Creating a Diverse Student Success Infrastructure: *The Key to Catalyzing Cultural Change for Today's Student*

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About the Pullias Center for Higher Education

One of the world's leading research centers on higher education, the Pullias Center for Higher Education at the USC Rossier School of Education advances innovative, scalable solutions to improve college outcomes for underserved students and to enhance the performance of postsecondary institutions.

The mission of the Pullias Center is to bring a multidisciplinary perspective to complex social, political and economic issues in higher education. The Center is currently engaged in research projects to improve access and outcomes for low-income, first- generation students, improve the performance of postsecondary institutions, assess the role of contingent faculty, understand how colleges can undergo reform in order to increase their effectiveness, analyze emerging organizational forms such as for-profit institutions, and assess the educational trajectories of community college students.

Foreword

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America's college student body grows more racially and economically diverse each year—growth that is well-known but not always well understood. Beyond raw numbers, a closer look at the educational trajectories of students of color reveals inequities along the whole of this continuum—from college access all the way to employment outcomes. The reasons for such inequities are complex, shaped by historical forces, and reinforced by a society that remains unequal in a multitude of ways. All of which place higher education in a unique position, and, I would argue, a position of great responsibility.

Complex problems require complex solutions, or at the very least, multifaceted ones. In the higher education context, this means movement away from a dominant change model for equity that is often focused on the margins, to one that is systemic in its approach. Many institutions are indeed enacting systemic approaches, but they are still too few in number. Barriers that keep campuses from innovating include a lack of financial and other resources as well as the many challenges associated with culture change—challenges that demand greater attention and investment by policymakers, philanthropy, the private sector, and institutions themselves. These challenges also demand concrete and comprehensive road maps designed to lead to closed equity gaps.

The Diverse Student Success Infrastructure, as outlined in this report, is one such road map. If thoughtfully deployed and sustained, it can lead to the kind of institutional transformation that creates equitable opportunities, experiences, and outcomes for those student populations traditionally underserved by our educational and other systems. Dr. Kezar is right to lead with the importance of culture change, an ultimate outcome of implementing the diverse student success infrastructure with fidelity. Such a culture may ultimately embody what has been observed on the campuses of many minority serving institutions: a culture of intentionality. Such a culture meets students where they are when they arrive on campus, sets high expectations for student success, and tailors programs, services, and institutional policies to recognize and address students' academic, financial, and social needs—all with cultural mindfulness.

The diverse student success infrastructure is by design intentional—leveraging nine distinct but necessarily interrelated functions and features of institutional operations. Some reflect campus units, like human resources and finance, while others represent administrative approaches, like governance and incentive structures. Together they comprise the toolbox for intentional leadership on supporting diverse students (as well as diverse faculty and staff). Each has its own unique culture and philosophy, which can make institution-wide culture change seem daunting. But the complexity of the model should not be a deterrent or barrier to the model's implementation.

Once campus leaders come to terms with the fact that change is hard, they roll up their sleeves and get to work. Self-assessment is critical, as it will direct which components of the nine-part model to tackle first. Some areas will be well underway already, as centers of excellence for a campus, while others will need more time and attention. Cross-functional collaboration and shared leadership are essential. As is the political will and the tolerance to take risks, and yes, fail at times. But the payoff is well worth the journey to arrive there. And the rewards will not only be felt on a given campus, but in its surrounding community and indeed society at large.

Executive Summary

Over the last few decades, many campuses have worked tirelessly to better support students from diverse backgrounds. In that time, a number of experts have observed that while higher education has added programs and services "on the side" to address the changes in the student body, a substantial and holistic rethinking of the core functions and practices of campuses has not yet occurred.

Such rethinking, however, is imperative in higher education today. Research suggests that even relatively significant efforts to orient an institution toward educational equity and inclusion—such as changing an institution's stated mission and values, a practice advocated by Smith (2015)—is not enough to alter historically embedded patterns that seep into policies, facilities, resource allocations, and daily decision-making. What the research points to is the need for culture change and a thorough examination of existing organizational structures.

One of the core aspects of such a change process is the *creation of a diverse student success infrastructure that supports long-term cultural change*. Research from systems theory and systems thinking demonstrates that when the infrastructure is aligned to support a change initiative and a set of organizational values and priorities, then transformation is more likely to happen and to be sustained.

The infrastructure of an organization includes core features (policies, human resources, and finance) that facilitate organizational functioning and day-to-day operations. To fulfill a student success agenda, this infrastructure is strategically leveraged and aligned with the goals of student success, creating a diverse infrastructure that enables an institution to effectively mobilize to serve a diverse student body. Without this basic infrastructure, a campus is unlikely to be ready to create and sustain change related to diverse student success.

Shared, equity-oriented leadership and values exploration are important precursors to engaging in the creation of a diverse student success infrastructure. The existing infrastructure of an institution is already being driven by implicit assumptions about the core values and priorities of the campus. If those values and priorities underlying the infrastructure remain unexamined, then the infrastructure may not be directed to diverse student success. An intentional focus on the infrastructure can shift the campus as a whole to support diverse student success. The infrastructure helps with three core areas related to change and systemic support for student success: *implementation, sustained interventions, and, ultimately, culture change.*

The diverse student success infrastructure elements share similar features that enhance effectiveness, including *equity, alignment, broad stakeholder engagement, collaboration, learning, clarity, and transparency*. These features capture basic ways of re-orienting higher education to be better organized towards supporting student success.

In the end, all of the infrastructures together create a culture that either supports or does not support diverse student success. It is time for diverse student success to move from being on the margins of campus, in isolated programs and services, to a diverse student success infrastructure that makes good on new values which promote the success of all students in college.

What Is a Diverse Student Success Infrastructure and Why Is It Important?

A diverse student success infrastructure enables the institution to mobilize to effectively serve a diverse student body. The infrastructure consists of the core features (policies, human resources, and finance) of an organization that facilitate daily functioning and operations. By intentionally focusing on the infrastructure, it can be shifted to support diverse student success. The infrastructure helps with three core areas related to change and systemic support for student success: implementation of interventions, initiatives, services, or programs; sustaining interventions; and ultimately helping lead to culture change. The central aspects of infrastructure include planning, governance and decision-making, policy, finance/resource allocation, information and institutional research, facilities and information technology, human resources/development; incentives and reward structures, and metrics/accountability.

Studies from *systems theory and systems thinking* demonstrate that when the infrastructure is aligned to support a change initiative and a set of organizational values, then the transformation is more likely to occur and to be sustained (Toma, 2010). Research demonstrates that efforts at transformation without modification in infrastructure typically fail, experience challenges, or are not sustained (Kezar, 2018; Smith, 2008; Toma, 2010). Yet campus leaders rarely consider the infrastructure needed to implement changes. Individuals often press for new programs or services without thinking about fundamental aspects of the organization that need realignment (e.g., policy, information technology) or support (e.g., funding, leadership) in order to actualize the new programs or services. In addition, organizations routinely make changes that end up lasting only in the short term, disappearing as soon as leadership or priorities change, instead of embedding changes into the infrastructure of the campus to increase the likelihood changes will be permanent as finances, planning, and policies all continue to support student success. Furthermore, organizations lose necessary nimbleness and flexibility when foregoing modifications in infrastructure. Because diverse students' needs change, support for their success must be embedded into the infrastructure to ensure continuous reflection, attention, and on-going examination of student needs in the priority-setting, planning, and resource allocation processes.

Research on *culture change* illustrates that a campus' infrastructure—its financial priorities, incentives and rewards, human resources and policy—reflect its values. By altering the infrastructure of a campus, one can affect culture change toward student success. If our priorities, resource allocation, energy, planning and policy are focused on diverse student success, then we will create a culture conducive to fostering diverse student success. But if the infrastructure remains unexamined, then interventions (e.g., proactive advising) are typically marginal efforts on the side, not major campus priorities. Yet most change initiatives focus on implementing an intervention, rather than examining the underlying values, systems, and infrastructure that drive institutional priorities and actions. Culture change is the only way to ensure that

student success will occur. A multitude of studies support the finding that whole systems and culture change are more effective than isolated implementations of solutions (Connolly & Lukas, 2002; Toma, 2010; Senge, 1990).

Before delving deeply into the diverse student success infrastructure, it is helpful to first examine past efforts at supporting student success to understand what has been missing in establishing the need for a diverse student success infrastructure as part of culture change. Secondly, it is critical to understand how a diverse student success infrastructure is a central feature of culture change and then to describe research on cultural change processes aimed at improving student success. This background helps place this argument in context and offers up the rationale necessary for leaders to engage in this type of effort.

Missing Systemic and Transformational Efforts to Support Diverse Student Success

While there have long been campus efforts to better support students from diverse backgrounds, these programs, services, and interventions have not been systemic. In the 1960s, ethnic and women's studies programs and centers sprang up, followed by LGBTQ centers and services in the 1970s, and adult, commuter, and first-generation student centers and spaces in the 1980s. The 1990s saw efforts to diversify curriculum and teach in more active, inclusive, and culturally relevant ways, while the 2000s brought programs to serve veterans, the transgender community, and the learning disabled. In addition, repeated federal efforts have attempted to support campus efforts in increasing low-income student success, starting with the introduction of TRIO programs and Pell grants in 1970, through the development of GEAR UP in the 1990s.

With all these efforts, one would expect significant progress on the graduation rates of these many groups. However, except for women, the needle has moved very slowly. We have seen minimal progress in improving the retention and success of first-generation, low-income, and racialized minority students. The same goes for adult, commuter, and part-time students. Moreover, statistics for some groups—such as transgender, learning disabled, and LGBTQ students—are not even tracked, so it's unknown how they are faring.

As many have observed over the decades, higher education has added programs and services "on the side" to address the changes in the student body without a substantial rethinking of the core campus functions and practices (Smith, 2015; Smith et al, 1997). In the late 1990s, Daryl Smith and her colleagues first noted this trend to add programs (summer bridge, first-year experience, learning communities) on campuses without really changing the general campus culture (1997). Smith called this trend "programmitis," and suggested campuses would not substantially improve the success of diverse students until diversity, equity, and inclusion became part of the institutions' central mission, values, goals, policies, and practices. Twenty years later, programmitis continues—and we have yet to capitalize on what Smith labeled as diversity's promise (Smith, 2015).

For two decades, I have argued that higher education is not organized for student success, let alone diverse student success. In *Organizing higher education for collaboration* (2009), I demonstrated how divisions between campus structures, such as those that separate academic and student affairs, academic departments, and disciplinary forms of thinking, as well as modes of being in versus being out of classroom, prevent students from succeeding, developing, and learning. Over the past 120 years, campuses have drifted away from their mission around learning and are no longer structured effectively to support that mission. Additionally, I have established that campuses need to undergo institutional transformation in order to support students that these campuses were not originally established to support. In a similar argument, in my book *Recognizing and serving low-income students in higher education* (2011), I traced how campuses developed historically to serve the wealthy and white, demonstrating how ingrained the patterns of whiteness, class and privilege are. Building on my arguments, McNair and Albertine, in their book *Becoming a student-ready college* (2016), noted that the challenge of serving diverse students is an organizational one. They made the case that higher education has never been set up to support today's students, and those in higher education need to rethink primary organizational structures to support diverse students.

In these analyses, scholars highlight how the structures of higher education institutions prevent students from succeeding, while underscoring why side programs and services alone will never suffice. A total restructuring and reorienting of campuses is needed to disrupt these embedded patterns and to reorient campuses for a new student body. This also moves from a deficit approach in which students are seen as a problem that higher education needs to accommodate to institutions being deficit in not having the appropriate knowledge to address today's students. Smith (2015) called on campus leaders to re-examine the underlying mission of campuses, but even changing missions and values, as she advocated, may not be enough to alter historically embedded patterns that seep into policies, facilities, resource allocations, and daily decision-making. What the research points to is the need for culture change and for a thorough examination of existing organizational structures.

Institutional Culture Transformation for Diverse Student Success

How can campuses undergo lasting institutional transformations that support diverse student success? Examples of this sort of transformation are rare but do exist. The University of Maryland, Baltimore County (UMBC) is one place where the culture and climate writ large supports all students. UMBC is a campus that serves large numbers of first-generation, low-income, and underserved minority students and has made an intentional effort to recruit and serve these students well. Campuses that serve many underserved minority students (who are often low income and first generation) are termed *minority serving institutions*. These institutions can be great sources of learning for predominantly or historically white institutions because they have served more diverse students and often have a more robust infrastructure.

Not all minority serving institutions have had this status for long. Some have recently had their populations change and/ or recently embraced this status. In response, many of these institutions have attempted to intentionally better serve their diverse students, making these a potential, but not guaranteed, source of learning. A recent National Academies report highlights the importance of these institutions as a source of learning for institutions attempting to better serve diverse students (National Academies, 2019).

Research studies of UMBC show that the institution underwent a major culture change under the guidance of Freeman A. Hrabowski III, UMBC president. Instead of simply adding a few side programs, Hrabowski spearheaded a more holistic transformation so the entire campus community was aligned to support the success of first-generation, low-income, and underrepresented minority students in STEM. Studies of this campus have documented a variety of practices important to understanding culture change processes in higher education. UMBC's change process was undertaken through a shared leadership approach that instilled collective responsibility for student success, informed by exploring new values and examining existing ones. It involved re-examining campus history, collecting and reviewing data and information about students, conducting research, eliciting feedback and dialogue, creating accountability, and auditing current policies, structures, and practices.

One of the core aspects of UMBC's change process was the creation of a diverse student success infrastructure that supported long-term cultural change. The next section of this paper reviews UMBC's change process to help demonstrate the need for a diverse student success infrastructure and highlight the prerequisites for scaling such changes in higher education. The president demonstrated equity oriented leadership by interrogating the history of exclusionary practices, assuming all students have assets and can learn, and placing responsibility for change on the institution.

Exploring values and history

The first insight garnered from UMBC's change process is the need to begin by examining an institution's unconscious assumptions and biases. Leaders must understand how the existing values, assumptions, and beliefs on their campuses might be contradictory to the diverse student success culture the campus is trying to create. This insight mirrors Kegan and Lahey's (2009) work on Immunity to change (Hrabowski & Maton, 2009), which showed that people often hold contradictory values which may prevent them from engaging a new set of values. Kegan and Lahey's study, followed by dozens of others, including some specifically in the field of higher education (e.g., Kezar, Gehrke & Elrod, 2015), identify how implicit or embedded values often prevent culture change if left unrecognized and unaddressed. The key is to make individuals, groups, and institutions aware of the basic assumptions that often go undiscussed so that new values might be entertained.

Prior to its change efforts, UMBC conducted an inventory of the existing values of various subgroups about student performance to understand the values that might impede (or support) change. UMBC then developed a strategy that took this information into account. Culture change was also facilitated by a new set of institutional values in which the campus was guided by the Association of American Colleges and Universities' "inclusive excellence" framework. Inclusive excellence—a non-deficit and equity oriented approach—was embraced by campus leadership and made a priority as

part of campus communication. UMBC even explored their history of inequity and looked for ways inequities may be perpetuated in the present.

Such cultural approaches to change recognize how values are embedded into organizational structures over time and are not quickly or easily changed. For lasting institutional transformations, those structures themselves need to be examined and altered.

Auditing the current infrastructure

After exploring the institution's values and history, leaders at UMBC conducted a thorough examination of the institution to identify policies, practices and structures that needed to be aligned to the new values. They examined resource allocation, facilities, institutional research, incentives and metrics, and professional development. Based on this audit, they implemented a variety of changes, such as instituting new admissions and financial aid policies and scholarships; and realigning data collection efforts to track student success. They also revised the way introductory courses were taught; provided professional development for faculty and staff related to student support and success; and implemented mentoring processes, study groups, and peer support while aligning facilities to support these efforts, among other policies and practices.

Promoting accountability, responsibility and continuous improvement

Culture change means having everyone—not just individuals in positions of authority, but every member of the community—see his or her role in creating and shaping culture (Kuh, Kinzie, Whitt, & Shuh, 2010). Thus, UMBC leaders also confronted the issue of responsibility for student success and shared leadership by involving members of the campus—both staff and faculty—in all change processes through teams. To stimulate broader involvement, the leaders developed tactics such as networks, learning communities, cross-functional teams, communication channels, and relationship-building, all in support of the new culture. Then, leaders set up assessment mechanisms to ensure the culture change stayed in place. To this day, UMBC regularly collects data about student experiences as well as staff and faculty perceptions about the campus climate and services. UMBC also continues to audit its infrastructure so that it remains aligned with student success goals. Leaders recognize that without accountability and reward/incentives for progress, forward movement could halt, or worse, backsliding occur.

The UMBC example identifies many of the key strategies needed in order to undergo transformational change that supports student success. While many change leaders often resonate with and understand the role of values and vision, data, and even accountability (although higher education leaders are frequently loathe to set up accountability structures), it is the *diverse student success infrastructure* that is often overlooked when moving toward culture change. Culture change is unlikely to be cemented without substantial changes to policy and practice. For campuses not ready to engage in full culture change, the student success infrastructure provides a place to start transformation efforts that might seem daunting at the outset.

Shared, Equity-Minded Leadership and Values as Catalyst for the Diverse Student Success Infrastructure

As is clear from the UMBC example, shared equity-oriented leadership is central to the change process. In fact, shared, equity-oriented leadership is a prerequisite for creating a diverse student success infrastructure, and without leadership, forward movement on this issue is a challenge. Studies of transformational change have consistently identified shared or team leadership—across administrators, faculty, staff, and students—as central to implementing changes (Eckel & Kezar, 2003). Changes to support diverse students consistently emphasize leaders who foreground equity. Equity-minded leaders are race conscious, aware of the social and historical contexts of exclusionary practices, and call attention to patterns of inequity in student outcomes (Dowd & Bensimon, 2015).
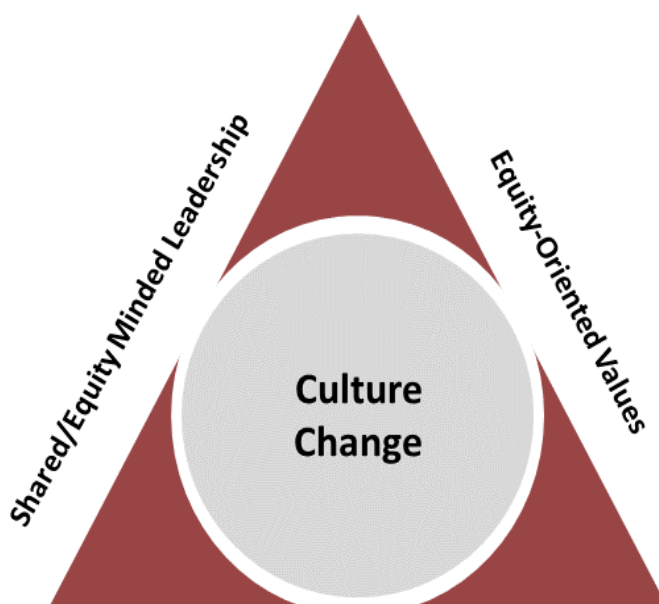
Diverse Student Success Infrastructure

Why is shared and equity-oriented leadership so critical to transformation? Leadership defines the values, direction, and priorities of an organization. Leadership establishes an institution's willingness and ability to identify, develop, implement, and support a strategic agenda-focused student success. Leadership also communicates, incentivizes, aligns human and financial resources, makes decisions, and ultimately holds itself accountable for progress. If leaders are focused on student success as they engage these various aspects, then an environment is created that enables the infrastructure to be altered. Equity-oriented leadership ensures that leaders are focused on inequalities, understand historical patterns of power and privilege, and explore root causes of current inequalities. Equity-oriented leaders take personal responsibility for the inequities experienced by students and that current practices and policies are not working, then work to identify changes to ameliorate them. Leadership is also critical to shaping and driving the alignment between all the aspects of the diverse student success infrastructure.

Values are the foremost and central area requiring definition before moving to alter the campus infrastructure. Values define the direction and priorities that guide what the diverse student success infrastructure will be. Research consistently shows that values shape institutional actions and establish direction and priorities (Morphew & Hartley, 2006). Therefore, if the values focus on equity and diverse student success, it is much more likely to occur. As individual campuses have their own unique sets of students, local contexts, and state policies, each institution needs to consider a variety of issues as it defines what diverse student success means. In the UMBC example, the values of inclusive excellence guided the institution's work.

Over time, the values around diverse student success need to be communicated to campus stakeholders, and leaders need to find ways to ingrain these values in the daily work that all faculty and staff do. Leaders who successfully use values and priorities to guide student success constantly ask members of campus: How is student success a part of your daily work?

Yet as will be demonstrated throughout this discussion on the diverse student success infrastructure, unless there is alignment of the values with the infrastructure, then there may not be execution of values in practice. In sum, shared and equity-oriented leadership, values exploration/redefinition are important precursors to engaging in the creation of a student success infrastructure. Other resources describe the role of shared leadership (see ACE Shared leadership in higher education: Important lessons from research and practice), equity-minded leadership (Center for Urban Education, Equity Mindedness) and values in change (See Hrabowski & Maton, 2009; Kezar, 2018). This report focuses on the student success infrastructure. This section helps articulate the connection of shared leadership, values, and a diverse student success infrastructure, as exemplified in the UMBC case.

Creating Systemic Support: The Diverse Student Success Infrastructure

As noted at the beginning of this report, a diverse student success infrastructure enables the institution to mobilize to effectively serve a diverse student body. The infrastructure is the core features of an organization which facilitate organizational functioning and day-to-day operations. They are desirable for effective organizational functioning. A campus is unlikely to be ready to create and sustain change related to a student success if it lacks the basic infrastructure. However, just having these elements in place is not enough to fulfill a student success agenda (see UMBC example for the full process)—but examining these areas and getting them into place, if they are missing, is an important starting place.

To fulfil a student success agenda, the infrastructure is strategically leveraged and aligned with the goals of student success— creating a *diverse student success infrastructure*. This infrastructure is already being driven by implicit assumptions about the core values and priorities of the campus. If the values and priorities underlying the infrastructure remain unexamined, then the infrastructure may not be directed to diverse student success. By intentionally focusing on the infrastructure, it

can be shifted to support diverse student success. The infrastructure helps with three core areas related to change and systemic support for student success: *implementation, sustaining interventions, and ultimately helping lead to culture change*.

1. Implementation of interventions to support students are facilitated through the infrastructure. Infrastructure is the basic structures in key areas that facilitate implementation—resources, policy, technology, information, and human resources. Implementing proactive advising without investments in technology and training, professionals that have new skills, adequate technology, or policies that support use of the advising software-are likely to face serious challenges. However, an infrastructure that is in place facilitates, eases, and often speeds up adoption.

2. A diverse student success infrastructure not only supports interventions implementation but also sustains them over the long run—institutionalizing the interventions. Interventions often come and go based on a lack of tangible support or organizational hurdles being too overwhelming to sustain them. With finances, policies, and leadership all supporting cross-campus mentoring, for example, then change agents struggle less to overcome organizational inertia and issues that prevent them from supporting and embedding the change.

3. Lastly, the diverse student success infrastructure can lead to culture change by having student success values integrated into the day-to-day work of the campus – its decisions, processes, and activities. Ultimately, the value of the student success infrastructure is that it can lead to broader institutional transformation. As more and more elements of the infrastructure are aligned toward the same underlying values of student success, the more likely it is that the overall campus will be a different place.

The central aspects of infrastructure are planning; governance and decision-making; policy; finance/resource allocation; information and institutional research; facilities and information technology; human resources/development; incentives and reward structures; and metrics/accountability.

The elements of the diverse student success infrastructure are interdependent. While a campus can certainly look at and improve an area that leaders feel might need some attention, each aspect of the infrastructure is reinforcing that process. For example, as a campus builds human resources policies aimed at diverse student success, the institution will also likely enhance its use of data, which will then help improve policy and technology decisions. Therefore, the student success infrastructure elements are best engaged collectively as there is a strong synergistic effect when all aspects of the infrastructure are being developed simultaneously.

Elements of a diverse student success infrastructure
Each element of the infrastructure has its own internal logic that supports why it is important to work on in order to create sustainable systems and culture change. We review the rationale for each element to help support why it is necessary to work on re-examining it in relationship to student success.

ELEMENTS OF A DIVERSE STUDENT SUCCESS INFRASTRUCTURE
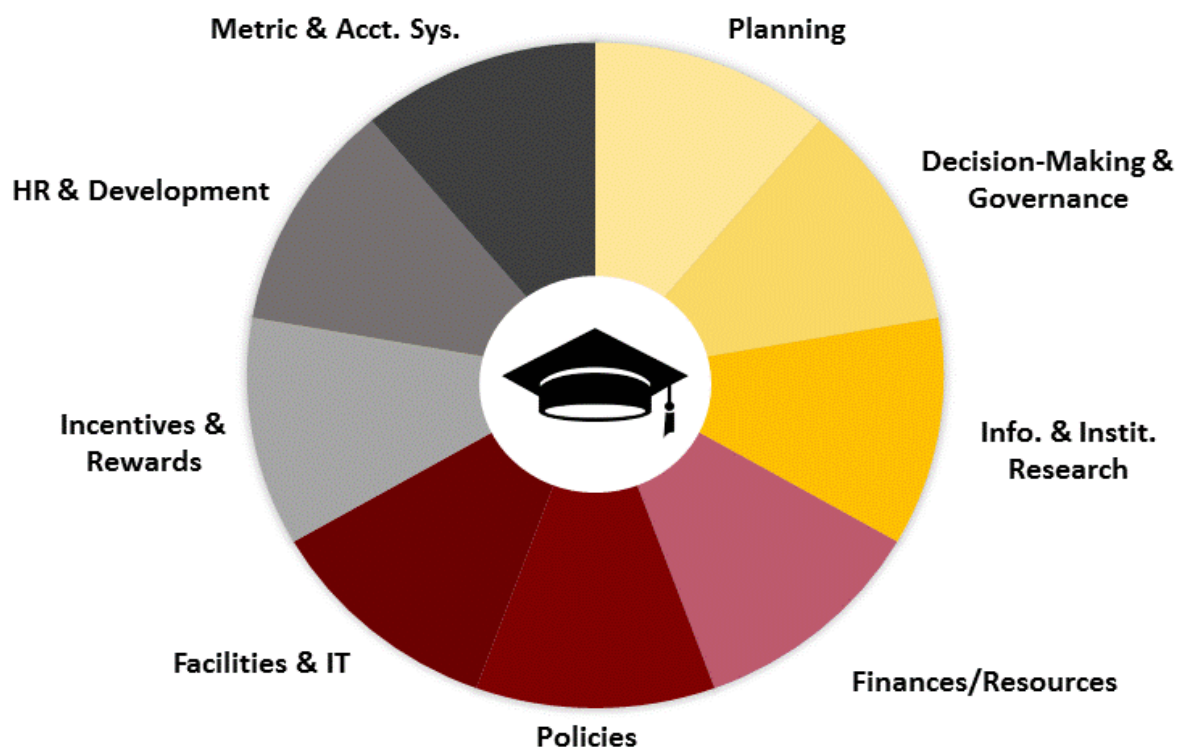
Planning is a central way that campuses reset priorities. The values, direction, and priorities that are articulated by a campus will not become a reality without careful planning processes that implement these values and priorities into daily work and processes. Planning involves the re-examination of core processes as well as the institution of new initiatives that can become part of the campus. Typically planning shapes budget priorities. Campus processes were traditionally developed without an understanding of diverse student needs—therefore, financial aid processes, advising, instruction and support service are all areas that need review and resetting. Planning is an organized way for campuses to initiate and maintain re-examination of processes as a priority. Planning for student success involves student voices and members as part of the process. Campuses also use data and information about student success. Students keep changing, so planning processes need to be on-going and responsive to new changes. However, one tendency of planning processes that distracts campuses from meeting their student success goals is a focus on new ideas rather than re-examining current processes. New ideas are always an add-on to the current systems and that can absorb lots of time and energy without always be pivotal for meeting goals.

Decision-making and governance refers to who and what processes are used to make decisions and policy. Decision-making and governance work best when guided by the values, priorities, and direction around student success. Decision-making marked by student success at its center involves including student voices in decisions whether that be through focus group data or by students being part of governance processes. Campuses with a robust governance infrastructure have shared processes that bring in all faculty and staff with expertise about student success into governance

processes as well. When there are competing priorities, a strong governance infrastructure creates processes to carefully weigh different views about or priorities that may compete with student success. So, campuses need to re-examine their underlying governance to ensure that student success has a central value with avenues for obtaining diverse student voices and various educational practitioners into the process.

Policies dictate the actions of faculty and staff and create the conditions in which student success can be established or not. If policies are examined routinely then ones that create barriers can be changed. Because policies establish the possibilities for action they are a strong driver of systems and cultural change. In addition to having robust governance structures that create new policies, you need to examine existing policies for the way that they support student success or not. This is particularly important because campus policies were generally established when institutions were not diverse. Without examination, they can stand in the way of important efforts that are undertaken to support diverse student success. For example, policies related to admissions criteria, student advising, curriculum, staff hiring criteria, faculty promotion, and tenure, when left unexamined, can shape a set of experiences that are exclusive rather than inclusive.

Finances/resources are necessary to support systems and cultural change that institutionalize transformation. Resource allocation reflects institutional priorities and if decisions related to finances do not foreground student success, then the campus is unlikely to make progress in this area. Values are reflected in where resources are allocated. Resource allocation approaches that tend to support student success typically have more input from varied constituents. Resource allocation for student success also fundamentally re-examines budget assumptions, which allow for major restructuring to occur. Resource allocation decisions from the past typically have not been made using student success as central criteria. Therefore, if leaders try to adjust within a current set of budget assumptions, they are unlikely to be able to prioritize student success. Campuses can create more inclusive budget processes that bring in more voices and advocate for strategic budget cuts in areas that can free up money for student success or bring in new monies to support initiatives. A set of student success and equity measures can be developed as part of budget processes that hold campuses accountable for budgetary decisions. When goals and metrics are set that determine success and future funding, campus leaders are pressured to shift and reallocate resources to meet these goals. This is connected to the accountability element of the infrastructure noted later.

Information and institutional research are necessary to support systems and cultural change that institutionalize transformation. Data and information help to monitor student progress. While institutional research is a key capacity that needs appropriate support to inform institutional decisions and practice, other types of data may also be helpful such as historical background and documents, national reports about best practices, and data about peers. Thus, a robust set of information is important to provide guidance for student success initiatives. Additionally, data about students help support learning and decision-making in service of student success. Governance decisions, planning, and policy re-examination are all facilitated though institutional research data and capacity.

Facilities and information technology are important infrastructure elements that creates the possibilities in which faculty and staff can deliver education and support all the programs, activities, and services of a college. Classroom spaces, areas for student activities, as well as virtual and on-line modes of interaction and support, are significant and often overlooked aspects of infrastructure. Physical spaces can signal inclusion or exclusion, particularly for low-income, first-generation and under-served minority students. The many recent debates over campus statues, names of buildings,

and pictures/artwork help illustrate how physical space can shape student success. Research demonstrates that campus leaders tend to ignore their facilities and IT and leave these areas up to specialists (Bensimon and Neumann, 1993). As a result, these areas can often become unaligned with student success goals.

Incentives and rewards focused on student success facilitate transformation. Leaders can establish reward systems that incentivize and prioritize the value of student success. Additionally, finance/resource allocation can translate leaders' values into merit pay and other systems that tangibly demonstrate that incentive. Furthermore, awards and recognition that honor student success are ways to help move toward institutional transformation. Too often student success is assumed to happen because it is the "right" thing to do, but if incentives are set up to reward other behaviors, this can create conflict and make it difficult for faculty, staff, and administrators to execute this work. In fact, various studies demonstrate that one of the greatest barriers to changes related to student success is that faculty rewards are not aligned with student success. Staff also are rewarded for focusing on improving institutional prestige and generating revenue more than for achieving student success. In fact, staff have reported this pressure has increased dramatically in the last few decades. Without an honest examination of both the formal rewards systems as well as informally what people say is rewarded on campuses—truly meeting goals around supporting diverse student success will be extremely difficult. Incentive systems remain an area of the infrastructure that often goes unexamined. Like resources, it is a system that is often preset and challenging to change, but necessary for changing the culture of campuses.

Human resources and development are important for student success. Human resources include the ways that faculty and staff are hired and oriented so that they support student success, how their work is structured in terms of employment policies, and how their roles are structured to support student success. Human resources also provide opportunities for development to enhance employee skills towards supporting student success, and how faculty and staff are evaluated and rewarded for work that supports that success. Development is particularly important, as research identifies that employees who are properly trained can react in real time to challenges, support students, and be more effective in their roles. Campuses have long assumed that faculty and staff require little development as professionals. However, today's students often have backgrounds and experiences quite different from the faculty and staff they interact with. Research shows that by providing faculty and staff development about how to work with first-generation, low-income, and underserved minority students, these groups increase their efficacy and effectiveness in working with these populations (Schademan & Thompson, 2016). Capitalizing on faculty and staff professional norms is a way to engage them in professional development. While faculty and staff may engage in professional development as part of their discipline or professional field, there is often not an effort on campuses to emphasize the need for local professional development aimed at helping faculty and staff connect to the students on their campus. There is also a lack of effort to communicate the specific values, priorities and goals of the campus to its employees.

Metric and accountability systems are critical to provide a measure for the goals and priorities, to aim planning efforts, to align resources, and to incentivize the campus to focus on student success. While systems such as performance-based funding have had mixed results in higher education, research more generally supports that having metrics in place that are widely shared, understood, and the target of people's work, help to drive change, align actions, and can help lead an institution to focus on diverse student success. There are some cautions needed as metrics are often overly simplistic—such as graduation and persistence. The push for simplistic metrics—as part of the student success movement—has in

fact "tarnished" this key area of the student success infrastructure. Accountability for student success is indeed central for a campus to remain invested and guided in this work. Campuses therefore need to devise a complex set of metrics to guide their work. For example, in addition to graduation rates, do students report a positive experience in college? Do they feel prepared for graduate school or work? Values that are developed into goals as part of planning but for which there is never any accountability are quite likely to be goals that are not met or are only met superficially.

The beginning step to make progress in altering the infrastructure is to ask: How does or doesn't a particular part of a campus support diverse student success? How do policies, resource allocation, institutional research, or information technology support student success, for example? Without intentionally grounded infrastructure in the concept of student success, it is unlikely these structures will support students.

What makes a robust or effective diverse student success infrastructure?

The diverse student success infrastructure elements share similar features that enhance their effectiveness, suggesting some basic ways of re-orienting the way higher education is organized to better support student success. The shared features of effectiveness within the student success infrastructure include *equity, broad stakeholder engagement, collaboration, clarity & transparency, learning, and alignment*.

First, *equity* is an important feature across the infrastructure. Equity is the examination of whether student success is being considered for different groups and that each are being treated fairly and justly. Equity is important to ensuring that all students are supported—particularly low-income, first-generation and underserved minorities who often get overlooked. Data is disaggregated so that disparities by race or gender are apparent and gaps in performance of students are closed. Facilities and technology use principles of universal design so that all students, faculty, and staff can use technology effectively. Policies are examined for ways they may unfairly impact certain groups, including admissions or financial aid decisions. Human resources reflect on the diversity of demographics of people in roles and explores how diverse perspectives are within faculty, staff, and administrative leadership. When equity cuts across the elements of the infrastructure, student success becomes a reality for all students.

Second, the infrastructure elements are strengthened by *broad stakeholder engagement*. For example, broad stakeholder engagement enhances decision-making and governance and planning and leads to better policies, processes, and decisions around student success. Broad stakeholder engagement also creates ownership and buy-in of plans and leads to understanding and learning that enhances implementation while leading to sustainability. When more staff and faculty have access to data to make decisions, decisions will more likely lead to student success. Stakeholders need to be asked about technology needs to create the most robust IT system. When policies are known among the broadest number of people, they can better support students.

Third, *collaboration* across groups in the work of the diverse student success infrastructure also supports student success by improving and building new processes and systems. Units that communicate to implement student success initiatives

are likely to more smoothly implement them. Students are best supported when faculty and staff can use similar technology to obtain information about students and provide the same counseling advice. This is a call for new types of collaboration not just working in committees or communicating across units. Collaboration should extend beyond typical modes and involve breaking down silos and pushing the campus into new work boundaries such as having groups work together in new ways—for example, combing academic and student affairs units, cross-functional teams, or co-locating units that typically have not worked together but should.

Fourth, *clarity and transparency*. We noted earlier how intentionality and keeping the student at the center as one deploys planning, resource allocation, or creates policy, is central to altering the values system. Tied directly to this notion of intentionality is clarity and transparency around the infrastructure. When the elements of the infrastructure are clear and transparent, they are more easily accessible to faculty and staff and better able to guide work. Are policies clear and visible as it relates to student success? Are leaders consistent in communication about the priority of student success? Are there clear goals around what information and data is important to collect related to student success and is this made available to multiple campus stakeholders? Clarity often relates to defining student success as well as goals and metrics for accountability.

Fifth, infrastructure elements are strong when they allow the campus to *learn* and develop its expertise. While human resource and development are areas of the infrastructure itself, learning is also a unique feature that cuts across the infrastructure. Learning allows the campus to constantly adjust the infrastructure elements so they might change with new circumstances or new student populations. Technology and data can provide information that allows staff and faculty to make better decisions and to plan differently. Are there metrics and data available to assess and understand the financial health of the campus? Continuous learning and improvement are emphasized in the infrastructure elements—policies, processes, budgeting, data, facilities are never set in stone—they need to evolve. Both data and technology can provide information that can help the campus learn. Shared governance processes include a multitude of voices that allow for learning to occur in the decision-making process. Professional development is needed to build the necessary skills among faculty and staff to be competent and execute a student success infrastructure.

Sixth, *alignment and integration* are important for the infrastructure elements. Alignment is important for creating smooth and effective implementation and for ensuring that the benefits of a student success infrastructure are expansive and included across the campus as a system. Infrastructure elements work best if they are mutually reinforcing. Alignment happens along two dimensions—across the infrastructure themselves and across the system of the campus. As the leadership pursues a strategic agenda, alignment means that all infrastructure elements are aligned in service of specific set goals. Considering the campus as a system, leadership needs to have a definition of student success that is adopted at multiple levels across leaders from department chairs to the presidential cabinet. With technology, systems located within units and departments need to follow similar principles around student success as central systems. Data used by units or colleges should receive the same level of training as data used by the president's cabinet. If infrastructure elements vary and are deployed on different assumptions throughout the campus, this will likely negatively impact student success.

In terms of understanding how the shared features can be applied across a single infrastructure element the following example is provided:

- Equity—*disaggregate data by race and gender*
- Broad stakeholder engagement—*involve faculty, staff, and students in planning around data collection for student success*
- Collaboration—*interpret and explore data with various stakeholders' input*
- Clarity & transparency—*develop shared metrics and definitions of student success and the creation of unit-wide dashboards*
- Learning—*consider new forms of data to inform student success—new survey questions, focus groups*
- Alignment/integration—*provide cross campus data forums that bring together stakeholders to ensure conversation related to data collection processes in various units*

In order to examine how a campus is performing in terms of its diverse student success infrastructure, I have developed a tool that can be used by planning teams. See appendix 1. This tool will allow you to explore your campus infrastructure and gauge where you are at so you can make plans to enhance the infrastructure.

Conclusion

It is important to note that while I emphasize the creation of a diverse student success infrastructure in this report, that is not meant to downplay the role of shared, equity-minded leadership, in which value is defined for the campus as well as individual learning that must also occur for these ideas to become embedded in the infrastructure. All elements are necessary to work toward culture change. Individual commitment in regard to leadership and learning is central to the development of the infrastructure as well. As the UMBC example shows, leadership can help provide the experiences to translate and ensure learning necessary for the infrastructure to become a reality. Without leaders understanding where their work should aim—the diverse student support infrastructure—the sustained culture change may not occur. Therefore, this document offers a reframing of the vision for diverse student success work. I offer a systemic cultural change vision for equity-minded leadership processes.

In the end, the infrastructure elements taken together create a culture that either supports or does not support diverse student success. It is time to move from diverse student success being on the margins in isolated programs and services over to success being a reality for all of today's students. The creation of a diverse student success infrastructure is a way to make good on the shifting values—of wanting all students to succeed in college. *Increasingly campuses are embracing a new set of values, but without the infrastructure to support the new values, there is likely to be minimal changes that are scaled, long-term, and enduring.* A diverse student success infrastructure is one of the main cornerstones of institutional transformation.

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Appendix 1—Student Success Infrastructure Worksheet

Element	Equity	Broad stakeholder engagement	Collaboration	Clarity and transparency	Learning	Alignment
Planning						
Decision-making and governance						
Policies						
Finance and resource allocation						
Information and institutional research						
Facilities and information technology						
Human resources and development						
Incentives and rewards						
Metrics and accountability						