encourages colleges to build in coursework on topics of interest and connections to faculty and others in fields of interest starting in students' first term at the college. In creating program maps, faculty offer students a first-term experience that includes coursework relevant to their field as a means of giving a taste of the field and an opportunity to see if students like it and can master the foundational coursework.

Mandatory educational planning. Research indicates that having clear learning goals and a learning plan predicts active coping, sustained motivation, and higher achievement among college students (Grant & Dweck, 2003). With a clearly structured plan through college that is easy to understand, students have more confidence that they are on the right track and so are encouraged to persist in college (Scott-Clayton, 2015). Colleges implementing guided pathways require students to develop a full-program academic plan ideally by the end of their first term. Many colleges require students to take a first-year seminar course that helps them explore interests and options and develop a full-program plan that they review with advisors at the end of their first term to set their schedule for the next term. These plans are based on the program maps created by faculty and advisors and are used by students and their advisors to schedule courses and monitor progress.

Practice Area 3: Keeping students on a path to completion

Mandatory ongoing advising. Conventionally, many colleges require students to meet with an advisor upon entry. Although advising is also available to all returning students, it is typically used most by those who seek it out, and research suggests that students who need ongoing advising the most tend to be the least likely to seek it out (Karp et al., 2008). Guided pathways colleges thus require returning students to check in with their advisor before they can register for classes so that students who are not making steady progress on their plans or who are going off plan will get assistance.

Caseload advising by field. In response to research on the importance of advising and more recent research showing the importance to student success of "wraparound advising and support" (Azurdia & Galkin, 2020), colleges have recognized the need to provide better ongoing advising and progress monitoring. However, colleges seeking to undertake case management advising have run up against the problem of not having enough advisors to provide assigned advisors for all students in their many programs. One way that colleges have addressed this problem is by embedding advisors into meta-majors and assigning them to provide case management advising to students in programs in their area. This approach has several advantages. First, it enables advisors to become specialists in the requirements both for programs in their areas and for baccalaureate transfer programs, jobs, and careers that graduates from their programs are likely to pursue. Second, embedded advisors can work more closely with faculty and academic administrators in their meta-major to recruit and retain students. In some cases, colleges have assigned responsibility for recruiting and retaining students for particular meta-majors to completion teams comprised of embedded academic advisors, lead faculty, career advisors, and others. Third, embedding advisors into meta-majors and otherwise building meta-majors as academic and career communities through which students can gain support from faculty and peers has the potential to increase student engagement and thus the likelihood that students will complete their programs (Tinto, 2012). It also creates networks through which students can learn about internships, jobs, and other opportunities for educational and career advancement.

Progress monitoring and feedback. Guided pathways colleges are upgrading their student information systems to enable students and their advisors to monitor students' progress on their plans. This provides frequent feedback to students and allows advisors to employ intrusive advising when students are in danger of falling off track, which research indicates helps retain students (Bettinger & Baker, 2014).

Scheduling to facilitate on-time completion. While there is limited research on the benefits of more intentional scheduling on student outcomes,[1] college reform advocates sometimes insist that more predictable scheduling is especially important for students with many competing obligations and limited time and money (Complete College America, 2016; Spaulding et al., 2016). Guided pathways colleges also use students' educational plans to schedule the classes students need when they need them, potentially increasing the number of courses students can take in a term and reducing the risk that students will take excess credits that do not count toward their degree. Students are notified when they try to schedule a course not on their plan.

Practice Area 4: Ensuring that students are learning across programs

Integrated, contextualized academic support for students in college-level mathematics and other program foundation courses. Increasingly, community colleges are eschewing prerequisite remediation, which research indicates relegates students to a remedial track and often fails to build their skills for college (Scott-Clayton & Rodriguez, 2015). Instead, they are mainstreaming students into introductory college-level courses that provide additional tutoring and support to help students master college-level course material. Research on this approach—including a randomized controlled trial (Logue et al., 2017)—indicates that corequisite support enables students to take and pass college-level math courses at a much higher rate than with conventional, prerequisite remediation (Bickerstaff et al., 2022; Jaggars et al., 2015; Zachry Rutschow & Schneider, 2011). Recent research indicates that contextualizing and personalizing instruction increases the likelihood of success for students in developmental courses (Bickerstaff et al., 2022) and in college-level community college coursework in math (Wang et al., 2022).

In a quasi-experimental study on the effects of the adoption of corequisite math and English composition courses at all 13 Tennessee community colleges, Ran and Lin (2022) found that the positive effects of corequisite math and writing—namely, enabling more students to pass college-level math and English in their first year—did not extend to success in other courses. This is not surprising, given that corequisite remediation is focused exclusively on math and English (composition and reading). But it suggests that colleges need to rethink the remedial model of education, which assumes that helping students pass college-level introductory math and English courses will prepare them to succeed in other courses.

Opportunities for active learning, particularly in program foundation courses. Under the guided pathways model, faculty are encouraged to set program-specific learning outcomes and to use pedagogical approaches that enable students to attain these goals. Particularly important are teaching techniques that engage students in active learning, defined as pedagogical approaches that "truly engage students intellectually and involve thinking, problem-solving, questioning, or analyzing information" (President's Council of Advisors on Science and Technology, 2012, p. 86). Numerous studies find that active learning is positively associated with mastery of course content, critical-thinking and problem-solving skill development, academic performance, college persistence, and degree completion in undergraduate coursework across fields and particularly in STEM (Theobald et al., 2020). In a discussion of findings from in-depth research on community college students intending to transfer in STEM, Wang (2020) presents strong evidence of the importance of active teaching and learning, particularly in early coursework in a program. Engaging students in active learning not only improves students' learning outcomes but also helps motivate students, particularly students of color and those from other underrepresented groups, to persist in their programs. Other research has shown that the quality of instruction and students' level of success in initial STEM courses is strongly correlated with persistence in STEM majors; underrepresented minorities are particularly vulnerable to STEM attrition after experiencing poor-

quality instruction in introductory math and science courses (Chen, 2013; Kober, 2015; Seymour & Hewitt, 1997).

There is no reason to believe that active learning is not beneficial to students in foundation coursework in fields outside of STEM. CCRC researchers have observed that colleges further along in implementing guided pathways reforms are giving greater attention to strengthening active teaching in courses such as Accounting 101, Chemistry 101, and Anatomy and Physiology that are foundational to success in programs in related fields of study, which can be even more important in terms of a gateway to program success than math or English composition coursework (Zeidenberg et al., 2012). While *Redesigning* highlighted the importance of supporting motivation and metacognition as explicit instructional goals for coursework, there was no discussion in that book about the importance of experiential learning to student success in college and beyond. And yet, to secure well-paying jobs with good advancement prospects, job seekers increasingly need relevant experience in addition to credentials (Carnevale et al., 2015; Nunley et al., 2016). Community colleges have long provided work-based learning opportunities to students in nursing and other CTE programs through clinical practicums, apprenticeships, and service learning, and they occasionally offer study abroad, undergraduate research, and other cocurricular opportunities. However, the number of students who take advantage of these opportunities tends to be quite small, leaving the majority of community college students without such experiences.

2.2 Research in Support of the Guided Pathways Theory of Change

Redesigning argued that to move the needle on student success, discrete interventions focused on one group of students or one phase of the student experience are not sufficient; rather, colleges need to redesign practices, processes, and systems at scale across students' entire journey through college in ways that help students explore interests and choose, plan, and complete a program of study in a field of interest.

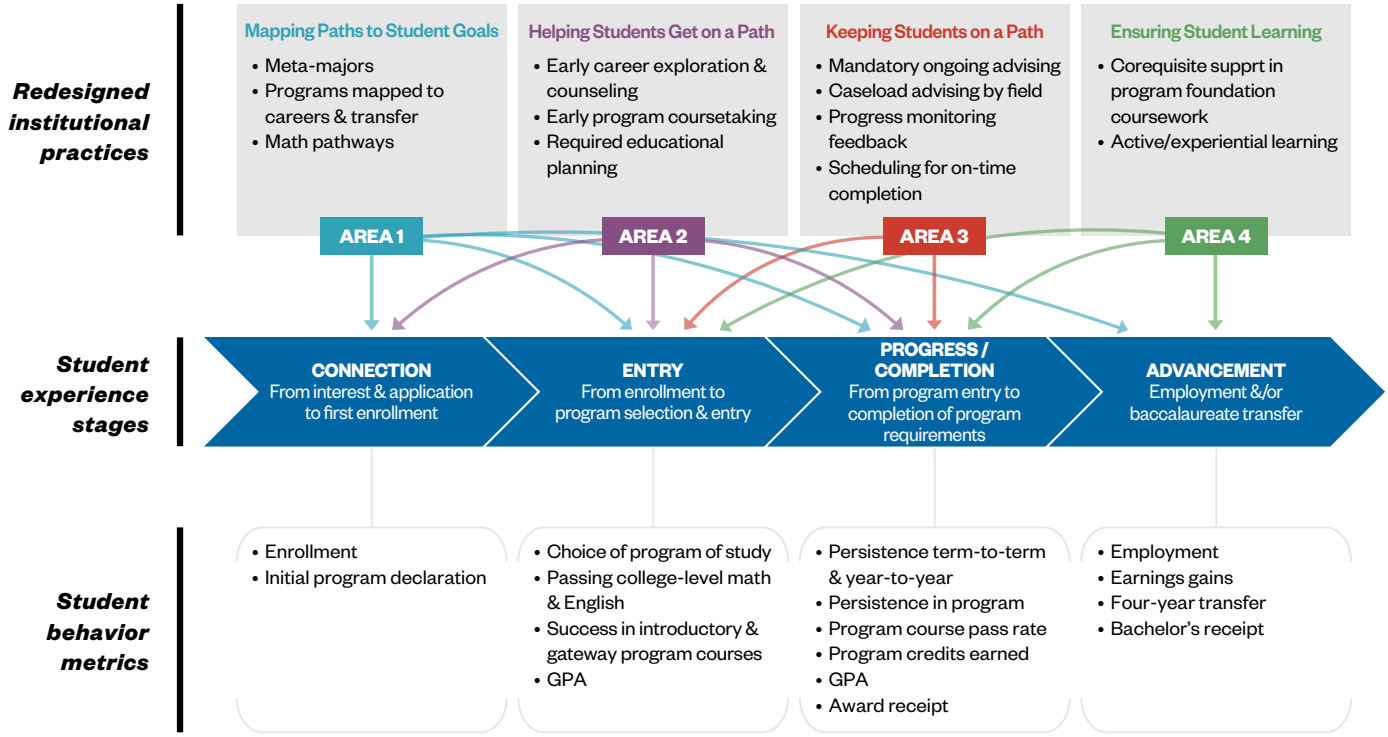
Other research supports the idea that the most effective reforms involve a set of complementary supports for student success that span each student's journey through college. Perhaps the most rigorous evidence for the need of such supports comes from research on CUNY's Accelerated Study in Associate Programs (ASAP), which provides a range of financial, academic, and personal supports to increase the likelihood that students will complete associate degrees. A random assignment study found that ASAP nearly doubled the graduation rate among students who entered community college three years earlier (Weiss et al., 2019). A second random assignment study of ASAP at three Ohio community colleges produced similar results (Miller & Weiss, 2021). Although ASAP and guided pathways share a similar principle—the provision of multiple complementary supports to guide students along their pathways—there are critical differences. ASAP is directed at students, not colleges; it does not address institution-wide obstacles to completion. ASAP includes transportation assistance and other enrichments that make it costly per student (Levin & Garcia, 2017); the feasibility of scale-up is therefore limited. Moreover, ASAP is limited to students who can attend full-time. It does not address the problem that community colleges are not well designed to help all students—including part-time students—explore career and academic options and interests, choose a program of study suited to their strengths and interests, and develop and complete an academic plan. To help more students enroll and complete programs in fields of interest to them, community colleges need to redesign their policies, programs, and supports at scale so that, throughout their college experience, students are provided some of the same kinds of supports as ASAP students while also enabling those who have a strong interest in or aptitude for particular fields, such as STEM, to get on and complete a path to a credential and career in that field.

Studies of community colleges that achieve high graduation rates and other positive outcomes for low-income, underrepresented students support the idea that effective reforms need to involve transformation of the entire college (Jenkins, 2007). Studies of exceptionally effective universities (Kuh et al., 2005), K-12 schools (Bryk et al., 2010), and private sector enterprises (Collins & Porras, 1994) have reached a similar conclusion: Organizational innovations have the greatest effect on performance when they are implemented at scale, in concert with one another, and are well aligned to achieve organizational goals.

Figure 1 illustrates the guided pathways theory of change. By adopting at scale the practices we just described under each of the four guided pathways practice areas (top panel), colleges shape students' experiences at each stage of their journey through

college (middle panel) in ways that research suggests will lead to measurable changes in behavior (bottom panel).

Figure 1. Guided Pathways Theory of Change



Practices under each of the four areas are hypothesized to have complementary effects on students' experience and resulting behaviors. For example, the introduction of clear program maps (top panel, box 1) and career exploration (top panel, box 2) at the connection and entry stages will increase the percentage of students who choose a program of study suited to their strengths and interests. Integration of academic support (top panel, box 2) and active learning (top panel, box 4) into program gateway courses (such as mathematics and science foundation courses for STEM) will increase students' confidence and motivation to progress to higher level coursework. And improvements in planning (top panel, box 2) and monitoring (top panel, box 3) will contribute to more students progressing in college, completing an associate degree, and transferring to a four-year institution.

According to the theory of change, to improve students' success in entering and completing programs, colleges should implement guided pathways practices in ways that are aligned with one another to produce complementary effects. In the next section, we present a methodology for measuring the scale of adoption of guided pathways practices outlined in the top panel of Figure 1.

3. Methodology for Measuring the Scale of Adoption of Guided Pathways Practices

In this section, we describe the survey we used to measure the scale of adoption of the overall guided pathways model and specific practices of that model among colleges in our three partner states. We define the measures we used to gauge the adoption of specific practices. We also describe how we developed and administered the survey.

3.1 Guided Pathways Scale of Adoption Institutional Survey

Building on prior CCRC guided pathways institutional self-assessments (Lahr, 2018), we developed the Guided Pathways Scale of Adoption (SOA) survey as the instrument used in this study to examine the extent to which colleges are scaling the practices described in the preceding section, which research indicates are likely to be associated with improved student outcomes. The instrument is based on previous work by CCRC researchers whereby an institutional self-assessment for colleges and state agencies was designed and administered to measure the progress of guided pathways implementation at scale. While that self-assessment proved useful to colleges and state systems in increasing understanding of the complex set of changes in practice involved in implementing guided pathways reforms, it was not well suited to measuring the scale of adoption of guided pathways by colleges in a way that allows precise comparisons of both the extent and the timing of adoption of particular practices across colleges (Giardi et al., forthcoming; Lahr, 2018).

The SOA survey questions used in this study are designed to capture the timing and scale of adoption of activities associated with each area of practice up through the time the survey is taken. Drawing on prior fieldwork and CCRC research, we define the threshold for wide-scale adoption of a practice as affecting at least 80% of programs or at least 80% of first-time-in-college credit students. Most questions in the survey are categorical, with colleges able to choose whether a practice has been scaled to affect "more than 80%, less than 80% but more than half, some but less than half, or none" of their programs or students. If a practice is deemed to be scaled such that it applies to at least 80% of programs or students, the survey also captures the term and year the practice was first scaled.

Since the survey items ask about a range of activities that are often carried out by different departments, it is designed to be completed by a small group of college staff and faculty. We asked survey respondents to identify their name and position/title so we could understand whose input is represented. In the survey's introductory text, we explain that completion of the survey will be used to study how colleges are undertaking and scaling guided pathways and to explore how the extent of adoption of guided pathways practices may be related to first-year student momentum. We also assure respondents that data gathered from the survey will be used in the aggregate to study the effects of implementing the practices and that the survey is not used to evaluate any one college's progress.

3.2 Measures of Adoption of Guided Pathways Practices

The table below provides the definitions of the measures we developed using survey data to gauge colleges' adoption of specific practices associated with the four practice areas of the guided pathways model. Some definitions involve two component practices: We sometimes discuss these components separately in the Findings section below, and in Appendix A, we disaggregate the results for these practices by each component.

Table 1. Measures of Adoption of Guided Pathways Practices

PRACTICE	MEASURE
Practice Area 1. Mapping paths to student end goals	
1a. Meta-majors	Programs organized by meta-major AND students' meta-major tracked
1b. Career and technical education (CTE) program maps	CTE programs mapped to related jobs/careers
1c. Transfer program maps	Transfer programs mapped to related majors
1d. Math pathways	Program-specific math sequences mapped
Practice Area 2. Helping students get on a program path	
2a. Meta-major exposure	Either mandatory orientation or mandatory first-year experience course AND either meta-major content or field-focused events
2b. Required career assessment and advising	All students given career assessments and undergo initial advising
2c. Early program-related coursetaking	Students advised to take program foundation course in term 1
2d. Mandatory educational planning	Students helped to develop an educational plan in term 1 AND can see plan online
Practice Area 3. Keeping students on a path to completion	
3a. Mandatory ongoing advising	Mandatory advising for returning students
3b. Caseload advising by field	Caseload advising AND advisors assigned by meta-major
3c. Progress monitoring and feedback	Students helped to develop an educational plan in term 1 AND checkpoint advising or registration alerts
3d. Scheduling for on-time completion	Classes scheduled based on students' plans
Practice Area 4. Ensuring that students are learning across programs	
4a. Corequisite college math	Students placed in corequisite math AND corequisite support aligned with math subject
4b. Program foundation course improvement	Instructional improvement in program foundation courses other than math by meta-major

3.3 Survey Administration

Survey deployment

Between December 2021 and February 2022, we piloted an early version of the guided pathways SOA survey with one college in each of the three states in the study: Ohio, Tennessee, and Washington. Minor edits to the survey questions' clarity and structure were made based on feedback from the pilot tests, and the final version was deployed in all three states in May 2022. In two states, the survey was emailed to each college's vice president of academic affairs and was completed by either the vice president alone or by the vice president with a small team of other college staff involved in guided pathways implementation. In the third state, the surveys were completed via one-hour video calls scheduled and led by CCRC research staff. During these calls, college representatives were asked each survey question sequentially, and their answers were recorded. This was done because college leaders and staff in this state were concurrently participating in several state-led policy efforts and programs during the time of data collection, and the state board asked CCRC to disseminate the survey in a way that put the least burden on colleges.

Across all three states, an average of four people per college, including those closely involved with guided pathways work, collaborated on completing the survey. We acknowledge that it might be problematic to rely on self-reports from college staff who are leading the guided pathways reform work at their colleges to gauge progress, but those college staff are typically best positioned to understand the timing and scale of practices implemented across the college.

Survey responses

Sixty-nine surveys were distributed across our three states with an overall response rate of 91%. The response rates were 94% in Ohio, 100% in Tennessee, and 95% in Washington. Survey responses were either submitted through email by colleges or recorded by CCRC researchers. We entered all survey data into a customized secure web form, which enabled question validation and standardization. Most colleges completed all items on the survey, though some missingness was observed. In several cases, follow-up calls were conducted with colleges to clarify why questions were skipped or to confirm responses that appeared contradictory (e.g., a college entering an at-scale date for a practice they did not indicate was at scale). Only surveys with less than 20% of questions skipped were included in our sample. Overall missingness was analyzed for response bias and does not appear to impact our ability to analyze overall guided pathways model adoption.

4. Findings

In this section, we present our findings on the three research questions concerning patterns of adoption of guided pathways practices by the colleges in our three partner states.

4.1 Scale of Adoption of Guided Pathways Practices

Below we use the measures outlined in the previous section to examine the extent to which colleges in our three partner states have adopted practices of the guided pathways model. We focus on the adoption of practices at scale—that is, those affecting at least 80% of students or programs—across the four practice areas of the model.

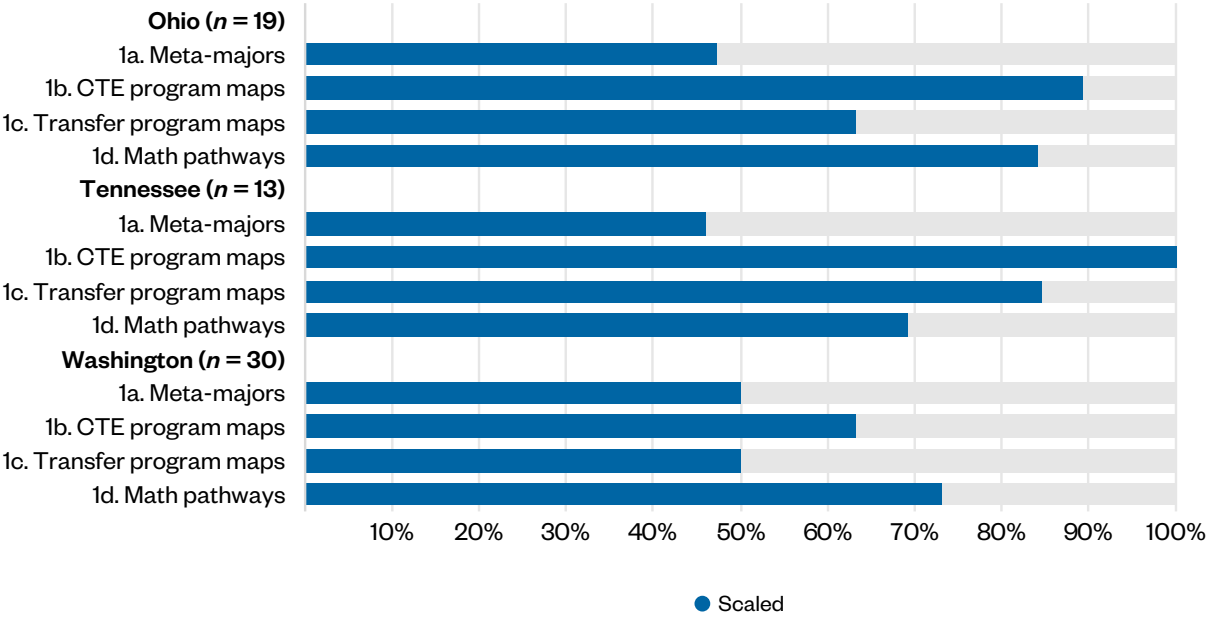
Practice Area 1: Mapping paths to student end goals

Central to the guided pathways model is clarifying information about program options and what students need to do to complete programs in fields of interest. While most colleges in the three states have organized program information on their websites into broad fields or meta-majors, only about half of colleges in each state also monitor which students are in particular programs or meta-majors (both are components of Practice 1a). For example, in Washington, 90% of colleges that participated in the survey have organized most of their programs into meta-majors, but only half track this information for individual students by meta-major (see Appendix Figure A1). We see a similar pattern among colleges in the other two states. This is an important consideration for scaling guided pathways across institutions; colleges that monitor which meta-majors students are enrolled in can use this information to advise students and connect them to field-specific activities and networks.

In all three states, most colleges have mapped requirements and course sequences for CTE (1b) and transfer programs (1c). In Ohio, 89% of colleges have scaled CTE program maps, and 63% of colleges have scaled transfer program maps. In Tennessee, all of the colleges have scaled CTE program maps, while about 85% have scaled transfer program maps, and in Washington, just over half of colleges have mapped both CTE and transfer programs. Across all three states, CTE and transfer maps also commonly include contextualized math coursework aligned to program content and students' associated academic goals (1d).

The Practice Area 1 findings are important and perhaps perplexing from an institutional and implementation perspective. Most colleges in our study organize their programs into content areas and utilize program maps to help students identify pathways, but information about students in programs and meta-majors does not appear to be collected or systematically leveraged by institutions to support broader reform goals.

Figure 2. Percentage of Colleges Adopting Area 1 Practices at Scale



Practice Area 2: Helping students get on a program path

A key principle of the guided pathways model is that entering students should be helped to explore academic and career options and interests. One way to do this is to ensure that students can take a course in a field of interest early on. Given that most colleges in the study have implemented meta-major organization and program maps at scale, it is not surprising that most colleges have also scaled the practice of advising students to take at least one program-specific course in their first term (2c). This applies to at least 60% of all colleges in the three states, but in Ohio and Tennessee, which implemented guided pathways earlier than Washington, more colleges appear to have scaled this practice (74% and 69%, respectively).

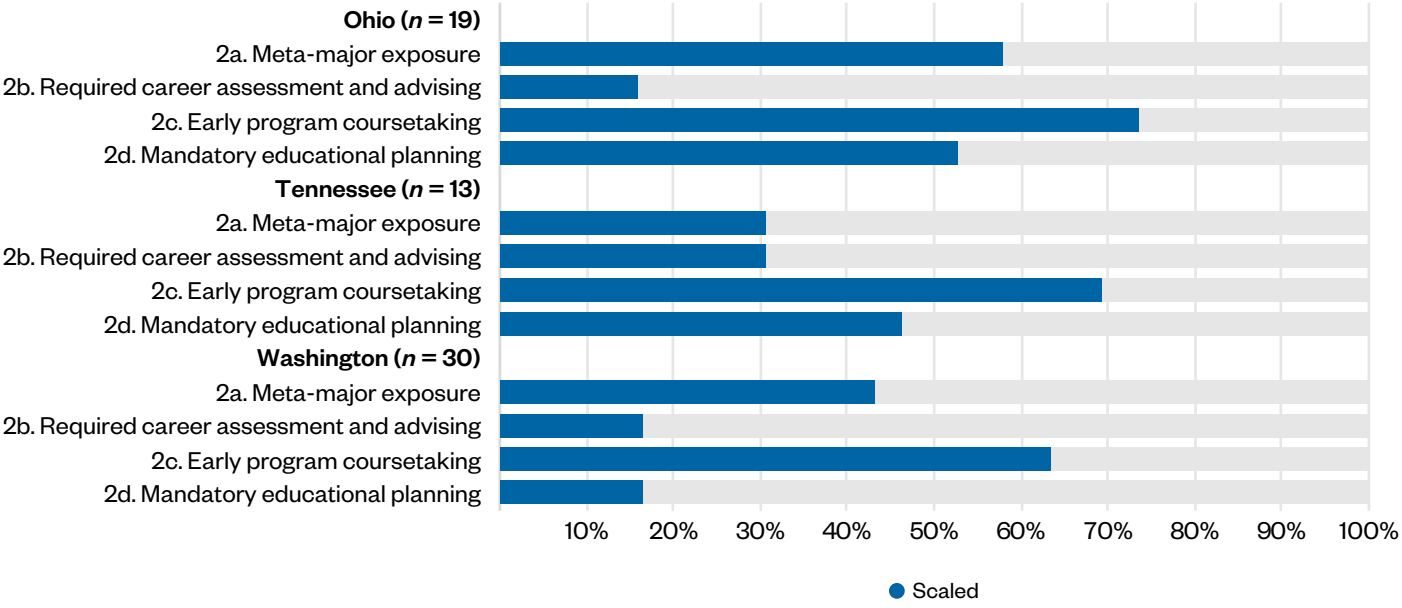
Considering that most of the colleges advise students to take a course in a field of interest in their first term, it is curious that fewer than a third of them mandate career assessments and advising meetings that include meta-major content (2b). Our measure for this practice requires both career assessment and early advising as necessary components, based on the idea that students should experience both to be guided to a field well aligned with their interests and goals. When results for this practice are disaggregated by these components (see Appendix Figure A3), we find that most colleges in all three states have scaled entry advisement that incorporates exposure to program-specific coursetaking; very few have scaled career assessments.

Once students have identified a field of interest, it is important to help them develop a plan for completing their program and to enable students to see their plan online so they and college staff can monitor their progress toward completion (2d). Washington colleges appear to lag behind those in the other states in terms of mandatory educational planning: Fewer than 20% of Washington colleges have

scaled this practice. This may be attributed to delays that Washington colleges have experienced in implementing a system-wide information system.

It is surprising to see that entering students' exposure to faculty, students, and others in their area of interest as part of new student orientation or field-specific showcase events (2a) is only scaled at about half of the colleges in all states (combined), especially as this exposure is a pivotal element of guided pathways implementation. However, once results for this practice are disaggregated by its components (see Appendix Figure A2), we see that most colleges are offering or requiring participation in activities such as orientations or first-year experience courses where this exposure could be present. Few colleges are offering these onboarding activities contextualized with meta-major-related content.

Figure 3. Percentage of Colleges Adopting Area 2 Practices at Scale



Practice Area 3: Keeping students on a path to completion

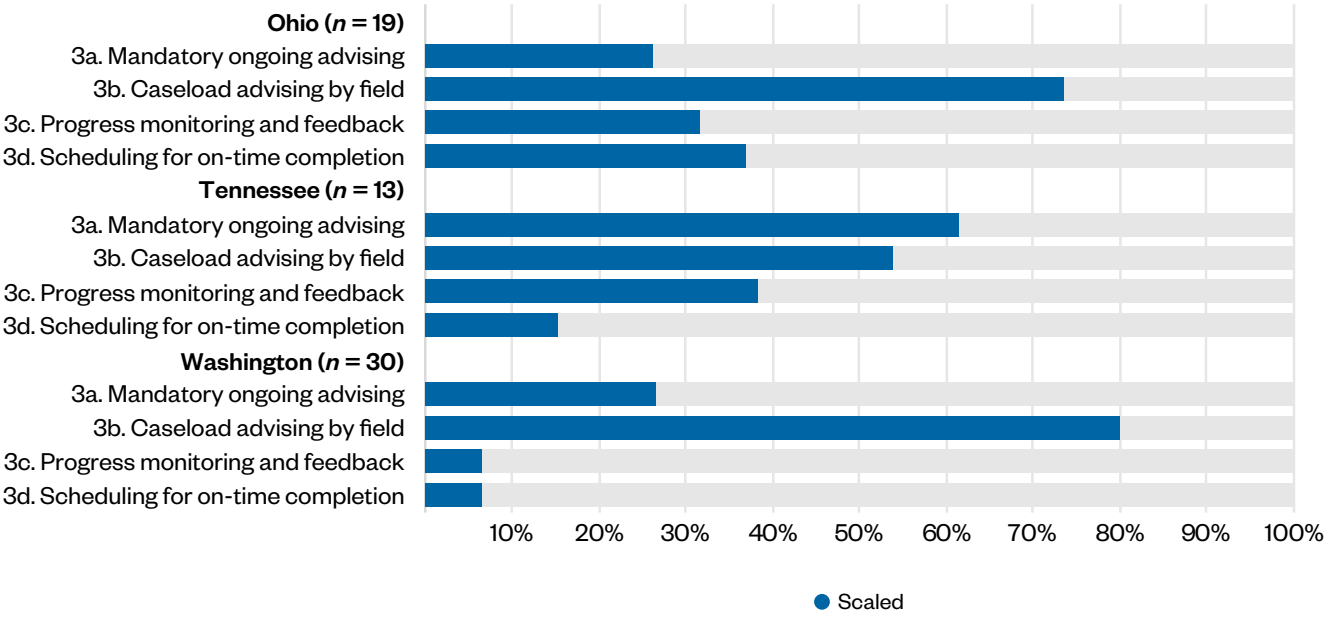
A lot of attention has been focused on the first two practice areas of guided pathways by those implementing reforms on the ground. Most colleges begin designing and organizing programs as part of meta-major pathways and then build structures intended to help entering students identify and choose a path. Ensuring that students stay on their path, remain focused, and persist toward their goals is an important continuation of this work, yet it is one that colleges have been slower to scale, including across the three states in this study.

One way to operationalize ongoing monitoring and support is through advising. Specifically, caseload advising, which assigns one advisor to a cohort of students, can be a helpful mechanism of support for students as they progress through college (3b). Colleges in Washington and Ohio are more likely to have scaled caseload advising by field than those in Tennessee: Approximately 75% of colleges in Ohio and Washington

have scaled the practice of assigning advisors to students based on their area of interest or meta-major. However, colleges in Tennessee were more likely to have scaled requiring ongoing advising for students (3a). This is an important observation when considering the role of advising within the broader reform model, and it raises the question of whether it is more beneficial for students to meet with advisors who have contextualized knowledge about their academic or professional interests or to be assigned to a single advisor who will continue to work with them even if they lack deep knowledge about their field of study. This is a topic for future study.

Additional mechanisms for helping students stay on a path to completion often rely on technology and institutions' fluency and capacity for data collection and analysis. For example, about a third of colleges in Ohio and Tennessee have scaled electronic registration alerts or checkpoint advising systems to monitor students' progress (3c). Nearly 40% of colleges in Ohio are also using data about students' meta-majors and program plans to develop course schedules aligned with completion goals (3d). Fewer than 10% of colleges in Washington have scaled these practices. Notably, Washington also has the fewest colleges that have scaled educational planning (2d, see Figure 3), which is consistent with the Washington colleges' lack of scale in progress monitoring of students' plans or their ability to base scheduling on students' plans.

Figure 4. Percentage of Colleges Adopting Area 3 Practices at Scale

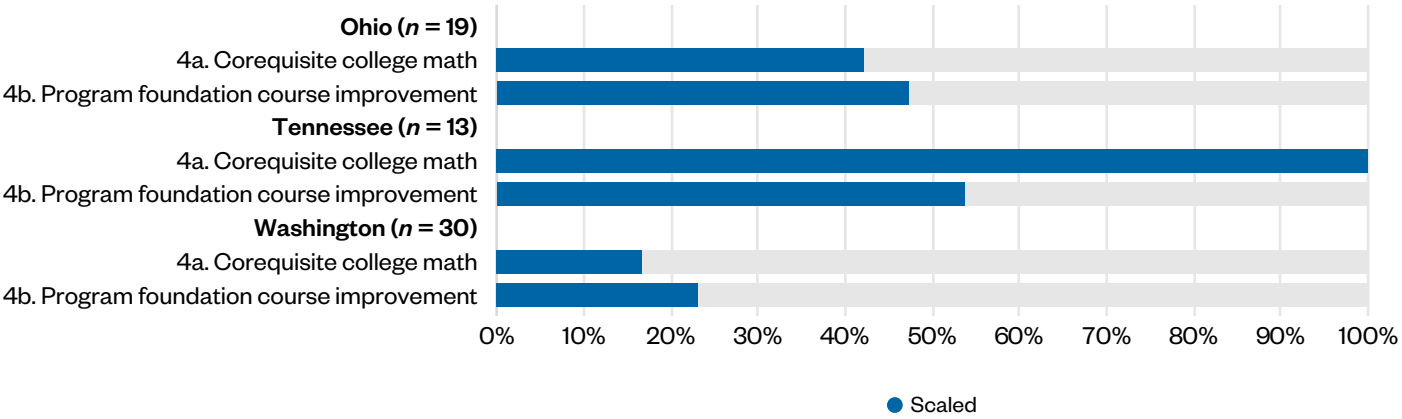


Practice Area 4: Ensuring that students are learning across programs

In addition to onboarding and advising practices that help students choose and navigate programs, experiences within the classroom can impact their ability to persist and complete. Offering corequisite content support in core subjects such as math and reading is one learning reform that has been widely adopted by colleges across the U.S. The colleges in our study have also made strides in this area. All of the Tennessee colleges have scaled corequisite courses for college math (4a), providing intensive academic support tailored to the course content to students in need while they are enrolled. Nearly half of the colleges in Ohio have scaled this practice, and about 15% of colleges in Washington have done so. The wide variation is largely due to the fact that the Tennessee Board of Regents pushed for statewide adoption of corequisite reforms in 2015, while colleges in Ohio began this work around 2018. In Washington, there has not been a similar statewide push for corequisite instruction. While several methods of designing corequisite support exist, when considering the goals of guided pathways reforms, we prioritize the use of content-aligned methods in our model. For example, students enrolled in college algebra may require different interventions than students enrolled in statistics. Among all colleges that have adopted some amount of corequisite math in Washington and Ohio—regardless of the level of scale—relevant and content-aligned support is available to students (see Appendix Figure A5).

Additionally, we asked colleges in our survey whether academic departments and divisions have undertaken efforts to improve pedagogy across program areas in foundational courses beyond math and English composition (4b). About half of the colleges in Ohio and Tennessee have scaled improvements in instruction, pedagogy, and content in foundation courses. While only 23% of colleges in Washington have scaled such pedagogical innovations, several made note of a statewide effort to incorporate equity-focused improvements into pedagogy and instruction, which is in the early stages of implementation.

Figure 5. Percentage of Colleges Adopting Area 4 Practices at Scale



4.2 Scale of Adoption of the Full Guided Pathways Model

In this section, we examine which guided pathways practices each of the colleges in each of the three states has adopted at scale across the four practice areas of the model. The purpose is to understand not only which colleges have adopted more practices at scale but also which combinations of practices they have adopted and in which areas. The latter is important because the theory of change presented in Section 2 predicts that the individual practices of the model will have the greatest effect on student outcomes when they are adopted at scale in combination with one another.

In all three states, regardless of total level of model adoption, the colleges are most likely to have scaled the practices of mapping pathways in CTE (1b) and transfer programs (1c) and identifying key math pathways within those maps (1d). Most colleges in all three states also encourage early program coursetaking (2c). Yet patterns of adoption unique to colleges in each state are also apparent. In Ohio, for example, at least half of the colleges have scaled processes for monitoring students' progress (3c) and have implemented course improvement strategies in foundational program courses (4b). All colleges in Tennessee have scaled corequisite math (4a), and most have also scaled ongoing advising processes (3a). While all of these practices are less likely to have been scaled in Washington, colleges there have made progress in early advising (2b) by implementing a caseload-by-field model (3b) and encouraging early foundational coursetaking (2c).

In general, low-adopting colleges in all three states are less likely to have scaled advising (2b and 3a), planning (2d), and monitoring practices (3c). Students may be able to identify and choose a path early in their experience, but ongoing support and structures to promote progress and completion appear to be more limited. Tables 2–4 show colleges scaling the fewest practices on the left and those scaling the most practices on the right. Practices are ordered sequentially in rows from Practice Area 1 to Practice Area 4. In all three states, a visual pattern emerges with color (signifying a scaled practice) converging toward the upper right quadrant of each figure. This suggests that most colleges, including both low- and high-model adopters, have focused on scaling Practice Areas 1 and 2, while a few of the highest adopters have also made strides in scaling practices across all four areas. In the next section, we will show that the pattern of adoption over time is consistent with progressive implementation from Practice Area 1 to Practice Area 4; colleges rarely begin scaling practices across the entire model at one time.

Table 2. Adoption of Guided Pathways Practices at Scale: Ohio Colleges

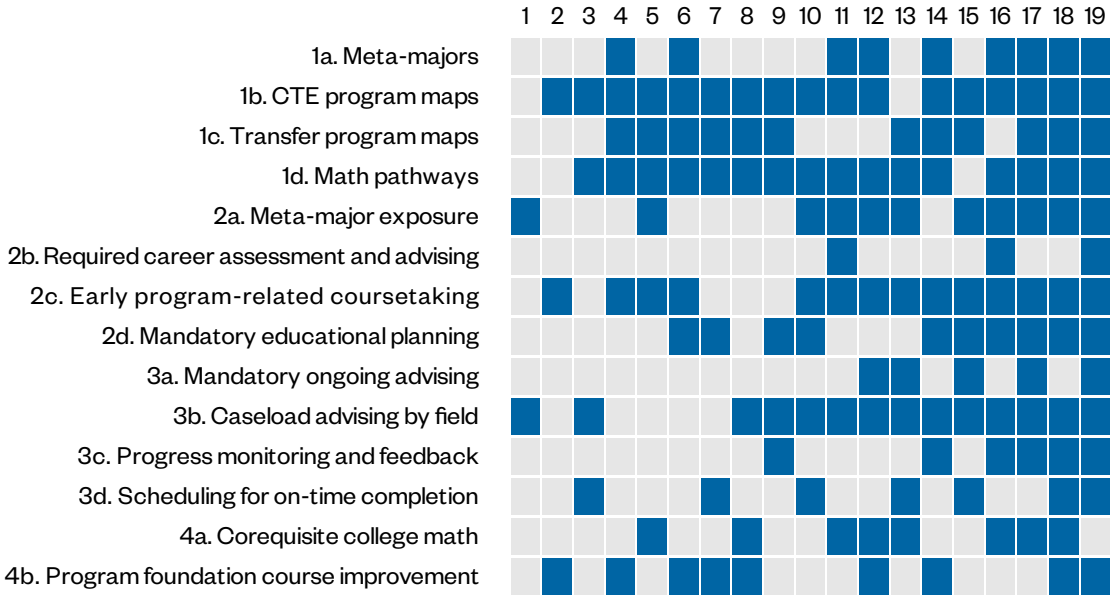


Table 3. Adoption of Guided Pathways Practices at Scale: Tennessee Colleges

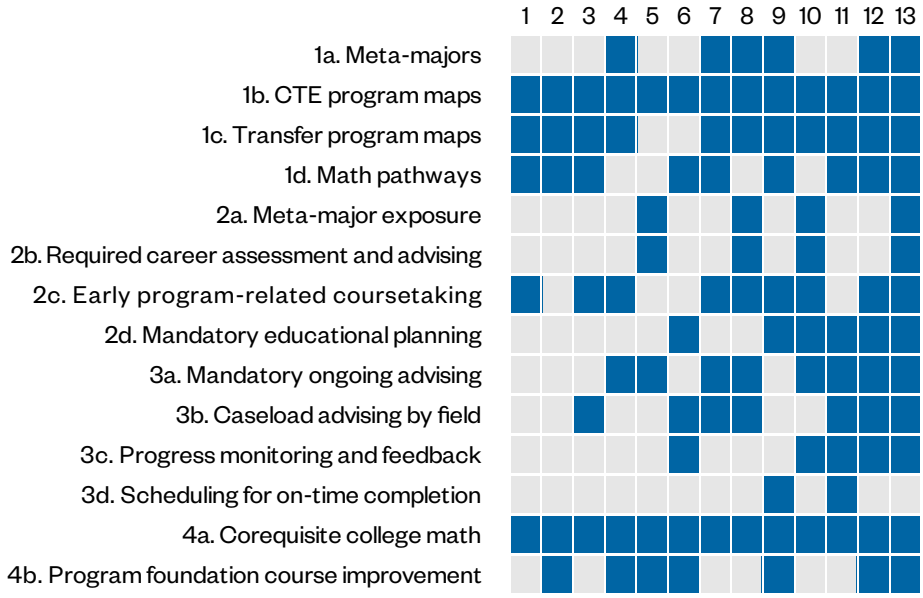
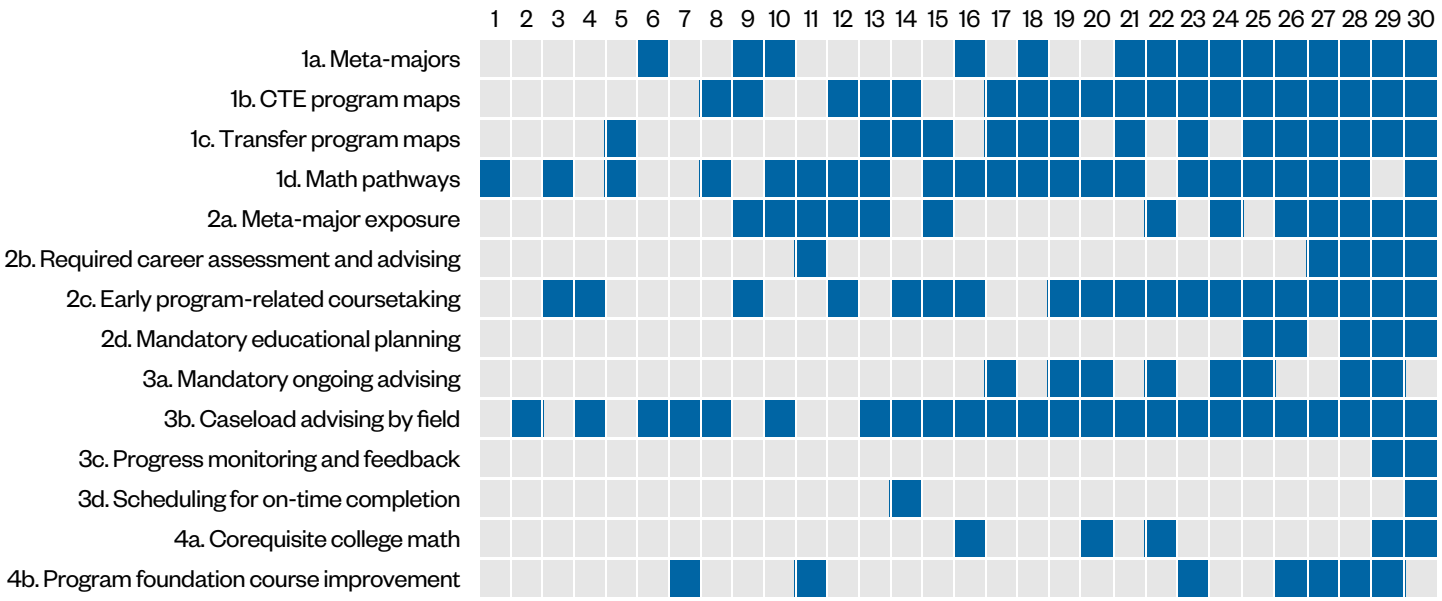


Table 4. Adoption of Guided Pathways Practices at Scale: Washington Colleges



4.3 Sequence of Guided Pathways Practice Adoption Over Time

Practice Area 1: Mapping paths to student end goals

In both Ohio and Washington, we heard from colleges that many modeled some of their program-mapping strategies on existing structures and processes aimed at supporting CTE students. Because CTE programs are often highly contextualized to workforce requirements and certifications and tend to attract students with specific career objectives, these programs have commonly and historically relied on clustered content and the mapping of academic terms to enable students' timely completion. It is not surprising that practices involving CTE program maps (1b) were some of the first to be scaled as colleges began adopting guided pathways. The scaled mapping of transfer programs (1c) across colleges followed this early progress in Ohio and also in Tennessee, but appears slower in Washington (see Figures 6, 7, and 8)—consistent with a later timeline of guided pathways implementation. However, in years when colleges scaled multiple practices within Practice Area 1, such as 2015 in Tennessee, 2017 in Ohio, and 2019 in Washington, mapping transfer programs was scaled at high rates in all three states.

Beginning in 2011, incorporating math pathways (1d) into CTE and transfer program maps appears to have scaled consistently over time in Ohio, but in Tennessee, it did not take off until corequisite reform was implemented there in 2015. In Washington, the implementation of math pathways at scale (1d) appears to mirror the implementation of meta-majors (1a), beginning mostly in 2018.

Figure 6. Adoption of Area 1 Practices at Scale Over Time: Ohio Colleges

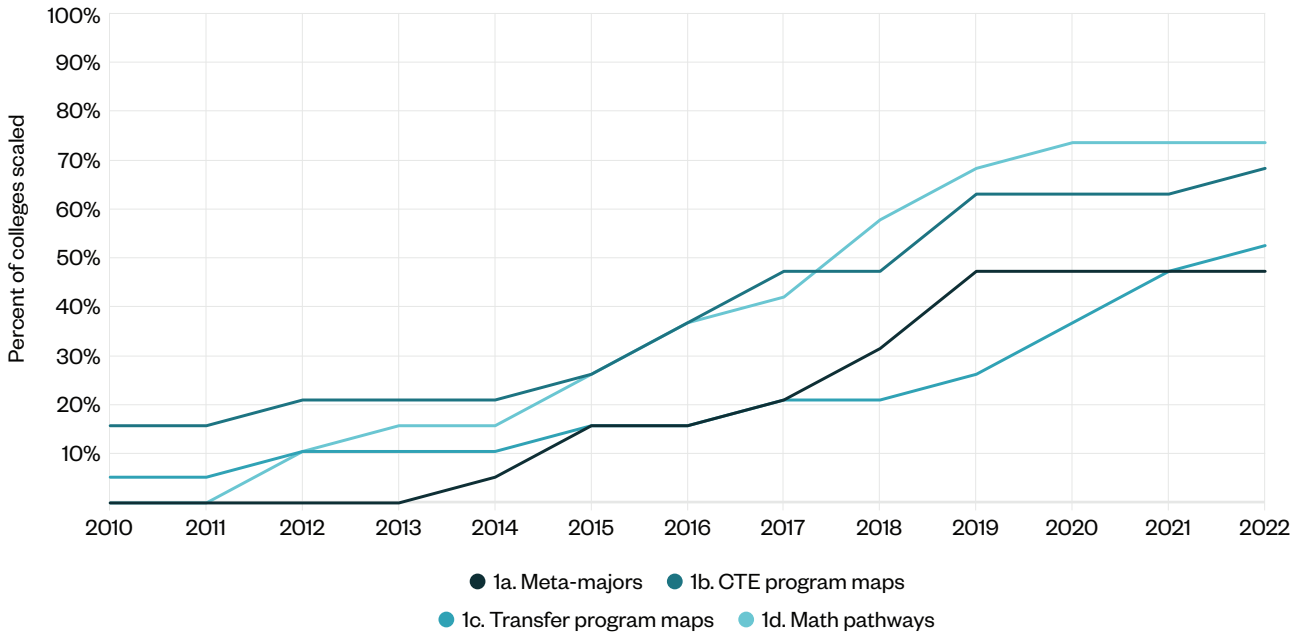


Figure 7. Adoption of Area 1 Practices at Scale Over Time: Tennessee Colleges

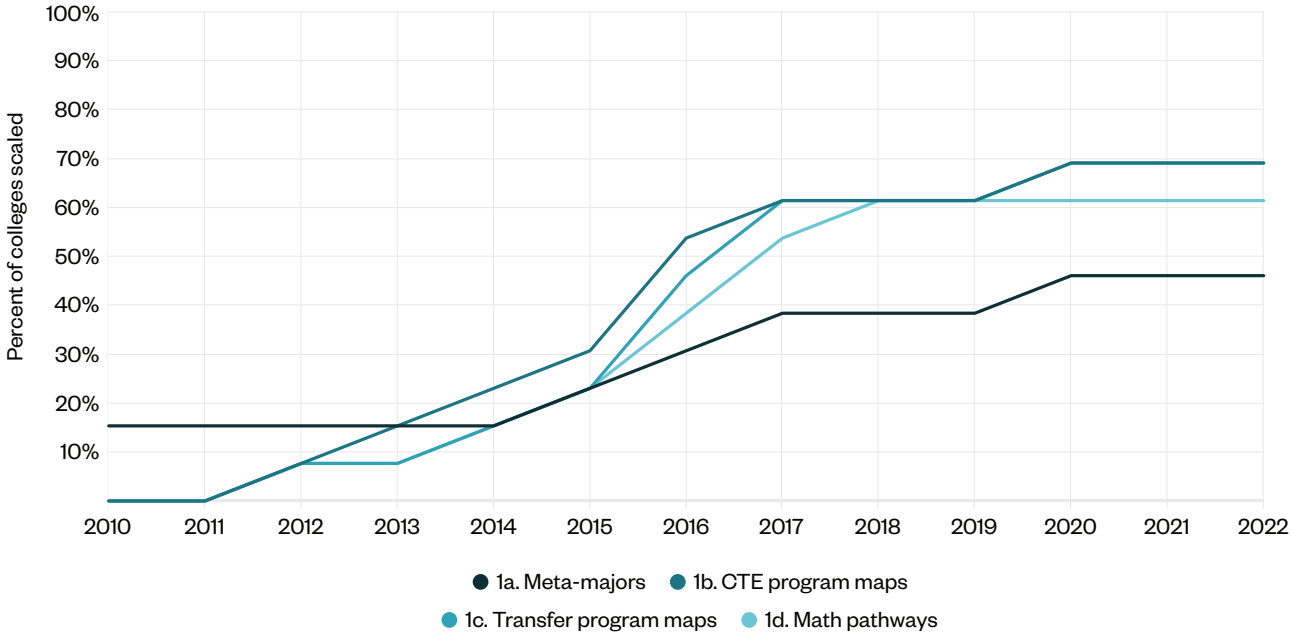
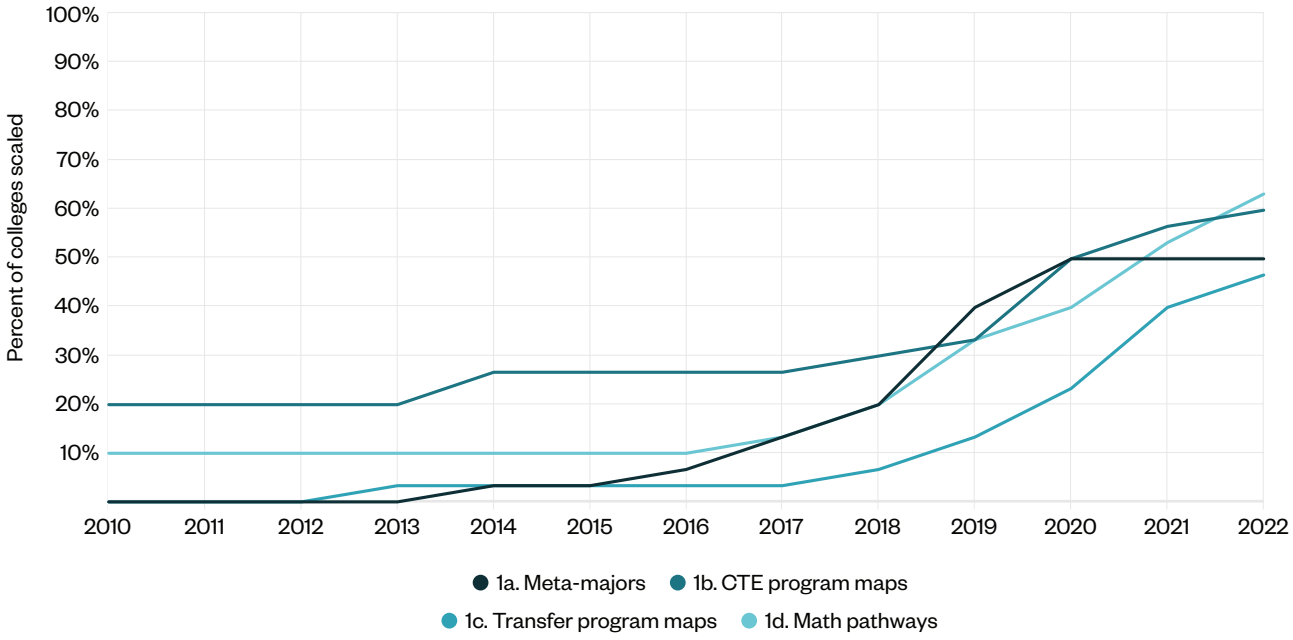


Figure 8. Adoption of Area 1 Practices at Scale Over Time: Washington Colleges



Practice Area 2: Helping students get on a program path

In all three states, adoption of advising and onboarding practices such as early program-related coursetaking (2c) and mandatory educational planning (2d) follows parallel trends over time. It appears that these two practices tend to be adopted in tandem, with more colleges scaling early program coursetaking before scaling mandatory education plans. This is not surprising, as the mechanism for encouraging students to take content-related courses early on is likely advising, during which educational plans may also be developed.

In Tennessee, there appears to be strong growth of scaling practices under Practice Area 2 until 2017 and 2018, when progress flattens out. This pattern repeats itself for early program coursetaking (2c) and mandatory educational planning (2d) around 2021 in Ohio. In Washington, scaling of mandatory education plans is low overall and appears to flatten in 2020, while more colleges in the state continued to make progress scaling advising practices (2b).

As with Practices 2c and 2d, adoption of practices that expose students to meta-major content and career assessment and advising (2a and 2b) also appears to move in parallel in all three states. In Tennessee and Washington, the same colleges are likely to have scaled both sets of practices, presenting as horizontal lines over time if other colleges don't make subsequent progress. However, in Ohio, this appears to be an area of growth for colleges, with more scaling in both practices over time.

Figure 9. Adoption of Area 2 Practices at Scale Over Time: Ohio Colleges

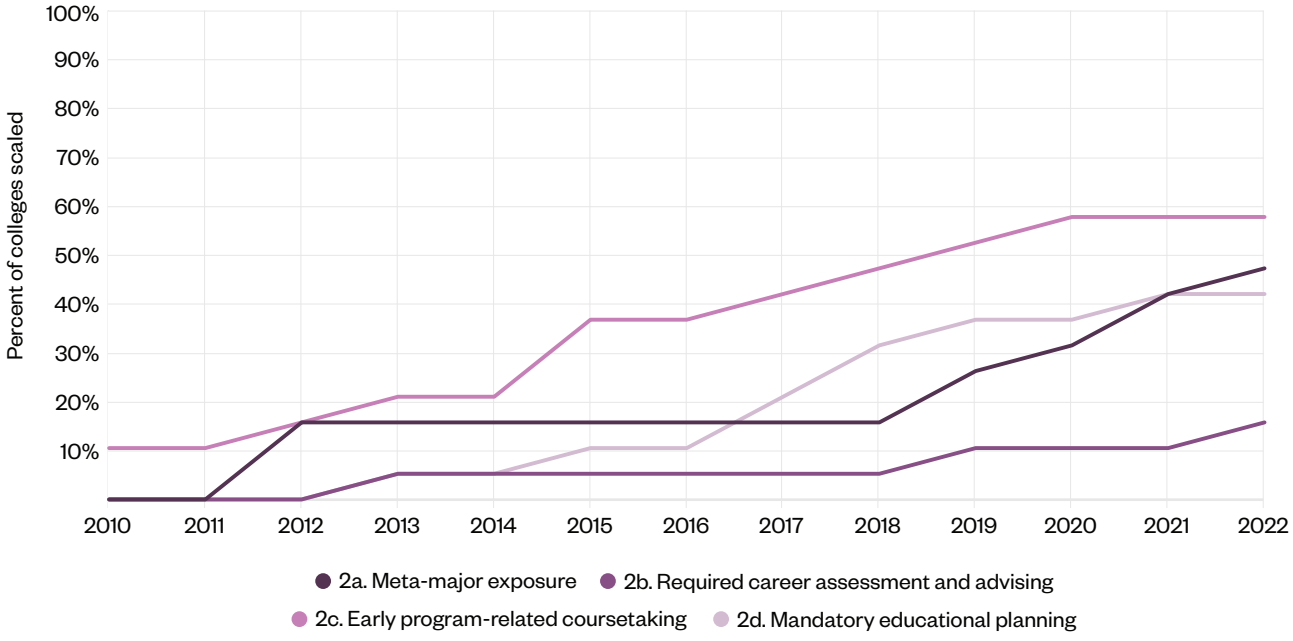


Figure 10. Adoption of Area 2 Practices at Scale Over Time: Tennessee Colleges

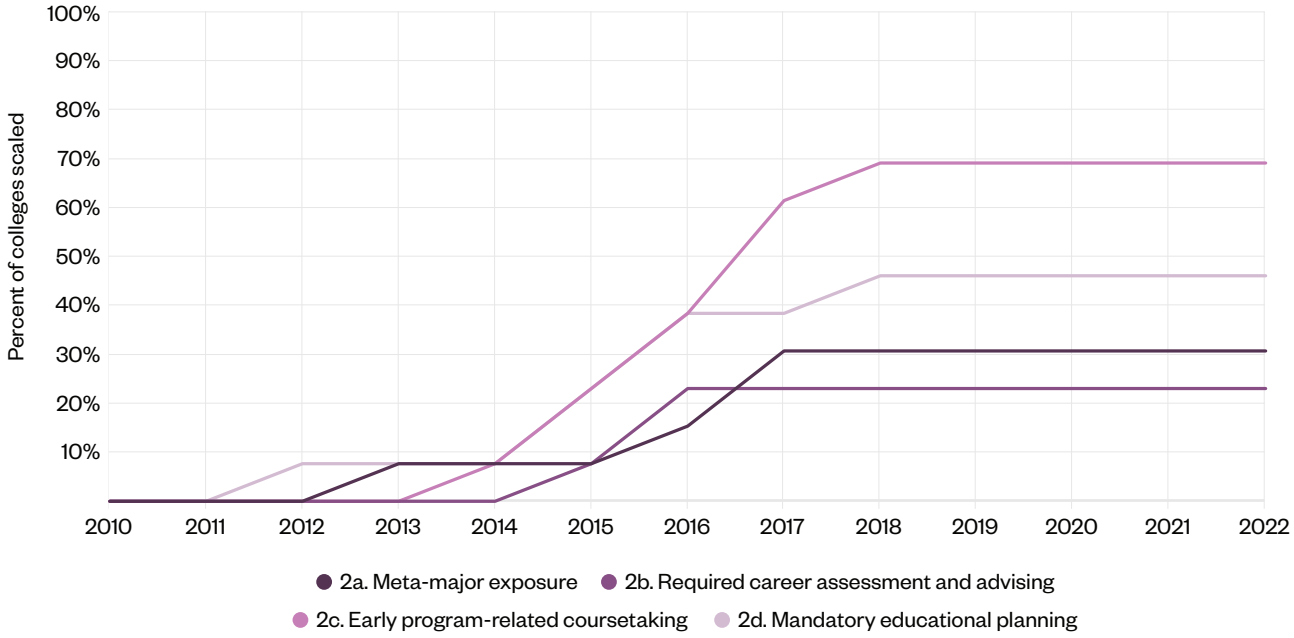
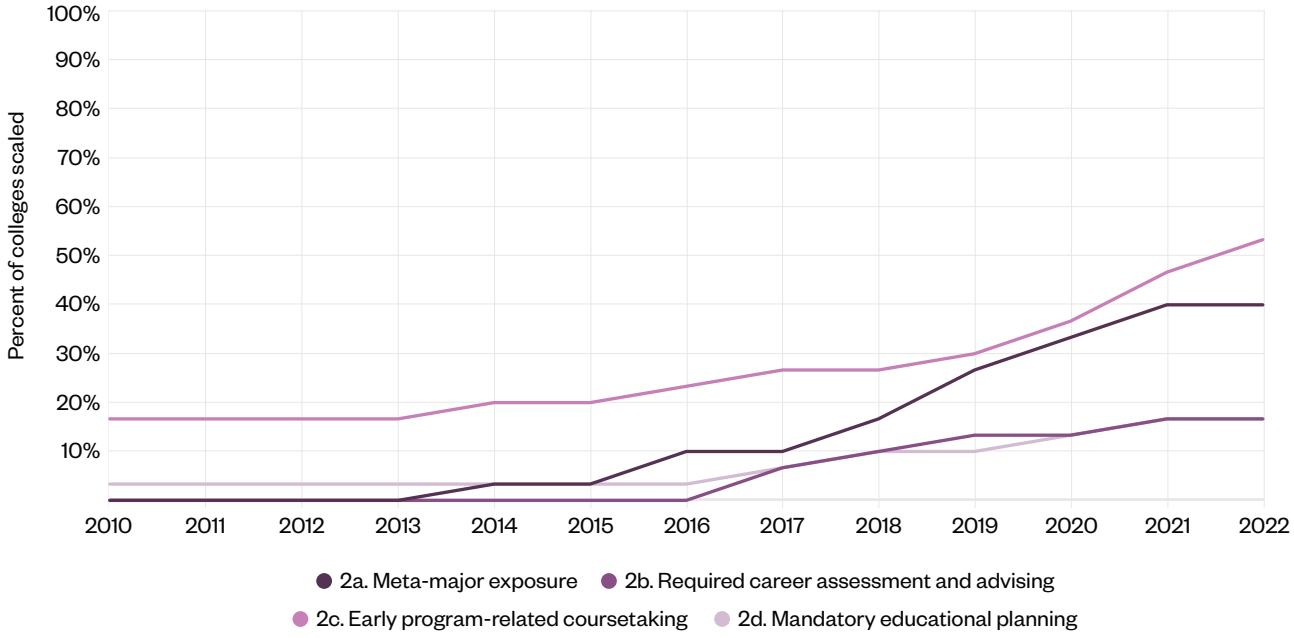


Figure 11. Adoption of Area 2 Practices at Scale Over Time: Washington Colleges



Practice Area 3: Keeping students on a path to completion

Since 2015, colleges in Ohio and Washington have continually made progress in scaling caseload advising by field (3b); about half of colleges in both states had scaled this practice as of fall 2022. In Tennessee, progress for this practice has remained flat since 2017.

Among all practices within Practice Area 3, progress in scaling appears to have slowed in Ohio and in Tennessee, where only about 48% and 38% of colleges, respectively, have scaled at least one practice as of fall 2022. In Washington, about half as many colleges have scaled mandatory ongoing advising (3a) and progress monitoring and feedback (3c), and a flat trend line persists over the last five years.

Figure 12. Adoption of Area 3 Practices at Scale Over Time: Ohio Colleges

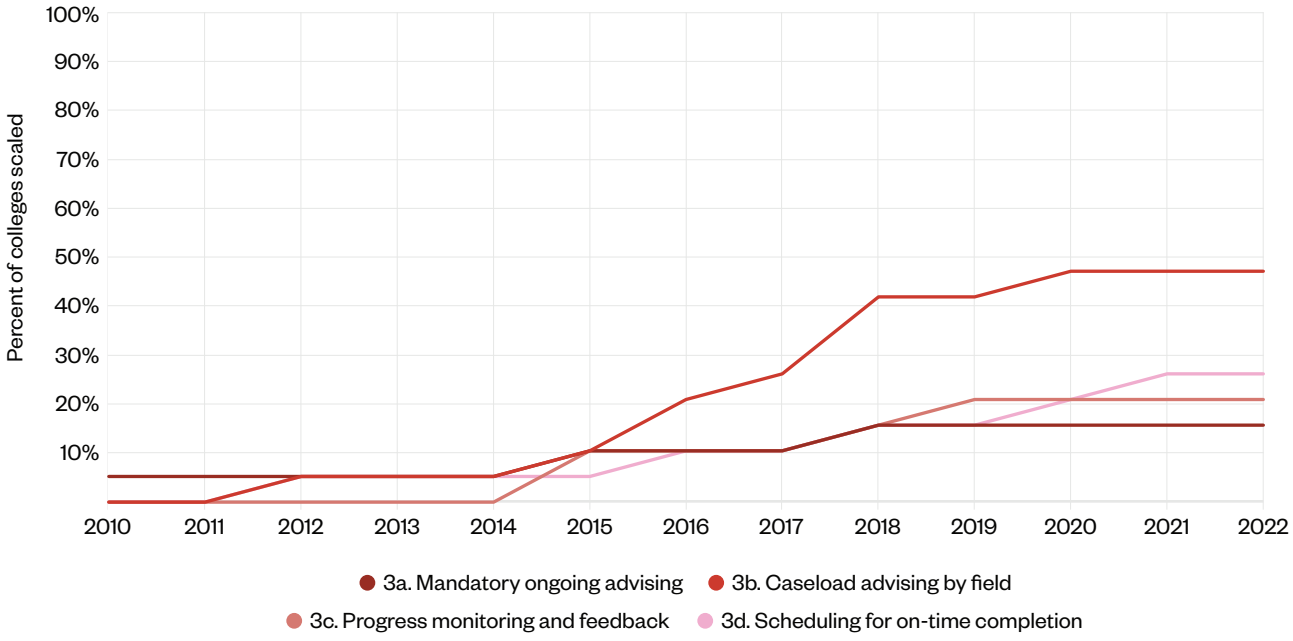


Figure 13. Adoption of Area 3 Practices at Scale Over Time: Tennessee Colleges

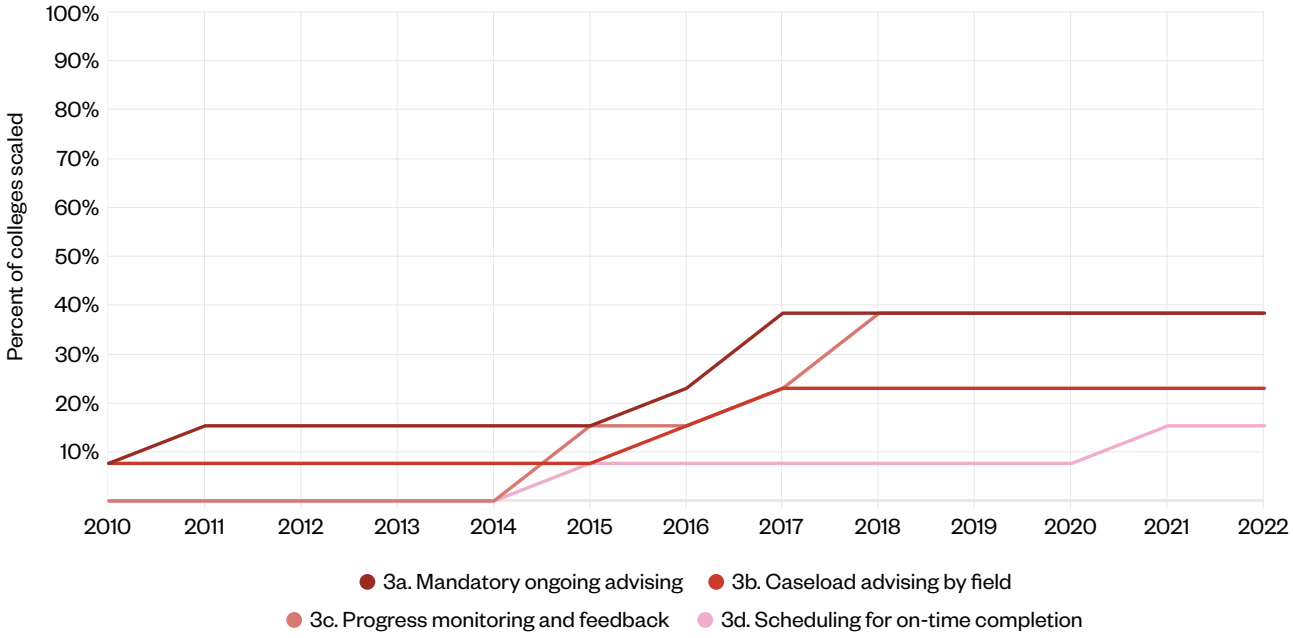
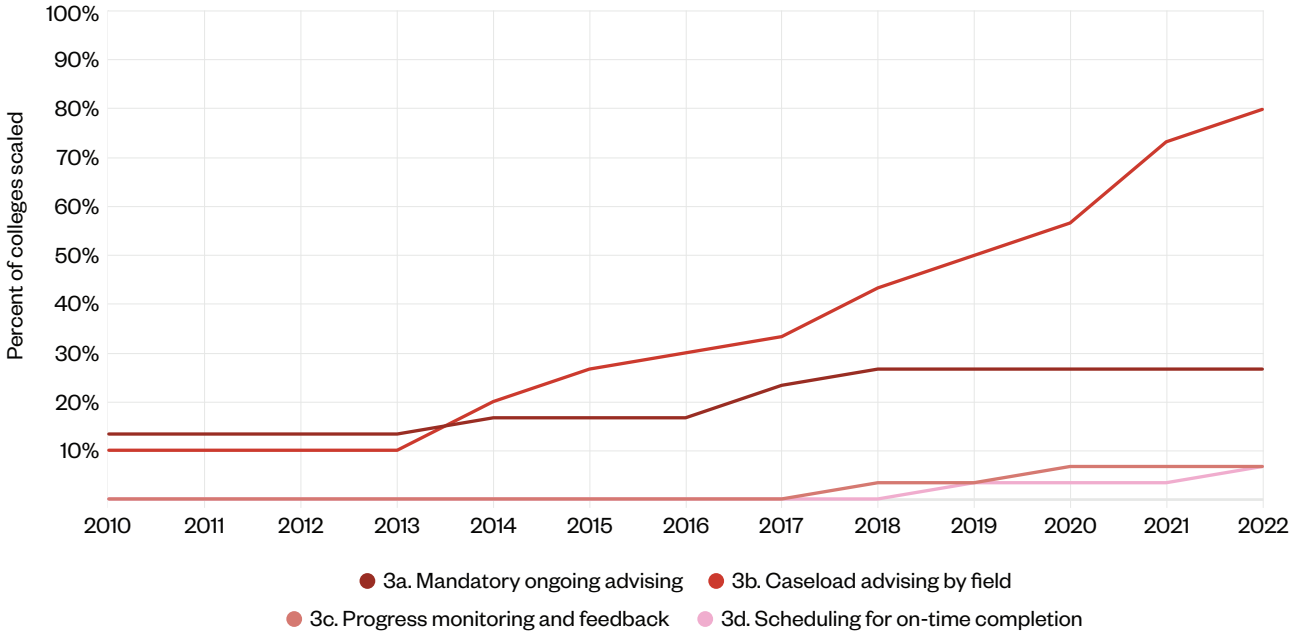


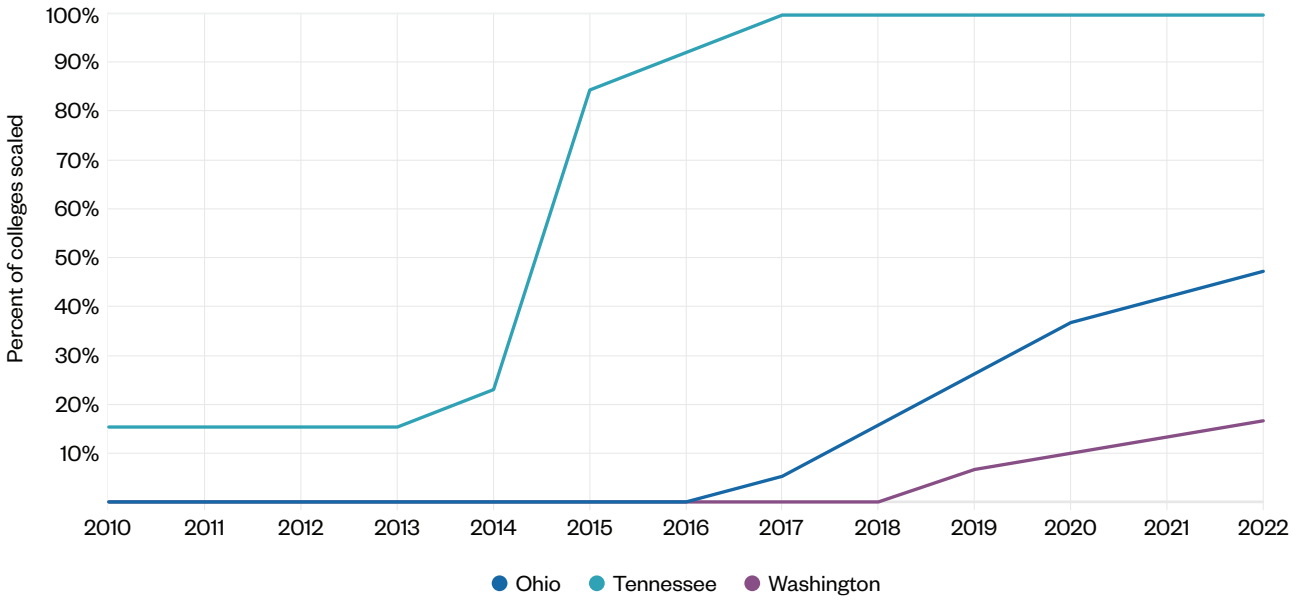
Figure 14. Adoption of Area 3 Practices at Scale Over Time: Washington Colleges



Practice Area 4: Ensuring that students are learning across programs

Our model includes both corequisite math reforms and systematic instructional improvements as practices in Practice Area 4, but we did not collect data on the timing of Practice 4b, program foundation course improvement. We therefore present data only for Practice 4a, corequisite college math reform, by state in Figure 15 (and in later figures). The timing of state efforts to roll out this reform is immediately obvious; in Tennessee, a state mandate to adopt corequisite reform in 2015 led to all community colleges adopting this practice at scale by 2017. Similarly, efforts in Ohio to support colleges transitioning to corequisite models impacted colleges' ability to scale in this area, and by 2017, we begin to see year-over-year growth. A parallel trend beginning in 2018 is evident for Washington.

Figure 15. Adoption of Corequisite Math at Scale Over Time: Colleges in Each State



5. Discussion

In this section, we discuss our findings in the context of institutional and statewide adoption of guided pathways as the movement has progressed through time and policy landscapes. Among the key insights our analysis identifies are consistent patterns of colleges adopting certain practices over time, nearly all colleges making at least partial progress toward full-model implementation, and observable spikes in adoption across states consistent with the timing of influential policy interventions.

5.1 Patterns of Adoption Over Time

The adoption of guided pathways practices at scale within the three states in our study has played out differently for each one over time. Considering how this work took shape across colleges has implications for the broader guided pathways movement. For example, in Ohio, early adopting colleges tended to scale many practices in Practice Areas 1 and 2 simultaneously. Guided pathways practices tended to be intensely adopted at a few colleges rather than sparsely adopted across most colleges in the state. This persisted until about 2017, when several colleges that had not scaled any guided pathways practices implemented corequisite math reforms at scale. After 2017, those colleges that had scaled only one or two practices began to make progress in other areas. However, there are still substantial differences among colleges in Ohio in the level of adoption at scale: The highest adopting college had scaled 12 out of 14 practices by spring 2022, whereas the lowest adopting colleges had scaled none.

This pattern contrasts with that of Tennessee, where most colleges tended to scale only one or two practices at a time, often in Practice Areas 1 and 2. In 2015 and 2016, statewide efforts to implement corequisite math led to every community college having scaled a guided pathways practice in at least one area. This represents a pattern of adoption that developed gradually over time. Until 2018, it was not as easy to parse out high versus low guided pathways adopters in Tennessee, as it was in Ohio and Washington, since most colleges had scaled in several areas. By 2019, a few colleges began deepening their implementation of guided pathways by scaling practices mainly in Practice Areas 3 and 4. In Washington, where guided pathways as a reform model is relatively new compared to the two other states in our study, there appears to be a mix of both more piecemeal and more holistic adoption of complementary practices over time, with nearly all colleges adopting at least one or two practices at scale but high-adopting colleges increasing their rate of scaled implementation faster than low-adopting colleges.

The nuances of such implementation and adoption patterns are important to consider when we think about whole-college reforms like guided pathways at the state level because they demonstrate how institutions may adopt policies through diffusion mechanisms. This can inform how other interventions may be designed in the future. For example, larger colleges may be more likely to take on the potential economic and structural uncertainties that come with implementing new reforms before smaller colleges. At the same time, smaller colleges geographically close to larger colleges may be more likely to adopt similar policies over time once they observe and learn

about outcomes (Shipan & Volden, 2008). We loosely observe this pattern in all three states: Some of the highest adopting colleges are also some of the largest and earliest to adopt practices at scale, with smaller colleges nearby also adopting guided pathways reforms at relatively high levels over time. Notably, in Tennessee, where practices were mostly adopted sequentially over time, we see less proximal pairing between large and nearby small institutions; high-adopting colleges were more geographically spread out compared to those in Ohio and Washington.

Our findings may prove useful for states, boards, and larger consortia preparing to roll out state-level postsecondary reforms. These groups should consider the characteristics of colleges in their initial implementation design, including which colleges have the level of commitment and resources necessary for early adoption and how other colleges, using early adopters as models, may learn about and choose to implement reforms over time.

5.2 Patterns of Adoption Within and Across Practice Areas

Colleges that adopted the most practices at scale by 2022 were also the most likely to be early adopters. Among these, there does appear to be a logical progression across all three states in how practices were implemented and scaled. As previously mentioned, Practice Area 1, which focuses on organizing programs and introducing students to areas of study, was most likely to be scaled across all colleges and years, but this is especially true for high adopters. Within Practice Area 1, colleges were most likely to have scaled CTE program maps (1b) and meta-majors (1a), followed by math pathways (1d) and transfer maps (1c). This aligns with the fact that many colleges had previously used CTE program maps before guided pathways implementation and then rolled that work into their continued reorganization efforts of introducing meta-majors and building transfer program maps.

In all three states, we notice a leveling off once about half of the colleges adopted meta-majors. In our extensive research on the implementation of guided pathways reforms, we have observed that many colleges struggle to establish meta-majors because the purpose is not clear to them and meta-majors run up against conventional academic organizational structures. In *Redesigning* (Bailey et al., 2015), meta-majors were intended as a way to better present information and program choice architecture. Consistent with that idea, in Tennessee, the Board of Regents developed meta-majors in terms of programs that have common/similar early foundation courses. Across all three states, colleges that have more fully implemented meta-majors have moved beyond using them merely as a framework for organizing programs on their websites and for identifying common foundation courses; they have used them as a framework for building career and academic communities (Jenkins et al., 2021). Developing meta-majors as career and academic communities is much more involved and requires more changes to systems and culture than merely using them to organize program information on the college website or to identify critical program foundation courses. That the more fully implemented version requires changes to systems and culture that are more likely to affect the student experience may explain why we see this leveling off of the rate of adoption across colleges. In each state, some colleges were more

strongly positioned to adopt guided pathways practices at a high level, while others have not yet reached a point where broader systematic cultural changes are feasible.

Among colleges that were high adopters, most scaled certain advising practices (Area 2) around the same time they scaled meta-majors (Area 1). Specifically, introducing meta-major content to students through onboarding activities and advising practices (2a and 2b) were more likely to be scaled if practices in Area 1 were fully scaled. On the other hand, there does not appear to be a similar pattern for encouraging students to take program-related courses early on (2c). One interpretation of this may be that to scale practices requiring colleges to design new meta-major-specific onboarding content and advising practices, meta-majors must first be widely scaled. Encouraging early program-specific coursetaking does not require the same meta-major structures to be in place, and we do not observe the same level of coupling between this practice and Practice Area 1. This may make intuitive sense; colleges can provide course suggestions for students at scale more easily than they can redesign onboarding and advising systems tailored to programs, so this practice can be adopted independently of structural changes that would come from implementing Practice Area 1.

There is a clear progression of scaled adoption from the first two practice areas to the second two. This is not surprising, as implementing ongoing advising models (3a), developing schedules based on students' program plans (3c), and investing in teaching and learning in core programmatic courses (4b) would all necessitate introducing students to meta-majors and supporting their early programmatic progress at scale first. One practice where this progressive pattern deviates slightly is corequisite math reforms (4a). We see that colleges tended to adopt this practice regardless of their implementation of other reform practices, likely due to state policy interventions.

5.3 Likely Connections Between Guided Pathways Adoption and State Policy Interventions

Several mechanisms have affected the scale, timing, and trajectory of guided pathways adoption for the states in our study. In addition to a general acknowledgment that deep reform is time- and resource-intensive, we have discussed how institutional characteristics like size and location may impact adoption at scale. The COVID-19 pandemic has also taken a toll on colleges' ability to adopt new reforms. The role of state policy interventions in guided pathways implementation has also been instrumental. In this section, Figures 16–18 aggregate the proportions of practices by colleges in each state that have been scaled within each practice area in an academic year. Vertical dotted lines show the start of important state policy interventions.

In Tennessee, efforts to reform developmental education paralleled the early adoption of guided pathways. Starting in 2013, the Tennessee Board of Regents led an effort to introduce guided pathways concepts to the Tennessee community colleges (Jenkins et al., 2018). Then, between 2015 and 2016, all community colleges in the state were required to implement corequisite math and field-specific math pathways, enabling all students to access college-level math courses in their first year (Ran & Lin, 2022). Not surprisingly, we see that incorporating math pathways into program maps as a model practice became widely scaled over the same period (see Figures 7 and 17).

In 2016, the Ohio Association of Community Colleges (OACC) and the Success Center for Ohio Community Colleges launched the Student Success Leadership Initiative (SSLI), which included statewide institutes for all 23 colleges, as well as workshops, webinars, and coaching to support the colleges to learn about, implement, and scale guided pathways reforms (Jenkins et al., 2017; Klempin & Lahr, 2021). Then, in 2018, the OACC partnered with the Ohio Department of Higher Education to launch a statewide effort to scale corequisite reforms in math and English through Strong Start to Finish. In addition to focusing on developmental education reform, Strong Start incorporated several guided pathways model practices, including broadly implementing meta-majors, reforming developmental education, aligning math and English courses with relevant programs, and implementing new early advising practices (Strong Start to Finish, 2020). Figure 16 demonstrates how the scaling of practice areas increased across colleges in Ohio at the time of these reforms.

In our study, Washington colleges were the latest adopters of guided pathways practices. Their adoption of practices mirrors the design of a broad state-level guided pathways initiative led by the State Board of Community and Technical Colleges (SBCTC). In 2016, SBCTC, with funding from College Spark, developed a grant program designed to pilot guided pathways reforms at ten colleges in two cohort stages. The first five colleges were selected in 2016, and the next five were selected in 2018. These colleges received implementation grants to support their work, which is ongoing. Following the rollout of the pilot, the Washington legislature approved funding to implement guided pathways at all technical and community colleges in the state in 2019 (Washington SBCTC, 2021). This may help explain why we see adoption at scale in a somewhat stepped pattern over time, with the Practice Area 1 slope rising gradually in the first grant period and rapidly rising after 2018 (see Figure 18).

Figure 16. Adoption of Practice Areas 1–4 at Scale Over Time: Ohio Colleges

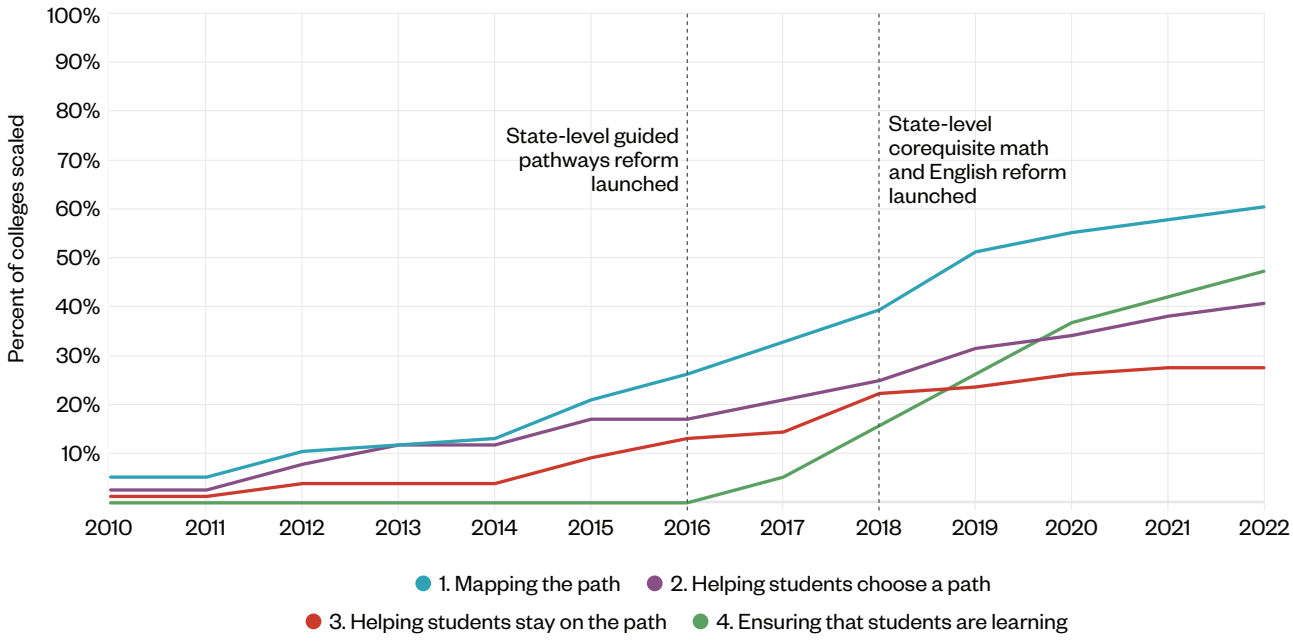


Figure 17. Adoption of Practice Areas 1–4 at Scale Over Time: Tennessee Colleges

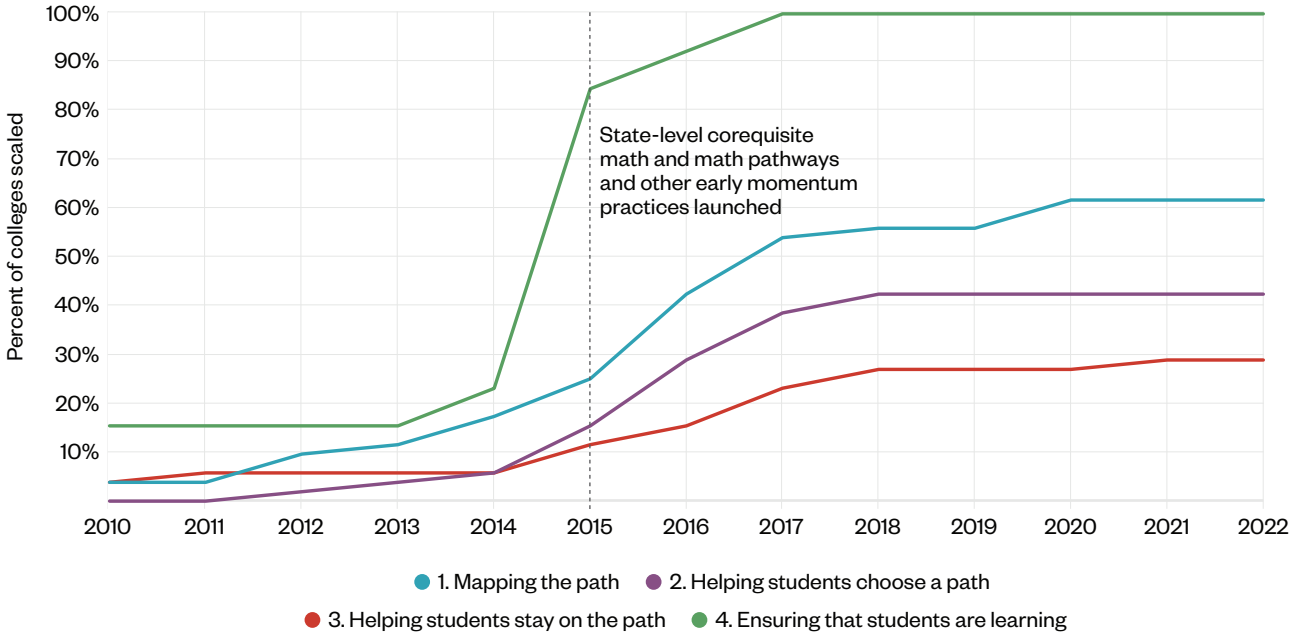
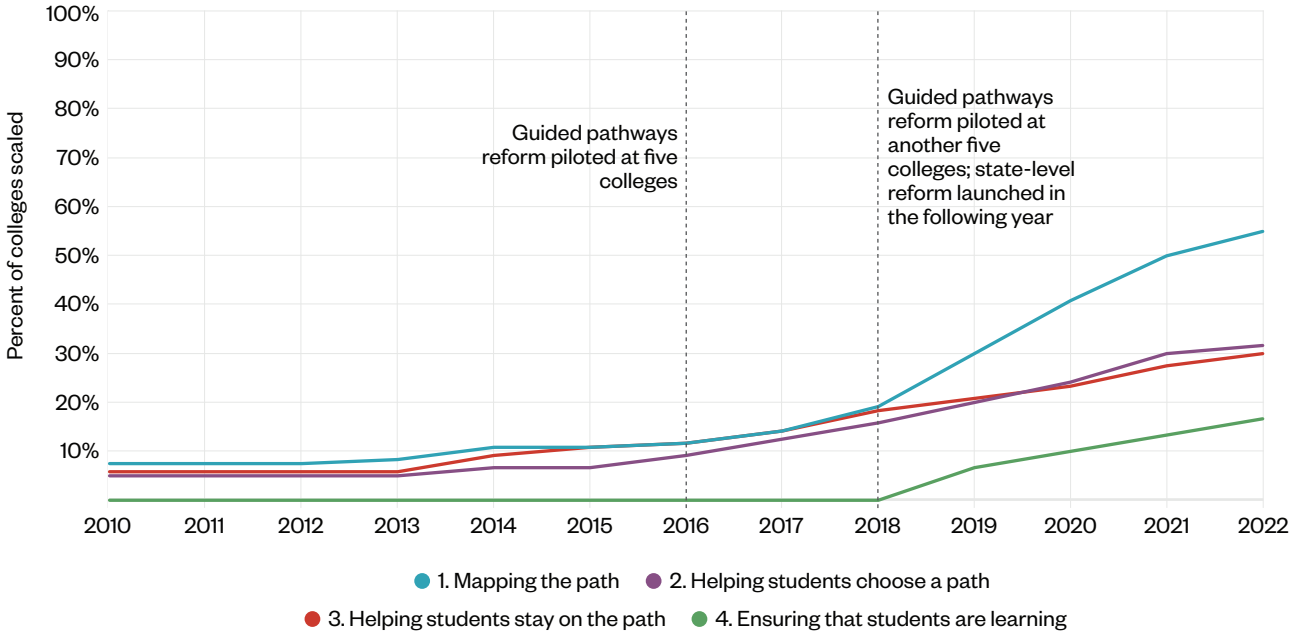


Figure 18. Adoption of Practice Areas 1–4 at Scale Over Time: Washington Colleges



5.4 Colleges' Ongoing Progress in Scaling Guided Pathways

This report focuses on the adoption of guided pathways practices *at scale*. Such a focus is consistent with our theory of change, which posits that reforms should be deeply ingrained within college cultures and should affect all or most students and programs to expect substantial changes in student outcomes. The model presented here represents sets of practices that are complementary to one another and are often implemented in combination with one another by colleges. Our analysis focuses on colleges that have implemented practices and sets of practices at scale. However, it is not the case that low-adopting colleges have made little progress toward scaling practices. Most colleges, even those that have adopted the fewest or no practices at scale, have made significant progress *toward* scaling guided pathways implementation. For example, the three lowest adopting colleges in our study have all implemented meta-majors and program-specific math pathways for at least 50% of their credit programs as of spring 2022 (see Appendix B for selected data on partially scaled practices). Colleges near the median of the distribution of total practices scaled have similarly implemented many practices at this 50% threshold. These colleges are most likely to have made progress implementing meta-majors (1a), early program coursetaking (2c), and program planning (2d).

We know from our research on managing the process of implementing guided pathways that the adoption of a full-reform model takes a long time (Jenkins et al., 2019). We also know that the COVID-19 pandemic seriously impaired many colleges' momentum toward scaling, and these impacts are expected to linger for some time. However, as figures in the text and in Appendix B demonstrate, progress toward adopting guided pathways practices at scale is happening at the vast majority of colleges in our study.

6. Conclusion

Guided pathways is arguably the most widespread whole-college community college reform movement in decades. This report presents important insights into patterns of adoption of guided pathways practices within and across colleges in three states with state-level efforts to support adoption among colleges system-wide. Only a minority of colleges in all three states had adopted a fuller set of guided pathways practices at scale across the four practice areas by 2022. We know from interviews with college leaders in these and other states that many colleges put guided pathways reforms on hold because of the pandemic. There is evidence, however, that most colleges in the three states are back in the process of scaling guided pathways reforms. This report provides an interim look at a reform movement that will continue to play out in these and other states for several years to come.

Endnotes

1. The one study we could find (Ad Astra, 2018) was published by a firm that sells scheduling software.

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Appendix A. Survey Results for Practices With Multiple Components

Figure A1. Percentage of Colleges Adopting Components of Practice 1a at Scale

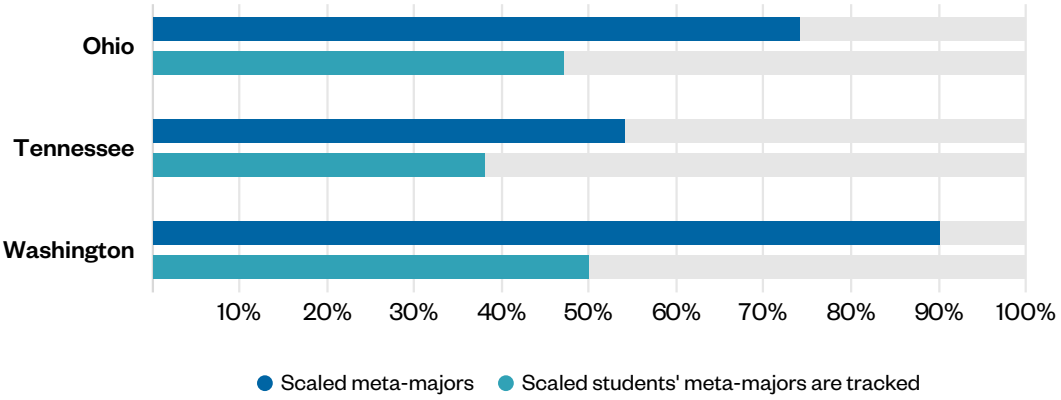


Figure A2. Percentage of Colleges Adopting Components of Practice 2a at Scale

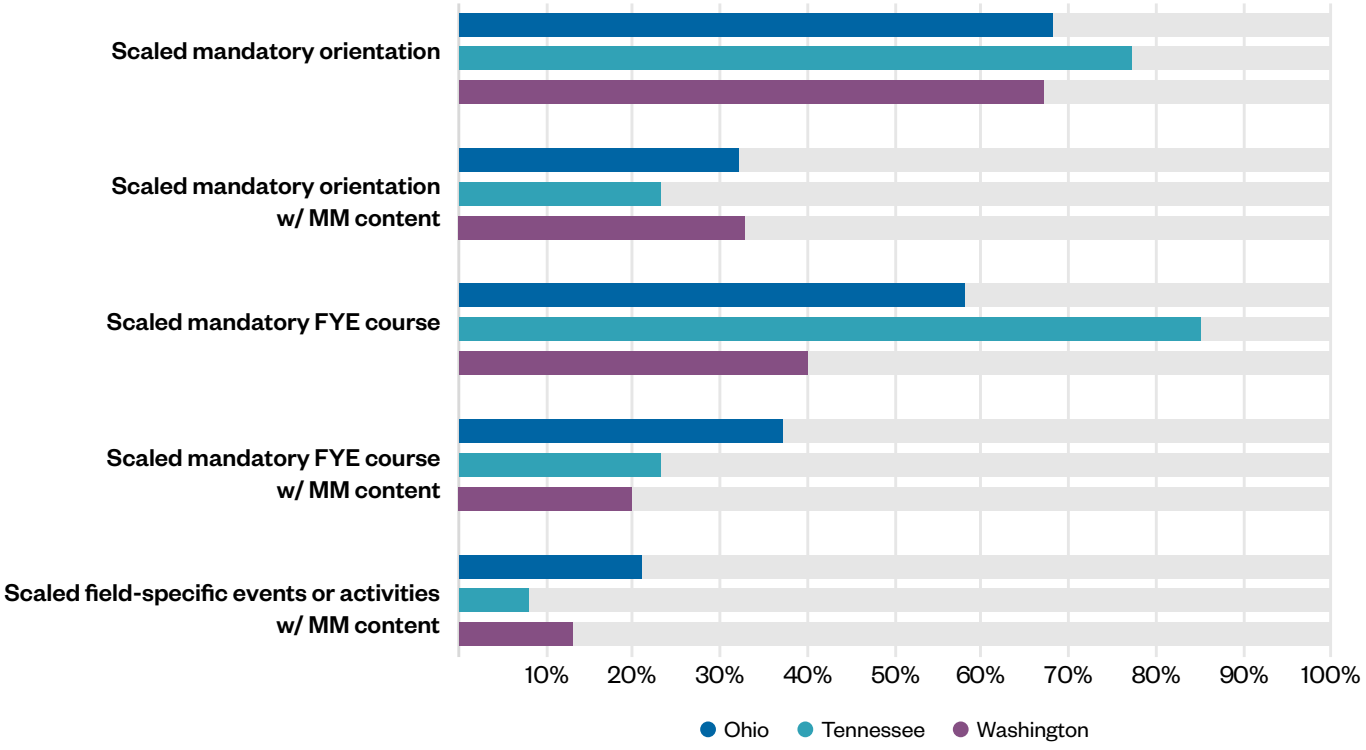


Figure A3. Percentage of Colleges Adopting Components of Practice 2b at Scale

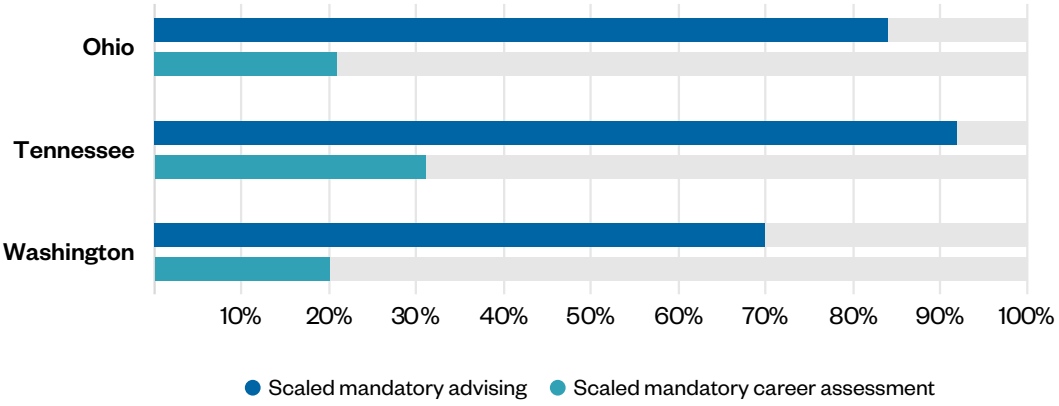


Figure A4. Percentage of Colleges Adopting Components of Practice 3c at Scale

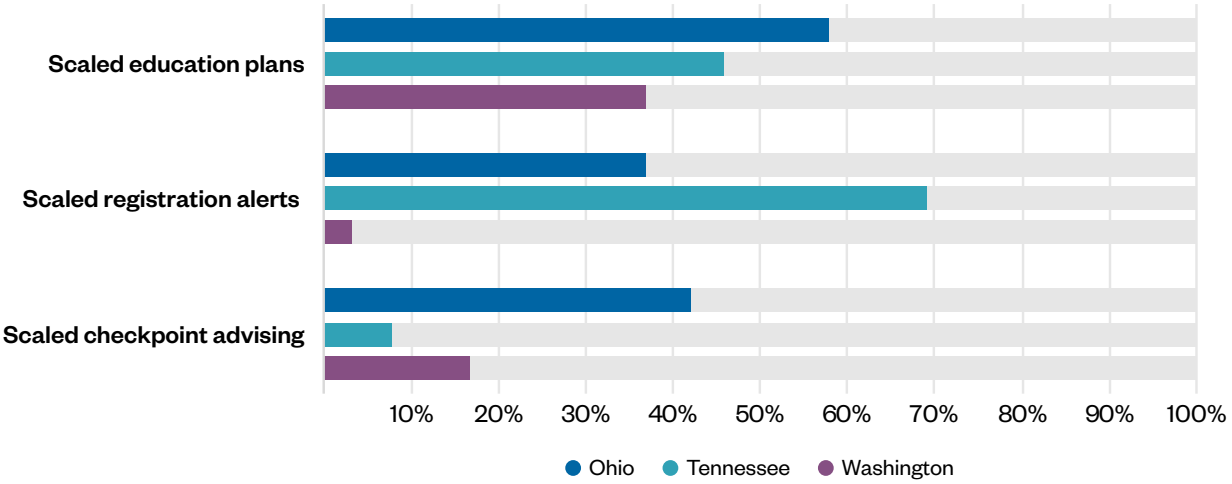
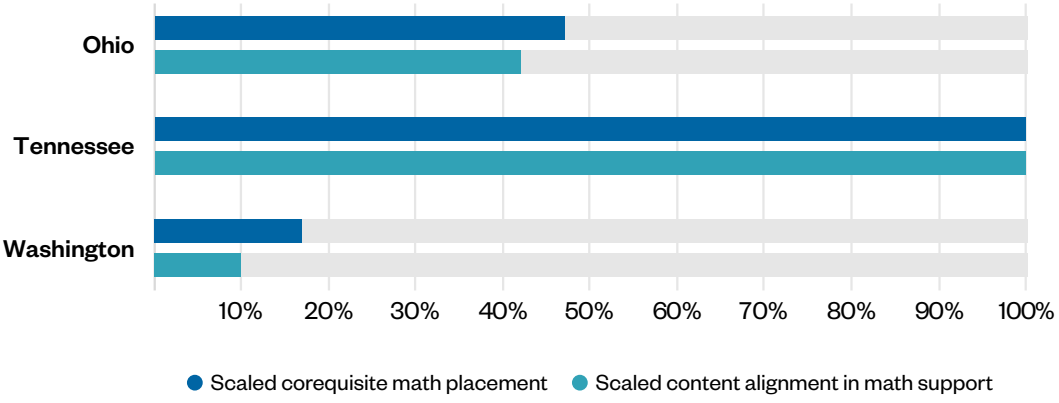


Figure A5. Percentage of Colleges Adopting Components of Practice 4a at Scale



Appendix B. Selected Survey Results for Partially Scaled Practices

Colleges are considered to have partially scaled a guided pathways practice if they implemented it for at least 50% but fewer than 80% of credit programs or first-time-in-college credit students.

Figure B1. Percentage of Colleges Adopting Practice 1a (meta-majors)

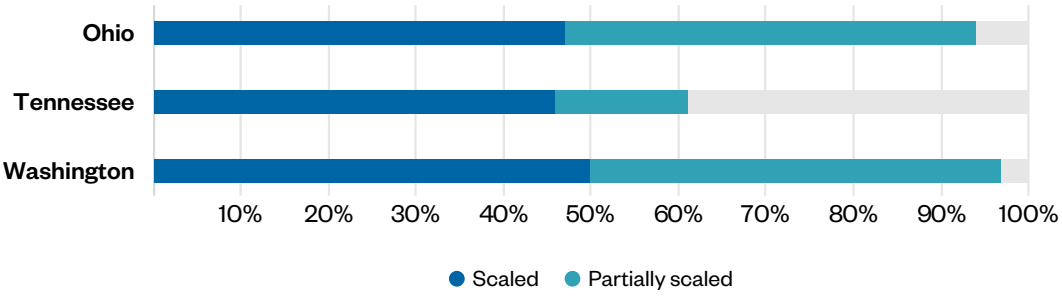


Figure B2. Percentage of Colleges Adopting Practice 1b (CTE program maps)

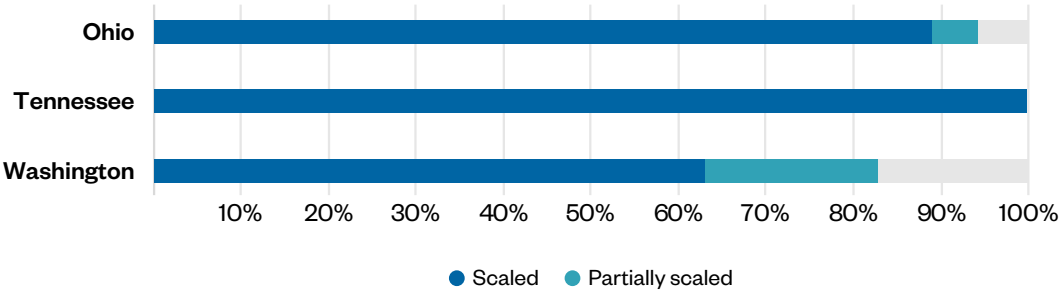


Figure B3. Percentage of Colleges Adopting Practice 1c (transfer program maps)

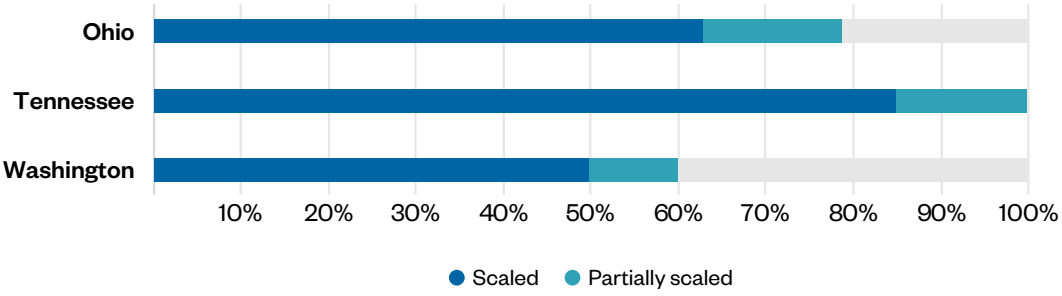


Figure B4. Percentage of Colleges Adopting Practice 1d (math pathways)

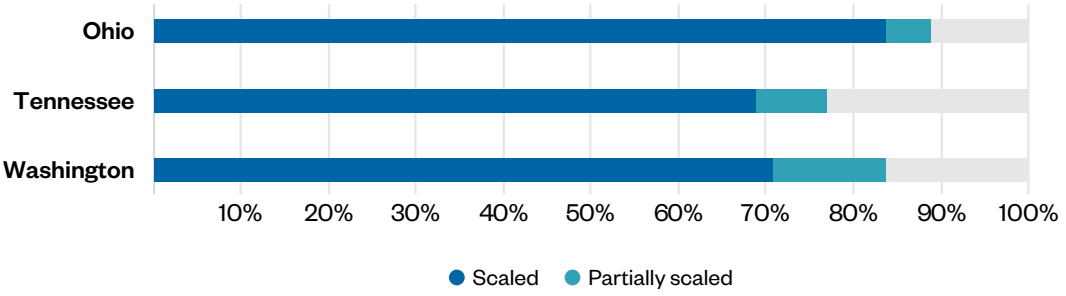


Figure B5. Percentage of Colleges Adopting Practice 2c (early program coursetaking)

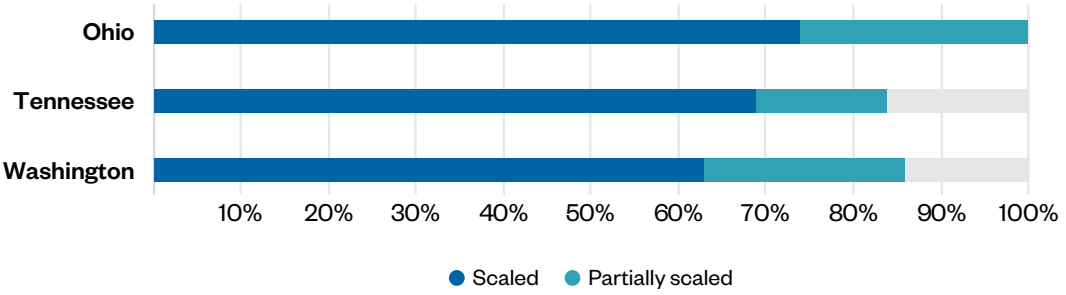


Figure B6. Percentage of Colleges Adopting Practice 2d (mandatory educational planning)

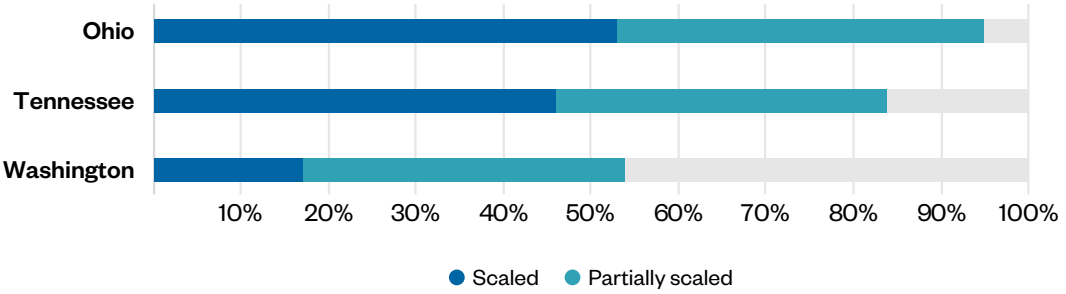
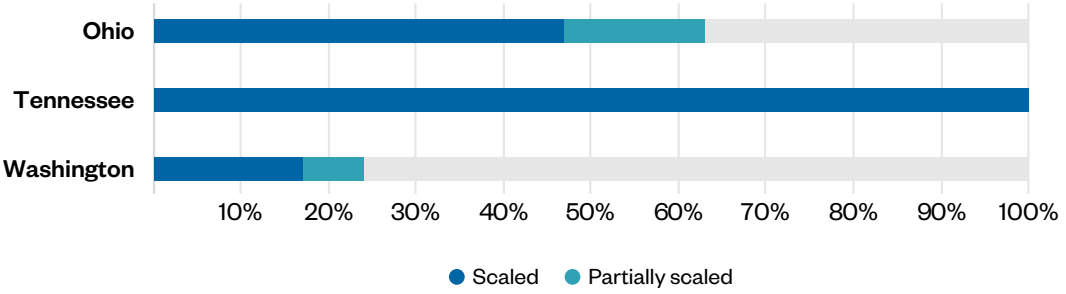


Figure B7. Percentage of Colleges Adopting Practice 4a (corequisite college math)



CCRC COMMUNITY COLLEGE RESEARCH CENTER

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

CCRC studies community colleges because they provide critical access to postsecondary education and are uniquely positioned to promote equity and social mobility in the United States. Our mission is to conduct research that helps these institutions strengthen opportunities and improve outcomes for their students, particularly those from underserved populations.

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