

A photograph of three students sitting at a desk in a computer lab. A woman with dreadlocks is on the left, a man with glasses is in the center, and a woman is on the right. They are all looking at a computer screen. The man has his hand on his chin, appearing thoughtful. The background shows bookshelves and computer monitors.

Guided Pathways for Student Success:

Insights and Opportunities at Four-Year Institutions

Produced for the Bill & Melinda Gates Foundation Postsecondary Success Team



Stephanie Gardner, Ed.D.

George Mehaffy, Ph.D.

Paul Markham, Ph.D.

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About SOVA

Sova focuses on improving the quality and accelerating the pace of complex problem solving in the areas of higher education and workforce development. Animated by a core commitment to advancing socioeconomic mobility for more Americans, Sova pursues its mission through distinctive approaches to will-building, strategic planning, change leadership, and process improvement.

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Inside This Report

The Guided Pathways approach to student success has been successful among community colleges, and the fundamental practices of Guided Pathways are largely transferable to four-year institutions. However, significant differences between the two- and four-year sector impact institutional focus on student success outcomes. These differences also affect the ways in which comprehensive change must be approached.

This study aims to explore student success within four-year institutions. Specifically, it investigates the applicability and transferability of the Guided Pathways Model to four-year institutions. The researchers explore the features of a model for student success in the four-year sector and examine the supports needed to implement a student success agenda. To test the hypothesis that ecosystem building and institutional transformation must include policies, programs, capacity, and a shared orientation for organizing and evaluating the system in its entirety, the researchers crosswalked foundational documents funded by the Bill & Melinda Gates Foundation. Guided by these documents, researchers formulated a student success matrix. Within this matrix, student success is defined as equitable outcomes among all students in college completion and advancement to graduate study or entry into their first career job.

The student success matrix was used to develop a survey and semi-structured interviews with campus leaders at 15 four-year institutions. The results showed emerging themes and the (a) perceived importance of specific programs, policies, and practices in four-year institutions; (b) degree of implementation of specific programs, policies, and practices; and (c) obstacles and learning opportunities that impede or facilitate student success on four-year campuses.

The findings illuminate opportunities to optimize institutional fit of a student success model centered on students and equity. A comprehensive plan—informed by the Guided Pathways Model and tailored to four-year institutions—is particularly important as institutions integrate student success practices across all parts of the campus. Further, organizations must connect on-the-ground solutions while synchronously building capacity and integration for those solutions to flourish and sustain within the institution.

Introduction

Problem Statement and Opportunity

A common understanding of student success and institutional transformation is necessary for the purposes of this study. **Student success** is defined as equitable outcomes among all students in college completion and advancement to graduate study or entry into their first career job. The Bill & Melinda Gates Foundation defines **institutional transformation** as the realignment of an institution's structures, culture, and business model to create a student experience that results in dramatic and equitable increases in outcomes and educational value. Institutions transform by integrating evidence-based practices that create inclusive and coherent learning environments and leveraging a student-centered mission, catalytic leadership, strategic data use, and strategic finance in a robust, continuous improvement process.

Far too often, student success is associated with the development of a new program or practice. Yet, student success is most effectively pursued and achieved when campuses consider the entire student experience, from connection to completion and advancement in a career or to the next level of education. That core idea is anchored in the Guided Pathways Model. The focus on the student journey, and the role of institutions in improving the experience and outcomes for students, is the central idea that animates the Guided Pathways work.

While many four-year institutions are increasingly committing to student success, these student success efforts are often disjointed, episodic, or idiosyncratic. Institutions of higher education are increasingly aware of the fact that no silver bullet solutions for student success exist, and the work ahead will involve campus-wide efforts to better serve students. **The operating hypothesis is that ecosystem building and transformation must include policies, programs, capacity, and a shared orientation or model for organizing and evaluating the system in its entirety. This ecosystem building and transformation must also consider the human-centered dimensions of the work, including a commitment to student success that is found in programs, attitudes, and values where equity and students are at the center.** That often requires change in multiple parts of a campus as legacy practices are re-examined and interrogated to consider their impact on students. Helping institutions adopt a campus-wide model that details programs, policies, and practices may provide an opportunity to create new tools and artifacts that offer innovative ways to approach institutional transformation.

Belief in the critical role of a broad, holistic approach to student success is ultimately at the heart of this project. This project has explored a comprehensive understanding of student success, and it has helped to illuminate the critical need to connect on-the-ground solutions while synchronously building capacity and integration for those solutions to flourish and sustain within the institution.

Utilizing a mixed methods approach to the project, the project team partnered with 15 four-year institutions with diverse governance and policy contexts including regional comprehensives, R1 doctoral universities, Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), Tribal Colleges and Universities (TCUs), and Asian American and Pacific Islander Serving Institutions (AAPISIs). The team examined survey data, conducted semi-structured interviews, and analyzed foundational documents. The result of the project is a set of insights into the ways that institutions currently approach the work of student success, where they encounter obstacles to further student success, and where they need external support and assistance.

These insights can be shared with Intermediaries for Scale to assist campuses as they reflect on their own practices. The study has also produced a set of recommendations for the Gates Foundation to consider as it further supports student success work in the four-year sector. Finally, the study indicates that campuses need to develop a comprehensive plan with a shared definition of student success. A comprehensive plan—informed by the Guided Pathways Model and tailored to four-year institutions—is particularly important as institutions integrate student success practices across all parts of the campus.

DEFINITION OF STUDENT SUCCESS

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Equitable outcomes among all students in college completion and advancement to graduate study or entry into their first career job.

Driving Questions

The project team explored five primary questions:

1. Is the Guided Pathways approach, so successfully used among community colleges, applicable or transferable to four-year institutions?
2. What are the current perceptions about specific strategies and their relationship to student success?
3. Is there an analog for the Guided Pathways Model among four-year institutions? If so, what are the features of such a model?

4. Where are the key areas of emphasis (priorities and challenges) related to four-year institutions' formal commitment to student success?
5. What supports do four-year institutions need to clearly articulate and confidently pursue a comprehensive student success agenda?

To answer these questions, the project team devised a mixed methods study that included a campus-wide survey, semi-structured interviews, and document analysis. The survey was informed by crosswalking three foundational documents derived from prior Gates Foundation investments. These documents included (a) [the Guided Pathways Model](#) (October, 2019); (b) [the United Negro College Fund \(UNCF\) Four-Year Pathways Rubric](#) (2019); and (c) [the University of Florida \(UF\) Guided Pathways at Access-Oriented Four-Year Institutions Model](#) (2019). Five common themes were identified across the three documents. These themes were then incorporated into the student success matrix that undergirds this study ([Appendix A](#)). Themes included:

- Onboarding and Entry;
- Program Tracking and Support;
- Teaching and Learning;
- Career Preparation; and
- Overall Campus Culture.

Developed from the five themes, the campus survey collected administration and faculty demographic information related to length of service, race, gender, and working title. The survey was organized to (a) uncover the perceived **importance** of specific programs, policies, and practices in four-year institutions that produce the greatest outcomes for students; (b) determine the degree of **implementation** of specific programs, policies, and practices; and (c) identify **obstacles** and learning **opportunities** that impede or facilitate student success on four-year campuses.

Interviews were structured to supplement survey findings. Interview questions focused on three critical issues that have the potential to affect four-year institutions and their ability to increase student success, particularly among students from low-income backgrounds, first-generation students, and students of color. Focal areas of the interviews included (a) **institutional dynamics and contexts** that produce institutional change as a means to increase student success; (b) **obstacles that impede change**, with consideration for people, structures, and resources; and (c) ways that **external assistance** might nurture and facilitate institutional change.

The survey, interviews, and document analysis informed the primary questions. The project scope and primary questions were predicated on and informed by the Guided Pathways Model and aforementioned foundational documents.

Working Assumptions

A fundamental question undergirding this study is whether the Guided Pathways Model, that has been widely adopted and implemented in the two-year sector, is applicable to four-year institutions. While there is not a clear analog of Guided Pathways (a single, comprehensive model for student success) in the four-year sector, there are significant lessons to learn from the Guided Pathways movement that can bolster student success outcomes across four-year institutions.

Differences between the two-year and four-year sectors affect the ways in which comprehensive change must be approached. **While the fundamental practices of Guided Pathways are largely transferable, the context of four-year institutions requires nuanced language and engagement strategies.** Two-year schools focus almost exclusively on students and student outcomes. A portion of funding for two-year institutions comes from local tax levies, making these institutions especially attentive to local workforce needs. They are deeply connected to their communities through job training, through connections to their feeder local high schools, and to the four-year institutions where many of their students transfer. This inherent focus on student and place-based outcomes requires institutional leaders to pay close attention to student success as an essential aspect of their institutions' role in society.

CONTEXT RULES

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While the essential practices of the Guided Pathways Model are applicable to four-year institutions generally, the way these practices are designed and implemented is shaped by a number of factors including institutional size, mission, selectivity, geographic service area, governance, and policy context. Painting all four-year institutions with a single brush is ill-advised when considering strategies for scaling equity-grounded, student-focused redesign of institutional practice.

Other context-specific demands and drivers differ across the two sectors. For the average four-year college president, attention is spread among a series of different and often equally compelling areas: intercollegiate athletics, continuous fundraising, residence halls, student life, research, a university foundation, and student success. As a result of those varied responsibilities and pressures, four-year presidents may be less frequently seen as active leaders of student success on their campuses. Faculty in four-year institutions also have dispersed responsibilities that include the traditional

set of performance measures in teaching, scholarship, and service. This broad set of obligations may be distorted by an increasing emphasis on research productivity rather than teaching, particularly at institutions where expectations for faculty research are high. Faculty working toward promotion and tenure are seldom encouraged to focus on student success as a path to personal and professional success within their discipline. Institutional culture can also play a powerful role in the mindsets within the two types of sectors.

A final factor that contributes to reluctance to adopt a comprehensive model like Guided Pathways is a belief that each campus is unique, with its own traditions, culture, and history. At the same time, there is **skepticism about practices that were not developed locally** but instead generated from some external entity. Throughout the interviews, the team listened to interviewees report that they heard about an innovation that had worked somewhere else, but the campus had to go through a process of tweaking the innovation to ensure alignment with the culture of their institution.

Organization of the Study

The driving questions listed above informed the purpose of this research, and the working assumptions informed the context of this mixed methods study. The literature review presents the lens through which student success will be studied and analyzed, including a description of foundational documents. The research methodology explains the survey and interview approach to understanding student success elements in the four-year sector. An analysis of the survey results and interview responses is followed by implications and recommendations for practice.

Review of the Literature

This study is grounded in three foundational documents that were the result of previous investments made by the Gates Foundation. They include (a) the Guided Pathways Model (October, 2019); (b) the UNCF Four-Year Pathways Rubric (2019); and (c) the UF Guided Pathways at Access-Oriented Four-Year Institutions Model (2019). These three documents were crosswalked to inform the survey and subsequent semi-structured interview questions. Additional ancillary sources provided the necessary context for this study and helped inform future recommendations.

Guided Pathways Literature

Guided Pathways: A Historical Timeline

The Guided Pathways movement dates back to the time when community college leaders began looking carefully at their outcomes data and decided that a mission focused on access was a hollow promise unless paired with a mission focused on promoting greater student success. By many accounts, the founding of the Achieving the Dream network in 2004 signaled a watershed moment in the field as community colleges shifted toward a dual commitment to access and success with clear-eyed attention to student progression and outcomes data.

Based on early student progression and outcomes research from the [Community College Research Center \(CCRC\) at the Teachers College, Columbia University](#), the Loss/Momentum Framework was developed to show colleges that there are key “loss points” across the student learning journey where students stop or drop out in large numbers. The Guided Pathways movement was born from the evidence-based conviction that institutions can and must own the work of helping students persist and maintain momentum through these common loss points. Based on the notion that institutional action matters most, researchers began looking at the reasons why students were dropping out at these key loss points and found that college is too often experienced as a complicated maze.

The cafeteria model, in which students are provided with an endless array of course choices rather than coherent programs of study, was a leading contributor to low and inequitable completion rates. Likewise, approaches to advising in which students are left on their own to navigate the college maze, rather than being provided with integrated advising that attends to the academic and non-academic needs of students, also contribute greatly to loss points. Also clear from this early research was the insight that structures of remediation without corequisites served as an invidious sorting mechanism, rather than an on-ramp to success. As colleges and researchers dug deeper into the data and found that students from minoritized groups and low-income backgrounds were disproportionately impacted in these loss points, attention in the field began to shift from student readiness and toward institutional ownership.

When this shift happened, institutions began to proliferate boutique interventions and programs, which failed to become scaled improvements for students as shown by later evidence. The Guided Pathways movement truly began to take shape when researchers and practitioners joined forces to assert that only a comprehensive approach, rather than a piecemeal approach, would result in necessary improvements in outcomes and equity.

As early as 1996, CCRC began to explore topics relevant to the two-year sector including long-held beliefs about the student journey to and through the community college. Almost 20 years later, *Redesigning America's Community Colleges: A Clearer Path to Student Success* (Bailey et al., 2015) brought greater awareness to community college completion rates and institution redesign. The ground-breaking book presented considerations for developmental education, instruction, and student support. The critical research by CCRC provided strong case-making for future reform efforts, and it created opportunities to ameliorate the disparate impact postsecondary systems had on student achievement.

The Pathways Collaborative

In 2015, the [Pathways Collaborative](#) was formed under the auspices of the Gates Foundation. This group of 15 organizations is working to support the adoption and scale of Guided Pathways and had the original intent to increase momentum for scaled, holistic, institution-wide reform to dramatically improve outcomes and close equity gaps. The Pathways Collaborative asserts that moving the needle on student success requires helping more institutions implement large-scale change.

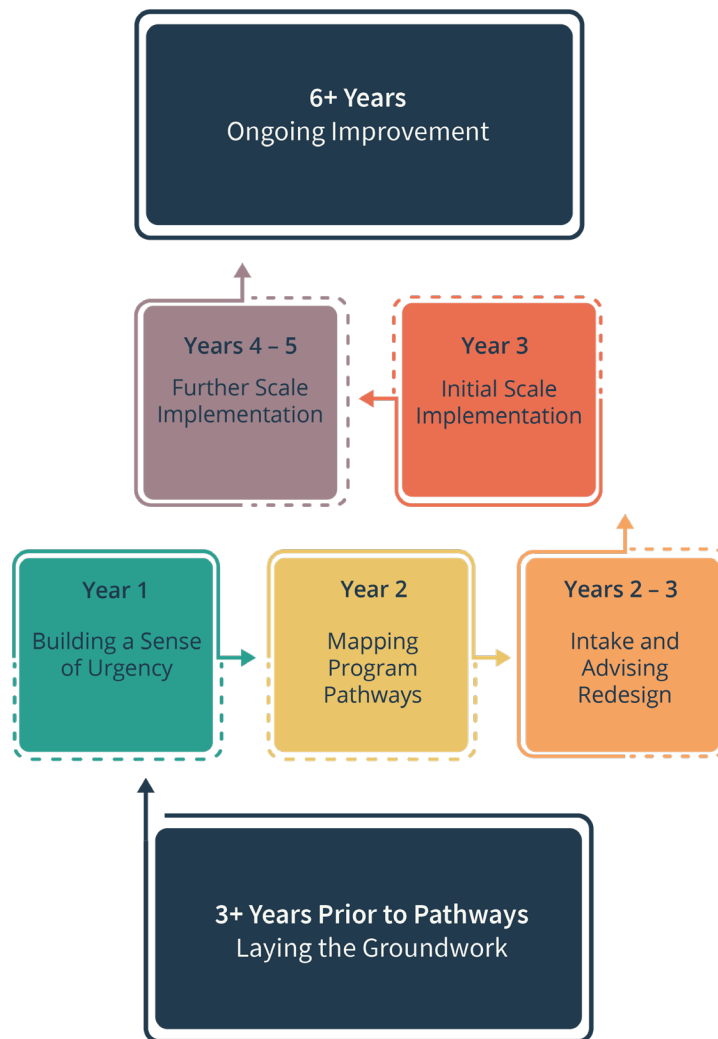
Pathways Collaborative members work to deliver a range of supports and services to the field. The aim of the Collaborative is to develop and curate learning that will contribute to the implementation and evaluation of pathways across the field. The Collaborative has produced several critical field-building supports and collateral artifacts including a coaching database and training, a revised Pathways implementation rubric, an emphasis on teaching and learning within the Guided Pathways Model, and more. The full Guided Pathways Model, developed by the Pathways Collaborative, appears in [Appendix B](#).

Pathways Requires a Long-Term Institutional Commitment

Jenkins, Lahr, and their colleagues at CCRC (2018) have made a significant contribution to the Pathways movement by exploring **implementation timelines**. This study captured the idealized conceptualization of the process and timeline for implementing Guided Pathways at scale. Based on their research and observations of institutions that were "early adopters" of Pathways, a picture emerged of the actual timeline needed for effective redesign, while adhering to fidelity of the Model. The researchers concluded the planning and implementation of the Guided Pathways Model takes multiple years as outlined in Figure 1. Further, they emphasized the importance of tracking leading and lagging indicators as key components to actualizing student success.

Figure 1

Guided Pathways Timeline for Implementation



Note. Adapted from [What we are learning about Guided Pathways, Part 3: Timeline and tips for implementing pathways reforms](#) (pp. 2–3), by D. Jenkins et al., 2018, Columbia University, Teachers College, Community College Research Center.

Jenkins et al. (2019) examined *Lessons on Managing Whole-College Reform From the American Association of Community Colleges (AACC) Pathways Project*, and the researchers sought to understand how institutions were **managing broad-based transformation** across multiple areas with consideration for time to implement at scale. The study focused on eight institutions that were part of a larger cohort in the AACC Pathways Project. More than 300 individuals participated in interviews and focus groups. Participating institutions were established in their Pathways journey with a number of key redesign elements in place (e.g., meta-majors). There were multiple findings from the study including identification of four phases of implementation that are critical to success (Figure 2).

Figure 2

Four Phases of Guided Pathways Implementation



Note. Adapted from [Redesigning your college through Guided Pathways: Lessons on managing whole-college reform from the AACC Pathways Project](#) (pp. 6–7), by D. Jenkins et al., 2019, Columbia University, Teachers College, Community College Research Center.

Recommended strategies accompanied each phase of implementation.



Laying the Groundwork for Whole-College Redesign

- Build awareness that college creates barriers to student success and that only large-scale, cross-college reforms will remove them.
- Build a culture of data-informed practice.
- Reorganize decision-making roles and structures to facilitate broad engagement in planning and implementing improvements.
- Foster individual accountability for contributing to the college's goals for student success.
- Encourage creativity and experimentation in developing strategies to improve student success.
- Provide time and support for collaborative planning and professional development.



Introducing Guided Pathways to the College Community

- Make the case for Guided Pathways by showing how a lack of clear program paths and supports hurts students.
- Communicate a guiding vision for the reforms.
- Cultivate a shared understanding of Guided Pathways through college-wide, in-person meetings and virtual communication.
- Allow time for reflection and deliberation.
- Present Guided Pathways as a framework for aligning and enhancing existing student success efforts.



Supporting Collaborative Planning and Implementation

- Support cross-functional leadership and collaboration to plan and implement Pathways.
- Engage faculty and staff from across divisions in mapping program pathways to good jobs and transfer in a major.
- Ask staff and faculty to map the entire student experience—both the status quo and what it should be.
- Identify and support change leaders throughout the college.



Sustaining and Institutionalizing Student Success Reforms

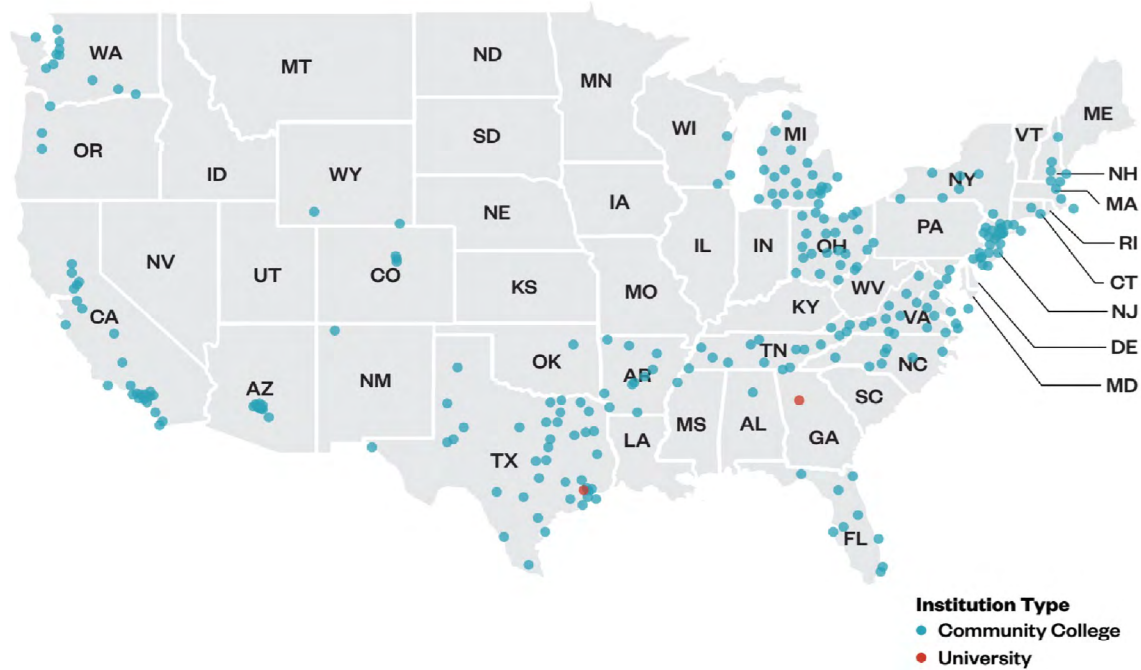
- Take time to celebrate wins, reflect on progress, and plan next steps.
- Reallocate and align resources to help scale and sustain effective practices.
- Ensure that employee hiring, onboarding, and promotion practices support a culture focused on improving success for all students.

Pathways in the Four-Year Sector

Over time, the Guided Pathways movement has gained national recognition and momentum. Jenkins et al. (2018a) estimated 250 institutions have implemented the Guided Pathways Model. However, the growth of Guided Pathways implementation has not occurred at the same level among four-year institutions as seen in Figure 3.

Figure 3

A National Movement: Colleges Implementing Guided Pathways



Note. From [What we are learning about Guided Pathways, Part 1: A reform moves from theory to practice](#) (p. 2), by D. Jenkins et al., 2018, Columbia University, Teachers College, Community College Research Center.

Despite few four-year institutions fully implementing Guided Pathways, interest in the Guided Pathways approach has grown dramatically in recent years. In 2018, Sovia conducted an analysis of Pathways for the [American Association of State Colleges and Universities \(AASCU\)](#). Starting with a broad sector analysis and AASCU member insights, Sovia concentrated on insights from Re-Imagining the First Year (RFY) and Frontier Set (FS) institutions as displayed in Figure 4. Sovia further focused on single FS institutions interested in Pathways.

Aims of the study included:

1. Understanding what AASCU institutions mean by Pathways;
2. Articulating demand for Pathways among AASCU institutions;
3. Understanding barriers to Pathways implementation in AASCU institutions; and
4. Suggesting further steps to learn and leverage Pathways to improve student success in AASCU institutions.

Figure 4

Insights From AASCU Institutions

Concept & Design

- What feels right about the Pathways concept and design: Holistic nature that integrates many initiatives and enhances collaboration between academic and student affairs.
- What feels like a problem with the Pathways concept and design: Faculty resistance to focus on a job as an outcome, potential to ignore diversity, and the name means too many things and narrows the goal.



Framework

- Strengths: Common language and structure everyone can visualize and adopt, focuses across boundaries.
- Weaknesses: Lack of emphasis on non-academic factors, lack of focus on faculty.



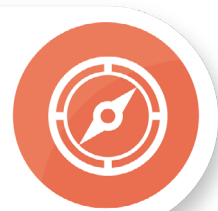
What would your campus colleagues say about this framework?

- "Just another model that won't work for us, because we're special."
- "This is nice, but student's lives are more complex and messier than this."
- "What's my role in this and how will I find time?"
- "They would agree with it, but doubt that it could be implemented."
- "We are too large and too decentralized to have a consistent design to benefit all students."



Needs in order to implement Guided Pathways

- Concrete examples of what we can do.
- Actionable ideas, direction on how to begin, direction on how to get unstuck.
- Some sense from other institutions about what is working and an individual contact to speak to them about their work (peer-learning).
- ROI.



Note. Findings condensed from *Analysis of pathways explorations & implementation* [Report for AASCU], by Sova Solutions, 2018. Insights were gathered during a two-day "Pathways Summit" with RFY and FS institutions.

Insights from the survey analysis (N=638) in the four-year sector included: ¹

- In general, Pathways awareness, adoption, or use is not driven by size but by the number of students who are receiving a Pell Grant.
- As Pell Grant percentage at an institution increases, the highest level of awareness and adoption across all departments of Pathways increases.
- Smaller size, higher Pell Grant percentage institutions report the highest rates of implementing Pathways in the most recent academic semester and prior to the 2014–15 academic year.
- AASCU institutions report more recent Pathways adoption (vs. four-year private institutions).
- AASCU institutions are less aware of Pathways than two-year institutions, but they are more aware than four-year private institutions.
- "Academic program structure" and "(student) self-tracking" are the most common forms of Pathways used by AASCU institutions.

Insights from Pathways Message Testing Focus Groups (AASCU and AAC&U): ²

- The term Pathways is not intuitively understood as a comprehensive student success strategy; it is often narrowed in people's minds to curriculum mapping, and the wider objective—to equitably empower students to achieve their goals by providing academic coherence and integrated advising and supports—is lost.
- For faculty at four-year institutions, a premium is still placed on the freedom of students to explore and even "wander." Faculty with this orientation find it much more difficult to understand the value of Pathways, and they are much more likely to view Pathways with suspicion and outright hostility.
- There is often resistance, particularly from faculty, when Pathways is presented and or interpreted as narrow job-training, or as excessive hand-holding in which student responsibility is transferred to institutions. The language of Guided Pathways itself can inadvertently reinforce an assumption about tracking students that impedes understanding of the broader aim of empowering student exploration and choice through the creation of clear and coherent programs of study.
- Faculty in transfer programs are a key audience that need to be involved for significant institutional change to occur.
- The ideological appeal of Pathways cuts across the political spectrum and offers something for everyone. For institutional practitioners, the association of Pathways with imperatives around equity and social justice is a particularly strong foothold for garnering understanding and support. For institutional leaders and governing board members, many of whom have backgrounds in the business community, the association of Pathways with workforce development and regional economic health is a powerful foothold for communicating the value of Pathways redesign efforts.

1 This survey, conducted by [Tyton Partners](#), described Guided Pathways as courses in the context of highly structured, educationally coherent program maps that align with students' goals for careers and further education. According to this survey, the Guided Pathways Model entails a systemic redesign of the student experience from initial connection to college through to completion.

2 This study was conducted in partnership with [Burness Communications](#).

In 2019, Sova engaged [Visions Strategy and Insights](#) communications firm to conduct qualitative and quantitative research on **messaging for four-year pathways**. The work began with in-depth interviews of 23 stakeholders identified by Sova. These interviews were intended to help inform the message development process by identifying overarching themes that were consistent across all stakeholders. Further, they identified resonant words and powerful concepts to determine areas of alignment. The process yielded a positioning statement for the four-year Pathways work to guide communications efforts.

POSITIONING STATEMENT

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Four-year Pathways is an integrated, institution-wide approach to student success that reimagines the student experience in an equitable way that supports students from point of entry to attainment of a postsecondary degree and through a career.

Other major highlights from the messaging project include:

- Guided Pathways involves changing the status quo, so it can be met with skepticism and resistance.
- It may take several years to implement Pathways in full, and implementation will require coordination among administrators, faculty, advisors, financial aid personnel, schedulers, technology specialists, and many others.
- The strongest words used to describe four-year pathways are listed in Figure 5 with the corresponding anchor words.

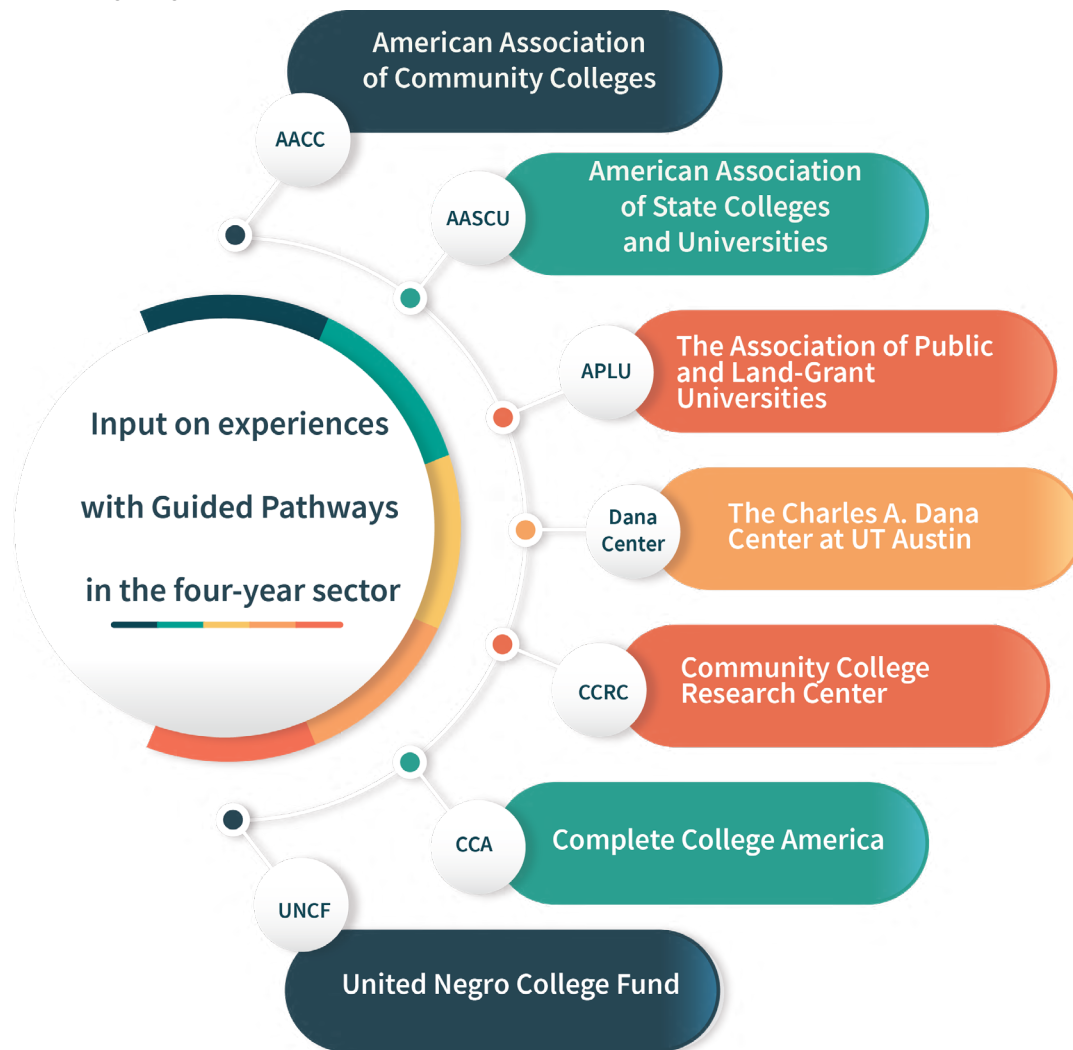
Figure 5
Major Themes Related to Four-Year Pathways

Major Themes	Anchor Words
Urgency, Outcomes, Student Impact >>	Momentum
Redesign, Change >>	Opportunity
Future >>	Transformation

In 2020, Sova interviewed individuals across seven organizations that have been affiliated with the Pathways Model as displayed in Figure 6.

Figure 6

Participating Organizations in 2020 Interviews Conducted by Sova

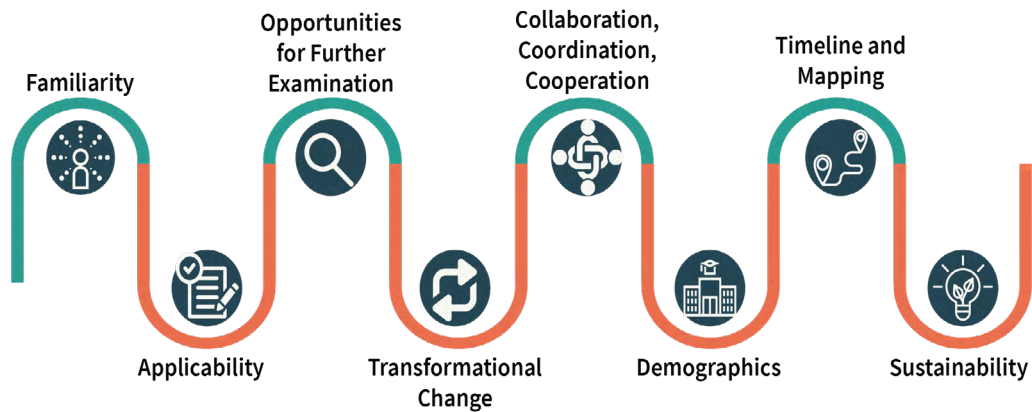


Through semi-structured interviews, Sova sought to learn more about organizations' and individuals' experience with Guided Pathways or similar models within a four-year context, particularly (a) experience with supporting pathways implementation (within the two- and four-year sectors); and (b) lessons learned from work on pathways as it relates to the adoption, implementation, and evaluation framework. Specific questions included:

1. Describe your work with Guided Pathways.
2. Can you share more about your role as it pertains to capacity building, determining KPIs, implementation, and evaluation or assessment of Guided Pathways?
3. Looking forward, what do you think are key questions related to the Pathways Model? For example, are there elements that are not being considered within a four-year context that need further exploration? What can be learned from work in the two-year sector and applied to the four-year sector? Eight themes emerged from the interviews as displayed in Figure 7. Comments and insights from interviewees appear below each theme.

Figure 7

Emergent Themes from Semi-Structured Interviews



Familiarity

- There is an individual belief that Guided Pathways is less familiar in the four-year sector.
- Some in the four-year sector may believe they are already using Guided Pathways, may be using similar models, or may be engaging Guided Pathways organically without knowing this is best practice.
- Elements of Guided Pathways are utilized in some four-year institutions (Georgia State, Arizona State University, Florida State and University of Florida).
- When Guided Pathways was pioneered in the four-year sector, there were issues with excess credits, challenges with advising and re-organizing credits.



Applicability

- There is an underlying acceptance that Guided Pathways can be expanded to the four-year sector through the transfer process and nontraditional progression.
- Backward mapping and design—starting with careers and planning backward—are key for implementing Guided Pathways in all sectors.
- Interviewees expressed that there is a need to better address equity gaps in student preparedness for careers and graduate or professional school.



Opportunities for Further Examination

- Interviewees noted the need to consider cost and other barriers to initiate, implement, lead, and evaluate Guided Pathways. They also highlighted that faculty release time and technology are different costs.

- There is a need to consider advising within a Guided Pathways Model: there may be opportunities to move to caseload advising or advising with a focus on subject matter and discipline.
- Expressed desire to examine the quality and caliber of teaching within a Guided Pathways Model.
- Additional questions arose during interviews:
 - What does it look like to integrate experiential and co-curricular learning?
 - What does equitable preparation look like in a Guided Pathways Model?
 - How do campuses approach the idea of career readiness in a Guided Pathways Model?
 - What needs to be in place structurally for students to choose a pathway?



Transformational Change

- Adoption of Guided Pathways has been slower in the four-year sector.
- An interviewee expressed that it is impossible to “buy institutional will” toward transformational change. Will to change as an organization varies across managers and institutions.
- Some institutions are at 1.0 and some are at a 2.0 version of Guided Pathways. There may be an opportunity to leverage institutions that are further along in institutional transformation to assist others.



Collaboration, Coordination, and Cooperation

- Interviewees noted that collaboration is more than breaking down silos. Collaboration involves learning who are the right people who need to be in the room for Guided Pathways implementation and institutional transformation (network mapping).
- There is opportunity to encourage institutions to work in regional or state systems, not in isolation.
- Institutional leaders expressed interest in gaining insights by learning from other institutions: How do individuals work across institutions? How can leaders develop cross-functional teams?
- Though there may be little conversation with industries now, how can institutions cooperate with industries to address career preparedness and opportunities post-graduation?



Demographics

- Institutions that focus on broad access may have similar experiences as community colleges.
- Some institutions want help but lack culturally competent coaches for campus climate.
- Not all institutions are created equal. Organizations should consider best practices for how to help institutions that may not have financial resources to implement or evaluate Guided Pathways.



Timeline and Mapping

- Interviewees noted the necessity of students taking program courses early in their academic career (this applies to the four-year sector).
- The early implementation of Guided Pathways seemed to emphasize mapping; however, the Guided Pathways Model does not focus exclusively on mapping.
- A key factor was identified for Guided Pathways implementation in both sectors: Lay the necessary groundwork—which may take years—by starting with self-assessment (ITA).
- Timing is critical for all sectors. Excess credits without direction or a defined area of study can be detrimental to retention and graduation.



Sustainability

- Pathways cannot be interpreted as the next “shiny” object or the field will lose momentum.
- Some interviewees noted that people will follow the money, but that is not why institutions should be engaging in this work.
- To ensure sustainability, there is a need to redesign four-year programs to integrate experiential learning with contextual content.
- The labor market is driving colleges and universities to teach entrepreneurship, soft skills, planning, and directional orientation.

Foundational Documents

UNCF Four-Year Pathways Rubric

The [UNCF Four-Year Pathways Rubric](#) was developed to assist four-year institutions with their ability to assess pathways across 21 indices. More information on the indices can be found in [Appendix C](#). The rubric builds on the Institutional Transformation Assessment (ITA).

UF Guided Pathways at Access-Oriented Four-Year Institutions Model

The 2019 [University of Florida's Institute of Higher Education report](#) was the result of an investment from the Gates Foundation. The University was funded to conduct a mixed methods study. The quantitative strand centered on a national field scan that used fixed-effects regression and factor analysis that focused on access-oriented four-year institutions that are outperforming

national averages along three key performance indicators (KPIs). These KPIs included (a) progress to degree completion, (b) labor market outcomes, and (c) economic mobility. The Institute of Higher Education study (2019) concluded that:

One clear take away from these results is there is not one institution or one institution type that excels in all outcomes. In order to identify best practices in facilitating student pathways at and through these institutions, researchers and practitioners will need to be mindful of the different outcomes relevant for pathways (including both academic progress and labor market outcomes) and consider the practices and performance of a wide range of institutions. (p. 9)

The qualitative strand centered on the following driving question: *How can access-oriented institutions operationalize a Guided Pathways approach at scale with a student-oriented approach?* This question was explored through a series of interviews with campus administrators and student support offices followed by 12 semi-structured interviews with individual organizations. A major takeaway from the study was that “colleges and universities seem aware there are gaps in the pathways for student

INSTITUTIONAL TRANSFORMATION ASSESSMENT

.....

“The ITA was built on a foundation of rubrics, created by experts, that represent current standards in a range of solution areas and operating capacities. The rubrics offer a common language to help align and orient teams to standards. It’s important to know that the ITA is not intended to be evaluative, rather, it’s designed to assess perceptions in order to support and streamline reflection. That reflection comes in the form of a dynamic Sense-Making Conversation—the centerpiece of this method.” (Intermediary Guide, Winter 2000)

success but struggle to understand how to address these gaps in practice” (p. 12). Additionally, while interviewees focused on their respective areas of expertise, qualitative findings of this report noted common themes across various specialties.

In addition to the report, the University of Florida produced an accompanying Guided Pathways Model for Access-Oriented Four-Year Institutions. The Model identifies key points along a students’ postsecondary journey from on-ramp and recruitment to transition (graduation and entry into the workforce). Although this Model was designed for access-oriented institutions, this present study includes several more selective institutions because the core focus is the degree to which the Guided Pathways Model is applicable throughout the four-year sector. The UF Model builds on the [Loss/Momentum Framework](#) originally developed through a Gates Foundation investment in Completion by Design as seen in [Appendix D](#). Excerpts from the UF report appear in [Appendix E](#).

Methods

Study Design

The next phase of research to more deeply understand the application of Guided Pathways for four-year institutions involved a study of key themes identified through review of the foundational documents as outlined in the student success matrix.

The project team worked with a group of national membership organizations to help identify approximately 15 different institutional types. The study participants included research universities, HBCUs, HSIs, a Tribal College, and regional comprehensive universities of various sizes. Institutions were coded according to their Carnegie classification. The institutions were selected from across the country with attention to both urban and rural representation. Participating institutions included:

- Fisk University
- Fitchburg State University
- Florida State University
- Georgia College
- Harris-Stowe State University
- Langston University
- Lehman College of The City University of New York
- Northwest Missouri State University
- Salish Kootenai College

- Towson University
- University of Maryland, Baltimore County
- University of South Alabama
- University of Texas at Arlington
- Virginia Commonwealth University
- Xavier University of Louisiana

The project team worked with each institution to select a campus coordinator who served as the primary point of contact throughout the project. Sova had an initial meeting with these coordinators to ensure they had the knowledge and tools to support the aims of the project. Campus coordinator activities associated with project goals included (a) providing information on key individuals or roles on campus, (b) convening campus groups for virtual interviews with Sova staff, (c) supporting survey distribution and completion, and (d) gathering various materials that represent campus efforts. The mixed methods approach to this study is detailed in [Appendix F](#).

Data Sources

Data for this study were primarily drawn from surveys, semi-structured interviews with mid-level and senior campus administrators, and document analysis. Sova worked with existing Gates Foundation ecosystem partners to connect with institutions. Campus coordinators were then selected to assist the research team with data collection. Survey data and interview data were generated from multiple individuals across 15 selected institutions.

Methodology

Survey Sample and Data Collection

The survey was informed by crosswalking three foundational documents that were derived from prior Gates Foundation investments. These documents included (a) the Guided Pathways Model (October, 2019); (b) the UNCF Four-Year Pathways Rubric (2019); and (c) the UF Guided Pathways at Access-Oriented Four-Year Institutions Model (2019). The survey explored five themes as outlined in the [student success matrix](#):

- Onboarding and Entry;
- Program Tracking and Support;
- Teaching and Learning;
- Career Preparation; and
- Overall Campus Culture.

The survey was administered mid-November 2020 through mid-December 2020. The campus surveys collected administration and faculty demographic information

that included length of service, race, gender, and working title. Through a series of questions, the survey sought to (a) uncover the perceived **importance** of specific programs, policies, and practices in four-year institutions that produce the greatest outcomes for students; (b) determine the degree of **implementation** of specific programs, policies, and practices; and (c) identify **obstacles** and learning **opportunities** that impede or facilitate student success on four-year campuses. Sova distributed a survey link (generated from Qualtrics) to mid- and senior-level administrators who were identified by each campus coordinator.

It was assumed that senior administrators would know more broadly about the programs, policies, and practices across an entire campus while mid-level managers would have a more in-depth understanding of specific program features and outcomes. Therefore, Sova worked with campus coordinators to request a minimum of 15 surveys from each campus with 5 surveys from senior administrators (Provost, VP for Student Affairs, and other senior level administrators) and 10 surveys from mid-level managers, preferably from individuals who administered student success program elements: onboarding, recruitment, advising, first-year programming, degree map coordination, etc. All campus coordinators participated in the survey.

An operational definition of student success was established and provided to survey participants. For the purpose of the survey, student success was defined as **equitable outcomes among all students in college completion and advancement to graduate study or entry into their first career job**.

Analytic Approach for Survey

The analytic approach included an aggregation and comparative analysis of responses with a focus on the perceived **importance** of programs, policies, and practices; **implementation** of programs, policies, and practices; and **obstacles** and learning **opportunities** that impede or facilitate student success. Survey data was aggregated and reported by the overall percentages, with a focus on the highest-lowest (bi-modal) responses. The open-ended comments were analyzed for common themes. A priori codes were not established prior to the survey being deployed.

At the start of each section within the survey, participants were informed that the following section would ask about their institution's attention to one of the five themes: Onboarding and Entry, Program Tracking and Support, Teaching and Learning, Career Preparation, and Overall Campus Culture.

In each of the five theme areas, survey participants were asked two questions.

1. The level of importance question asked participants to rank the listed elements based on how important they are to large-scale student success. Participants

were provided with ranking scales where 1 represents the most important element. The ranked importance level decreases as the numeric value increases. An assigned value was required for each element listed, and a note was provided prior to each question related to importance: "We know all of these areas are important for student success. We're asking you to rank these based on your experience in order to better understand how to prioritize these areas when resources are limited and few institutions can fully fund all student success initiatives as they would like."

2. The level of implementation question asked participants to use a scale to rate the listed elements based on extent of implementation at the institution. The Likert-style rating options included *widely used across campus in most units and/or with most students, fairly widely used but with notable areas of exception, adopted among a few units but generally not used, not used at all, I don't know*. A note was provided prior to each question related to implementation: "If you are unfamiliar with any of the programs, policies, or practices listed, select 'I don't know' as your response for that topic."

For the level of implementation questions, if respondents indicated a response of "fairly widely used" or below, the survey automated an open-ended question to gather additional information: "Why do you believe this element has not been implemented fully on your campus?"

Respondents were also offered the opportunity to upload any supplemental materials related to each area.

There were three summative reflection questions that asked respondents to share more about (a) obstacles to achieving student success; (b) the ways campuses might facilitate learning and improvement; and (c) the tools and supports that might help campuses facilitate improved student success outcomes.

1. After thinking about all the questions in this survey, consider the issue of student success more broadly. In your view, what are the most significant obstacles to achieving greater student success on your campus? The question required an open-ended response.
2. When exploring ways to increase student success on your campus, what do you most value? Response options included: *Learning from peer institutions, bringing in external support (consultants, speakers, etc.), other (with an open-ended response)*.
3. As a final reflection, what specific tools, processes, supports, or services would help increase student success on your campus? The question required an open-ended response.

Interview Sample and Data Collection

A total of 15 interviews, with more than 30 senior and mid-level managers, were conducted between mid-to late January 2021. Interviews lasted a total of 45 minutes. The purpose of the interviews was to capture rich, qualitative commentary that further explored student success strategies in four-year institutions focusing on (a) what and

who has served as the catalyst for transformation within a student success context, (b) where there are obstacles, and (c) what opportunities exist to enhance current efforts. Campus coordinators scheduled interviews for two campus members to meet with the Sova project team. The interviews included the campus coordinator, as well as one senior administrator (Provost, Presidents, AVP, SAVP), or one mid-level manager (ED, Director, AD). If the campus coordinator was a mid-level manager, they invited a senior level administrator to join the interview. If the campus coordinator was a senior level administrator, they selected a mid-level manager to join the interview. Campus coordinators were asked to include at least one individual who had the broadest understanding of the campus and how it works.

Analytic Approach for Interviews

Qualitative data from the interviews assisted the project team to gather additional context, nuance, and details not easily captured in the survey. The interviewers explored three specific questions that expanded on the campus survey. Each question included a series of sub-questions to further explore the main question.

Questions for examination included:

- 1. How does transformation occur on your campus?** To what extent does it come from within the campus, and to what extent is it externally imposed (by system, state, accreditors, or others)? Who usually drives the agenda? How is the idea or concept announced? How does the campus build support? Do you have a shared definition of student success? Do you have a current model, framework, or conceptual map for how your campus thinks about student success?
- 2. What are the obstacles to greater transformation and institutional change?** Is money the primary obstacle, or is it time, innovation fatigue? Who are the major objectors (by type)? What are the typical objections to change? How are objections responded to? What arguments seem most successful to counter objections? What are other strategies for overcoming resistance?
- 3. What kind of external assistance would be helpful in advancing student success on your campus?** Given that there is not enough external funding available to help transform universities, how might external funding be used in the most strategic way? What other kinds of assistance would be helpful? Would professional development be helpful, and, if so, what kind of professional development? What other information, research details, tools and strategies would be helpful?

The interview team took notes during each interview. One Sova team member was the interviewer while a second Sova team member was the scribe. Following the interviews, team members organized the responses according to major themes that emerged. Responses were then analyzed to develop a set of final recommendations based upon aggregated insights from the field.

Findings and Results

Survey Data

There were 271 individual responses to the survey. Responses were delineated by institution classification as seen in Figure 8. Most respondents who completed the survey were mid-level managers. Responses were delineated by role as seen in Figure 9. Approximately one third of respondents identified as Black Indigenous People of Color (BIPOC) and two thirds identified as non-BIPOC. The open-ended comments were analyzed for common themes. A priori codes were not established prior to deployment of the survey.

Figure 8
Survey Responses by Institution Classification

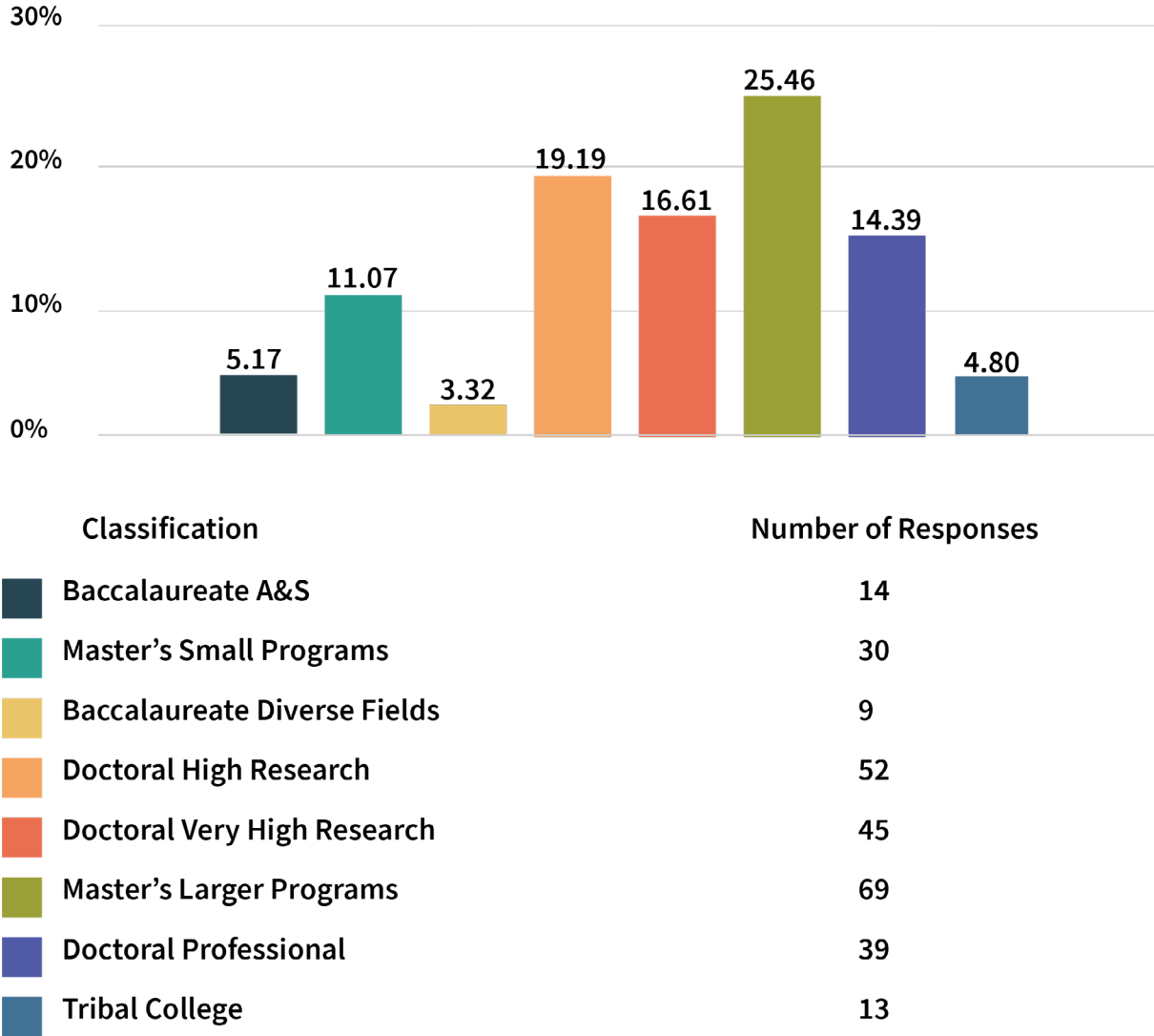
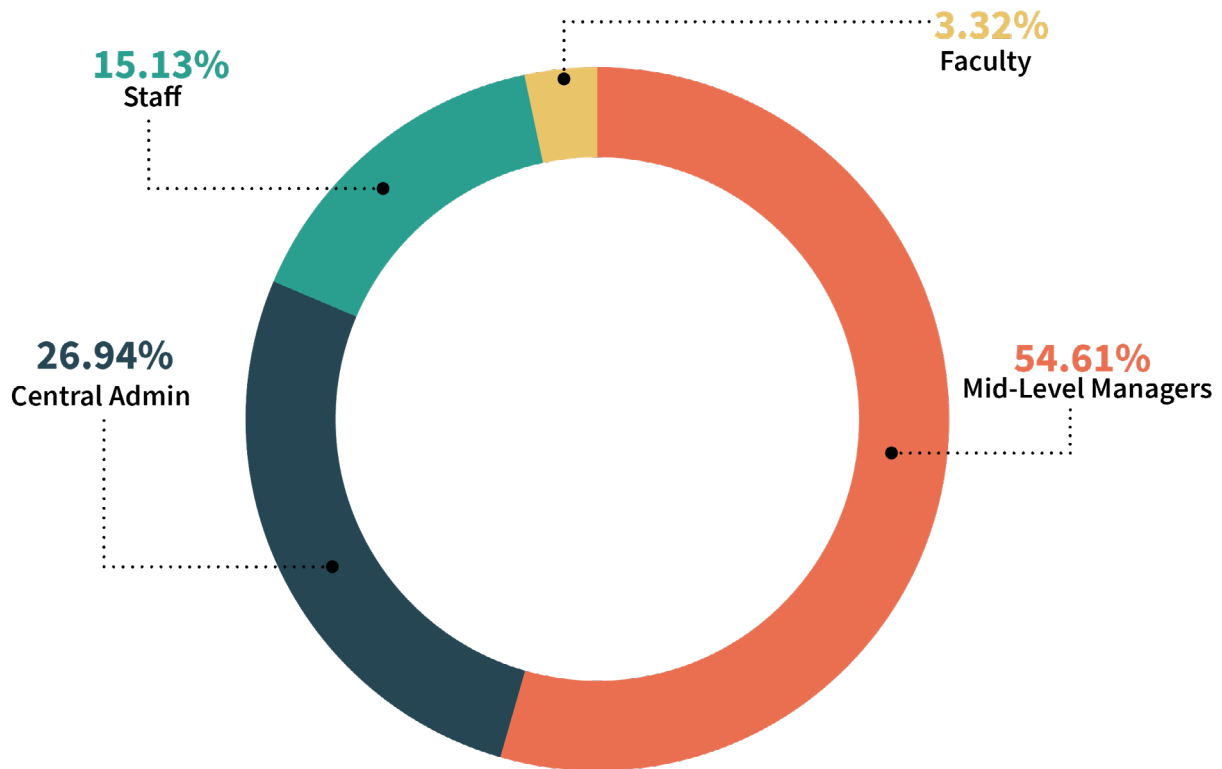


Figure 9

Role of Survey Respondents



Aligned with the student success matrix and the structure of the survey, results are presented according to the themes: Onboarding and Entry, Program Tracking and Support, Teaching and Learning, Career Preparation, and Overall Campus Culture.

Onboarding and Entry

Levels of Importance Results. Onboarding and entry programs, policies, and practices were ranked based on how important survey participants felt the elements were for student success. Respondents identified **first year programs that help students get on track** and **orientation that provides clear understanding of all services** as the two **most important** elements for large-scale student success. Freshman onboarding was also a highly ranked element. **Meta majors** were identified as the **least important** element as seen in Figure 10.

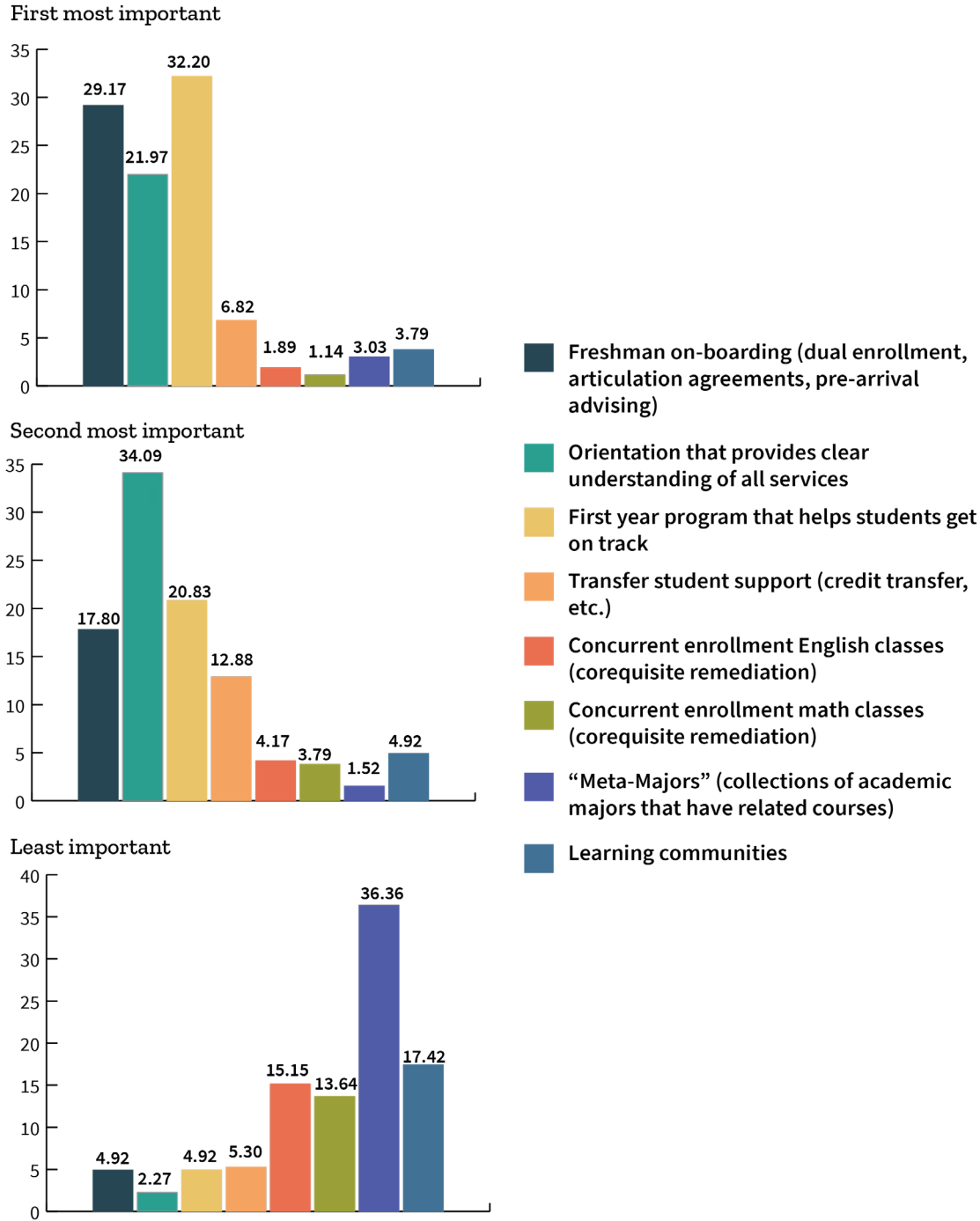
Levels of Implementation Results. Respondents rated the use and implementation of onboarding and entry elements using the scale provided. Respondents reported **orientation that provides clear understanding of all services** as the **most widely used** element across campus. As seen in Figure 11, **concurrent enrollment English courses** were reported most frequently as the element **not used at all**.

Quantitative survey data and aggregated open-ended comments provided some insight into why concurrent enrollment English courses were **not implemented fully on campus**. Corequisites were identified as an element that occurred at community colleges, and open-ended comments noted that providing corequisites was not the role of the four-year sector. Specifically, some state regulations prohibit offering corequisites, competitive admissions may not require a corequisite model, and the mission and profile of the school does not align with the corequisite model. Additional reasons that concurrent enrollment in English courses did not occur include lack of resources, cost, lack of advising to enroll students, and low student interest because

students already have AP credits or place out of remedial courses. Further, concurrent enrollment in English courses may already be implemented at some scale (e.g., student athletes, musicians).

Another notable discovery was the level of unfamiliarity with three areas of onboarding and entry. More than 20% of respondents indicated “I don’t know” for the use of the following practices: concurrent enrollment in English classes, concurrent enrollment in math classes, and Meta-Majors.

Figure 10
Onboarding & Entry Policies, Programs, or Practices Perceived Levels of Importance

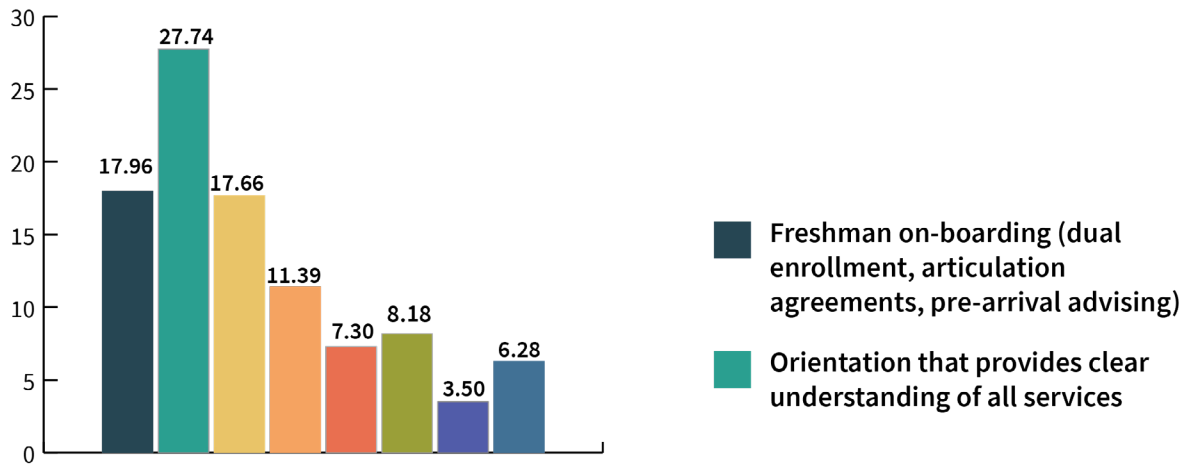


Note. Numbers displayed show percentages of total respondents.

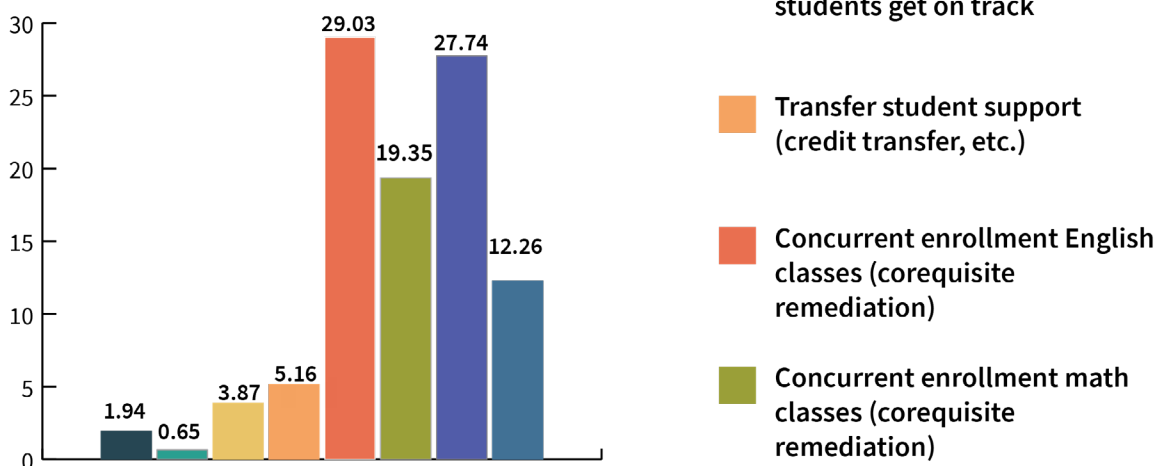
Figure 11

Onboarding & Entry Policies, Programs, or Practices Levels of Implementation

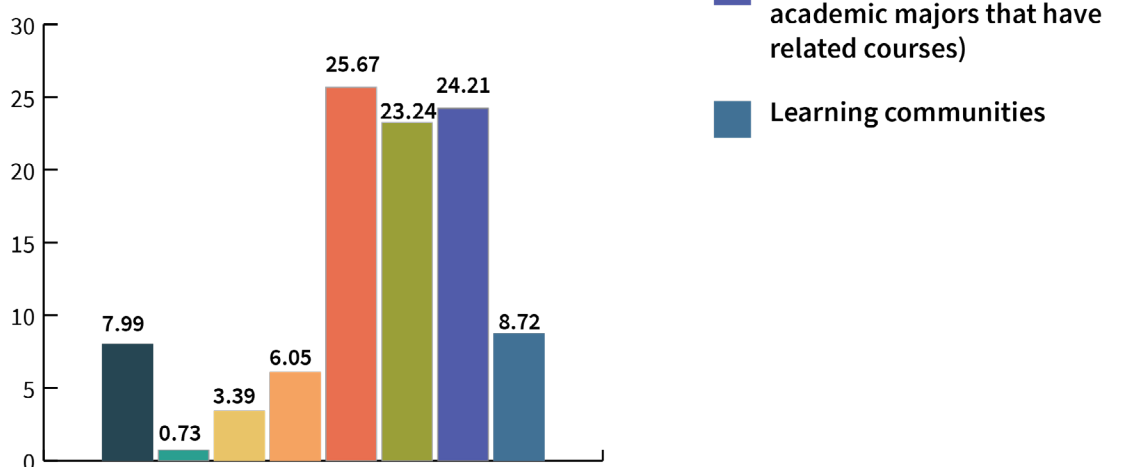
Widely used across campus in most units and/or with most students



Not used at all



Responses indicating "I don't know"



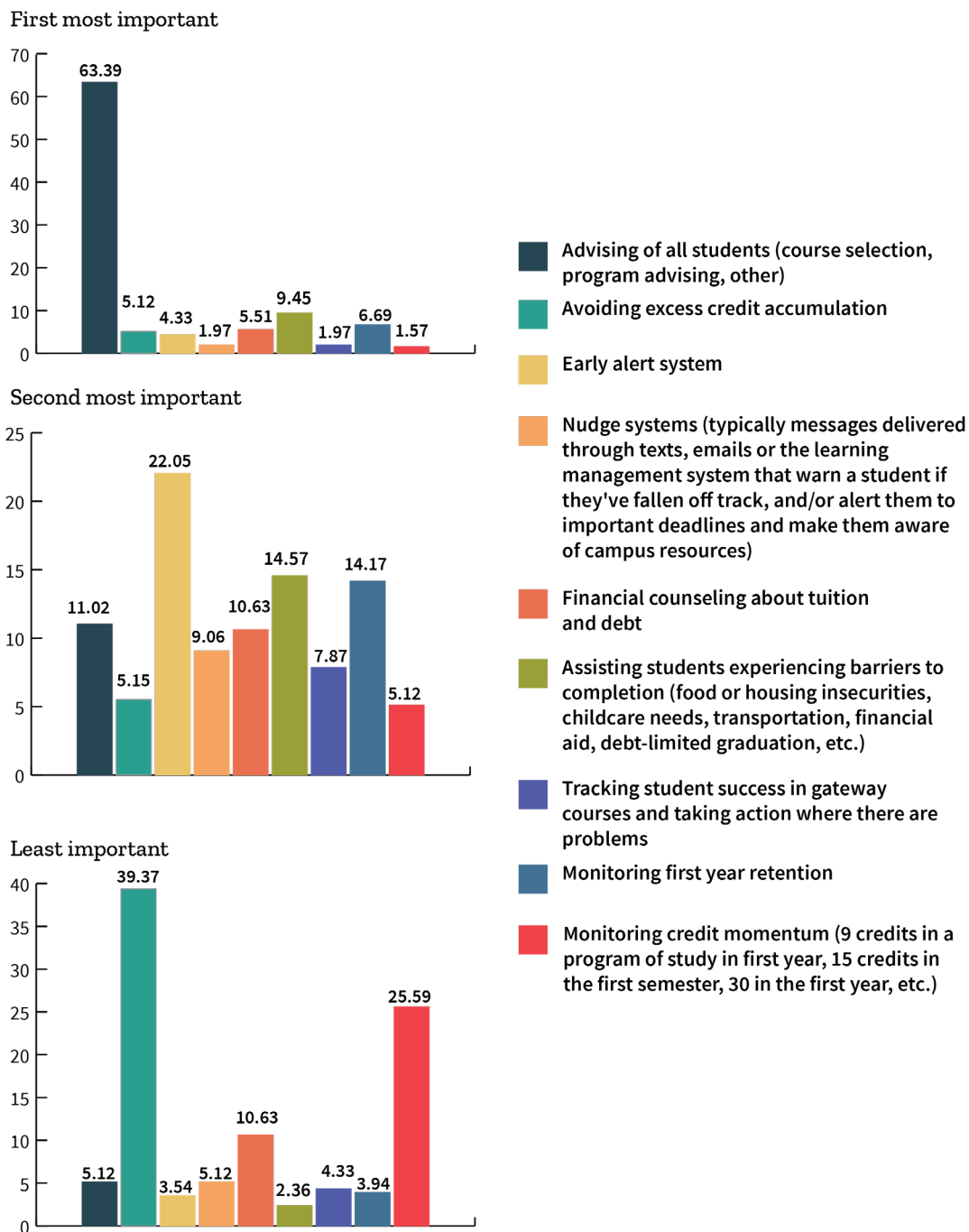
Note. Numbers displayed show percentages of total respondents.

Program Tracking and Support

Levels of Importance Results. Tracking and support programs, policies, and practices were ranked based on how important survey participants felt the elements were for student success. Respondents felt **advising of all students (course selection, program advising, other)** was the **most important** element for large-scale student success as seen in Figure 12. An **early alert system** was most frequently ranked as the **second most important** element. **Avoiding excess credit accumulation** was identified as the **least important** element.

Figure 12

Program Tracking & Support Policies, Programs, or Practices Perceived Levels of Importance

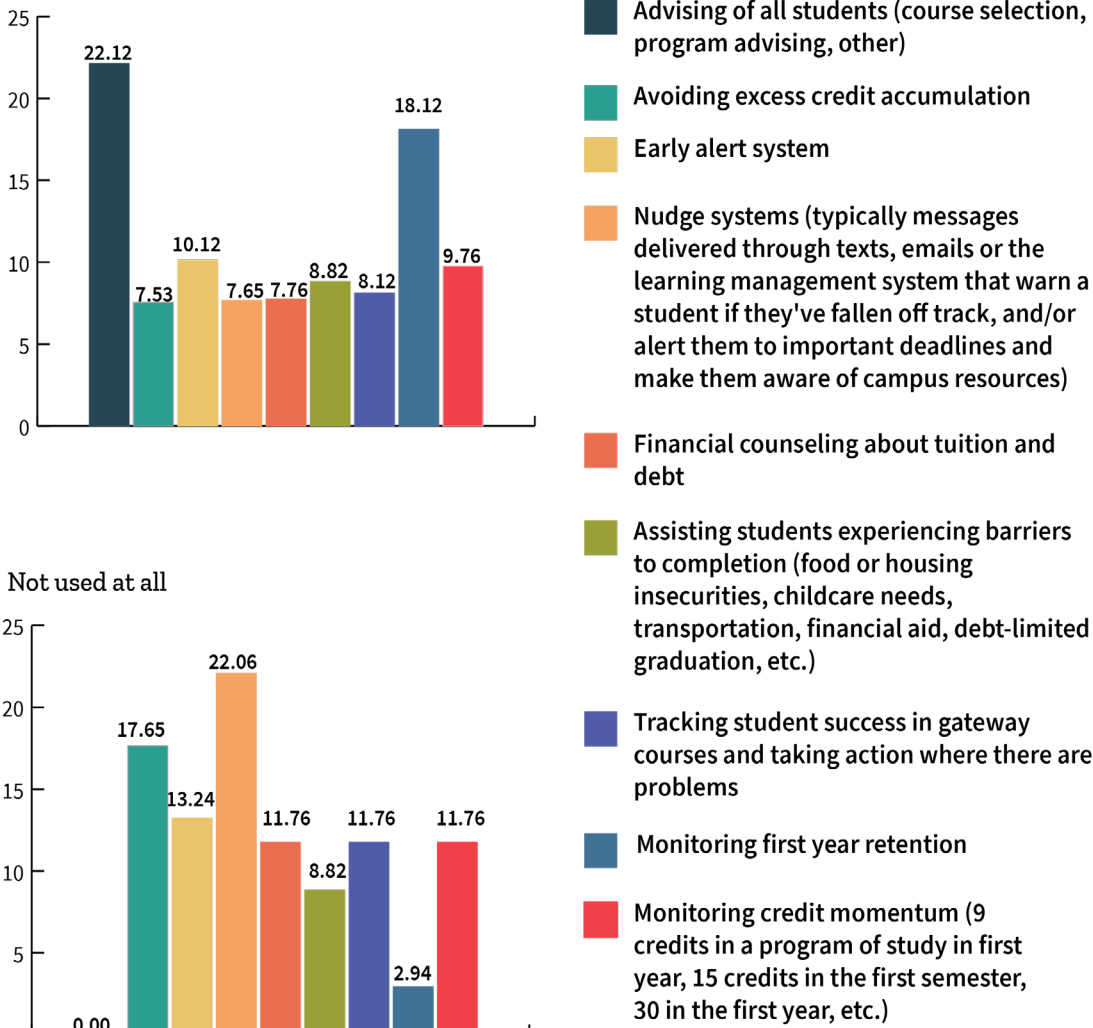


Levels of Implementation Results. Respondents rated the use and implementation of program tracking and support elements using the scale provided. As seen in Figure 13, the **most widely used** practice across campus in most units and/or with most students was **advising of all students (course selection, program advising, other)**. The practice of **monitoring first year retention** was also frequently selected as an element **most widely used**.

Nudge systems were reported most frequently as the element **not used at all** as seen in Figure 13. Quantitative survey data and aggregated open-ended comments provided some insight into why **nudge systems** were **not implemented fully on campus**. Lack of coordination or comprehensive plan for use was a predominant explanation for why nudge systems have not been fully implemented. Additional obstacles to implementation included time, resources, cost, staff training needs, and lack of commitment. Some respondents noted that a system was in the process of being implemented. Other respondents noted that a nudge system seemed intrusive, students should manage themselves, or that there are already many communications that students receive from the institution.

Figure 13

Program Tracking & Support Policies, Programs, or Practices Levels of Implementation
Widely used across campus in most units and/or with most students



Note. Numbers displayed show percentages of total respondents.

Teaching and Learning

Levels of Importance Results. Teaching and learning programs, policies, and practices were ranked based on how important survey participants felt the elements were for student success. Respondents felt **engaged teaching (syllabi, high expectations, culture of caring, support mechanisms)** and **course scheduling that is responsive to student needs (time, frequency, etc.)** were the two **most important** elements for large-scale student success as seen in Figure 14. **Quality assessment of program learning outcomes that lead to credentials, further education, and/or gainful employment** was the **least important**.

Levels of Implementation Results. Respondents rated the use and implementation of program teaching and learning elements using the scale provided. The **most widely used** element of teaching and learning across campus in most units and/or with most students was **degree maps for all programs with default electives** as seen in Figure 15.

Quantitative survey data and aggregated open-ended comments provided some insight into why **course scheduling that is responsive to student needs** was **not implemented fully on campus**, though this element was ranked with high importance. Lack of instructors and resources was a major explanation provided for the absence of course scheduling that is responsive to student needs. Some institutions noted a traditional format of in-person courses based on an “old” 8 – 5 schedule. Further, respondents indicated that faculty preferences drive schedules due to research emphasis. Faculty may also lack consideration for students. While one institution mentioned purchasing a system to help with scheduling, another respondent described the complexity of the course scheduling problem as too big to tackle. Fluctuating course demand, space limitation, and technology challenges were noted as additional obstacles in offering course scheduling that is responsive to student needs.

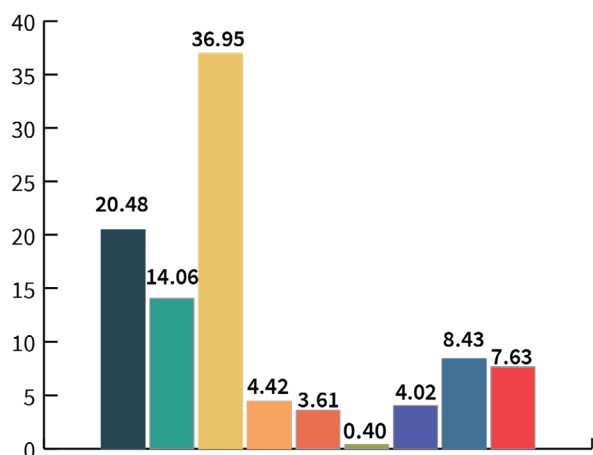


Course scheduling that is responsive to student needs was ranked as the first or second most important element for large-scale student success by 36% of respondents, but 27% of respondents reported this element is not used at all.

Figure 14

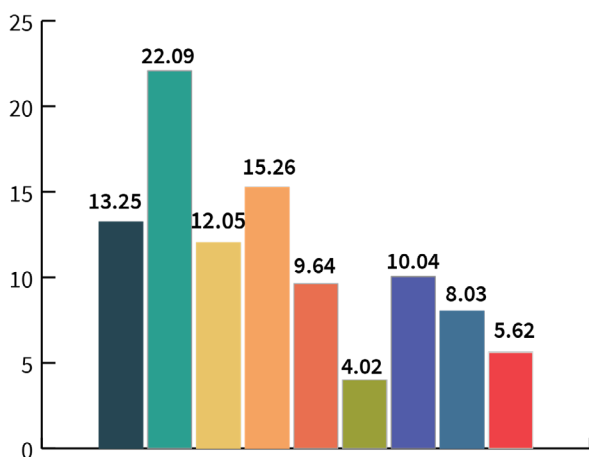
Teaching & Learning Policies, Programs, or Practices Perceived Levels of Importance

First most important

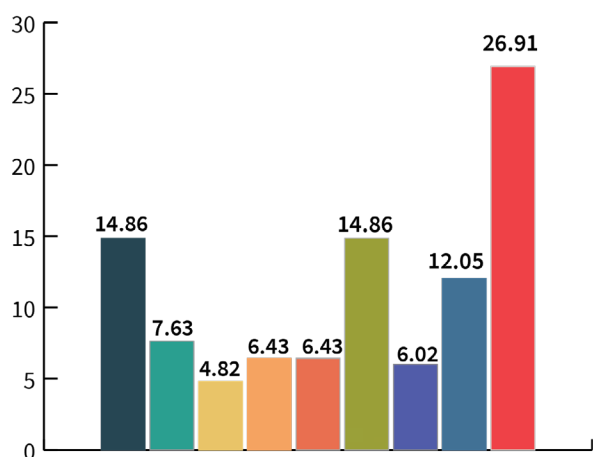


- Degree maps for all programs with default electives
- Course scheduling that is responsive to student needs (time, frequency, etc.)
- Engaged teaching (syllabi, high expectations, culture of caring, support mechanisms)
- Culturally responsive pedagogy and practices
- Professional development programs for faculty for improving teaching
- Professional development programs for faculty about special needs of priority population students
- Experiential learning (research projects, community projects, study abroad, work-based learning, etc.)
- Institution-wide commitment to equity-minded, asset-based teaching improvement
- Quality assessment of program learning outcomes that lead to credentials, further education and/or gainful employment

Second most important



Least important

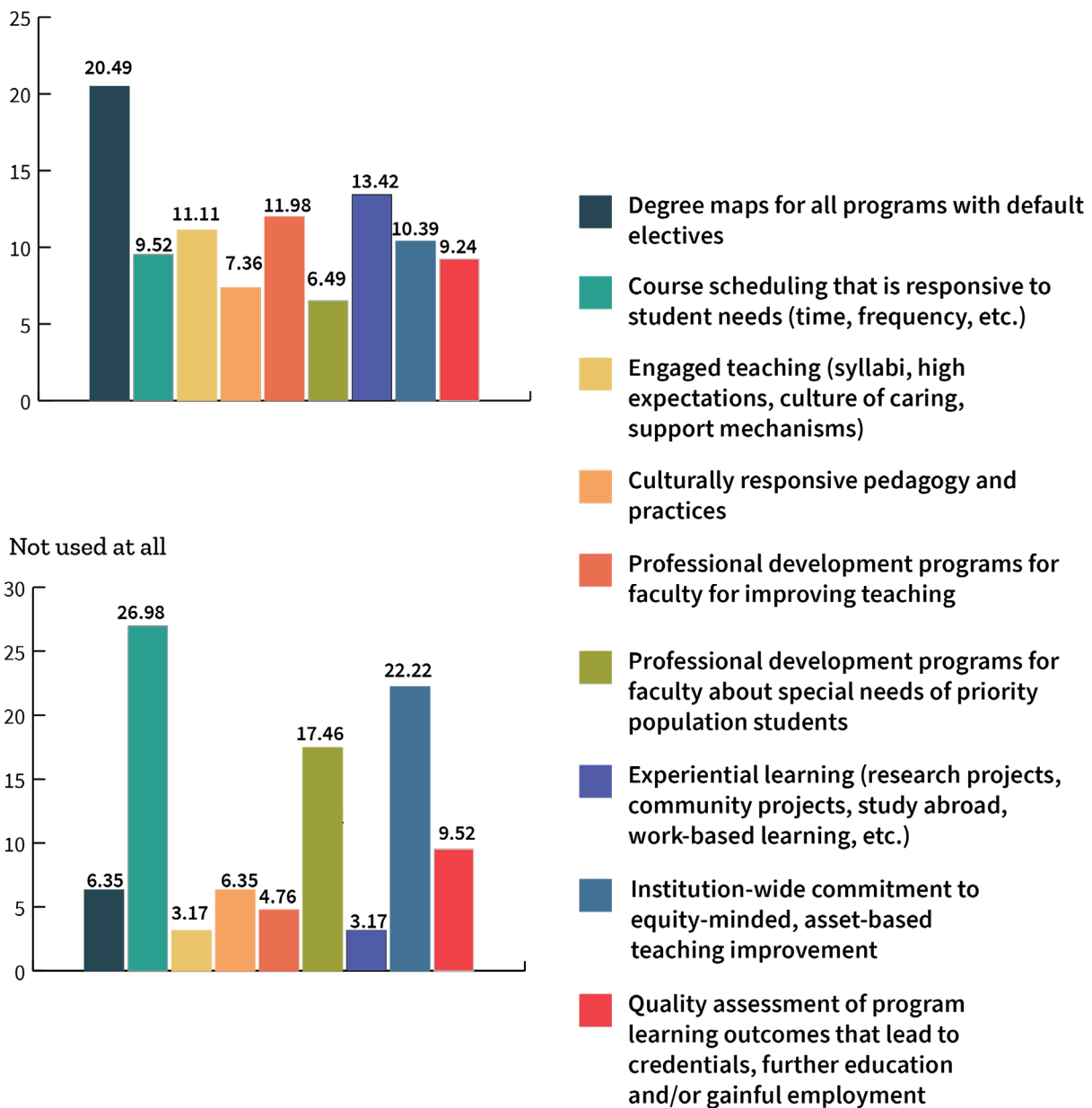


Note. Numbers displayed show percentages of total respondents.

Figure 15

Teaching & Learning Policies, Programs, or Practices Levels of Implementation

Widely used across campus in most units and/or with most students



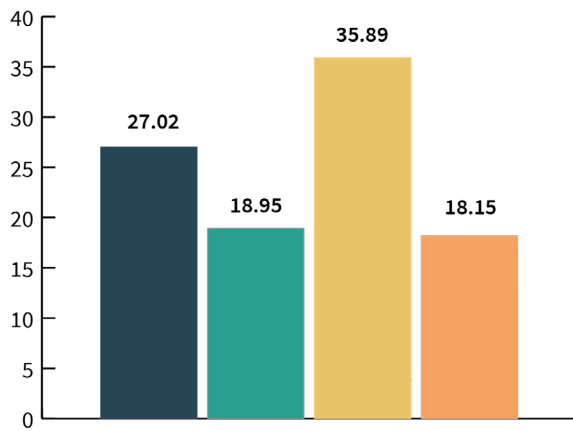
Career Preparation

Levels of Importance Results. Career preparation programs, policies, and practices were ranked based on how important survey participants felt the elements were for student success. Respondents felt **career exploration tools available to students** and **partnerships with businesses and community organizations** were the two **most important** elements for large-scale student success as seen in Figure 16. **Career exploration in the first semester** was identified as the **least** important by 35% of respondents; however, this element was ranked first most important by 27% of respondents. This disparity of opinion over the importance of career exploration in the first semester as it relates to student success provides impetus for further research.

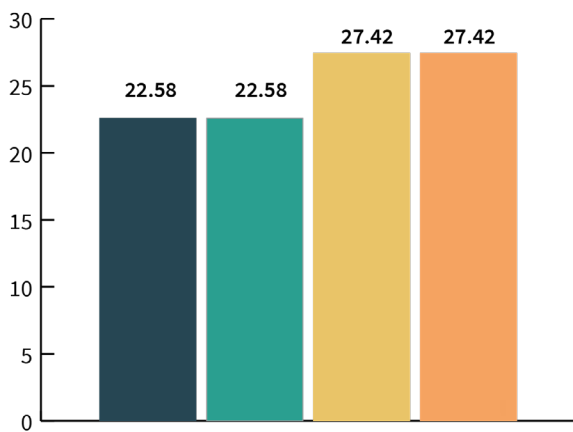
Figure 16

Career Preparation Policies, Programs, or Practices Perceived Levels of Importance

First most important

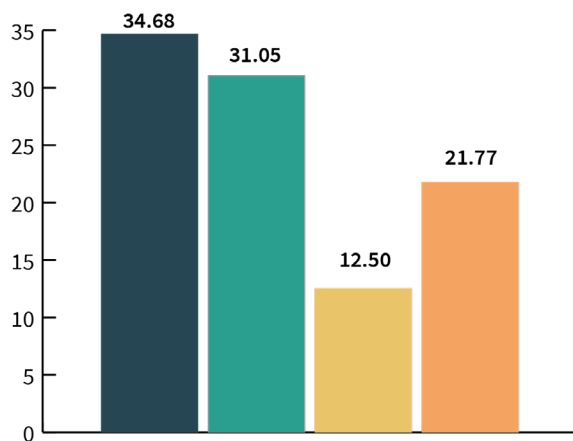


Second most important



- Career exploration in the first semester
- Learning outcomes aligned with skills and knowledge needed for students for advanced degrees
- Career exploration tools available to all students (personality and aptitude assessments, wage data, experiential programs such as co-ops, internships)
- Partnerships with businesses and community organizations to support career experiences and preparation

Least important

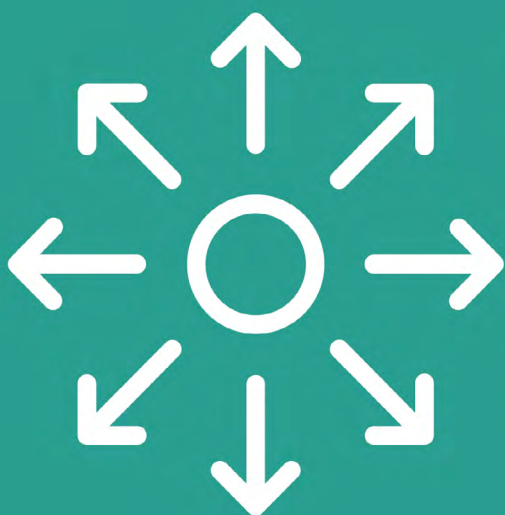


Note. Numbers displayed show percentages of total respondents.

Levels of Implementation Results. Respondents rated the use and implementation of career preparation elements using the scale provided. The most **widely used** elements across campus in most units and/or with most students were **career exploration tools available to all students** closely followed by **partnerships with businesses and community organizations**.

As seen in Figure 17, high percentages of respondents selected "I don't know" in the areas of **career exploration in the first semester** and **learning outcomes aligned with skills and knowledge needed for students for advanced degrees**. These reported levels of unfamiliarity with the use of these practices are grounds for further research.

Quantitative survey data and aggregated open-ended comments provided some insight into why **career exploration in the first semester** was **not implemented fully on campus**. While some institutions explained that current efforts are underway to develop a plan or implement career exploration in the first semester, other institutions noted that students are not open or ready for career exploration in the first semester. Further, academic preparedness is prioritized in the first semester. Full student schedules, limited staffing and resources, competing priorities, and focus on majors were noted obstacles to career exploration in the first semester. The rural location of some institutions may make career exploration in the first semester difficult. Some institutions indicated that career exploration in the first semester is optional; varies by department; or already integrated in FYP, orientations, or courses.

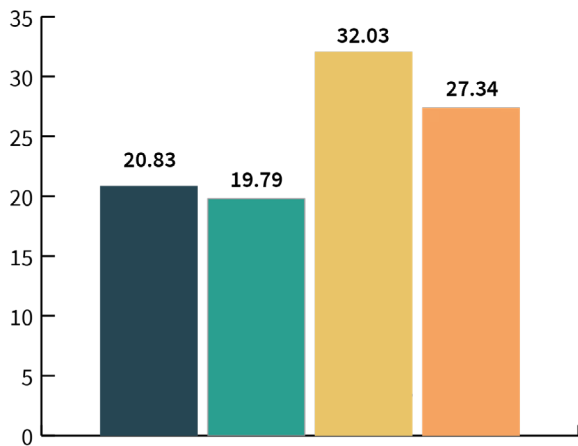


"...a well-designed pathway should give students a number of different options so that experiential learning related to their career can enable students to change course without penalty if they discover they are on a path to a career that does not suit them." (Institute of Higher Education, 2019)

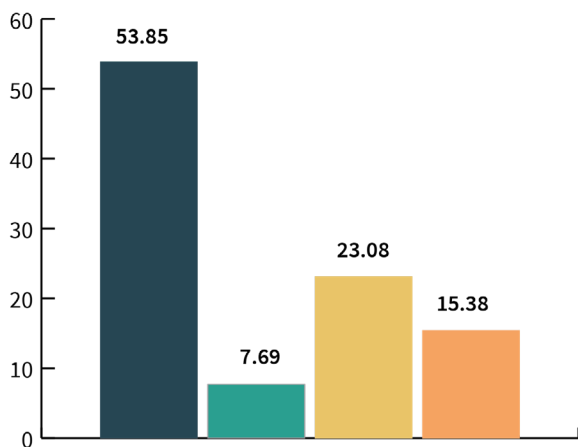
Figure 17

Career Preparation Policies, Programs, or Practices Levels of Implementation

Widely used across campus in most units and/or with most students

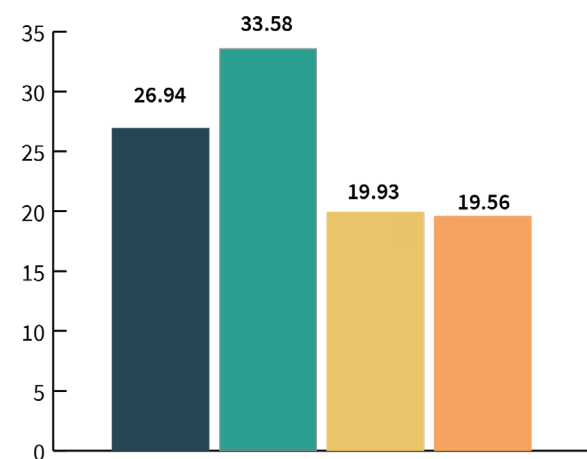


Not used at all



- Career exploration in the first semester
- Learning outcomes aligned with skills and knowledge needed for students for advanced degrees
- Career exploration tools available to all students (personality and aptitude assessments, wage data, experiential programs such as co-ops, internships)
- Partnerships with businesses and community organizations to support career experiences and preparation

Responses indicating "I don't know"



Note. Numbers displayed show percentages of total respondents.

Overall Campus Culture

Levels of Importance Results. Programs, policies, and practices related to campus culture were ranked based on how important survey participants felt the elements were for student success. Respondents indicated **commitment of the campus leadership to student success** and **campus-wide shared definition of student success** were the two **most important** elements for large-scale student success as seen in Figure 18. With a cumulative percentage nearly equal to that of the element ranked second most important, an **inclusive and supportive environment with increased understanding of the lived experience of students** is an additional area of campus culture that was highly ranked within the top two most important elements by 30% of respondents. A **strategic plan that contains detailed planning about student success** was ranked as the **least important** element for student success. This element was followed closely by **campus-wide governance structures that assess/monitor student success**.

Levels of Implementation Results. Respondents rated the use and implementation of elements related to campus culture using the scale provided. **Commitment of the campus leadership to student success** was recognized by respondents as most widely evident across campus by 20% of respondents as seen in Figure 19. A **strategic plan that contains detailed planning about student success** was identified by more than 20% of respondents as the **least important** element; however, this same element was **widely used** across campus by more than 15% of respondents.

Quantitative survey data and aggregated open-ended comments provided some insight into why a **campus-wide shared definition of student success** was **not implemented fully on campus** as indicated by 38% of respondents. Some campuses noted that a shared definition of student success was in development, but coming to consensus and the time needed to create a definition were obstacles to implementation. Existing definitions of success were described as discipline-specific “silos.” Additional explanations mentioned that a shared definition may not be a priority or institutions may not want to create a definition and goals for which all units will be held accountable. Further, turnover in leadership and institutional focus on enrollment more than student success were reasons provided for the lack of implementation of a shared definition of student success.

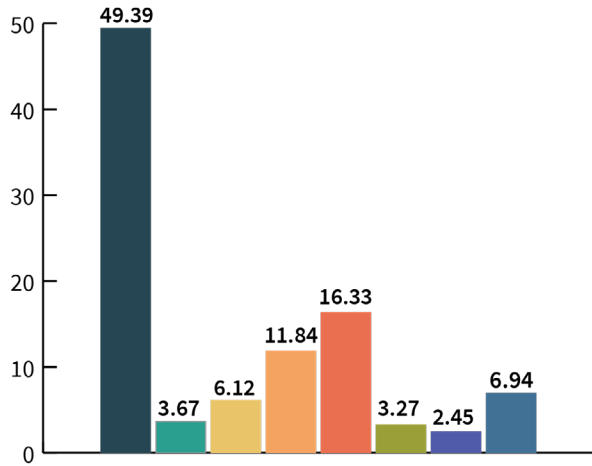


A campus-wide shared definition of student success was not implemented fully on campus as indicated by 38% of respondents.

Figure 18

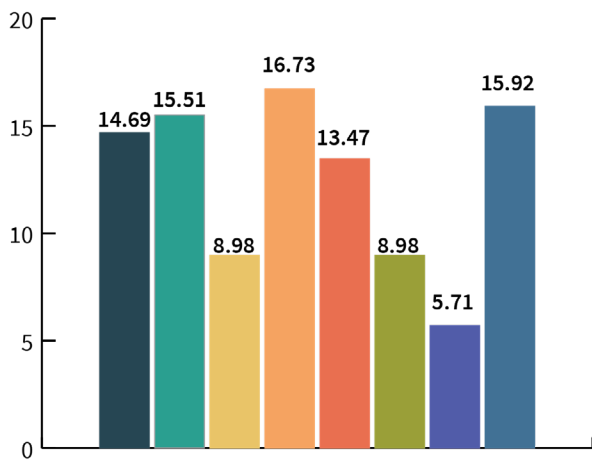
Areas of Campus Culture Perceived Levels of Importance

First most important

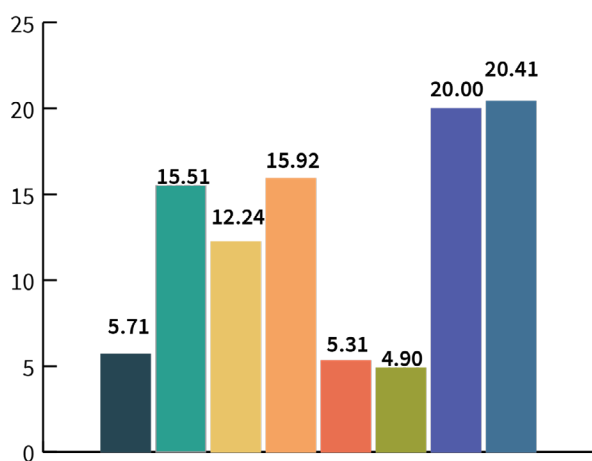


- Commitment of the campus leadership to student success
- Diversity of the faculty and staff
- Data acquisition, disaggregation and analysis, and use in planning
- Campus-wide shared definition of student success
- Campus is an inclusive and supportive environment with increased understanding of the lived experience of students
- Ongoing assessments of student success (degree audits, data analysis, campus-wide discussion and information distribution)
- Campus-wide governance structures that assess/monitor student success
- Strategic plan contains detailed planning about student success

Second most important



Least important

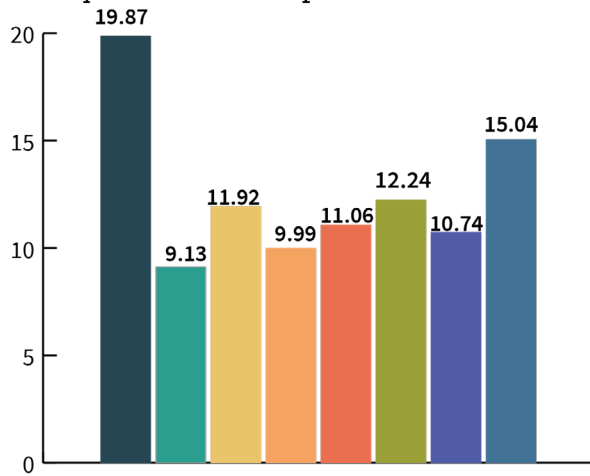


Note. Numbers displayed show percentages of total respondents.

Figure 19

Areas of Campus Culture Levels of Implementation

Widely used across campus in most units and/or with most students



Commitment of the campus leadership to student success

Diversity of the faculty and staff

Data acquisition, disaggregation and analysis, and use in planning

Campus-wide shared definition of student success

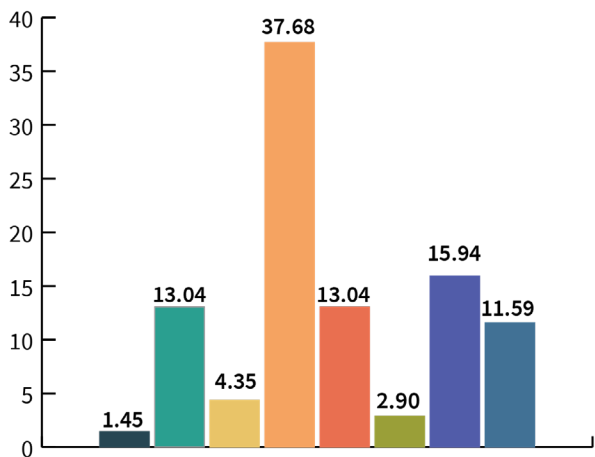
Campus is an inclusive and supportive environment with increased understanding of the lived experience of students

Ongoing assessments of student success (degree audits, data analysis, campus-wide discussion and information distribution)

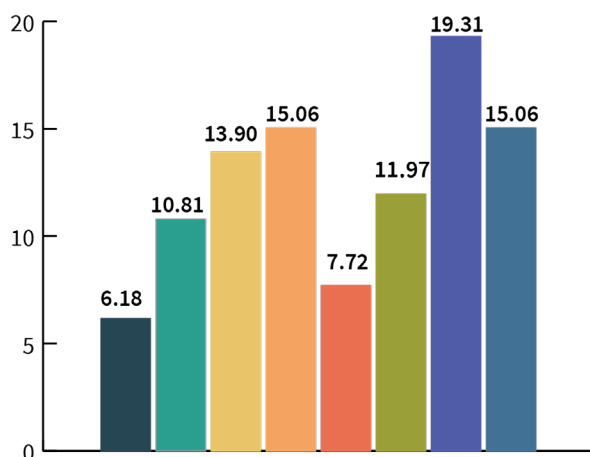
Campus-wide governance structures that assess/monitor student success

Strategic plan contains detailed planning about student success

Not used at all



Responses indicating "I don't know"



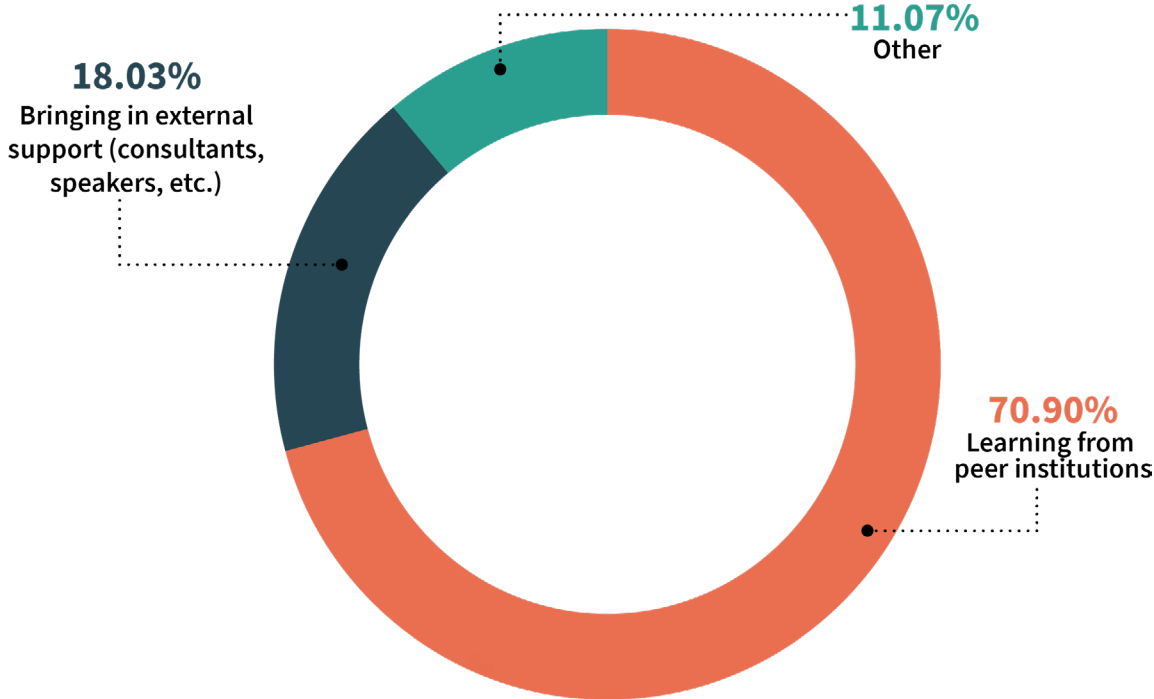
Reflection Questions

Three summative reflection questions asked respondents to consider obstacles to achieving student success, ways campuses might facilitate learning and improvement, and tools that might support campuses facilitate improved outcomes.

When exploring ways to increase student success on your campus, what do you most value?

The majority of respondents indicated **learning from peer institutions** as the most valued method of campus learning as displayed in Figure 20.

Figure 20
Most Valued Methods for Campus Learning

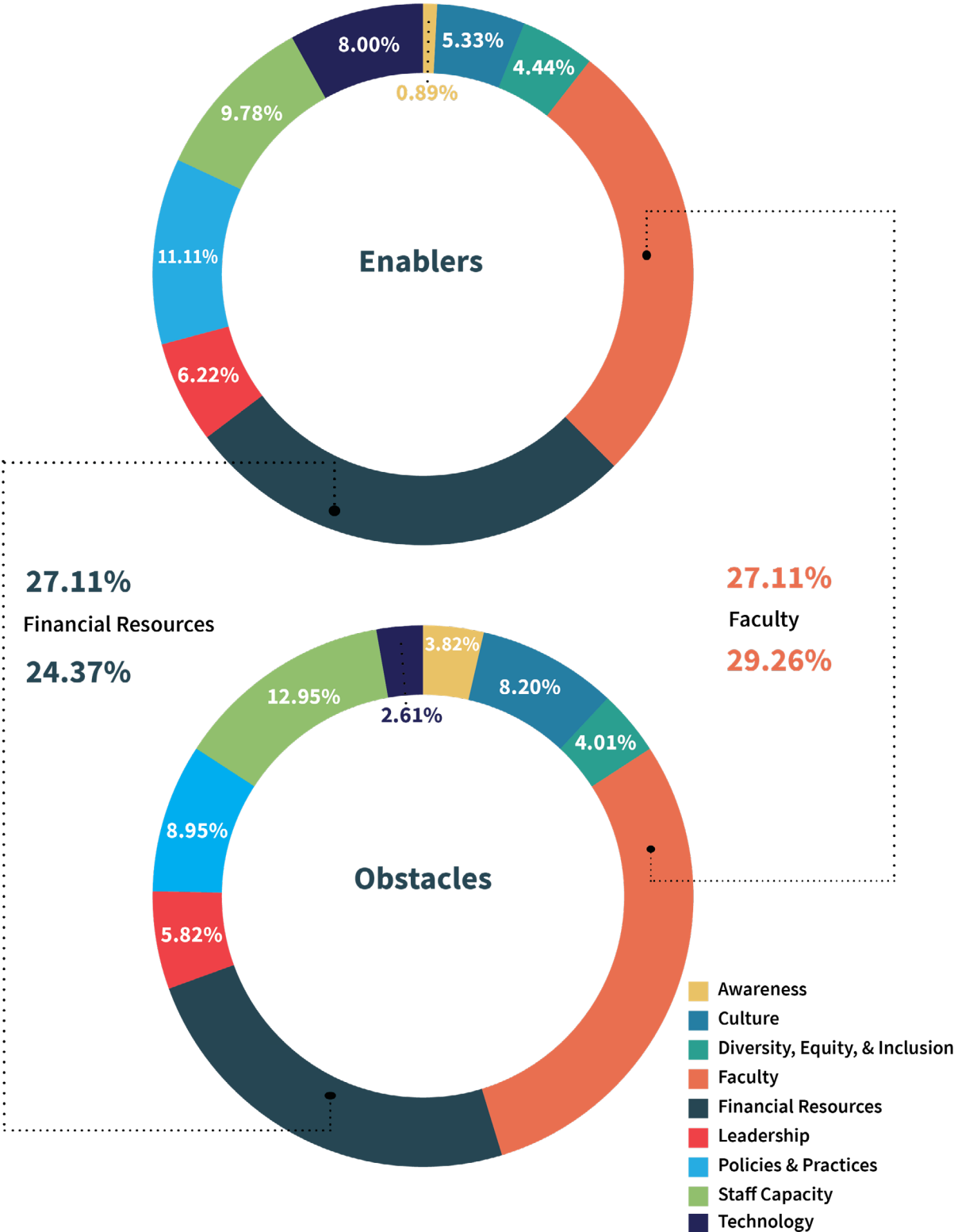


Within the final summative questions, respondents were asked to reflect on student success more broadly. One question focused on obstacles to student success: **what are the most significant obstacles to achieving greater student success on your campus?** Open-ended responses included 2,146 individual references to obstacles. Another question focused on potential facilitators or augmenters of student success: **what specific tools, processes, supports, or services would help increase student success on your campus?** Open-ended responses included 225 individual references to tools, processes, supports, or services that increase student success.

Several common themes appeared in the open-ended responses of the summative questions, and they were grouped accordingly. These themes included awareness of Guided Pathways; culture; diversity, equity, and inclusion initiatives; engagement or disengagement of faculty; presence or lack of financial resources; attention or inattention of leadership to student success; aligned or misaligned policies and practices; staff capacity; and access to or lack of access to technology. The most mentioned facilitators or enablers of student success were **engaged faculty** and sufficient **financial resources**. The most referenced obstacles to student success were also related to faculty and financial resources. Within campuses, the greatest facilitators of student success can also become the greatest obstacles as indicated in Figure 21.

Figure 21

Enablers & Obstacles: Student Success



Interview Data & Analysis

Interview responses were analyzed according to thematic classification aligned with the sub-questions and emergent themes from each question.

Question # 1: How does transformation occur on your campus?

To what extent does it come from within the campus, and to what extent is it externally imposed (by system, state, accreditors, or others)? Who usually drives the agenda? How is the idea or concept announced? How does the campus build support? Do you have a shared definition of student success? Do you have a current model, framework, or conceptual map for how your campus thinks about student success?

Influencers of Change. The responses from the campus interviews suggest that **change comes from multiple sources**. Many campuses noted the impact of both internal and external agents. A number of campuses reported that different actors have different degrees of influence, depending on the campus, and depending as well on the change or innovation taking place. For example, while many campuses reported that the president was often a force for change, at least one campus indicated that a previous president had been an obstacle to change. Interviewees gave several examples for the source of changes on campus: an intersession program was introduced by the president; a retention project came from a faculty retention committee; some metrics for student success came from the state. Other ideas came from external sources, such as Complete College America's 15 to Finish initiative. Engaged faculty are crucial to campus transformation. Peer-to-peer training was noted as an element that could lead to change in perspectives toward student success initiatives. One provost mentioned offering microgrants to promote new ideas. Aligned with survey findings, interview responses also noted that faculty could be a major facilitator of student success with the right supports and professional development.

Internal Influencers. Internal individuals who were most often mentioned were the president, the provost, and individuals in charge of units, like administrators in advising or student success centers. One campus cited the extraordinary influence of a provost who served for 16 years and was a particularly strong advocate for student success before student success became a widespread commitment on many other campuses. Often, new administrators, staff, and faculty brought new ideas and new approaches to student success from their previous institutions. Several campuses also mentioned the powerful influence of students. On one campus, for example, students challenged the English Department about books used in the curriculum that represented the Eurocentric canon, asking instead for books representing substantially more diverse authors and viewpoints. While significant internal influence was described as occurring from the top down, **substantial influence also occurred from different**

parts of campus.

External Influencers. External forces for change included partnerships with organizations working to promote transformation. The Career Pathways Initiative (CPI) was cited by multiple HBCUs as very influential for creating new programming. Another external force was accreditation, particularly the Quality Enhancement Plan process of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). State requirements, mandates, and performance funding also influence campus change efforts. System offices sometimes play an outside role in campus change, particularly when the system office took a very proactive role in student success initiatives. Significant variation exists among systems with respect to influence and change. University associations are also external influencers, particularly when operating large student success initiatives, such as AASCU's Re-Imagining the First Year (RFY). Finally, interviewees named foundations as external change agents, specifically the Gates Foundation, Ascendium, and ECMC Foundation.

Few campuses adopted external initiatives unreservedly. A number of interviewees reported that their **campus administrators carefully considered any innovation or proposal in terms of its "fit" to the campus context**. Nearly all innovations were tweaked or adapted to fit the culture of the implementing campus; innovations were not uncritically implemented as practiced elsewhere. This discovery serves as cautionary advice to potential external influencers seeking to improve student success on campuses.

Data. The role of data in campus change was notable among the interviewees. Some campuses included data as a regular part of assessment processes for programs, using the results to measure progress in student success. Some campuses had well developed data systems, promoting widespread understanding of student progress. Some campuses had developed sophisticated risk models to pinpoint and support students who were having difficulty. One campus reported that it used data to advocate for change; specifically, the use of data was very effective with skeptical faculty members. Sometimes, data were tied to performance indicators, which had the effect of transforming vague aspirations into concrete goals. Other **campuses lacked sufficient data capacity** and requested additional support in professional development for staff and quality data tools.

Shared Definition. A surprising number of campuses did not have a widely accepted or shared definition of student success. Some campuses used a definition from elsewhere. One campus started with AASCU's definition and surveyed its constituents for input to adapt the definition for their institution. The campus interviewee said they would

not have come to the definition as quickly and as focused without AASCU. Their participation with AASCU accelerated this process.

A number of campuses cited the use of the strategic plan to build awareness and a broad understanding of the institution's commitment to student success. However, when the strategic plan emphasized greater student success, **there was not an operative definition of student success that campuses could use to advance the work.**

The informal understanding of student success typically included the common metrics of retention and graduation. Sometimes that understanding included time to graduation. Fewer campuses broadened the idea of student success to include the process of coming to campus (onboarding), and fewer campuses included successful entry into a career or graduate program as part of their definition of student success. While most campuses did not distinguish between transfer and nontransfer students, one campus was notable for its outreach to its feeder community colleges to ensure experiential components in the first two years that would help prepare students to be successful in their first job.

Existing Model or Framework. Many campuses cited a strategic plan with outcomes, but there were few campuses that had an overall model for student success to guide student success efforts. **Without a comprehensive model, student success efforts may be idiosyncratic**—responding to a felt need, external mandate, or individual enthusiasm without a holistic approach to addressing all of the student success needs on a campus.

One campus reported an internal commitment to student success for nontransfer students; whereas, student success efforts for transfer students resulted from external pressure from the state. Varying levels of commitment to the student success agenda arise from different forces—some internal and some external.

Funding and Budget Model/Operations. Increasing a focus on student success was often accomplished by changes in the funding and budgeting process. **Some campuses reported that they moved to a zero-based budget process or changed their budgeting requirements to emphasize student success.** Some departments are required to justify their budgets based on performance metrics, including measures of student success and retention. This budgeting process challenges the often-cited problem of silos and the independence of individual units. One campus cited the example of a provost who asked individual academic departments to create degree maps for their majors. When a department refused to comply, the provost froze all of the department's accounts, prompting a rapid reversal of its position. At least two campuses identified outside grant funding and strategic plans as major drivers of student success programming.

The fear of or actual enrollment loss is also a driver of change. Campuses across the United States, but particularly in the northeast, are facing a 10% or greater decline by 2025. Declining enrollment tends to focus the campus on greater student success. Presidents and business officers pay attention when enrollments and funding linked to enrollment drop. Another strong motivator is performance funding. Presidents pay close attention to performance funding for their own institution; they also pay attention to other campuses in the state and how other institutions fare in the performance system.

Culture Building for Transformation. Frequently, interviewees talked about the importance of culture in increasing the focus on student success. Sometimes respondents cited campus culture as helping to change campus practices; sometimes changing campus practices were noted as affecting and shaping the campus culture. One campus interviewee observed that it felt “safe” to be an innovator on that campus. Several participants suggested that, to make an impact on culture, **student success must be an all-university responsibility**. A critical role in campus change is a boundary-spanner—someone who works effectively with multiple audiences and units of the campus.

Structure seemed to affect culture. One campus reported that the provost had created a campus-wide committee on enrollment, though the real focus was on student success. That committee, representing all parts of the campus, was able to identify and address issues of student success wherever they were. Now, 20 years later, that committee still meets every second week of the academic year. Temporary work teams, composed of a broad cross-section of the campus, were another structure used to address a specific problem or issue. Several campus respondents suggested that **campus culture around student success is always anchored or reinforced by focusing on why student success work is important**. Emphasizing the purpose is critical to create buy-in and acceptance of proposed changes in policy and practice.

Question # 2: What are the obstacles to greater institutional change?

Is money the primary obstacle, or is it time, innovation fatigue? Who are the major objectors (by type)? What are the typical objections to change? How are objections responded to? What arguments seem most successful to counter objections? What are other strategies for overcoming resistance?

Centralization vs. Decentralization. Several interviewees reported that one of the biggest obstacles to change is the issue of centralization versus decentralization. Respondents noted their colleges were often islands of separate cultures, with separate commitments. This is particularly true of larger campuses where the tradition of the independence of units, particularly individual colleges, is strong. Some campuses

address this problem by explicitly assessing student success efforts by individual colleges. Other campuses, as noted earlier, use budget processes to prompt greater participation in student success efforts. Where silos existed, particularly in academic units, the provost challenged the independence of individual units. The provost, in turn, had to have the strong support of the president in order to challenge the autonomy of units.

Time and Initiative Fatigue. Many campuses reported that a major obstacle to change was time. People simply did not think they had time to undertake another innovation. The lack of time was closely tied to initiative fatigue. People reported that their campuses seemed to be in constant flux; after a while, people were simply tired of working on new initiatives. Several interviewees referenced **bandwidth—limits to the amount of change a campus can tolerate**. Small and rural campuses seemed to report this issue more frequently.

Money. Access to additional funding was also reported as a major obstacle to change. When funds were tight, one interviewee reported, there were many more questions about whether the time and money for a new initiative was worth the effort. However, because money was limited, some campuses were able to effect substantive change by the judicious use of funding, especially for new student success initiatives.

Resistance to Change. A common response from interviewees was that there is a lot of resistance to change by individuals who are accustomed to doing things a certain way. Interviewees commented that **many people saw change as loss**, particularly people who had developed, years before, a sense of ownership in a particular way of doing things. Those individuals were oftentimes the fiercest critics of new proposals. For faculty, tenure sometimes had a negative effect on openness to change. Some faculty felt that the award of tenure reduced their obligation to the institution; therefore, any new change that might take time and effort to implement could be rejected.

Another area that was cited was advising, which had historically been a role of faculty. Many reported that faculty want to be involved in advising, but so much has changed over the years that having faculty as advisors requires substantial training. Faculty are also not incentivized for their advising work, leading to inconsistent levels of performance.

Leadership Turnover. An under-reported, but likely critical, obstacle to change is the frequent turnover of senior leadership, particularly presidents and provosts. One person remarked that, when a president steps down, any **student success efforts are often delayed by several years while the new president adjusts**. Another individual commented that a change in the presidency invariably means a change in the focus of

the institution. Sometimes that meant a greater emphasis on student success; other times, that meant a move away from student success to another priority. Occasionally, a new administrator may enrich an already-existing idea. For example, one new provost brought a specific focus on career development to the president's notion of student success—they both then described success as an emphasis on "real experiences" for students. The most common danger participants cited was that, when a student success initiative is too closely identified with a particular administrator, that initiative often suffers or disappears when that administrator leaves the campus.

Rigor and Academic Standards. A frequent comment was that efforts at implementing student success strategies were often met with concerns about the rigor of courses. Some faculty saw an increased focus on broadening access and student success in conflict with high academic standards and rigor. While the majority of faculty care deeply about the success of their students, some faculty see their role as maintaining rigor by weeding out students they do not believe are college material. Faculty may take pride in a low pass rate or with their record of a limited number of high grades.

Lack of a Customer Service Mentality. A number of campus respondents mentioned problems with developing a customer service mentality. On many campuses, offices serving students are scattered for the convenience of staff rather than students. Sometimes lack of funding means limited staff, creating problems in providing optimal service to students. Some websites are not up-to-date, and one campus cited the problem of campus directories not being updated.

Skill Sets. Across the interviews, there were a number of references to missing or inadequate skill sets. Sometimes the problem was in collecting, analyzing, and disseminating data. Several campuses commented on the lack of experience or training in project management. Others wanted to see administrators and faculty develop growth-mindsets as a way to continue on-going learning within the institution.

Question # 3: What kind of external assistance would be helpful in advancing student success on your campus?

Given that there is not enough external funding available to help transform universities, how might external funding be used in the most strategic way? What other kinds of assistance would be helpful? Would professional development be helpful, if so, what kind of professional development? What other information, research details, tools and strategies would be helpful? Other?

Professional Development. A number of campuses mentioned the need for professional development. Two kinds of professional development were most frequently mentioned. For faculty, there was the need for professional development for new approaches to teaching. Several people referenced the need for equity-minded teaching, while others

cited the need for increased use of technology to improve classroom practice. One person cited the need for a new set of ways to evaluate teaching and learning, noting that many current assessment systems depend on student evaluations, which are often popularity ratings in disguise. Another interviewee indicated the need for professional development training for inclusive pedagogy. They had conducted a pilot for a small group of faculty members to undertake that training and it had been transformative. Other professional development that was mentioned was focused on staff and included skill building, particularly among campus staff. Other topics included data management (acquisition, analysis, and distribution), technology training, and better use of analytical tools.

Experiential Learning and Career Preparation. One campus said it wanted to create a Career Preparation Audit that would help a student know whether they did things that were moving them towards a career (creating a network, doing internships, etc.). This new tool would be more than a major map that tracked the courses that were required for a major. Another campus wanted a dashboard but could not afford to build it.

Several campuses suggested that they needed more experiential programs for students, particularly to provide workplace internships or engagement with the community. Some campuses, specifically rural campuses, had a difficult time finding appropriate placements. Some campuses also wanted more help with degree planning and student portfolio development.

External Support. Respondents frequently cited the need for consultants who could give the campus an external perspective of their work—something often not available to campuses. **Campuses need to benchmark their work against national practices.** Some campuses wanted help with culture building. Others wanted help with backward-mapping to K–12 courses and experiences. One campus asked for help with how to partner with community and industry organizations and businesses. Another campus wanted help in how they could communicate to staff their critical value and how their work tied into the core mission of the university.

One campus wanted help with developing a comprehensive student success plan for their campus. Another campus wanted a new learning management system (LMS) with a degree audit function. One campus asked for someone to come in to give advice on a comprehensive reorganization plan for the campus indicating that, without an outside influence, it would likely never happen.

One campus wanted to have professional development around customer service for many of their staff. Another campus wanted professional development for faculty. Both campuses wondered if there were new models of professional development, using

technology, that could reach larger numbers of individuals with a more cost-effective approach.

Campus Connections. Interviewees mentioned the need for inter-campus connections and collaboration. Specifically, there was a desire from interviewees to know about how other campuses handled a process like advising. Meeting people from another campus gave the faculty and staff on a campus opportunity to drill down, explore practices in depth, examine and understand nuance, and deeply understand how specific practices were designed and implemented. Several campuses noted the benefit of their participation in Re-Imagining the First Year (RFY), a project funded by the Gates Foundation, as a great example of peer learning. One campus reported that the participation in RFY resulted in a campus blueprint for student success that, several years later, still guides its work.

A critical comment about peer learning is that **people need to talk to other campuses as groups, not just as individuals.** Far too often, that campus reported, individuals go to a conference, hear about a great idea, but then bring it back to the campus where they are the sole champion or enthusiast. For new approaches to really gain traction on a campus, a number of individuals on campus have to support its adoption. **Connecting a group of people on campus with a best practice elsewhere results in a more rapid, more effective adoption.** One respondent cited a practice of sending teams to campuses that were doing something exemplary. Having multiple people make the visit produced insights and nuances not otherwise available.

Philanthropy and Funding Sources. Many campuses described the significant help that external funding and student success organizations had provided. They also hope for more support in the future. Several campuses described how effective funding was when it involved a foundation, a member organization, and other campuses. One campus commented on the value of a grant that focused on transfer initiatives, which allowed a university to build much stronger ties with a community college partner. However, one interviewee provided a word of caution: **change often takes multiple years; therefore, short-term funding does not promote lasting transformation.**

Implications for the Field

This mixed methods study provided insight into critical driving questions.

1. *Is the Guided Pathways approach, so successfully used among community colleges, applicable or transferable to four-year institutions?*

The researchers found that the Guided Pathways Model is applicable to four-year institutions; however, the language of “Pathways” can be a barrier. The unique contexts of particular subsets of four-year institutions shape how they view the model (regardless of its name). Institutions seek a way to structure and coordinate comprehensive change; however, they may be unaware of the Guided Pathways Model as an option, or they may see it as an effort limited to community colleges. Four-year institutions repeatedly expressed skepticism that external programs and systems would work on their campus without adapting them to the unique culture and circumstances of their campus. Elements of the Guided Pathways Model are significantly useful for four-year institutions—particularly four-year institutions that serve the largest proportion of today’s “new traditional” students—because the struggles these institutions face in retaining and graduating students are the same challenges that community colleges face. A comprehensive roadmap for student success that involves the entire campus is sorely needed.

KEY INSIGHT

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Regardless of the naming conventions, the Guided Pathways Model is perhaps the most promising support for institutions beset by the need to dramatically improve retention, persistence, completion, and labor-market advancement for today’s students.

Like early in the Guided Pathways movement in the two-year space, a noticeable number of four-year institutions work on student success in narrow areas of focus. They use boutique programs rather than scaled interventions—without seeing the need for or having the capacity to create a comprehensive, holistic approach to student success that involves all parts of the campus ecosystem.

The findings also illuminate the need for a common, shared definition of student success grounded in the three undergirding imperatives from the origins of the Guided Pathways movement:

- Institutions must carefully examine their finely disaggregated data and elevate student voice to understand what is actually happening to students (attention to early momentum metrics is particularly important here).

- Institutions can and must own the work of eliminating barriers to student persistence and completion through interrogation and reform of institutional policies and practices.
- Institutions must move beyond boutique interventions that impact only small numbers of students to scaled, whole-institution redesign of policy, practice, and culture grounded in an equity-minded commitment to improving student experience and outcomes.

These core imperatives are not only profoundly relevant to four-year institutions—they are necessary. Regardless of the naming conventions, the Guided Pathways Model is perhaps the most promising support for institutions beset by the need to dramatically improve retention, persistence, completion, and labor-market advancement for today's students.

2. What are the current perceptions about specific strategies and their relationship to student success?

Two broad conclusions about strategies emerged from the study. First, substantial agreement exists across participants and institutions about the importance of certain strategies, both conceptually and in implementation. Second, despite broad agreement, there were significant numbers of strategies that different campuses identified, suggesting that a wide diversity of opinion and approaches is common across the four-year landscape. This was evident in the rank order of survey responses that focused on both the importance and the actual implementation of specific strategies aimed at student success.

3. Is there an analog for the Guided Pathways Model among four-year institutions? If so, what are the features of such a model?

It was difficult to discern a single model for how four-year institutions approach student success because there was such wide variability in the ways that campuses address student success. There were some commonalities in the key areas that campuses focused on: advising; monitoring of student progress and early alert systems; attention to financial issues, especially financial aid support; degree maps; and monitoring credit momentum and similar issues. However, there were also several areas less addressed by four-year institutions: focus on teaching excellence; meta-majors; and other support systems. Wide variability also exists in the implementation and use of approaches shown to be effective in increasing student success.

If student success work in the four-year sector were viewed as a continuum, some four-year campuses are very far along, some campuses are in the middle, and some are still in the beginning stages of developing a robust set of programs and a campus culture that supports greater student success. Though institutions may be at varying stages of student success work, four-year institutions would benefit from clear supports in transitioning to a model. Understanding an institution's developmental stage on the Guided Pathways timeline for implementation is important to begin work with clear goals and activities.

4. *Where are the key areas of emphasis (priorities and challenges) related to four-year institutions' formal commitment to student success?*

Campuses reported that the siloed nature of universities made it difficult to create a coordinated, all-university commitment to student success. Campuses could benefit from a set of ideas and practices that connect units to one another and to the larger institution. For example, what are the various strategies to hold individual colleges in the institution accountable for student success? What are the strategies to hold individual departments accountable?

Several interviewees reported that there was significant resistance to change by people who had become comfortable with a certain way of doing things or who feared that change meant loss. More professional development for senior leaders about how to initiate and lead change would be helpful in overcoming resistance.

Some campuses reported that advances in student success were often stalled when new presidents or senior leaders arrived on campus. Professional workshops on continuity of change and momentum loss reduction through better hiring and a more grounded set of strategies would be helpful for several campuses.

A core obstacle with student success, especially success for students who need greater support, was a belief that success can only be created by a reduction of high standards and rigor. The field would benefit from evidence-based and historical

HIGHLIGHTS

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The field would benefit from a tool that helps campuses agree upon a shared definition of student success.

Campuses may benefit from a tool which describes the current work of student success across the country—policies, programs and practices—that might shape student success efforts in all parts of a four-year campus.

examples that demonstrate success for students who need support can be achieved in a context of high standards and rigor.

Many campuses reported that they did not have a common definition of student success. The field would benefit from a tool that helps campuses agree upon a shared definition of student success. The ITA may serve that function.

The campuses that were interviewed also lacked a comprehensive model of student success that could guide their efforts and highlight areas of weakness. Those campuses might benefit from a tool which describes the current work of student success across the country—policies, programs and practices—that might shape student success efforts in all parts of a four-year campus.

5. *What supports do four-year institutions need to clearly articulate and confidently pursue a comprehensive student success agenda?*

Many campuses cited the need for greater professional development. For faculty, professional development that centers on the improvement of teaching was a noted area of need. New models are needed, particularly models that are lower in cost, higher in effectiveness, and broader in outreach—impacting more faculty on a campus. Professional development was also cited for staff, particularly professional development around data, the use of technology, and the use of new analytic tools.

A number of campuses indicated the need for external consultants, particularly for services like developing a new organizational structure, creating or updating a comprehensive student success plan, and helping develop a robust data capacity. Perhaps most frequently, campuses expressed the desire to have structures that would allow people from one campus talk to people on other campuses. There was a notable interest in seeing how other campuses handle issues or solve a challenge. Foundations could support the development of networks among similar institutions to work on issues of student success together.

Campuses also identified collaborative work with other campuses as a strong source of new ideas. Foundations might consider increasing the number of collaboration opportunities they fund to increase student success. Collaboration opportunities may include campuses from different parts of the country. In some instances, university systems are also strong forces for change. Funding considerations may be targeted within a specific system, or even more creatively, among a set of interested and committed systems.

Campuses commonly reported that they considered the issue of “fit” when

thinking about adopting a strategy or program. Therefore, any model that is being disseminated to the field should have an early period of deliberate consideration about how to tweak the model to fit a particular campus.

Campuses reported that data were very powerful in providing a motivation for change. However, campuses often did not have a robust data system that collected, analyzed, and disseminated data to effect change. National workshops on data processing and literacy would be helpful for campuses needing assistance with their data.

Finally, campuses reported that enrollment declines were a powerful force to push the student success agenda. A tool which allowed a campus to see its own return on investment for every student who is retained and graduates would be useful in advancing the student success agenda.

Additional Questions and Research

There are several questions that warrant further exploration. Additional insights gained from future studies may lead to greater knowledge development and field building among partners and institutions within the Foundation's ecosystem.

- 1. The Connection Between Services, Solutions, and Capacity Building in the Four-Year Sector.** This project has explored a comprehensive understanding of student success, and it has helped to illuminate the critical need to connect on-the-ground solutions while synchronously building capacity and integration for those solutions to flourish and be sustained within the institution. While many institutions were already implementing multiple student success strategies tied to their strategic plans, the most salient areas needing further study and support are (a) how to assess and evaluate against key metrics across the institution with consideration for depth and breadth; (b) how to develop will-building and climate and culture change for capacity building to take place; and (c) how to build capacity with consideration for time, institution size, geographic location, and resources. As mentioned, time was one of the primary barriers to capacity building. Future studies might explore how capacity building is initiated with consideration of time in relation to the aforementioned variables; what are the driving questions institutions should explore as a means to understand current capacity and future or ideal state; how does one create capacity across multiple areas while focusing on integration of specific capacities?
- 2. Faculty.** The number one enabler of and barrier to student success, as identified in the survey and interview data, was faculty. This key stakeholder group has

the ability to drive or impede change across an institution. Faculty in four-year institutions have a dispersed set of responsibilities that includes the traditional set of performance measures in teaching, scholarship, and service. Faculty working toward promotion and tenure are seldom encouraged to focus on student success as a path to personal and professional success within their discipline. Future research might consider (a) a comparative study to assess student success outcomes and ROI based on institutions that have intentionally integrated faculty into their campus-wide student success strategy (e.g., advising caseload; increased teaching load; professional development around pedagogy and classroom management; diversity, equity, and inclusion training; and tenure tied to student success); (b) a field scan of peer-to-peer models that have accelerated faculty buy-in and support for student success; and (c) a national effort to expand understanding of the relationship between faculty research, effective teaching, and student success outcomes.

- 3. Existing Model or Framework.** Many campuses cited a strategic plan with outcomes, but there were not many campuses that had an overall model or framework for student success. A strategic plan speaks to an institution's priorities, outlines where an institution wants to directionally move relative to student success, and directs actions to reach an established set of goals and objectives; however, it does not provide a holistic model for inputs, outputs, time, trajectory, and orientation to the work. Without a comprehensive model, student success efforts may be idiosyncratic. This raises the question: how can institutions integrate strategic plans with a conceptual model or framework that is connected to the student journey? As indicated, campuses were skeptical that external programs and systems would work on their campuses without adaptation, thus, leveraging an existing four-year model like the University of Florida may gain greater traction within the sector.
- 4. Commitment and the Human-Centered Dimensions of Change.** When asked a series of questions about overall campus culture and leadership, respondents overwhelmingly indicated commitment of the campus leadership to student success and a campus-wide shared definition of student success as the two most important elements for large-scale student success. A strategic plan that contains detailed planning about student success was ranked the least important. Given that leadership commitment was ranked as a key element, further studies might explore the construct of commitment including (a) identification of an operational definition, (b) attributes of commitment, (c) accelerators of commitment, and (d) derailleurs of commitment. This work can be paired with a climate and culture scan to highlight campus stakeholders within an institution's network who can help facilitate change based on their identified high levels of commitment to student success.

- 5. Peer Learning and a Network Approach.** A critical comment about peer learning is that people need to talk and engage with other campuses as groups, not just as individuals. For new approaches to gain traction on a campus, several individuals on campus must support its adoption. Connecting a group of people on campus with a best practice elsewhere results in a more rapid, more effective adoption. The Frontier Set is a great example of a peer-learning network where institutions are collectively learning and iterating around key student success practices. Key questions for the field include (a) can this model be replicated at more institutions: if so, how would this process occur; (b) are there lessons from this body of work that can be leveraged across the Foundation's strategy; and (c) did a peer-learning network provide any insights into the relative speed and traction at which change can occur: does belonging to a network accelerate change and allow for greater traction of solutions?
- 6. A Shared Definition and Implications for Assessment and Evaluation.** A surprising number of campuses did not have a widely accepted or shared definition of student success. It is difficult to measure what is not defined. Multiple institutions mentioned first-year retention rates or graduation rates as tied to their definition of student success; however, when prodded, respondents' definitions were much broader. Many campuses did not appear to include a students' initial onboarding into the institution or transition in graduate school, professional school, or career. Additional questions for consideration by the four-year sector include (a) does the definition of student success consider the entire trajectory of a student's experience as outlined in the Guided Pathways Model for Access-Oriented Four-Year Institutions; (b) is the definition of student success measurable, and does it include leading and lagging indicators; (c) does the definition of student success balance academic achievement with personal growth and exploration; (d) what is the process for developing a definition of student success; (e) is the process of developing a definition inclusive of key stakeholders including students; and (f) if a definition of student success is established, is there room for refinement based on current context?
- 7. Career Exploration and Concurrent Enrollment.** As multiple stakeholders continue to question the ROI of a postsecondary credential or degree, it will be paramount that institutions are able to clearly articulate the benefits of attainment for both the individual and larger community. This pressure was evident in the surveys and interviews as multiple campuses referenced current and long-term enhancements to student success efforts focused on career. Interesting insights gathered through the survey indicate that career exploration in the first semester was ranked as least important by 35% of respondents. Yet, it is worth noting that nearly 50%

of respondents ranked this career preparation element as most or second most important for student success. Additionally, more than 50% of respondents indicated their campuses did not use career exploration in the first semester while 27% indicated "I don't know." This may be considered an area for additional study since there are mixed opinions and unfamiliarity over the importance of these elements, and the practice is the highest reported as not being used at all.

A similar pattern of low rated implementation levels and uncertainty among respondents emerged in the onboarding and entry element of concurrent enrollment in English and math. Nearly 30% of respondents indicated concurrent enrollment in English was not used at all, and 19% noted concurrent math enrollment was not used at all. However, 26% (English) and 23% (math) of respondents indicated "I don't know" regarding the use of these practices.

While the Guided Pathways Model for student success is applicable in the four-year sector; there are many opportunities to optimize institutional fit. Receptivity of a student success model in this sector is impacted by language and underlying associations with two-year institutions. However, evidence-based examples of student success may influence institutional mindsets. Gaining momentum for and implementing a model in the four-year sector will require clear supports for institutions. Though efforts exist to improve student success outcomes in the four-year sector, some appear to be sporadic and inconsistent. More work must be done to support institutions to adopt a campus-wide model centered on students and equity. Programs, policies, and practices aligned with the student success matrix and grounded in the human-centered dimensions of the work can impact student outcomes. Ultimately, improving student success outcomes has broader implications for social and economic well-being for all.

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Appendix A

Student Success Matrix

Student Success Definition

Student success is defined as equitable outcomes among all students in college completion and advancement to graduate study or entry into first career job.

Five Themes and Concomitant Elements of Student Success

The following list was developed from three core documents: the UNCF Four-Year Pathways Rubric, the UF Guided Pathways at Access-Oriented Four-Year Institutions Model, and the Guided Pathways Model.

Onboarding and Entry

1. Freshman on-boarding (dual enrollment, articulation agreements, pre-arrival advising)
2. Orientation that provides clear understanding of all services
3. First year program that helps students get on track
4. Transfer student support (credit transfer, etc.)
5. Concurrent enrollment English classes
6. Concurrent enrollment math classes
7. Tracking student success in gateway courses and taking action where there are problems
8. Monitoring first year retention success
9. Meta majors
10. Learning communities

Program Tracking and Support

1. Advising and mentoring of all students (course selection, program advising, other)
2. Avoiding excess credit accumulation
3. Early alert system
4. Nudge systems
5. Special support for marginalized students
6. Financial counseling about tuition and debt
7. Assisting students with barriers to completion (food or housing insecurities, childcare needs, transportation, financial aid, debt-limited graduation, etc.)

Teaching and Learning

1. Degree maps for all programs

2. Course scheduling that is responsive to student needs (time, frequency, etc.)
3. Teaching (syllabi, high expectations, culture of caring, support mechanisms)
4. Culturally responsive pedagogy and practices
5. Professional development programs for faculty for improving teaching
6. Professional development programs for faculty about special needs of marginalized students
7. Experiential learning (research projects, community projects, study abroad, work-based learning, etc.)
8. Institution-wide commitment to equity-minded, asset-based teaching improvement
9. Quality assessment of program learning outcomes that lead to credentials, further education and/or gainful employment

Career Preparation

1. Career exploration in the first and second year of college
2. Learning outcomes aligned with skills and knowledge needed for students for advanced degrees
3. Career exploration tools available to all students (personality and aptitude assessments, wage data, experiential programs such as co-ops, internships)
4. Partnerships with businesses and community organizations to support career experiences and preparation

Overall Campus Culture

1. Commitment of the campus leadership to student success
2. Diversity of the faculty and staff
3. Data acquisition, disaggregation and analysis, distribution and used for planning
4. Campus-wide shared definition of student success
5. Campus is an inclusive and supportive environment with increased understanding of the lived experience of students
6. On-going assessments of student success (degree audits, data analysis, campus-wide discussion and information distribution)
7. Campus-wide governance structures that assess/monitor student success
8. Strategic plan contains detailed planning about student success

Appendix B

The Guided Pathways Model



Guided Pathways: Planning

Creating guided pathways requires managing and sustaining the process of planning, continues through consistent implementation, and leads to college completion, transfer, and attainment of job and career goals.

PLANNING

ESSENTIAL CONDITIONS

Make sure the following conditions are in place – prepared, mobilized, and adequately resourced – to support the college’s large-scale transformational change:

- Strong change leadership throughout the institution
- Faculty and staff engagement
- Commitment to using data
- Capacity to use data
- Technology infrastructure
- Professional development
- Favorable policy (state, system, and institutional levels) and board support
- Commitment to equity in student outcomes

PREPARATION/AWARENESS

Understand where you are, prepare for change, and build awareness by:

- Engaging stakeholders and making the case for change
- Establishing a baseline for key performance indicators
- Building partnerships with K-12, universities, and employers
- Developing flowcharts of how students choose, enter, and complete programs
- Developing an implementation plan with roles and deadlines

SUSTAINABILITY

Commit to pathways for the long term and make sure they are implemented for all students by:

- Determining barriers to sustainability (state, system, and institutional levels)
- Redefining the roles of faculty, staff, and administrators as needed
- Identifying needs for professional development and technical assistance
- Revamping technology to support the redesigned student experience
- Reallocating resources as needed
- Continuing to engage key stakeholders, especially students
- Integrating pathways into hiring and evaluation practices

EVALUATION OUTCOMES

Measure key performance indicators:

- Number of college credits earned
- Number of college credits earned in first year
- Completion of gateway courses in student’s first year
- Number of college credits earned in first year
- Persistence from term 1 to term 2
 - Rates of college-level course completion in students’ first year
 - Equity in outcomes

Revisit conditions, sustainability, and outcomes to improve pathways by building on elements that are working or discarding elements that are not.

EVALUATION

Pathways collaborative organizations: [AACCC](#), [AAC&U](#), [AASCU](#), [Aspen](#), [ATD](#), [Carnegie/WestEd](#), [CCA](#), [CCCSE](#), [CCRC](#), [Dana Center](#)

ing, Implementation, Evaluation

sustaining large-scale transformational change. The work begins with thorough on, and depends on ongoing evaluation. **The goals are to improve rates of os with value in the labor market — and to achieve equity in those outcomes.**

IMPLEMENTATION

CLARIFY THE PATHS

Map all programs to transfer and career and include these features:

- Detailed information on target career and transfer outcomes
- Course sequences, critical courses, embedded credentials, and progress milestones
- Math and other core coursework aligned to each program of study

HELP STUDENTS GET ON A PATH

Require these supports to make sure students get the best start:

- Use of multiple measures to assess students' needs
- First-year experiences to help students explore the field and choose a major
- Full program plans based on required career/transfer exploration
- Contextualized, integrated academic support to help students pass program gateway courses
- K-12 partnerships focused on career/college program exploration

EARLY OUTCOMES

Success indicators, including:

• Credits earned in first term

• Credits earned in first year

• Math and English courses in the

• Credits earned in the program of

• Credits 1 to term 2

• Level course completion

• Academic year

• Outcomes

and implementation. Continuously
implements that work and adjusting
not serving all students well.

HELP STUDENTS STAY ON THEIR PATH

Keep students on track with these supports:

- Ongoing, intrusive advising
- Systems for students to easily track their progress
- Systems/procedures to identify students at risk and provide needed supports
- A structure to redirect students who are not progressing in a program to a more viable path

ENSURE STUDENTS ARE LEARNING

Use these practices to enrich and assess student learning:

- Scaled high-quality, program-relevant, applied learning experiences
- Intentional and sustained student engagement
 - Evidence-based, high-impact teaching practices across modalities
 - Institution-wide commitment to equity-minded, asset-based teaching improvement
 - Quality assessment of program learning outcomes that lead to credentials, further education, and/or gainful employment

EVALUATION

Center, JFF, NCIJ, OCCRL, Sova, and UNCF.

OCTOBER 2019

Appendix C

UNCF Four-Year Pathways Rubric

Four-year Pathways Rubric

Question 1: Does the institution have a clear definition of equity?

Indicator Statement 1: The institution has articulated a clear definition of equity that is widely shared (e.g. website, town-hall meetings, faculty meetings, syllabi, policies) and implemented consistently, campus wide.

- The institution has not established a definition of equity.
- Equity is only defined and documented in the institutional policies, but it is not shared nor is equity being implemented through policies or practices.
- Equity is defined and documented within institutional policies but is inconsistently shared and implemented through policies or practices across the campus.
- Equity is defined and documented within institutional policies, communicated regularly, and consistently practiced campus wide.

Question 2: Is student outcome data disaggregated and used to inform institutional planning and practice?

Indicator Statement 2: The institution disaggregates student (race, gender, socio-economic status, first generation) outcome data (course, program, and institutional) to inform institutional planning (policies, practices, teaching, learning, support).

- The Institution does not disaggregate student outcome data nor use data to inform institutional planning and practice.
- Some levels of the institution disaggregate student outcome data, but the information is not accessible, or used to inform institutional planning and practice.
- Most levels of the institution disaggregate student outcome data, informing institutional planning and practice. The data is somewhat accessible. However, the institution does not consistently use the data to inform institutional planning, policies, teaching and learning, and student support.
- There is institution wide disaggregation (race, gender, socio-economic status) of student outcome data (course, program, institutional) that is publicly available, and consistently used to inform institutional planning, policies, teaching and learning, and student support. In addition, the institution collects and report data using the same definition across campus.

Question 3: Does the institution have strategies in place to support historically marginalized student populations?

Indicator Statement 3: The institution has established strategies (e.g. inclusive syllabi, high expectations, making their success an institutional priority) to explicitly support historically marginalized

populations (i.e., low-income students, students of color, adult learners, students with disabilities, formerly incarcerated students) and assesses those strategies regularly.

- The institution has not established strategies to explicitly support historically marginalized populations.
- There are strategies that support some historically marginalized populations but are not communicated nor executed by the institution.
- There are strategies that explicitly support historically marginalized populations through their student experiences that are communicated and executed by the institution.
- There are strategies (goals, policies, practices, programs, etc.) that explicitly support historically marginalized populations through their student experiences (program maps, degree maps, career maps, advising) which are communicated and executed, as well as assess regularly and consistently campus wide.

Question 4: Does the faculty, staff, and administration of the institution proportionally reflect the diversity of the student body?

Indicator Statement 4: The composition of the institution's staff, faculty, and administrators proportionally reflect the institution's historically marginalized groups. In addition, there is a diverse body of institutional representatives that help establish campus wide policies and practices.

- The faculty, staff and administration do not proportionally reflect the diversity of the student body. The institution has no interest in improving diversity throughout the institution's staff, faculty, and administrators.
- The institution has set forth some goals to ensure its academic and administrative bodies are diverse and proportionally reflect the student body. However, there are no concrete changes to the body establishing campus wide policies or practices.
- The institution has achieved some of its goals to ensure its academic and administrative bodies are diverse and proportionally reflect the student body. However, there is not a diverse body developing policies and practices campus wide.
- The institution's staff, faculty, and administrators are diverse, proportionally reflect the student body, and they play a major role in establishing campus wide policies and practices.

Question 5: Does the institution partner with secondary school(s) and community college(s) to strengthen the college pipeline for underserved students?

Indicator Statement 5: The institution partners (e.g. dual enrollment, articulation agreements, credit transfer) with secondary school(s) and community college(s) to strengthen the college pipeline for historically marginalized students.

- The institution does not have any partnerships with secondary schools or community colleges.
- The institution has inconsistent/inactive partnerships with secondary school(s) and/or community colleges.
- The institution has several active partnerships) with secondary school(s) and community colleges.
- The institution has consistent and active partnerships with secondary school(s) and community colleges that focus on strengthening the college pipeline for historically marginalized students.

Question 6: Does the institution have strategies in place to help students explore their educational and career interest?

Indicator Statement 6: The Institution has strategies (e.g. career personality assessment, sharing wages, demand of labor market) and support in place to help students explore their educational and career interests.

- The institution does not have strategies in place to help students explore their educational and career interests.
- The institution has some strategies in place to help some students explore their educational and career interests.
- The institution has strategies in place to help most students explore their educational and career interests.
- The institution provides multiple and non-discriminatory strategies to help every student explore their educational and career interests. The institution works to ensure students take advantage of the support.

Question 7: Are academic program learning outcomes aligned with skills and knowledge needed for students to gain access to advanced degrees or employment?

Indicator Statement 7: Program learning outcomes are aligned with skills and knowledge needed for students to gain access to graduate/professional school and/or employment.

- Program learning outcomes are not aligned with skills and knowledge needed for students to gain access to graduate/professional school and/or employment.
- Some programs have aligned their learning outcomes with skills and knowledge needed for students to gain access to graduate/professional school and/or employment.
- Most programs have aligned their learning outcomes with skills and knowledge needed for students to gain access to graduate/professional school and/or employment.
- All programs have aligned their learning outcomes with skills and knowledge. Faculty and staff continuously engage (e.g. externships, networking, guest lectures, professional development) local employers and graduate schools to ensure their programs are aligned with skills and knowledge for advanced education and/or employment outcomes targeted by each program.

Question 8: Does the institution have academic and course support for students through their chosen program from start to finish?

Indicator Statement 8: There is clear academic and course support (e.g. course guidance, mentoring, tutoring, program advising, career advising) for students through their chosen program from start to finish.

- There is no clear support for students; they do not know the proper sequences to take their courses. In addition, other mandatory courses and requirements are not clear. The information does not exist or is not easily accessible.
- There is some support for students through their chosen program but is not consistent across the institution.

- There is clear support for most students through their chosen program. Students know which courses they should take, as well as mandatory courses and other requirements. This information is accessible for all students.
- There is clear support for all students before they enroll at the institution, until the time of completion, including students who transfer in or may change majors. There is a monitoring system in place for students to track which courses they should take in its proper sequence. Mandatory courses and other requirements, whether in or outside of the classroom, are clearly identified and consistently updated and accessed. This information is easily accessible for all students.

Question 9: Does the institution have strategies in place to ensure students are not accumulating unnecessary credit hours?

Indicator Statement 9: The institution has strategies (e.g. regular meetings with advisor, course mapping, tracking) in place to ensure students, especially transfer students and those who change majors are not accumulating unnecessary credit hours.

- The institution does not have a system in place to ensure students are not accumulating unnecessary credit hours.
- Some programs within the institution have a system to ensure students are not accumulating unnecessary credit hours.
- Most programs within the institution have a system to monitor and ensure students are not accumulating unnecessary credit hours.
- All programs campus wide has a system in place to assess, continuously monitor, and ensure students, especially transfer students and those who changed majors are not accumulating unnecessary credit hours.

Question 10: Have your academic programs conducted an audit to determine which math courses are appropriately aligned to the student's field of study?

Indicator Statement 10: All academic programs conduct an audit to determine which math courses are appropriately aligned to the student's field of study.

- Programs have not audited nor aligned math courses with the student's field of study.
- Some programs have audited and aligned math courses with the student's field of study, but students are not guided to take the appropriate math course.
- Most programs have conducted an audit to determine which math courses are appropriately aligned to each student's field of study and processes are in place to guide students to take the appropriate math course.
- All programs have conducted an audit to determine which math courses are appropriately aligned to each student's field of study. Early math courses have been enhanced and redesigned to best support students in meeting the math skills needed to excel in their specific program.

Question 11: Is there an early alert system for enrolled students?

Indicator Statement 11: There is an early alert system in place tracking students' attendance, course success, and off course plan informing advisors and students. In addition, the institution has developed policies and practices to help the students meet program requirements.

- The institution does not use a monitoring system to inform advisors and/or student based on course behavior.
- Some programs use a monitoring system to notify the advisor and students of course behavior. There are little to no policies and practices for students when they are not meeting program requirements.
- Most programs use a monitoring system, informing advisors and students of course behavior. There are some policies and practices in place when students are not meeting program requirements.
- All programs use a monitoring system that houses indicators of students' course behavior (attendance, course success, off course plan). Advisors and students are proactively notified of course behavior. In addition, there are policies and practices in place when students are not meeting program requirements.

Question 12: Is support available to ensure student success for entry-level and gateway courses until completion?

Indicator Statement 12: There are differentiated support systems (e.g. peer mentoring, tutoring, access to professors) provided to facilitate student success from entry-level and gateway courses until completion.

- There is no differentiated support to facilitate student success in entry-level and gateway course for major program areas.
- Some programs provide differentiated supports to facilitate student's success in entry-level and gateway courses for major program areas. However, the support stops after students complete their entry-level and gateway courses.
- Most programs provide differentiated support to facilitate student success in entry-level and gateway courses until completion for major program areas.
- All programs have a system in place to identify the differentiated supports that are needed and are provided to facilitate student's success in entry-level and gateway courses until completion for major program areas.

Question 13: Does the institution have strategies to work with students who exhibit signs of not completing a program?

Indicator Statement 13: The institution has strategies (e.g. early alert systems, monitoring systems, tracking system) in place to identify and intervene for students who exhibit signs of not persisting in their program.

- There is no intervention for students who exhibit signs of not persisting or stalling in their program.
- Some programs have requirements, along with support in place to identify and assist students who exhibit signs of not persisting or stalling through their program.
- Most programs have requirements and policies, along with support in place to identify and assist students who exhibit signs of not persisting or stalling through their program.
- All programs consistently communicate their requirements to students. Policies and support are in place to identify and intervene for students as soon as they exhibit signs of not persisting or

stalling through their program. In addition, there are strategies in place to ensure students respond to this support.

Question 14: Does the institution have strategies to support and mitigate barriers towards completion for students in and outside of the classroom?

Indicator Statement 14: The institution has the necessary strategies in place to support students and mitigate barriers (e.g. inadequate resources, attendance, food insecurities, transportation, housing, childcare) towards completion in and outside of the classroom.

- The institution does not have the necessary tools to support students or mitigate barriers towards completion in and outside of the classroom.
- The institution provides support and/or mitigates barriers towards completion for some students in and outside of the classroom.
- The institution has strategies in place to support most students and mitigate barriers towards completion for most students in and outside of the classroom.
- The institution continuously seeks to identify students with external commitments/concerns and academic barriers towards completion. Every student can easily access programs to support them in and outside of the classroom.

Question 15: Does the institution assist students with addressing the cost to attend college?

Indicator Statement 15: The institution effectively assists/guides students on how to minimize and manage the cost to attend college (e.g. loans, scholarships, financial advising, on campus job/work opportunities, food banks, transportation).

- The institution does not assist/guide students on how to address the cost to attend college.
- The institution somewhat/occasionally aids and/or guides students on how to address the cost to attend college.
- The institution assists/guides students on how to minimize and manage the cost to attend college.
- Annually, the institution provides various financial assistance program(s), financial plans, and materials to assist and/or guide students on how to minimize and manage the cost of attending college.

Question 16: Are faculty actively involved with guided pathways?

Indicator Statement 16: Faculty are knowledgeable on guided pathways methods and play an integral role in how the practices are implemented on campus.

- The faculty are not aware of guided pathways, nor play a role in implementing the practices on campus.
- Some faculty are aware guided pathways methods but play little to no role in the implementation of such practices on campus.
- Most faculty are aware of guided pathways, while a few play a role in how practices are implemented on campus.
- Faculty are consistently updated on new developments within guided pathways. Faculty are made aware of their role in the implementation process and play an integral role in determining how it will be executed on campus.

Question 17: Are culturally responsive pedagogy and practices (e.g. incorporating various cultural into the curriculum, making learning contextual) implemented throughout the institution and curriculum?

Indicator Statement 17: Culturally responsive pedagogy and practices (e.g. incorporating various cultural into the curriculum, making learning contextual) are consistently implemented throughout the institution and curriculum.

- There is not a clear understanding of culturally responsive pedagogy and practices. Therefore, it is not being implemented within the institution or curriculum.
- Some faculty are actively using culturally responsive pedagogy and practices within the classroom.
- Most faculty are actively using culturally responsive pedagogy and practices within the classroom, and occasionally outside the classroom (e.g. office hours, mentoring, research projects).
- Faculty have fully integrated culturally responsive pedagogy and practices within the institution's curriculum and have implemented this strategy outside of the classroom (e.g. office hours, mentoring, research projects).

Question 18: Do faculty, staff, and advisors have professional development opportunities to assist them in carrying out their role efficiently and effectively?

Indicator Statement 18: The institution offers professional development opportunities and support for faculty, staff, and administrators to assist them in carrying out their role efficiently and effectively, as well as assisting them with implementing culturally responsive practices within their programs and throughout the institution.

- The institution does not provide professional development opportunities for faculty, staff, and advisors.
- Professional development opportunities for faculty, staff, and administrators are limited and not tailored to the individuals' position on campus (e.g., limited PD focused on instructional practice for faculty).
- Professional development opportunities for faculty, staff, and administrators are available, but may not be tailored to the various positions on campus. Some topics may include culturally responsive practices or may assist in making sure roles and responsibilities are carried out efficiently and effectively throughout the campus.
- Professional development opportunities for faculty, staff, and administrators are mandatory for all. The opportunities are tailored to individual positions on campus to assist in addressing culturally responsive practices within their programs and on campus, and to ensure individuals remain current within the position to best guide students into the workforce/advanced education. The effectiveness of faculty and staff are assessed to determine if the practices have been applied systematically. The application and improvement of various practices are part of the promotion process.

Question 19: Do students have opportunities to apply their knowledge and skills outside the classroom?

Indicator Statement 19: The institution has strategies (e.g. STEM projects, internships, honors programs, study abroad, undergraduate research, work-based learning etc.) for students to apply and deepen their knowledge and skills outside of the classroom.

- The institution does not have programs outside of the classroom for students to apply and deepen their knowledge and skills.
- Some programs have opportunities outside of the classroom for students to apply and deepen their knowledge and skills.
- Most programs have opportunities outside of the classroom for students to apply and deepen their knowledge and skills.
- All programs have opportunities for students to apply and deepen their knowledge and skills outside of the classroom. There are also strategies to ensure experiences are distributed equitably across colleges, departments, and majors.

Question 20: Do partnerships/memorandums of understanding exist between your institution and organizations (e.g. communities and businesses) to better prepare students to enter the workforce?

Indicator Statement 20: The institution has developed consistent partnerships and/or memorandums of understanding with various local organizations (such as communities and businesses) to better prepare students to enter the workforce.

- The institution does not have partnerships or memorandums of understanding with other organizations.
- Though the institution does not currently have consistent partnerships or active memorandums of understanding, they are working on developing them.
- The institution has some working, consistent partnerships, and active memorandums of understanding with other organizations.
- The institution has developed consistent and robust partnerships and/or active memorandums of understanding with corporations, which are used to better prepare (i.e. enhance the curriculum, internships, externships, etc.) students to enter the workforce.

Question 21: Does the institution share various opportunities embedded throughout the student experience that prepares them for life after graduation?

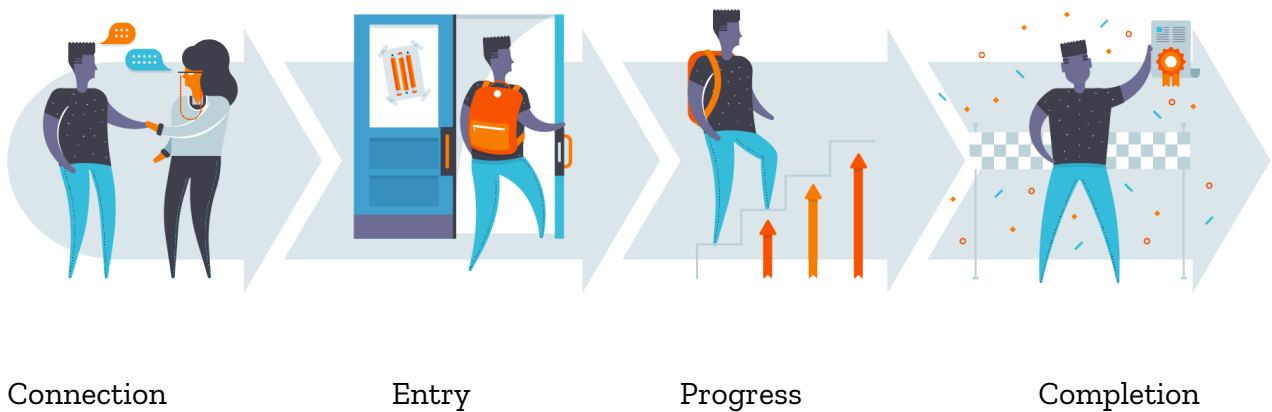
Indicator Statement 21: The institution shares employment and graduate/professional education opportunities (e.g. assistantships, internships, fellowship, jobs) with students from the time they enroll until they graduate.

- No information is provided to students, highlighting employment and graduate/professional education opportunities.
- The institution occasionally shares information with their students about employment and graduate/professional education opportunities.
- The institution consistently shares information with their students nearing graduation, highlighting employment and graduate/professional education opportunities.
- From the start of a student's experience the institution shares details and updated employment and graduate/professional education information. The institution highlights employment and graduate/professional education opportunities by each program. The information is easily accessible.

Appendix D

Completion by Design's Loss/Momentum Framework

This framework supports educators in designing every step of the student's pathway with the end goal in mind—completion.



Connection

From Interest in college enrollment to application

Entry

Enrollment to completion of first college-level course

Progress

Entry into program of study to 75% of requirement completion

Completion

Complete program of study to credential with labor market value

Note. From *Completion by Design*, 2017, <https://www.completionbydesign.org>.

Appendix E

Excerpts from Guided Pathways for Student Success at Access-Oriented Four-Year Institutions: A Final Report by the University of Florida's Institute of Higher Education

Excerpt 1: Introduction

Guided pathways is an evidence-based framework based upon a structured experience and designed to support institutional transformation with student success at the center. A guided pathways approach leverages enhanced institutional capacities in order to identify and develop an academic plan early in the student's postsecondary journey by creating a clear roadmap of the courses required to graduate and providing targeted guidance and support to help the student remain on the optimal path to degree completion. By integrating an institution-wide guided pathways approach, colleges and universities can foster student success through intentional, clear, and structured educational experiences that allow students to efficiently and effectively navigate from the point of entry to completion before ultimately transitioning to the labor market to secure a high-quality job.

The guided pathways model has generated significant momentum in recent years, but current efforts to support and implement guided pathways are focused primarily on two-year institutions. In this report, we supplement and enhance prior work related to guided pathways in higher education by developing a foundation for future adaptations of the guided pathways framework for access-oriented four-year institutions. Although four-year institutions have significant differences when compared to two-year institutions, access-oriented four-year institutions have important parallels to two-year institutions when one considers their broad missions related to educational opportunity and social mobility—as reflected in the disproportionate number of underrepresented and disadvantaged student types being served at two-year and access-oriented four-year institutions.

In the following sections, we will report our quantitative findings pertaining to identifying the leading access-oriented four-year institutions and outline our qualitative findings based on interviews with national experts. The interviews with national experts were intended to determine their potential contribution to efforts designed to increase the scale of the guided pathways framework to include access-oriented four-year institutions. After reporting our quantitative and qualitative findings, we will offer our data-driven recommendations to the Pathways Collaborative (PC) and the Bill & Melinda Gates Foundation (BMGF) regarding whom we identified as potential new partners to join the PC and lend their expertise related to the needs and practices of access-oriented four-year institutions in order to add value to continued efforts by the PC to implement the guided pathways framework at scale.

Excerpt 2: Summary of Qualitative Findings

Our findings from this exploration reveal there are many gaps and opportunities in the current guided pathways to student success. While many institutions are working to close these gaps, these efforts are mostly taking place in small pockets of the institution and need to be scaled up within and across institutions so that all students can have equitable opportunities, support, and outcomes. Our experts identified key areas and practical examples of transfer, advising, equity, affordability and financial aid, career-oriented approaches, and data use and communication that can be better addressed, both within

institutions and between them, to improve guided pathways for student success. The next step is cultivating the vision and leadership necessary to create and implement the necessary training, faculty buy-in, and learning that will lead to a comprehensive approach to addressing all of these areas.

Excerpt 3: A Unique Conceptual Model

Our Guided Pathways Model for Access-Oriented 4-Year institutions is grounded in the student experience. The model is oriented toward postsecondary leaders and practitioners seeking to adopt strategies and catalyze institutional transformation to better support learner's access into and success within 4-year institutions. We use a placed-based collective impact approach to undergird the model in order to leverage multiple stakeholders from the surrounding community to achieve shared goals and work across sectors with mutually reinforcing activities. We apply this concept in terms of leveraging internal cross-campus collaborations and external cross-community collaborations to activate and sustain student success.

Modifying [Completion By Design's Loss/Momentum Framework](#), the Guided Pathways Model at Access-Oriented 4-Year Institutions prioritizes an asset approach to leverage Partners, Processes, Interventions, and Policies to mitigate Pressure or Friction points in many students' academic journeys and create Asset Points to sustain success. These domains are considered across the student journey phases from important on-ramps to aid Recruitment, through the college experience with Early and Advanced Progress, and extending beyond completion as students Transition into the workforce and/or graduate studies.

Aspects of the Guided Pathways Model

Student Phases

The model presents four phases for institutions to consider when developing guided pathways. While these phases seem linear, their boundaries are in fact somewhat amorphous. In this model, we seek to stretch the focus of institutional leaders to consider the opportunities to build asset points prior to entry and beyond degree completion. Our hope is for institutional leaders and practitioners to use this model as a framework in which they may input their own institutional contexts as aligned with the identified content as a guide.

- **Recruitment** refers to the phase just prior to entry when an institution is seeking to identify and enroll prospective students. We encourage institutions to consider building multiple on-ramps into their academic community by leveraging partnerships across industry, K-12, and community partners. System-wide and regional articulation agreements are especially important for the recruitment of transfer students at access-oriented four-year institutions.
- **Early Progress** refers to the phase when an institution is developing students' acculturation to the academic community and attending to broad cognitive domains- often through about the first third of students' academic journey. Many institutions may consider this the phase when students are taking lower division courses and may be garnering prerequisites to gain entry into a specific major.
- **Advanced Progress** refers to the phase when institutions are preparing students' deep study within a specific discipline (often referred to as upper division courses). Many students increase the focus of their education's application in post-college contexts, such as the job market or graduate school (e.g., internships/ apprenticeships, undergraduate research, etc.).

- **Transition** refers to the phase when an institution is helping to prepare students to complete their courses of study and often move into the workforce or onto graduate studies. This phase can overlap with the Advanced Progress phase and many institutions may consider opportunities within this phase to build lifelong relationships with these students as alumni and prospective returning adult students for future studies.

Model Domains

Model Domains include both tangible processes and practices along with context for discrete aspects of the student experience. Below are brief summaries for each domain which may provide guidance for leaders and practitioners to build their own institutional map as aligned with 4-year guided pathways framework.

- **Asset Points** refers to the student feeling positively supported along with associated target outcomes and/or conditions that lead to momentous student success outcomes (e.g., greater enrollment, retention, completion, etc.). These points should be interpreted as recommended 'states' in which institutions may redesign and change their organizational capacity.
- **Partners** refers to both the internal and external partnerships salient to student success with respect to a given student phase. Partnerships may be native to the institution (e.g., department, unit), within the community (e.g., community colleges, K-12), or national associations or vendors.
- **Processes** refers to the various approaches and change management techniques that build to/develop asset points as well as mitigate and/or eliminate pressure points. Processes are often larger in scale, systemic, and require wholesale integration of a set of interventions and programs.
- **Interventions** refers to specific, evidence-based programs or initiatives that help to develop/support asset points and mitigate and/or eliminate pressure points. These may also be nested and integrated into broader processes (see above) for inclusive, and equitable student success reforms. Interventions may target a given subpopulation of students or scaled to all depending on the level of need and available resources.
- **Policies** refers to common institution-level policies that reflect the lived experience of students. The policies referenced serve as evidence-based examples that work to achieve asset points and mitigate/eliminate pressure points. Policies may be a reflection of institutional internal culture ("commitment to course delivery on time") or external catalysts (federal and state policies).
- **Pressure/Friction Points** refers to common barriers and challenges experienced by students. These points reflect barriers and challenges that commonly result from either or both inefficiencies in institutional design of services (lack of partnerships, outdated promotion/tenure systems, limited articulation/transfer systems) and/or external factors such as a decrease of state funding.
- **Essential Institutional Capacities** refers to operational capacities that are particularly salient to a given phase. Three functional capacities are identified as essential and require a slightly different focus with respect to each phase. These capacities include 1) Institutional Research & Information Technology (IR & IT); 2) Strategic Finance (SF); and, 3) Leadership & Culture (LC).

Intended Use of the Guided Pathways Model

This unique conceptual model is intended for use by institutional leaders and practitioners. The model is designed to be incorporated into everyday tasks and interactions as a means of conducting learning-oriented practitioners' work based on research that examines the impact of guided pathways on educational outcomes. Further, the model should create a continual context for exploring and implementing policies, programs, and practices. The model intends to shape how institutional leaders and practitioners think about the student experience through the lens of guided pathways.

Understanding the phases and domains allow users to adapt the model for their particular institutional contexts and for particular subgroups of students. For example, an institution who is particularly interested in developing guided pathways for veteran students might use the model to consider asset and friction points particular to veteran students across their postsecondary journey. The institution could then consider ways to build assets for veteran students through partners, processes, interventions, and policies. We encourage users to, therefore, consider this model's use at the macro and micro levels.

Excerpt 4: Future Directions for Guided Pathways at Access-Oriented Four-Year Institutions

To move beyond our analyses, future work should aim to shed additional light on high-performing, access-oriented institutions as well as the specific practices employed by institutions that contribute to academic progress, success in the labor market, and upward social mobility for their students. Given the inherent time limitations in evaluating labor market outcomes and other long-term outcomes that result from institutional practices, one strategy is to use existing longitudinal datasets that include information about students' household income upon entry to college (from records like the FAFSA or other state or local financial aid applications) and that can be linked with state-level unemployment insurance databases or other workforce data. On the other hand, researchers may employ experimental research designs or other analyses of current educational practices, but linked long-term outcomes may not materialize for several years. One-year retention and degree completion have stood in as short- and medium-term proxies for longer-term outcomes, and identifying other reliable proxies for labor market preparedness or future mobility that are available more quickly would be an important research contribution.

In direct response to lessons learned from this project, we have identified three key areas that would need to be central to any type of scalable approach to implementing efficient pathways at access-oriented four-year institutions: (1) challenges with transfer receipt, (2) advising issues, and (3) data use and communication. The two remaining emergent themes from our qualitative work—financial aid and career-oriented approaches—would need to be embedded within advising and other institutional efforts. Given that the issue of receiving transfer students from community colleges was repeatedly mentioned in nearly every interview discussing challenges at access-oriented four-year institutions, we believe future work should not focus solely on two- or four-year institutional levels but should incorporate both two- and four-year institutions at the system level if such analyses are possible despite the inherent challenges associated with data access.

Due to the disproportionate number of traditionally disadvantaged students, such as low-income students and students of color, at both community colleges and access-oriented four-year institutions, we believe future work related to guided pathways

should prioritize students' experiences and course-taking patterns among two-year and access-oriented four-year institutions. Such a strategy will allow future efforts to maintain a central focus on equity while seeking to optimize student success and transform institutional practices. If we are able to identify inefficient course-taking patterns, as an example, we can employ interventions to advise students to avoid the specific course combinations that lead to excess credit accumulation and a lower likelihood of degree completion. Whether talking with students or examining student-level data at both institutional levels, there is much to be learned regarding how to implement a guided pathways framework at scale, particularly as the PC and the Bill & Melinda Gates Foundation seek to increase the scale of the application of the guided pathways framework to include access-oriented four-year institutions.

Appendix F

Mixed Method Research Design

Method	Data Collection Technique	Sample/Population	Description
Qualitative	Literature review	» Existing Pathways Literature	Reviewed existing Pathways literature.
Quantitative	Survey	Sova requested a minimum of 15 surveys from each of the 15 campuses: 5 senior administrators, 10 mid-level managers (preference was for individuals who administer student success program elements: onboarding, recruitment, advising, first-year programming, degree map coordination, etc.)	The goal was to obtain insights from both senior administrators who shape and lead strategy and mid-level managers who implement the strategy.
Qualitative	Semi-structured interviews	The purpose of the interviews was to capture rich, qualitative commentary to further explore student success strategies in four-year institutions.	Focus on Transformation: » What has worked? » Where are there obstacles? » Opportunities for support?
Qualitative	Document analysis	Reviewed foundational documents: » Pathways Placemat » University of Florida Report » UNCF Rubric	Analysis included documents that were the result of prior investments made by the Gates Foundation.



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