

KNOWING OUR STUDENTS

UNDERSTANDING & DESIGNING FOR SUCCESS

A Guidebook for Institutional Leaders





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About the Advising Success Network

Formed in 2018, the Advising Success Network (ASN) is a dynamic network of five organizations partnering to support institutions through a holistic approach to advising redesign that supports students’ personal, academic, and career goals. The network addresses the multifaceted needs of colleges and universities to design a meaningful student experience and improve institutional retention and completion rates for students from low-income backgrounds, as well as Black, Latinx, Native American, and Asian/Pacific Islander students. Partner organizations include Achieving the Dream, the American Association of State Colleges and Universities, EDUCAUSE, NACADA: The Global Community for Academic Advising, and the National Resource Center for the First-Year Experience and Students in Transition.

About Achieving the Dream

Achieving the Dream leads a growing network of more than 300 community colleges dedicated to helping their students, particularly low-income students and students of color, achieve their goals for academic success, personal growth, and economic opportunity. ATD is making progress in closing equity gaps and accelerating student success through a unique change process that builds colleges’ institutional capacities in seven critical areas. ATD, along with nearly 75 experienced coaches and advisors, works closely with Network colleges in 45 states and the District of Columbia to reach more than four million community college students.



INTRODUCTION

Toward a New Understanding of Our Students

For the past few decades, institutions of higher education have been making strides in the collection and use of data to inform their decisions. From enrollment data to student surveys, outcome metrics to predictive analytics, institutions collect more information on how their students move through their educational journey than ever before. These data have informed decisions on almost every aspect of the institution, providing leaders with tangible evidence of what's working and what needs to be addressed to increase student success.

Yet, while data has helped develop a more sophisticated understanding of institutional effectiveness, the understanding of students has remained somewhat one-dimensional. Basic demographic data, such as race or ethnicity, gender, Pell Grant eligibility, and others are collected and used to explore differences in enrollment and outcomes. But these data alone only tell one story of who our students are and how they might experience our institution. Disaggregating data to determine how the outcomes of Pell-eligible students differ from students from higher income

backgrounds only tells part of a student's story. It doesn't provide insight into the obstacles faced by a Pell-eligible Latina mother of two, with a decade of career experience, who also works to support her family.

Many institutions across the country still fall back on assumptions that they serve the historically "traditional" college student or that their students can and will attend full-time.

However, this is increasingly not the student served by institutions today, particularly open access institutions. Now, more than ever, higher education



We need to challenge ourselves to see our students not only as learners, but also as individuals whose life contexts impact their academic journey.

serves as a major route to economic mobility for an increasingly diverse student population. Students come to institutions of higher education for a better life for themselves and their families, to access jobs or careers more aligned to their interests or needs, and to become lifelong learners. It is our role to deliver on the promise of higher education. We need to challenge ourselves to see our students not only as learners, but also as individuals whose life contexts impact their academic journey.

Knowing our students requires an institution to pivot their data collection and use approaches to understand students as complex human beings with intersecting identities and experiences. Ebenbach perfectly and succinctly encapsulates why this change is urgent and critical: “Students bring their full selves with them wherever they go on campus. Their academic work informs their personhood, and vice-versa.”¹ Only once an institution develops this depth of understanding of their students can they truly examine how their existing policies, practices, and culture impact the experience, progression, and success of the students they serve. This is particularly important at a time when inequities along racial and income lines, already unacceptable, are at risk of being deepened by the events of 2020 and 2021.

For example, if an institution has a high number of student parents registered part-time that work more than 20 hours a week, that may impact when and how critical academic supports are offered. As institutions responded to the COVID-19 pandemic in 2020, many shifted to offering supports online at “off-peak” times, which served working students and student parents better than the traditional, primarily daytime in-person approach. This gave student parents the opportunity to access support services after their children had gone to bed and is just one example of the kind of practice that should continue in a transition back to in-person learning.

Gaining a deeper understanding of our students requires analysis of both quantitative and qualitative



data. Some of the data needed to understand students are already collected by through existing processes and technologies, while other data may need new processes to be set up. This requires close collaboration between those leading the redesign effort and their institutional research and technology departments to identify what is already collected and what needs to be collected. For data that isn’t already collected in a usable manner by the institution, such as whether a student is a working parent, new mechanisms can be set up to gather this information through surveys or added to existing processes.

When aggregated, these data can complement other institutional data colleges collect — such as when students are on campus for their classes, what supports are underutilized compared to reported need, or when in a term different supports are used most. Information such as this can and should be used to inform decisions on how to design and deliver supports in an integrated manner.

¹ Ebenbach, D. (2017, December 14). “Crossing the divide.” Inside Higher Ed.
<https://www.insidehighered.com/advice/2017/12/14/collaborations-between-faculty-and-staff-improve-student-well-being-opinion>



Impact on Existing Student Success Efforts

As leaders of this work, we acknowledge that institutions are already deep in the design and implementation of multiple institution-wide efforts to improve student success and close equity gaps. While these efforts vary across institutions, there are many national efforts designed to provide supporting frameworks and strategies to guide institutions in implementing promising practices across the institution. Efforts like guided pathways (and its predecessor, Completion by Design), developmental education reforms like Quantway and Statway, holistic student supports, high impact practices, college promise campaigns, and performance-based funding efforts, among others, are informed by research and practice at the state or national level.

These efforts have already led to a 10-percentage point increase in postsecondary attainment of Americans aged 25 to 64 between 2008 and 2018.² Yet, there is still more work to be done to close equity gaps and increase successful academic and career

outcomes for our students. Indeed, this work has become more urgent since 2020 given the devastating effects of the COVID-19 pandemic on our students and communities.

Institutions must know their students and communities deeply in order to address pre-existing and worsening inequities. To be successful, national and state efforts must be contextualized to each institution's students, institutional environment, and communities. A deep understanding of the students an institution is serving is critical to this contextualization and to the design and implementation of other institutional efforts. The data discussed throughout this guidebook, as well as the process described in how to collect and use the data, can be beneficial to both existing and new student success efforts. Throughout the guidebook, short notes are included on how the data and each step in the process can be additive to existing efforts to become a student-centered institution.

² Lumina Foundation. (2020). A Stronger Nation. <https://www.luminafoundation.org/stronger-nation/report/2020/#nation>

Why a Guidebook?

This guidebook stands as a resource for institutional leaders and student success teams ready to engage in a new dialogue about the students they serve and eager to learn practical strategies from national experts and peer institutions. It shares the latest knowledge, examples, and tools about:

- ▶ What it means to really know students,
- ▶ What data points are useful,

- ▶ How these data can be used effectively,
- ▶ Challenges that may arise, and
- ▶ What are strategies to overcome these challenges.

As with any guidebook, there are still questions the field needs to answer to develop a more comprehensive guide. As such, in subsequent years, this guidebook will be updated as more is learned about designing our institutions to serve the whole student.

How to Use This Guidebook

Leaders and teams will gain the most value from the guidebook if it is read and used in chronological order. However, each chapter can be read as a stand-alone guide if an institution is more advanced in its efforts to know our students.

Each section provides tips, tools, guidelines, and resources to promote a deeper understanding of students. At the end of each section, questions are posed and tools are provided to help colleges apply the

learnings from that section to their work. Throughout, examples from the field are featured to illustrate how institutions are working to successfully deepen their understanding of students, how these data are used in decision-making, and what is learned along the way.

Here is a summary of what you will find in each chapter:

Section	Value Description	Page
Knowing Students	By the end of this section, there will be a clear picture of the types of data traditionally collected by institutions, and an outlook of potentially untapped data sources that support efforts to know students.	9
A Closer Look at the Student Experience	By the end of this section, there will be a greater understanding of the importance of recognizing the myriad experiences that students encounter — both on campus and off — based on their background, identity, and lived experiences. This section invites readers to take an in-depth look at the institutional structures, processes, and attitudes that impact student experiences and outcomes.	25
Collecting the Data	This section identifies multiple ways to gather or collect data on students' identities and experiences beyond the foundational data sources. The importance of uncovering student perspectives, voices, and experiences before setting out to redesign inclusive campuses is emphasized.	38
Using Data to Design the Student Experience	This section identifies the final three steps in the student-centered design process and provides a framework for moving from data to idea to action.	50



Key Definitions

- ▶ **Equity:** A concept grounded in the principle of fairness. To achieve equity in higher education requires institutions to identify structural barriers facing underserved students and address policy and practice that impacts the student experience. Institutions need to eliminate such barriers by investing in equity-minded policies, practices, and behaviors that lead to student success through the intentional design of the college experience.³
- ▶ **Equity-minded decisions:** When the process used to make decisions in any area of the institution ensures the default outcome is to minimize or eliminate inequitable outcomes from that decision. The process must guide individuals involved to call attention to patterns of inequity in student experiences and outcomes and ensure the institution takes responsibility for the success of their students, with an emphasis on those historically underserved by higher education, particularly students from racially minoritized or low socioeconomic populations.⁴
- ▶ **Minoritized students:** Identities students hold that were not considered when the system and institutions of higher education in the U.S. were originally designed. Sometimes the term “under-represented” is used to define these student groups. Examples include but are not limited to first-generation; low-income; adult students; students of color; marginalized orientations, gender identities, and intersex students; students with multiple-language backgrounds; undocumented students; veterans; students with disabilities; students with dependents; foster care youth; and formerly and currently incarcerated students.
- ▶ **Opportunity gap:** An alternative to the phrase “achievement gap” that recognizes the inequality of opportunity in education, or “education debt,” characterized by a long history of discriminatory gaps in educational inputs.⁵
- ▶ **Equity gap:** Another alternative to “achievement gap” that evokes the notion that institutions have a responsibility to create equity for students.



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requires institutions to identify
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experience.*

3 Achieving the Dream. (2016). Equity Statement. <https://www.achievingthedream.org/about-us-0>

4 This definition was informed by the Center for Urban Education's definition of equity-mindedness <https://cue.usc.edu/about/equity/equity-mindedness/>

5 Ladson-Billings G. (2006). From the Achievement Gap to the Education Debt: Understanding Achievement in U.S. Schools. Educational Researcher. 35(7):3-12.



SECTION I

Knowing Students

A foundational step in creating an environment where students can succeed is understanding the student population that is being served. Knowing students goes beyond counting heads by disaggregated groups. It includes building an internal learning system to gain insight into and to respond to student needs, motivations, and behaviors.

Many institutions have rich information about students from compliance reporting, such as the Integrated Postsecondary Education Data System (IPEDS) and through state requirements and grant funding requirements. Institutions are also learning much by disaggregating the student data by demographic categories to identify gaps they want to address. While this is a critical step, investigating to know more about the lived experiences and challenges that a student faces along their education journey can provide information that will support

data-driven decision-making to help them on the pathway to completion.

This section goes beyond foundational data and lays the groundwork to the key concepts, practical examples, tools, and resources needed to improve how the student experience is uncovered and understood. By the end of this section, a clear picture of the types of data traditionally collected by institutions and an outlook of potentially untapped data sources that support efforts to know students will be evident.



Investigating to know more about the lived experiences and challenges that a student faces along their education journey can provide information that will support data-driven decision-making to help them on the pathway to completion.

The Student-Centered Design Process as a Tool for Understanding Students



“Design is the intention (and unintentional impact) behind an outcome.”

— Creative Reaction Lab, adapted from IBM’s original definition

Student-Centered Design, an adaptive approach to serving students, contextualizes and refines the process of design thinking to the higher education field, with a central focus on students and equity. The process can be applied to any aspect of the institution’s design, including structures, policies, processes, services, and culture. The process, when implemented with care and fidelity, ensures every decision:

- ▶ Begins with a focus on student needs and experiences and how these differ across student populations.
- ▶ Uses multiple ways to empower students to engage in the design process and bring student voices into the analysis of existing processes, policies, and services.
- ▶ Takes into consideration factors external to the institution that impact the success of different student populations.
- ▶ Generates creative approaches to address the challenge or opportunity.
- ▶ Incorporates harm-free, rapid testing of identified approaches.
- ▶ Encourages bolder solutions and embraces failure as a learning opportunity.

Student-centered design offers many tools for developing a deep understanding of the students’ needs, wants, and experiences before the design process begins. This focus on the student remains central throughout.

The student-centered design process is also

flexible, simple to understand, and encourages creativity. It can be followed as is or the institution can infuse aspects of the process into its current approach to address complex challenges. For each stage of the process there are many simple, effective tools available to support teams in keeping students at the center while being creative and nimble.

One common critique of the standard design thinking process is that it does not inherently challenge the designers’ biases and does not share power with those most impacted by the challenge or decision being addressed. These are important critiques to be aware of as in its traditional form, the process can often result in reinforcing the status quo. If those most impacted people are not engaged in the process, the designer maintains hold of the power and it is their interpretation of the intended audience that drives the design ideas. This is where biases, assumptions, and anecdotes can be baked into the process, leading to ideas that can range from minor changes with minimal impact to ideas that wind up further harming those the designers were attempting to support.

These critiques are why the ASN proposes institutions adopt a refined approach to design thinking. This approach forces the designers to explore both the system within which the challenge or decision exists, as well as the nuance that hides in a detailed understanding of how the challenge or decision impacts student populations differently. The student-centered design approach also calls on leaders and designers to share their power with those most impacted by the challenge or decision. This goes



A Note on Biases, Assumptions, and Anecdotes

Throughout the student-centered design process, the design team needs to be proactively seeking out and addressing biases, assumptions, and viewpoints based solely on anecdote. Without a proactive and vigilant approach, these can creep into the process unchecked and cause the team to make decisions that don't address the reality of the problem, resulting in minimal or negative impacts.

For example, many institutions struggle to improve their communication with students to ensure they take critical steps in their educational journey at the right time. An all-too-common assumption is that the problem is that students don't read their emails. With this assumption, the solution many institutions gravitate to is text messaging, as a phone is a staple for most students today. However, what's missing from this solution is an examination of the institution's communication efforts. When we work with institutions on this topic, we typically find that:

- Institutions send hundreds of emails per semester, ranging from low-impact messages such as bookstore marketing emails to success-critical emails such as course withdrawal deadlines.
- Emails are packed with information, but the important action steps are buried in text-heavy paragraphs.
- There is little coordination across departments or oversight so important messages are duplicated and communicated in inconsistent ways.

So, while text messaging may be a good idea, it doesn't solve the root cause of the problem the team is trying to address. What may end up happening is that students stop reading institutional text messages because the hectic strategy shifts from email to email and texts without being refined.

beyond one-off focus groups or surveys to make the case for equipping faculty, staff, students, and sometimes community members, to take active roles throughout the process.

The student-centered design process we will infuse throughout this guidebook is a blend of the design thinking processes from the Darden School of Business at the University of Virginia⁶ and the Equity-Centered Community



The student-centered design approach calls on leaders and designers to share their power with those most impacted by the challenge or decision.

Design process developed by the Creative Reaction Lab.⁷ The Darden School follows the more traditional design thinking process developed in the for-profit technology space. The Creative Reaction Lab's approach is rooted in a more systemic,

comprehensive, and equity-minded approach to addressing problems that emphasizes the need to co-create with those most impacted by the decision.

⁶ Bronzenske, R., Liedtka, J., and Ogilvie, T. (2019). *The Designing for Growth Field Book: A Step-by-Step Project Guide*. Columbia Business School Publishing.

⁷ The Creative Reaction Lab. *Our Approach: Equity-Centered Community Design*. <https://www.creativereactionlab.com/our-approach>



A Note on Using the Process

Before we dive into the process, it is important to note a few ways this process can be useful for your institution's success efforts, as well as for individuals or departments trying to solve smaller problems.

STUDENT SUCCESS TEAMS: NEW AND EXISTING

The process is most effective when used by a team that has the expertise and authority to make changes at scale. These teams should represent diverse perspectives and experiences and should always include representatives from groups who will be asked to make changes in how they work. When forming new teams, they can use this process to begin their efforts, spending more time on the first two steps to ensure they develop a deep understanding of their students and the problem they are working on before they move to identifying solutions.

However, most institutions have at least one such team tasked with working on one or multiple student success efforts. These teams can use the student-centered design process to design and plan each stage of their efforts or use it more quickly during implementation efforts where new decisions have to be made that can significantly impact their students. For example, a team working on advising redesign may have addressed academic advising in their first phase to great success, intending to then focus on infusing career advising into this experience as their second phase. Two ways this team could use the full student-centered design process are:

1) To ensure their academic advising redesign is meeting the needs of different student populations, grouped beyond basic demographics. This effort may include disaggregating advising experience data to identify if there are populations still experiencing gaps. If a population, such as first-generation students who also work, is found to be using advising less or is less happy with their experience, the team can use the remainder of the student-centered design process to address this by generating and testing ideas to tweak their academic advising model.

2) As they begin phase two of their work, the team can use the full process to ensure they understand the need and experiences around career advising before they begin to identify solutions. The team may

already know a great deal about their students and their experiences so the first step may be little more than a quick review of the most relevant information before they move into ensuring they understand the issue in depth and begin identifying solutions.

INDIVIDUALS

Anyone can use the tools and approaches of the student-centered design process as they make decisions that impact the student experience. For example, an advisor can use tools from step two to gather data on the student experience of their communication style and approach. That same advisor could identify new ways to message critical steps they know will help students succeed and test those messages with a small group of students before implementing successful approaches to all the students they work with.

DEPARTMENTS

Whole departments can use the process, whether on the academic or student supports side. A dean could work with their faculty to leverage the tools to understand the challenges and obstacles that cause students to drop or fail classes in their subject area. These data could then inform ways faculty could adjust their teaching or curriculum, or how and when to connect students to supports that can address these obstacles. Additionally, the dean could learn how they can best support their faculty and students by providing professional development and advocating for changes needed that are beyond their control.

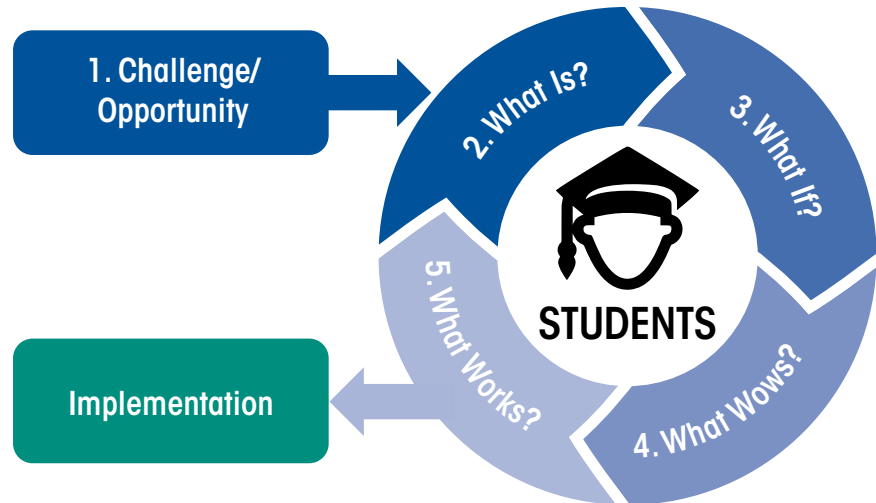
STUDENT INPUT

Where teams are using the process, students from populations most impacted by the status quo should be brought onto the team as they are experts in their own experiences and needs. They should also be compensated for their time and contributions as critical members of the team. While this can be uncomfortable for institutions, it is important to ensure the student voice is fully present when decisions are being made. A complementary approach is to ensure input from a broad range of students is consistently gathered and used by the team throughout the process. This guide includes examples of how this can be implemented effectively at each stage of the process.

Getting Started with Student-Centered Design

The first two steps in the student-centered design process are focused on learning more about the challenge or opportunity being addressed. The focus of this data collection and analysis should be on the student experience of this topic. However, the perspectives of other key stakeholders involved, as well as quantitative data that can help illuminate the problem, are also critical. Below we go into more detail about the first step. In sections two and three, we will explore the second step of the process

in more detail as we learn more about the student experience. Finally, in section four, we will explore the final three steps of the process, which focus on the use of these data in identifying ways to improve the student experience.



Step 1: What Challenge or Opportunity?

The first step in the student-centered design process is to document the decision, challenge, or opportunity you believe you are trying to address. In this stage, which could take anywhere from a few days to weeks depending on the institution's culture and timeline, the leadership that is forming the design team and/or the design team itself works to:

- ▶ Draft an initial brief that states the crux of the challenge, providing any evidence they used to illustrate it as a challenge or pain point.
- ▶ Identify the populations most harmed or impacted by the status quo.
- ▶ Document any necessary limitations or considerations the design team needs to know.

The purpose of identifying who is most impacted or harmed by the status quo is not a purely academic

exercise. The intent is to identify these student populations, as well as other key stakeholders, so the design team can ensure those voices are fully represented during the process. **However, when engaging students in this process,**

it is recommended that they be compensated for their time and expertise. This avoids further deepening inequities by asking those harmed most to contribute to solving a problem they did not create. Students should be provided with adequate training or support to fully participate as an equally valued team member.

At this stage, the team will find that access to data about who their students are, as discussed throughout this guide, will be critical to their ability to truly

However, when engaging students in this process, it is recommended that they be compensated for their time and expertise.

understand the challenge they are trying to address. This will not only help them identify which populations are currently most impacted by the problem but will also help the team begin the discovery and design process with a clearer understanding of the problem itself.

It's equally important to make sure this team has all they need to do their best work as they enter step two of the process, where they will be deepening their understanding of the problem. Consider the following common needs for this type of design work:

- ▶ **Data:** The team will need access to a lot of different data about the institution's students, their experiences and outcomes, and other information that sheds light on the topic of the design process. The team will also need the resources to collect additional data. As such, consider having the institutional research team ready to provide support either as a member of the team or on standby to provide data support as needed. If the institutional research department is small, consider how math and social science faculty can support the data gathering aspect of the work in step two.
- ▶ **Space:** The team will need space to meet throughout the process. When in person, it is ideal that this is the same room, with flexible furniture, plenty of wall space and whiteboards, and far from distractions. The team may also need to acquire additional space at different phases of the work, for example, when conducting interviews, focus groups, or presenting ideas for feedback. When the process is being managed in a virtual or hybrid manner, the team will need a shared folder where they can all access and contribute to documents, a video conferencing software that has tools to facilitate collaboration, survey tools to gather input from stakeholders and survey students (this is also useful in-person but not always necessary), and other tools, as defined by the team.
- ▶ **Decision-making authority:** The team needs to be clear on the scope of the work they can make decisions on without getting formal approval from another party. For example, it's important to know if the team has permission to test any idea for feedback or needs to run the final chosen ideas by their senior leader, or even bring the senior leader into the process at certain intervals, before implementation can begin. Senior leadership should provide a clear charge to the design team in addition to providing a senior leader as a team sponsor, who may serve on the team proactively or in an ex-officio role.
- ▶ **Clarity on how to get approval & needed resources:** The team will also need to know the process for accessing additional resources, authority, or time as the process plays out. This clarity up front will help avoid slowing the work down if new needs arise.
- ▶ **Necessary limitations:** It is often recommended in traditional design thinking approaches that teams suspend the reality of what they think is possible until later stages in the process. There is some value to this in higher education as well to avoid limiting creativity with boundaries that could be breached with the right resources and support. However, there are also some stark realities related to limited resources or externally imposed requirements that may be useful to factor in from the beginning to avoid wasting the team's time.
- ▶ **Team composition:** The composition of the team is a critical decision point for leaders for multiple reasons. First, who is selected to serve on the design team and who is left without representation on the team serves as a signal to stakeholders about whose voice is privileged and whose is discounted in this process. Leaving key stakeholders with no representation on the team, such as having no frontline advisors serve on a team charged with designing a new process that impacts advising, signals that their experiences and perspectives are not valued. This can lead to challenges with morale and risk ideas being generated on incomplete information. Second, the team should be diverse not only in role, but also in

perspective and values. This approach ensures the problem or opportunity being addressed is understood from multiple angles, stimulates creativity and discussion during the idea generation and selection process, and can help to generate support for implementation once ideas have been selected. A final note on team composition: As mentioned previously, it is highly recommended that students be represented on the design team, ideally not just students serving in student government or similar positions to give a broader perspective. Where this is not possible, the design team should plan for multiple ways to gather student input to ensure the student voice is central.

The questions can be used to help your team build a comprehensive yet succinct design brief that outlines your challenge, opportunity, or decision. A template for building a design brief can be found in the toolbox at the end of this section.

- ▶ What problem or opportunity is being addressed?
- ▶ What are the core issues of the problem being solved for?
- ▶ How is it a known problem? What evidence exists that describes the current reality?
- ▶ Who is not served well by this issue?
- ▶ What biases, myths, or assumptions need to be acknowledged before the empathy step begins?
- ▶ Why should this problem be solved?
- ▶ How will it be known the redesign is having the desired effect?
- ▶ What critical, non-negotiable conditions exist that the solution must operate within?

Getting to Know Your Students: Foundational Demographic Data

Foundational demographic data can be categorized as basic information, can be easily accessed and tends to follow a student through their academic experience. When collecting and analyzing foundational demographic data such as age, race and ethnicity, gender and socioeconomic status, consider how this data might be used to assist in painting a full picture of a student's background and story. Financial indicators such as Pell status can be disaggregated to highlight whether or not a student is eligible for the maximum Pell amount versus another amount. Similarly, Expected Family Contribution (EFC) data can be analyzed to determine which students are at the minimum or maximum of the scale. Other verified demographics such as veteran status, students with disabilities, and current or former ZIP code provides approximate information about students and whether they are from or live in upper income or high poverty areas. Foundational data tends to be more accessible, yet oftentimes overlooked as a source of information to truly know our students. The following subsections take a closer look at foundational demographic data and are intended to provide ideas on how this data might be used to get to know your students.

Socioeconomic Status

For first-time college students and first-generation college students, it is important to determine whether they completed the Free Application for Federal Student Aid (FAFSA). Paying for college is not only a barrier to making the decision to go to college but also to stay in college to complete a degree. Financial challenges are one of the main reasons that students drop out of college and don't persist to completion.

Data such as a student's ZIP code, school district poverty estimate, highest level of education completed by resident parent or guardian, and EFC can be used as proxy metrics for socioeconomic status.⁸ Assisting students to create a financial plan to ensure strategic

⁸ National Forum on Education Statistics. (2015). Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems. (NFES 2015-158). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

use of financial aid, along with their academic plan to complete a degree, is an essential step in retaining students, particularly those with fewer resources. This is intended more to support students in ensuring 'hidden' or unexpected fees and costs associated with attending college are planned for upfront rather than general financial literacy training.

Past Academic Experiences

To expand the base of foundational data sources, consider what we already know about students and their backgrounds. A key source to gain insight is to look at their pre-college experience. This includes

reviewing high school GPAs, placement in developmental coursework, GED/HSED completers, transfer credit or credit for prior learning, and dual enrollment student participation by race/ethnicity. Students who have been successful in the past may be more confident, more willing to take advantage of campus opportunities and generally be more open to the classroom experience. Looking at data based on a proxy measure such as prior GPA may bring some opportunity gaps to light and a place to provide more support to shift the way new students engage with their first-year experience.

Using Foundational Data to Meet Students Where They Are

At Florida Atlantic University, where 80 percent of students are commuters, the institution set up "drive-through" advising stations in parking garages between the hours of 5:00 p.m. and 7:00 p.m. to best serve these students as they were leaving campus for the day.

Within four months of piloting the program, advisors had met with 500 students in parking garages.

Institutions should consider whether they have the appropriate processes and systems in place to meet the needs of various student groups. The following three factors should be considered when evaluating the student composition of an institution:

- **Study Intensity:** Refers to the enrollment status of the student and the number of credit hours taken per semester/term. Part-time students often have different needs and experiences

than students attending full-time. For example, students enrolled part-time are more likely to be working while studying, be caring for dependents, come from low-income families, and be the first in their family to enter higher education.⁹

- **Age Group:** Refers to the age of the student. Many institutions will not only be serving the 18- to 24-year-old learner but will also have a large portion of post-traditional adult learners who may have different needs, skills, and experience, and often are trying to balance competing priorities.
- **Interaction Mode:** Refers to the way in which students engage with the institution, whether primarily through classes on campus, online, or a blend of both.¹⁰

9 Lawton, J. and Toner, M. (2020). *Equity in Design for Holistic Student Supports: Supporting the Success of Students Enrolled Part-Time*. Achieving the Dream.

10 New, J. (2015, May 19). Drive-Up Advising. *Inside Higher Ed*.
<https://www.insidehighered.com/news/2015/05/19/florida-atlantic-u-offers-academic-advising-parking-garages>

Enrollment Status

Other essential information about students is if they intend to participate in classes on a full- or part-time basis and how this decision fluctuates throughout their academic journey. Understanding why students attend less than full-time can inform critical decisions about retention strategies including academic planning, course scheduling, and student support service delivery. Further, coupling enrollment status with other data on students' identities and experiences can provide the level of detail needed to understand if any institutional policies, processes, or structures are impacting a students' decision to enroll part-time for a semester or more. For example, a single mother with children in school may not be able to take classes scheduled once the school day ends, which could result in a slower time to degree if the institution doesn't offer that course at a different time. Additionally, institutions often schedule student supports to be available during a 9 to 5 workday, which does not accommodate many students who work full- or part-time.

Program of Study or Major Selected

Selecting their program of study or major is one of the crucial decisions a student makes in their academic experience, and it is data to which we have relatively quick access. "Many community college students are confused or overwhelmed by the number and complexity of choices they face, which can result in 'mistakes' — unexamined decisions they make that waste their time and money or that divert them from a promising academic or career path."¹¹ The selection or reselection of a course of study can be a source of anxiety and stress for many students.

Beyond the program of study and their academic goals, understanding a student's career and personal goals is an important step in knowing the student. Through the work of advising reforms such as the Integrated Planning and Advising for Student Success (iPASS) initiative, more institutions are



implementing a more holistic approach to academic planning and supports. Through these efforts, institutions are using what they know about their students to engage them in early and intentional academic, career, and financial planning and monitoring their plans over time. This contributes to the delivery of advising that is personalized and strategic.

Getting to Know Students: Beyond the Foundations

What do you know about your students beyond gender and race? How do other individual identity characteristics “intersect” with one another and overlap?

Institutions need to move beyond the common demographics of gender, race and ethnicity, socioeconomic background, and enrollment status to recognize the combination of the social identities and lived experiences that support or hinder students' success. A common misperception is that students fail to enroll, re-enroll, or persist through college due

¹¹ Jaggars, S. S., Fletcher, J., Stacey, G. W., & Little, J. M. (2014). *Simplifying complexity in the student experience: Gathering data*. New York, NY: Columbia University, Teachers College, Community College Research Center.

to academic failure. In reality, more than half (55 percent of 13,000 respondents) say work and family commitments, course schedules, and transportation are major concerns to enrolling in college.¹² Institutions are not typically designed to meet these types of needs as they have too often been considered “non-academic” despite being the main causes of students dropping or stopping out. Thus, we must focus our efforts on understanding more about our students than their academic data and background. To design a support that encompasses all students, not just the 18 to 21-year-old bracket, institutions should consider exploring:

- ▶ Who are the students?
- ▶ Where do they live (or did live prior to enrollment)?
- ▶ What do they value?
- ▶ What are their goals (academic, career, personal)?
- ▶ How do they feel about the institution and seeking support?
- ▶ What do they struggle most with?
- ▶ What do they think they need support in?
- ▶ How do they think they use services?
- ▶ How do they actually use services?

The “whole student” comes to class, bringing with them their lived and learned experiences, trying to navigate a system of higher education that was not necessarily designed for them. In order to move the needle on student success for minoritized students, institutions must understand the totality of factors that undermine success for different student populations. For example, student academic achievement is not isolated to math, science, or language ability. It is

influenced by beliefs, preparation, lived experiences, access to health and learning resources, the financial income of the student’s family, and racist inequities in systems and structures.

Simply put, students that have the benefits of a foundation that gives them greater opportunities in life tend to do better; students who have not started out in life with those benefits are too often expected to catch up without having access to the resources they need. If they don’t, blame is placed on the student or the resulting equity gaps are seen as an inevitable outcome. Institutions of higher education have a unique opportunity to provide supports that can close the opportunity gap, allowing students from all backgrounds the resources they need to thrive.

Expanded Student Characteristics

College students range from adolescents to senior adults, but regardless of their age, all of them are exploring who they are and who they want to be as they move toward their academic goals at your institution. We all have multiple identities that develop throughout our lives, though adolescents are actively working on identity development and may be exploring new identities as part of this process.¹³ Our multiple identities — including but not limited to race, gender, age, role in our family, communities we belong to, and how we perceive ourselves in the world — all shape how we experience the world. Different identities are more or less salient in different contexts. For example, a student’s identity as female may be more prominent in male-dominated programs of study.

When we understand how students’ identities shape their experiences on campus, we can make our institutions places that promote robust identity exploration and development so that students leave with content knowledge and are better positioned to become thriving members of their communities.

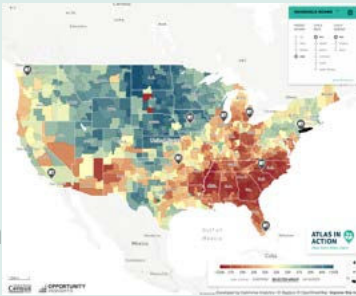
¹² Strada Education. (2020). *Public Viewpoint: Enrolling in Education: Motivations, Barriers, and Expectations*. <https://cci.stradaeducation.org/pv-release-july-15-2020/>

¹³ Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, 7(3), 172-180.; McAdams, D. P., & Zapata-Gietl, C. (2015). Three strands of identity development across the human life course: Reading Erik Erikson in full. *The Oxford handbook of identity development*, 81-94.

Leverage National Datasets and Resources

Many national, regional, and state datasets exist that can shed light on students without needing a significant data collection or analysis capacity on campus. The following are some examples of datasets that could be useful to institutions looking to better understand their students and communities:

- The [Opportunity Atlas](#) uses Census data to track social mobility in neighborhoods across the United States. Institutions can use the data about their communities to learn more about the societal factors that impact their students. Data can be disaggregated



in complex ways to better understand how different populations are impacted differently in their area. Institutions can also overlay their own data to create customized boundaries that better reflect the service area. Additional datasets, including estimates of access and mobility rates by college can be found on their sister website, [Opportunity Insights](#).

- The [KIDS COUNT Data Center](#) is a free online resource that provides data on child well-being over time from the most trusted national sources and from more than 53 state- and territory-based organizations. The KIDS COUNT Data Center houses hundreds of key child and family well-being indicators and more than four million data points at the national and local levels.

The following factors will give more information about who students are beyond their academic status. It is noted that many of these are challenging to collect and personal in nature so self-disclosure and clear privacy regulations and safeguards are critical.

- ▶ Family status
- ▶ Parental or caregiver status
- ▶ Sexual orientation
- ▶ Gender identity or expression
- ▶ Veteran status
- ▶ Immigration status
- ▶ Displaced workers
- ▶ Job function
- ▶ Current or former ZIP code, to approximate neighborhood
- ▶ Expected family contribution
- ▶ Pell eligibility status and level
- ▶ Formerly or currently incarcerated individuals
- ▶ Historical personal or collective trauma
- ▶ Health conditions
- ▶ Mental health
- ▶ English literacy
- ▶ Food insecurity
- ▶ Housing insecurity
- ▶ Computer technology literacy and skills
- ▶ Years of work experience
- ▶ Dual enrollment status
- ▶ Transfer status

Institutions that gather and utilize this more descriptive student information are more likely to understand the barriers for students in learning and academic success. Exemplary institutions routinely

conduct qualitative research and have trained faculty and staff to do this in order to ensure quality and deepen understanding of student needs, motivations, and behaviors.

Every Student's Dream Matters at Lorain County Community College

Lorain County Community College (LCCC) has made a commitment to equity, embracing the belief that “every student’s dream matters.” Faculty, staff, and leaders listen to students and make a point of incorporating the “student voice” in their planning, evaluation, and communications. This culture was developed intentionally by senior leadership after LCCC created an equity score-card using disaggregated data on key metrics of student progression in 2015. It charts the student journey from initial contact with the college through completion and transfer or entry into the workforce.

Presenting the data in a transparent way revealed that the college had progressed in some performance areas, but not all. In order to innovate and improve equity outcomes on a regular basis, the college relies on three key strategic practices:

- **Promoting professional development:** LCCC’s professional development offerings since 2016 have focused on increasing awareness of equity issues, exploring how those issues influence the student experience, and providing strategies to address them. The professional development programs are designed to provide college staff and faculty with an understanding of social, racial, and economic justice issues.
- **Fostering innovation and scaling what works:** LCCC’s student support and academic divisions

collect student feedback formally and informally, which informs the development of innovative programs that respond to student needs. For example, the Students Accelerated in Learning program (SAIL) provides academic and financial support to help students earn their associate degree within three years. Financial supports include gap tuition scholarships, textbook vouchers, and monthly grocery and gas gift cards. Academic and career supports feature

high-touch academic advising, personalized career advising, priority registration, workshops, and boot camps that meet students’ needs. Other supports include the development of mentoring programs, an early college high school, and the Advocacy and Resource

Center, which was created in response to students struggling with food insecurities, housing challenges, lack of reliable transportation, and other nonacademic obstacles.

- **Applying technology solutions:** The college has leveraged both existing technology and new tools to ensure that it is reaching out frequently and consistently to find and remove barriers that might arise along the student journey. For example, the college uses text messages to nudge students, adaptive technology to improve skills, and a technology platform to personalize advising.





Noteworthy Considerations

FERPA Guidance

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. As colleges access and utilize student data, certain terms and conditions of FERPA may serve as a barrier.

Data Security and Privacy

All data collected about students' identities and experiences should be stored safely and securely in a way that allows access to those needing data to make better decisions while also respecting students' privacy. This means making sure students know what data is being collected and in what ways it may be used. A recent survey of students by EDUCAUSE found that while around half of students trust their institution to use their data ethically and respectfully, there was much less awareness of how that data is used and how it might benefit the student.¹⁴ The report also outlines ways institutions can be more transparent and promote security and the type of data students are comfortable with their institution using.

The Importance of Language

When beginning to work with the richer information about students, it is important to agree on the nature of language used to talk about data and to describe the insights. Specifically, when discussing race, it is recommended that racially coded language such as at-risk, minority, low-performing, URM (underrepresented minorities), nonwhite, or better-served not be used.¹⁵ These terms are “racialized labels” to describe “students who are not North American whites without actually naming them. Equity-minded individuals humanize minoritized students as African American, Latinx, Native American, Hawaiian, Vietnamese, etc. They also understand that lumping all minoritized populations into a single category is another way of avoiding honest race talk.”¹⁶

One way to move toward a more equity-minded culture is by changing the language used to talk about success. Using appreciative versus deficit language — such as gateway versus gatekeeper course; or equity gap versus achievement gap — acknowledges structural and process barriers contributing to

¹⁴ EDUCAUSE. (2020). Student Technology Report: Supporting the Whole Student. <https://www.educause.edu/ecar/research-publications/student-technology-report-supporting-the-whole-student/2020/student-data-privacy>

¹⁵ DiAngelo, R. (2011). White Fragility. *International Journal of Critical Pedagogy*. Vol 3 (3), pp 54-70.

¹⁶ Bensimon, E. M., Brown McNair, T., and Malcom-Piqueux, L. (2020). *From Equity Talk to Equity Walk: Expanding Practitioner Knowledge for Racial Justice in Higher Education*. Jossey-Bass.

inequities in the systems in higher education. As one academic put it, “The attainment metrics I had been using registered the deficits in the students. But the deficits are not in the students. They’re in the systems that are supposed to serve them.”¹⁷ The definitions provided in the introduction of this guidebook are a good place to start.

Appreciative Language in Practice

Deficit language often creeps into discussions around student data, from common terms like “achievement gap” to the focus on where students

are not performing well. Even the standard approach to disaggregating data embeds an inequitable deficit mindset by comparing the outcomes of racially minoritized to those of white students, as if the outcomes for white students are the standard to meet. Yet one of the most effective ways to approach data discussions in an appreciative way is to shape the questions being asked appreciatively.

Below is an example of how to use appreciative language when describing student characteristics versus the deficit norm.¹⁸

DEFICIT

Why are Black male students’ rates of persistence and degree attainment lowest among both sexes and all racial and ethnic groups in higher education?



ANTI-DEFICIT

How do Black male colleagues manage to persist and earn their degrees, despite transition issues, racist stereotypes, academic under preparedness, and other negative forces?



QUESTIONS FOR EXPLORATION & ACTION STEPS

In addition to completing the design brief, consider and examine the data landscape. To do this, work through the following questions for exploration:

- ▶ What foundational student data do we already have access to? Where is it stored and who has access to it?
- ▶ What data do we already have access to that goes beyond the foundations our students’ identities? Where is it stored and who has access to it?
- ▶ What additional sources are available for us to gather foundational student data?
- ▶ What data do we have that needs to be disaggregated in different ways or in greater detail? In what ways?
- ▶ What percentage of students have completed their FAFSA?
- ▶ How is this data stored and used by the institution?
- ▶ Which aspects of this dataset would the institution be comfortable using in new ways?
- ▶ Are we aligned on the language we use to describe students and student groups?
- ▶ How might we be more equitable, inclusive, and strengths-based in our language?

¹⁷ Paunesku, D. (2019, July 9). The Deficit Lens of the ‘Achievement Gap’ Needs to Be Flipped. Here’s How. *Education Week*. <https://www.edweek.org/leadership/opinion-the-deficit-lens-of-the-achievement-gap-needs-to-be-flipped-heres-how/2019/07>

¹⁸ Harper, S. (2010). An Anti-Deficit Achievement Framework for Research on Students of Color in STEM. *New Directions for Institutional Research*. n148 p63-74.



TOOLBOX FOR SECTION I

Student Needs Assessment

Achieving the Dream's Student Needs Assessment, part of the Holistic Student Supports Redesign Toolkit, can help teams begin to evaluate the different identities and needs of students. An editable copy of this assessment can be [downloaded here](#).

Student Needs Assessment						
Questions for Your College	0 – 20%	21 – 40%	41 – 60%	61 – 80%	81 – 100%	Don't Know
What percentage of students work more than 20 hours a week?						
What percentage of working students experience regular changes in their shifts or number of hours?						
What percentage of students have children or care for family or friends?						
What percentage of students receive or are eligible for Pell Grants?						
Of those who receive Pell Grants, what percentage live below the poverty threshold for a family of four?						
What percentage of students say they live paycheck to paycheck?						
What percentage of students receive income-based public assistance?						
What percentage of students feel they are carrying too much debt?						
What percentage of students struggle to feed themselves and/or their families?						
What percentage of students have unstable living situations?						
What percentage of students have a disability or other health concern for which they may want assistance?						
What percentage of students come from households where English is not their first language?						
What percentage of students come from households where no one has a college degree?						
What percentage of students are being flagged for additional services?						
What percentage of students come to your campus knowing what career they are seeking?						



TOOLBOX FOR SECTION I (cont'd.)

Design Brief: Deepening Your Understanding of the Problem

The following design brief template can help teams craft a summary of the problem trying to be addressed. This is valuable to engage stakeholders in trying to identify solutions to the challenge or opportunity as they can summarize key findings from the first two steps in the student-centered design process without overwhelming people with mountains of data. An editable copy of this assessment can be [downloaded here](#).

What problem are you trying to address?	
How do you know it is a problem? What evidence exists that describes the current reality?	
Who is not served well by this issue currently? <i>Consider specific student populations but also institutional personnel and the community.</i>	
Based on what is known about the identities and experiences of these students, what are the biggest pain points related to the challenge?	
What other aspects of the student experience are related to this challenge and what do those relationships look like?	
What biases, myths, or assumptions need to be acknowledged before the next step begins?	
Who is needed to get this information? How will this information be gathered?	
Why should your institution attempt to solve this problem? <i>Consider:</i> <ul style="list-style-type: none"> • <i>How is this effort aligned with your institutional vision and strategic goals?</i> • <i>How else could the institution or the community benefit from addressing this opportunity/issue?</i> 	
How will you know your redesign is having the effect you want? These are the beginnings success metrics.	
What critical conditions exist that the solution must operate within? <i>Consider:</i> <ul style="list-style-type: none"> • <i>Timeline</i> • <i>Resources</i> • <i>Area of focus</i> • <i>Scope of changes that can be made</i> 	



SECTION II

A Closer Look at the Student Experience

In the previous section, we outlined the challenge to be addressed and examined some of the many ways of knowing your students. We looked at ways to learn their intersecting identities, including demographic groups and how they relate to their communities and the world. In this section, we take this further to really understand how students' identities and experiences all shape how they experience campus and their academic programs. We will explore how the design of our institutions shape their experience and outcomes. In this phase, known as the "What Is?" step in the student-centered design process, the design team works to develop a deep understanding of what causes and what reinforces the challenges they are trying to address.

Step 2: What Is?

The first part of this step is focused on collection of quantitative and qualitative data that can help the design team formulate coherent and comprehensive answers to questions that provide a deeper understanding of the challenge or opportunity. For example:

- ▶ What are the root causes of this challenge?
- ▶ How do our institutional structures, policies, processes, and culture contribute to or cause the outcome of this challenge?
- ▶ How do your students experience the challenge?
 - How do other stakeholders close to the challenge experience it?
- ▶ Which student populations are most adversely impacted by the status quo?
 - How do these students' identities and experiences interact with these causes?
 - Based on what is known about the identities and experiences of these students, what are the biggest pain points related to the challenge?



- ▶ What other aspects of the student experience are related to this challenge and what do those relationships look like?
 - What other institutional structures, policies, processes, or culture are connected to this challenge and may also need to be revisited?
- ▶ What assumptions is this team making about the challenge and key stakeholders?
- ▶ What biases exist within the group and how do we want to ensure they do not influence the process?

As in step one of the process, access to as much student data as possible can be critical to the development of a deep understanding of the problem or opportunity at hand. This includes access to data currently collected by the institution but also the authority and resources to gather additional data needed to understand the problem and how it impacts students. Section three of this guidebook will explore ways to collect these data.

The second part of this step is to analyze these data and develop some design tools that summarize the key insights. These design tools act as a cheat sheet so the most critical insights remain at the forefront of the design process. Examples of the types of design tools that are most useful in higher education are noted in the toolbox at the end of this section. The most important thing to note is that the design tools are intended to help the team keep students at the center, particularly those who are most harmed by the status quo.

The final part of this step is to decide how decisions will be made and by whom. Preparation at this stage will ensure that all team members and other stakeholders involved are on the same page going into the idea generation phase. This aspect of the work contains two parts:

1. Deciding the process for who makes which decisions and how they are communicated to stakeholders. For example, the design team

may be responsible for deciding the two to three ideas they wish to move forward. They may also be responsible for presenting these ideas to the leadership team during a meeting for approval. Once approved, the design team may be responsible for communicating this decision to key stakeholders.

2. Identifying the criteria the design team will use to decide which of the ideas generated will be moved forward or proposed to the leadership team. Design criteria should include some of the most critical findings from the “What Is?” step to remind the design team who they are designing for and what the root causes of the problem are.

A Note on Urgency Versus Accuracy

It is important for the design team to avoid the temptation to rush this step because they or the institution are eager to move into implementation. To ensure the process results in the most effective ideas, teams need time for deep examination of the systemic root causes. While it may feel uncomfortable delaying the move to ideas in the short run, it will save time and resources in the long run.

The Importance of Empathy and Humility

In an ideal approach, those most impacted by the problem being addressed, particularly students, would be well represented on the design team. However, in reality, many institutions find this difficult for a number of reasons, including concerns about sensitive topics or privacy, desire not to overburden students with institutional responsibilities, difficulties in incentivizing and equipping students for participation beyond student government members, and more. Either way, each team member should exercise their own empathy and humility as they gather information from stakeholders on the problem and its impacts. Humility is a critical practice in this process, introduced by the Creative Reaction Lab, that ensures the design team does not place their own biases on the problem and filter out the

statements that don't align with their own biases. In their own words:

"Building humility and empathy is the step in which we examine how our own identities, values, biases, assumptions, and relationships to power and privilege impact how we engage with ourselves, each other, and the communities we work with. It's not enough to build empathy — we also have to acknowledge what we know we don't know (and what we don't know, we don't know)."¹⁹

If skipped, the design team runs the risk of disregarding or downplaying critical findings in the "What Is?" step, thus risking the success of the ideas they generate and test in the remaining steps.

What Data Help Illuminate the Student Experience?

To understand how students experience campus, it is helpful to think about students interacting with a variety of systems within their lives.²⁰

Your institution is one system and consists of multiple parts that students connect with. Students are also part of other systems including a workplace, family, the community, a home community (if they moved to attend your institution), a religious community, and Indigenous community, and more. These systems may be connected, or students may move between them with little overlap. In general, where students have more connections the easier it is for them to integrate their studies with the rest of their lives. For example, if students work on campus or for an employer who has a relationship with campus, they are more likely to be able to work around

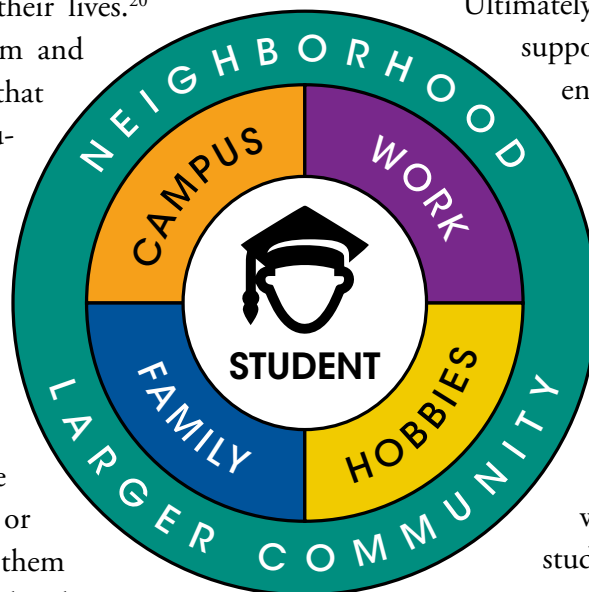
their course schedules. Having childcare on campus or near campus with schedules for care that match class offerings is another example of how systems can benefit students. Using a systems approach to understanding the complexity of your students' lives can help develop a clearer understanding of how they come to and move through their higher education journey.

Taking into consideration both individual and community experiences is particularly important in this moment as our students and institutions adjust to the changes brought on by the coronavirus pandemic and the social unrest from the systemic racism experienced in systems such as health care, education, and criminal justice. The dual pandemics of the pandemic and systemic racism have affected some communities more directly than others and are a reminder of how outside experiences affect the academic and college experiences for students differently.

Ultimately serving students in a way that supports equitable outcomes means ensuring students with all manner experiences feel as though they belong on campus, and that faculty and staff expect them to succeed.

By now, it should be clear that students do not experience campus the same way. Your campus and institutional programs may work well for some groups of students, allowing them multiple opportunities to engage and thrive.

At the same time there may be a subgroup of students who have many members who are not thriving. Identifying who these students are is the first step to changing their experience. As student groups bring historical or collective trauma with them, they may move through campus with more anxiety or



¹⁹ Creative Reaction Lab. A new model for Community Engagement, Problem Solving, and Creating Inclusive and Equitable Outcomes. <https://www.creativereactionlab.com/our-approach>

²⁰ Bronfenbrenner, U. (1992). *Ecological systems theory*. Jessica Kingsley Publishers.

experience stereotypes despite their personal beliefs about bias.²¹ Identifying the policies and structures that can change to better support student's thriving is the next step in building more student success at your institution.

Individual and Community Experiences

Students experience campus as individuals. Every student brings their life experiences with them to campus. This includes their experiences and perceptions about school and teachers, all their successes and all their hurt. These experiences can filter the way they approach school and their instructors. Students who have been effectively engaged and supported in and out of the classroom will likely approach your institution with openness and an expectation that they belong and will succeed. Students who have had negative experiences in education may expect rejection or harm from their everyday interactions and need to build trust with faculty, advisers, and the institution as a whole.²² This is why small interactions with faculty or staff around campus can be so meaningful. When students as individuals feel seen and valued, they can engage with campus and it is easier to put in the effort necessary to progress through their academic programs. Scholars from many disciplines agree that meaningful, authentic relationships are the foundation of belonging.²³

Student experiences are individual, but they also embody the collective experiences of the groups they are in. Examples of this are community experiences like flooding or a large fire and historical experiences like slavery or oppression. Many Native tribes carry

the collective trauma of their elders who were forced into boarding schools into every education experience. The current COVID-19 pandemic is creating a shared traumatic community experience. There is mounting evidence that such communal experiences leave their mark on individual identity and will affect how students experience campus.²⁴

If students are part of a group that has historically been discriminated against on campus it will take more and different efforts to mend that relationship and create a place where students can authentically engage. Understanding the *communities* students come from can guide a better campus review to ensure all communities are visible throughout campus.

The On-Campus Learning Experience

Understanding how students experience their classrooms is a critical piece of the student experience. Knowing which classes feel welcoming, where students feel challenged, and which classes leave students feeling lost or without adequate support can inform professional development and additional support structures to keep students making progress on

their chosen pathways. Paying attention to the classroom experiences across programs, day and evening classes, classes taught by tenured professors and adjunct faculty, and face to face, hybrid, and online experiences.

Data collection to answer questions about the classroom experience can include surveys, focus groups, or faculty observations. These qualitative data will be most useful when combined with academic data on course completions, drop points, and grades.

Some questions to ask to better understand the

Every student brings their life experiences with them to campus.

21 Steele CM, Aronson J. (1995, November). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*. 69(5):797-811.

22 Davidson, S. (2017). *Trauma-Informed Practices for Postsecondary Education: A Guide*. Education Northwest.

23 Strayhorn, T. (2012). *College Students' Sense of Belonging*. Routledge.

24 Menakem, R. (2017). *My grandmother's hands: Racialized trauma and the pathway to mending our hearts and bodies*. Central Recovery Press.; Heart, B., & Horse, M. Y. (2000). Wakiksuyapi: Carrying the historical trauma of the Lakota. *Tulane Studies in Social Welfare*, 21(22), 245-266.

on-campus learning experience include:

- ▶ What academic experiences have students most enjoyed during their time at the institution?
- ▶ Is there a pattern to withdrawal dates during each semester?
 - If so, what are the most commonly cited causes of dropping a class?
 - Do those students all drop their classes at the same time?
 - What earlier metrics can be tracked to intervene before a student withdraws?
- ▶ What proportion of students attending less than full-time would take additional classes if the schedule was altered?
- ▶ When do students access or submit coursework?
- ▶ Are younger students accessing the tutoring center more often?
- ▶ What proportion of students report having had conversations with faculty or assignments that help them map their learning to their chosen career path?

Every campus provides student support services from help with basic needs, spaces to study, and advising and financial aid support. Communities are also providing supports that many students are eligible to access. These data can be part of the surveys conducted, questions for a focus group, or a routine set of questions advisers ask students on a regular basis.

Other On-Campus Experiences

The campus experience is so much more than just attending classes. Make sure to capture all the ways students engage with campus when collecting data about the student experience. Some of this information will be in survey results like CCSSE or Noel Levitz surveys.

The first step to understanding student experiences outside of class is to know who is engaging with which resources and services. It is likely that data on not only how many, but which students are engaging in campus activities like clubs or social events or visiting the library regularly exists. It is important to disaggregate these numbers for student subgroups. Some questions that you can answer with these data include:

- ▶ Are working students only coming to class and then immediately leaving campus?
- ▶ When do students typically email advisors, faculty, or other staff with questions?
- ▶ Are Black and Brown students engaging in campus at the same rates as their white peers?
 - How does this change based on whether they live on-campus or not?
- ▶ Are Black and Brown students appropriately represented in student government?
- ▶ Do student parents need child-friendly spaces?
- ▶ Do working students need different hours to access advising or tutoring?
- ▶ Are students doing homework at home or on campus? Why do they make those choices?
- ▶ Is there a particular part of campus students are more comfortable going to ask questions?
- ▶ How often are students not able to get an answer to their question?
- ▶ What are students hoping to get from their campus experience beyond attending class?

All of these questions are answered more completely with qualitative data. In many ways, these data are more sensitive than some other data collected, as students may not want others to know they receive services. Be mindful of how the data is collected and used and take the time to evaluate whether or not



names are necessary to answer research questions or if confidential aggregate data will answer the questions to inform decisions.

Another facet of the campus experience is student work. Many students work, but not all work is the same. When understanding how work may affect a student's experience it's important to know not only how much they work, but how the job is or is not related to their course program. Students who work on campus generally have more flexibility to adjust their work hours around classes — and because they are working on campus — work actually increases their campus engagement. Students who are working in their field either for pay or as an internship are building valuable experience that they can use to scaffold their learning, so their work hours may be more complementary to their campus experience. The students who are working in entry-level jobs to pay bills while they attend school may struggle the most. This work often has variable schedules and may

include long hours, causing students to miss classes or attend sleep deprived.

Understanding student's work schedules is critical to helping your institution increase access by ensuring both classes and other services (advising, libraries, food pantries) have schedules that allow both traditional students and night and weekend students to access them. Advisors and other staff can help students make decisions about how much they need to work to meet their needs, as well as help them access services for relevant support. Understanding how many students are working more than 20 or more than 40 hours a week is an initial step to identifying any support that would be useful to help students cut down hours, where possible, such as through financial supports or services like free/low-cost childcare. These data can be collected using surveys or by advisers, especially considering work schedules can change over the course of the students' academic journey.

Leveraging Data to Reconnect with Stopped Out Students

Spending time gathering data around students' experiences has significantly impacted how many institutions approach redesign of their support. Cleveland State University (CSU) partnered with College Now Greater Cleveland, a local college access organization, to use data to identify the reasons their students dropped out of college. The data showed the top three reasons to be 1) that students were underprepared and couldn't keep up with their course load, 2) they owed money to institutions they have previously attended, or 3) they experienced an unforeseen crisis. CSU knew they could support students in reenrolling and completing their degree if they took a proactive approach. So, they pulled data on the students who had dropped out and set up a campaign to call them to identify how the institution could help

them reenroll. Once reenrolled, students complete an academic plan so they could see what is left of their academic journey and be connected to supports to help them succeed. In the first year of the program, over 230 students were successfully reenrolled and progressing towards graduation.

As the work of the [\(Re\)Connect to College program](#) progressed, CSU learned that debt was a significant barrier to reenrollment for an overwhelming number of students. In response, the team began working with the financial aid office to examine how these policies could be redesigned to better support students and prioritize student success. They also partner with local employers as another approach to reengage students and encourage employees who never considered college to enroll.

Sense of Belonging

As we learn how students experience the institution from their own perspectives, we need to consider how their identities and lived experiences interact with the learning environment. “A sense of belonging is experienced as a feeling of being accepted, included, respected in, and contributing to a setting, or anticipating the likelihood of developing this feeling. People assess their fit with ... an array of implicit worries and questions ... An important consequence is that a person may be highly responsive to cues that seem minor, even invisible, to a third party who does not have the same implicit question in mind. They can experience a lack

of belonging ... if they feel that an important social identity of theirs is marginalized.”²⁵

Anecdotally, we know that self-doubt is a major hurdle for many students, but there is also quantitative data to support this. Students’ beliefs, including their sense of belonging, stereotypes, and anxieties about education, can be the justification for them to disengage when they perceive judgment or don’t feel connected or acknowledged. “When students worry about belonging and something goes wrong – for instance, when a student feels left out, criticized, or disrespected – it can seem like proof that they don’t belong. This can increase stress and undermine students’ motivation

We need to consider how students’ identities and lived experiences interact with the learning environment.

Ways to Increase a Sense of Belonging

Some examples of ways to shift policies to better support more students and increase students’ sense of belonging include:

- Reduce the number of steps to access support.
- Normalize support for all students – this is a culture shift so it is assumed all students will access support rather than feeling stigmatized or not as strong a scholar when they access support.
- Work within departments to ensure all students have connections to at least one faculty member.
- Use orientations to teach students about the importance of connection.
- Consider light-touch psychological interventions to build students’ identities as learners and combat stereotype threat. For example, the growth mindset interventions at University of Texas led by David Yeager and his team have shown great success.²⁶
- Integrate collecting and reviewing data about who students are and how their identities intersect into the regular operations of the institution. This can happen through data cafes, reports, and dashboards that are regularly shared, and new structures for department and administrative meetings.

²⁵ Walton, G. M., & Brady, S. T. (2017). The many questions of belonging. In A. J. Elliot, C. S. Dweck, & D. S. Yeager (Eds.), *Handbook of competence and motivation: Theory and application* (p. 272–293). The Guilford Press.

²⁶ Broda, M., Yun, J., Schneider, B., Yeager, D. S., Walton, G. M., & Diemer, M. (2018). Reducing inequality in academic success for incoming college students: A randomized trial of growth mindset and belonging interventions. *Journal of Research on Educational Effectiveness*, 11(3), 317–338.

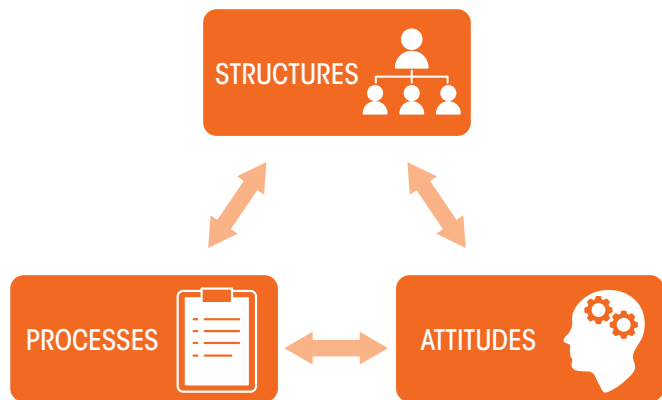
and engagement over time.”²⁷

In one survey conducted in spring 2020, half of the more than 13,000 respondents fear they won’t be successful students or have been out of school too long.²⁸ Institutions can impact a students’ sense of belonging through “social belonging” interventions including messaging and values affirmation that supplement the existing teaching pedagogies.²⁹ The ideal student experience includes at least one person on campus that knows the student well and can connect them to supports. The more relationships that faculty and staff can build with students, the more students will succeed.

Measuring sense of belonging for students can be challenging. However, there are a few survey scales that have been used to measure sense of belonging. These can be part of student surveys to allow for easy tracking of sense of belonging over time. These scales can include just a few questions or be longer and more thorough.

How Does the Design of an Institution Impact the Student Experience?

Institutions can benefit from adopting a framework through which to break down and analyze the design of their institution. One simple framework born of comprehensive research into institutional change and advising redesign at two- and four-year higher education institutions, is to examine structures, processes, and attitudes.³⁰



A Note on Students and the Virtual Campus

In light of the large shifts institutions made when the COVID-19 pandemic began, students who are learning virtually have become a larger and more important group with needs that must be addressed if they are to complete their programs at the institution. These students may be spread across geographies and are experiencing the institution in different ways than students who are physically on campus. These students, like their peers who come to campus, have lives and out-of-school experiences they are managing along with their academics. They may be working and have

childcare needs or other responsibilities that, along with their identities, shape their experience of campus. Ensuring that these students are represented in data needs to be intentional. In a fully online environment, there are still a number of non-classroom spaces students engage with; tutoring, virtual club meetings, advising, and any virtual contests on social media. It should be particularly easy to access participation data from virtual events. Focus groups can be administered online as well. For quick data collection, polls can be administered during virtual events or appointments.

27 Yeager D., Walton G., Cohen G.L. (2013). Addressing Achievement Gaps with Psychological Interventions. *Phi Delta Kappan*. 94(5):62-65.

28 Strada Education. (2020). *Public Viewpoint: Enrolling in Education: Motivations, Barriers, and Expectations*. <https://cci.stradaeducation.org/pv-release-july-15-2020/>

29 Yeager D., Walton G., Cohen G.L. (2013). Addressing Achievement Gaps with Psychological Interventions. *Phi Delta Kappan*. 94(5):62-65.

30 Kezar, A. (2013). *How Colleges Change: Understanding, Leading, and Enacting Change*. New York, NY. Routledge.

- ▶ **Structures** are the foundational elements of an organization, the components that make up its internal and external functions.
- ▶ **Processes** can be thought of as the steps one takes to navigate the internal or external functions or structures.
- ▶ **Attitudes** are the convictions, mindsets, and beliefs that shape organizational culture.

The sum of the design behind each of these components is the institution students experience. Yet, too often, structures, processes, and cultures are designed based on institutional history or based on the preferences or assumptions of personnel. To truly make change, identify if the structures and policies on campus that are supporting some students may be creating challenges for others.

When analyzing institutional attitudes, consider the mindsets, beliefs, and habits that shape or influence decision-making and culture within and through the campus. Attitudes permeate every aspect of institutional culture and influence decision-making, which in turn impacts what structures are in place and how students navigate through them or the process. A student's sense of belonging can be heavily impacted by institutional and individual attitudes. While many students already feel they belong, too many find themselves navigating unfamiliar structures and complex processes which present as a formidable barrier to academic and social success. While sense of belonging is ultimately created by making connections and building relationships, the institution is responsible for setting up structures and policies to facilitate belonging for all students.

Perspectives from the Field

Institutions of higher education across the country are working to design an experience that meets the needs of their students. Many are shifting to a holistic approach to supporting students, with support services co-located or interconnected to reduce the chances of students dropping out. Institutions pursuing this holistic student supports approach need to implement changes in structures, processes, and attitudes across the institution. The experiences of these institutions illustrate the nuanced relationship between these types of change. They often find that attitudinal change is the hardest to effect, especially if the change needed is significant. When senior leadership is leading the charge, structural change often represents an actionable and meaningful first step, requiring resources to reshape and develop infrastructure to demonstrate

commitment. Process change is often the area that gets the most attention and resources because it is often where the most work needs to be done.

Some of these changes are small, such as making

sure everyone is trained to pronounce names correctly for all students. This reference guide is a great tool for institutions to train staff on non-English names.³¹ Other changes are much larger: Are there students who can't participate in campus activities because they need childcare? Do night students who are not being connected to activities because clubs only meet during the day? Have students shared that many of them do not have connections to any faculty or staff on campus? If so, what policies could change that?

On the next page are some examples of data to collect on your students' experiences and how that can be connected to institutional structures, processes, or attitudes.

To truly make change, identify if the structures and policies on campus that are supporting some students may be creating challenges for others.

31 Greenberg Motamedi, J., Jaffery, Z., Hagen, A., & Yoon, S.Y. (2017). Getting it right: Reference guides for registering students with non-English names, 2nd edition. (REL 2016-158 v2). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest



Data Point	Potential causes...		
	Structures	Processes	Attitudes
Proportion of students who report having to visit multiple offices to get a question answered.	Offices are located in inconvenient places or not clustered based on student need. Departments are named using higher education jargon, for example, the bursar's office.	Staff are not cross-trained to be able to provide basic information to students on important topics, such as financial aid application deadlines.	Institutional culture is to remain within departmental silos and not provide information that falls under the purview of a colleague.
Proportion of advising sessions that result in students waiting for 10-plus minutes to be seen.	Budgets aren't aligned with institutional student success priorities, resulting in high caseloads or queues for walk-in appointments.	Advising sessions often go longer than scheduled due to unrealistic goals for each session. Technologies make advising sessions more complex instead of more seamless.	Leadership doesn't recognize the importance 10 minutes can have on the student experience, particularly for students juggling multiple responsibilities.
Proportion of part-time students that have gone full-time in at least one previous semester.	Schedules are not set with working students in mind. Opportunities to work on campus are not available to enough students.	The advisor role doesn't explicitly state they help students plan for their next semester, so the student experience of retention is inconsistent. Financial or life support services, whether on or off-campus, are not sustained throughout the student journey.	The institution accepts that a number of part-time students are expected each semester so does not examine how it could better meet their needs.
Proportion of minoritized students reporting they have a go-to person on campus for their questions.	Staff, faculty, and leadership do not adequately reflect the population they serve.	Onboarding processes don't facilitate the building of a strong relationship with a faculty or staff member consistently.	Campus culture defaults to the assumption that students will ask when they need help, whether on academics or personal supports.



Spotlight on Students Enrolled Part-Time

Part-time students are another group that warrants extra attention when examining the impact of structures, processes, and attitudes on the student experience. Too many institutions of higher education are still designed for the historical image of a “traditional student” who is able to enroll full time. This can have unintended consequences for part-time students who may only be on campus in the evenings or may have outside responsibilities that don’t allow them to spend time on campus beyond their classes.

Additionally, students inhabit multiple iden-

ties, and these identities intersect. This means racially minoritized students who are enrolled part-time may have a different experience from white students attending part-time, and may also have a different experience from racially minoritized students who attend full-time. The only way to know this is to pay attention to these layers of student groups when disaggregating data and when collecting qualitative data to better understand where the challenges are and how adjustments can be made.



QUESTIONS FOR EXPLORATION & ACTION STEPS

In narrowing in on the student experience and the ways in which the design on the institution influences and impact their experience, consider and explore the following:

- ▶ What are the structures that students must navigate?
- ▶ What are the steps a student must take in order to reach the intended outcome of the aforementioned structure?
- ▶ What data points about your students, beyond their identities, are currently collected?
- ▶ Which offices collect that data?
- ▶ What data points would be useful to the institution that are not currently collected?
- ▶ What assumptions or myths about students, or certain student populations, exist on campus?
- ▶ To guide conversations after having learned more about students, consider these questions:
- ▶ Who are the students that succeed? What are their characteristics and behaviors?
- ▶ What factors can we observe that tell us students are gaining or have lost momentum?
- ▶ Where does a student spend most of their time while completing a degree at your institution?
- ▶ Do we know how students are experiencing our “workflows”?
- ▶ How do we communicate with students?
- ▶ How do they “hear” us?
- ▶ Are the student supports designed to address the students identified with highest need or with the needs you want to address?
- ▶ How are decisions made to ensure the best interest of students?



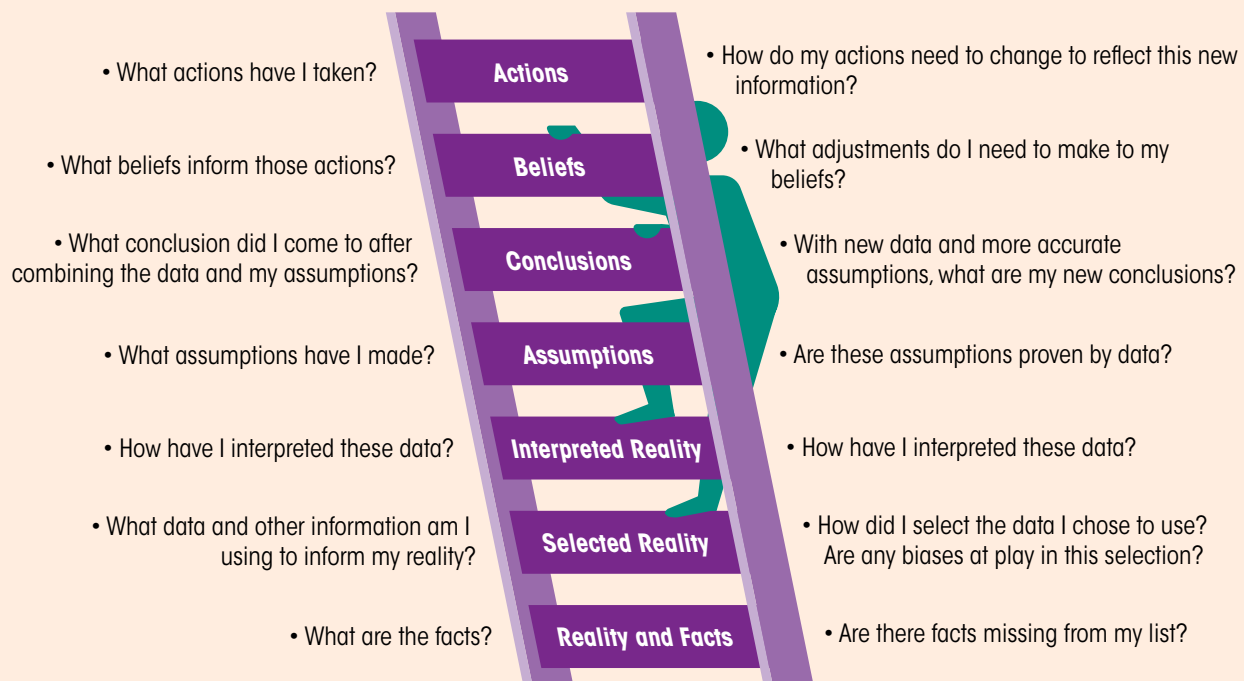
TOOLBOX FOR SECTION II

Activities and Tools to Explore Root Causes

Ladder of Inference

This activity, a slightly modified version of a tool used in systems thinking, can help design teams avoid jumping to conclusions about the problem they are trying to address and the students they are trying to design for. It can also help align the design team's thinking about the problem or opportunity. Follow these steps to use the ladder of inference.

1. Identify where on the ladder the team is:
 - ▶ Selecting the data or reality?
 - ▶ Interpreting what it means?
 - ▶ Making or testing assumptions?
 - ▶ Forming or testing conclusions?
 - ▶ Deciding what to do and why?
2. From the current rung, analyze your reasoning by working back down the ladder using the questions on the left side of the ladder.
3. Once the reality and facts rung are reached, work back up the ladder using the questions on the right to ensure actions are based on a clear understanding of the facts.





TOOLBOX FOR SECTION II (cont'd.)

The Iceberg Activity

The iceberg activity is another tool taken from systems thinking that can help teams understand the root causes of a problem. The activity helps teams move beyond a surface-level understanding of their problem to really dig into the systems and culture that reinforce or cause the problem. Teams can use the activity by answering the questions in the following order:

- ▶ **Events:** What is happening or what happened?
- ▶ **Patterns of behavior:** What has been happening over time?
- ▶ **Underlying systems:** What structural forces contribute to these patterns?
- ▶ **Mental models:** How does our thinking, as a team or campus, reinforce these systems?

EVENTS

("What happened?")

PATTERNS OF BEHAVIOR

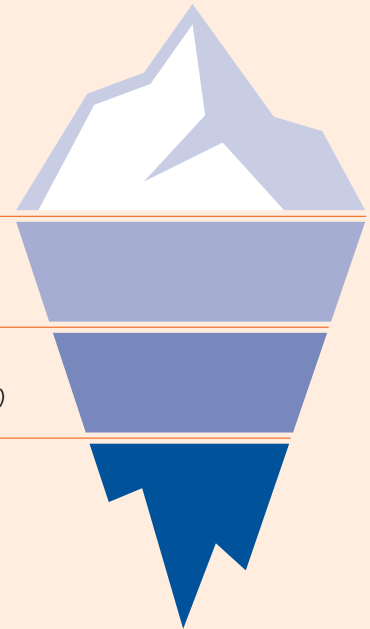
("What has been happening over time?")

UNDERLYING SYSTEMS

("What structural forces contribute to these patterns?")

MENTAL MODELS

("How does our thinking reinforce these systems?")



Systems Maps

Working together to develop a map of the problem or opportunity can help teams visualize and better understand the bigger picture of how their work connects to other aspects of the institution.

There are many different types of systems maps:

- ▶ **Relationships:** To show how different parts of a system are connected and in what way.
- ▶ **Power dynamics:** To explore where power, both formal and informal, lies within a system so levers of power can be identified.
- ▶ **Causal loops/maps:** To visualize how one part of a system reinforces outcomes in other parts of the system.

SECTION III

Collecting the Data

Getting to know your student experiences includes collecting both quantitative and qualitative data. In this chapter we explore ways to collect data that highlights how students experience your institution. The experts on this are your students. As such, we explore ways your team can uplift the voices of your students in this process.

Collecting Student Data: Start with What You Have

The first step should be to explore what data is already collected on your students and their experiences. Many institutions use the Noel Levitz, CCSSE, or NSSE to assess student experiences of their institution. The primary goal of these surveys is to measure campus engagement and satisfaction with the institution. These surveys also capture some of the basic demographic information discussed earlier. While these surveys do not necessarily capture student's prior experiences, they do allow to see if overall students are having a favorable experience on campus. By disaggregating the results based

on student groups (minoritized racial groups, student parents, older students, working students, part-time students) these surveys make it possible to identify groups of students who are not having a favorable

experience. This work also identifies student groups who are successful, and it is equally important to learn from them what fosters that success both on and off campus.

Institutions often design and implement their own surveys to

complement or serve different purposes to these national surveys. For example, many institutions have developed intake surveys as part of the application or

Your first step should be to explore what data your institution already collects on your students and their experiences.

onboarding experience of their students. These surveys are designed to learn more about the student early in their college experience so faculty and staff can connect them with relevant academic, financial, and life supports that could support their progression and success. While intake surveys may be only a snapshot in time, they can help students get set-up for success and provide valuable data to the institution about what is most critical to those early experiences for different populations. Additionally, the FAFSA gathers a lot of data that could be used in new ways, as long as privacy and security considerations are addressed, and students know what data is being used and how.



Collaborate with Community and Industry Partners

Without robust data sharing agreements, there will only be access to aggregate data from community partners. Work with partners to build shared data definitions for groups within the data that are important to the community. For example, when looking at age groups, come to an agreement as to where breaks will be made. If all partners agree to disaggregate data for groups 16-18, 19-24, 24-30, 30-40, and 40 and older, then everyone can easily gain a shared understanding of the community's age groups. Being able to easily determine which student groups are over or underrepresented in services or engagement with community partners is an important part of understanding student experiences off campus. According to FERPA “it is a best practice to enter into a written agreement with the community-based organization prior to sharing any PII from education records.”³²



32 U.S. Department of Education. Protecting Student Privacy: Frequently Asked Questions. <https://studentprivacy.ed.gov/frequently-asked-questions>

Unleashing the Power of Partnerships in Central Ohio

In 2010, the city of Columbus and the surrounding Franklin County community were dealing with the effects of the Great Recession. Many out-of-work adults or workers who needed new skills had turned to Columbus State Community College (CSCC), swelling enrollments and forcing the college administration to focus on finding extra classrooms, faculty, and resources. In addition, Columbus State was taking in more traditional-aged students, more than half of whom, The Columbus Dispatch reported, were not college-ready and needed developmental education courses. This news alarmed taxpayers as well as the education and business communities alike.

CSCC set out to address this challenge as a community, leveraging their role as an anchor in the community. As an outgrowth of the president of CSCC's conversations with education and business leaders in the region, they convened a series of facilitated forums involving 150 to 200 people over 18 months. This led, in 2011, to the creation of the Central Ohio Compact, a coalition of more than 50 school districts, universities, and employers committed to the understanding that "regional prosperity is tied to student success, and it can be

achieved through the collaboration of education and industry players." The compact is a vehicle for K-12, higher education, and industry players to seamlessly collaborate. In addition to convening the compact, the college launched and maintains a regional dashboard, integrating data from state, high school, postsecondary, and employer sources. The college also formed a workforce advisory council comprised of chief talent officers of Central Ohio companies. A similar community advisory board is being created to facilitate community responses to students' nonacademic barriers.

A significant collaboration to grow out of the compact is the Modern Manufacturing Work-Study program, designed and customized to address locally based Honda North America's need for a talent pool of workers who can keep up with rapid technological change. In the accelerated learning program, high school students graduate with 18 college credits, attend two semesters at CSCC, then split the final 12 to 15 months between the college classroom and on-the-job activities while they earn a salary. The college has extended a tailored form of this model to other companies in the region.





Collecting Student Data: Seeking Students' Perspectives

To fully understand the current student experience of your problem, it is essential to use a variety of techniques. Consider a combination of the following:

- ▶ Quantitative data on student identities and experiences.
- ▶ Quantitative data on the student experience of that problem.
- ▶ Quantitative data on student outcomes and progression related to the data.
- ▶ Student understanding of needs and experience: One-on-one interviews, focus groups, surveys, student journals.
- ▶ Third-party perspective of student needs and experience: Shadowing or observing, secret shopper, student mental models (for example, a student's understanding of how advising works).
- ▶ Students' participating with tools like process mapping to identify every step in the student experience of career exploration and counseling.

In addition, to the student experience, engage a broad range of stakeholders across the institution and, often, its community, to build out knowledge of what is causing the problem, what other aspects of the institution or student experience are connected to the problem, and what is already known about the problem locally or in the wider field of higher education. Students are the best resource to better understand how students experience the institution. There are multiple ways to collect data about the ways students experience campus which will be discussed below. As with all data collection:

1. Start with questions.
2. Consider who should be included.

Questions about how students experience campus can be general, but they may also be specific. If there is an equity gap among STEM students, the question may be “How do students experience their STEM classes?” If the institution is considering restructuring advising, questions may include “How do students currently experience advising and what are the challenges you face in benefiting from this service?”



In most cases, questions should be clearly defined before gathering data. The question guides the data collection technique, your analysis, and reporting. Like all projects, making sure you are clear about the questions you are asking will save you work later on in the project.

Sample questions:

- ▶ How do working students experience orientation?
- ▶ Do students feel more connected to campus if they participate in the first-year experience?
- ▶ Where on campus do student parents spend time when they are not in class?
- ▶ Why do some students use the food pantry and others with need do not access services there?
- ▶ How do racially minoritized students experience the introductory courses that are part of the STEM majors?
- ▶ What experiences do the most successful students credit for their success?

It is critical to include students from across the demographics and identity contexts that you have already identified. Include students who are successful and those facing barriers. Consider if your sample includes robust representation across ethnic groups, age, working and non-working students, parents, veterans, students from the local community and those who are in your community specifically to attend your institution.

Collect qualitative data on the student experience in a variety of ways. The right technique is one that gathers the data needed to answer the question, includes a variety of student voices, and can be analyzed within the capacity and time frame of the project.

Focus Groups

Focus groups are a facilitated discussion that allow the team to listen to a conversation and then later analyze the data to understand multiple student experiences at once. Focus groups can answer questions about the way students experience orientation and their first term at the institution, or how students experience the community around campus. When a group of students is struggling from the quantitative data of surveys, focus groups are another way to facilitate conversations and better understand how groups of students may experience campus differently.

Planning for Focus Groups

When planning for focus groups, consider where and when data collection is happening. When designing focus groups consider who needs to be at the table as much as the types of questions asked. Will focus groups be hosted at different times a day so working and parenting students can attend? How do methods adapt to remote settings and are a variety of schedules students accounted for? Where is recruitment happening? If all recruitment is in the student union, students who are less engaged with campus may be missed. To support participation from a diverse set of students, it is highly recommended to offer students a stipend for participation.

Consider if a question is best answered by a group of diverse students, or if a smaller, more homogeneous group will elicit more candid responses. For example,

a general question about orientation or the financial aid process would benefit from diverse focus groups. If the question is about a sense of belonging for students from different racial groups, it may be more productive to do small identity groups to create more safety for groups experiencing racism or microaggressions. For a question digging into why student parents are

It is critical that you include students from across the demographics and identity contexts that you have already identified.

struggling, the focus group needs to include student parents (but should still be diverse in demographics and include part-time and full-time students.)

Focus Group Facilitation

After casting a wide net and confirming focus group attendees from varying backgrounds, ensure that the questions and facilitation guide are carefully planned out in advance. It is critical to create a safe environment so that all participants are comfortable speaking. This may impact how it is determined who will facilitate the focus group, how that facilitator and others involved will dress, where the focus group will be held, and the language used to provide context.

The facilitator needs to be an active listener who is able to ensure that the conversation remains on track

but listens for threads of important information that need to be follow up on. It is strongly recommended to seek participants' consent to record the conversation, so the facilitator can move the conversation along without being consumed trying to capture notes.

In the virtual space, students need to set time out of their day and log in from home, which is different from showing up for a social event where food is being provided. Plan on time for students to troubleshoot connection issues (have phone numbers for all participants to coach them through any challenges in connecting to the video platform). Start with an icebreaker, and manage who is talking more than other participants. Using a mutually agreed upon set of hand signals can help manage the conversation and allow all of the participants to engage.

Tips for A Successful Focus Group

RECRUITING

- Emphasize how focus groups will influence policies on campus to recruit.
- Be mindful to keep the topics of focus groups general.
- When recruiting for focus groups there are always no-shows. Recruit more students than needed.
- Schedule some groups during working hours and others during evenings and weekends to ensure student diversity.
- Send multiple reminders to attendees through various modes of communication (email, phone, text, etc.).
- Reward students for their time (gift cards if virtual, a meal and childcare if in-person).

RUNNING THE FOCUS GROUP

- Have a dedicated notetaker and, if possible, record the focus group to allow the facilitator to focus on the discussion.
- If conducting the focus group in a virtual environment, have a devoted technical person who can assist with connection issues and run any polls, or chats.
- During recruitment, collect phone numbers and emails so students can be reached if they have trouble connecting.
- Provide stipends (gift cards, Visa cards with a nominal amount for participation).
- Include an icebreaker activity.
- Use a survey at the end or during recruitment to collect demographic information.
- Make sure you invite all your participants to contribute and ensure everyone can speak.

Process Mapping

True change will only be achieved if we look at larger institutional systems, how they are related, and how students experience those systems to identify areas where we have the most opportunity to have lasting and transformative impact. Process mapping presents an opportunity to understand student-facing processes on campus and how they impact the student experience. Institutional processes are often designed to accommodate institutional structure or convenience. As a result, there can be unintended consequences to students when a process is not designed with their identities and needs at the center.

When looking at a process, it is critical to understand how it currently operates. It is helpful early in the process to gather as much data as possible about the process, the students who successfully complete it, the students who are lost during the process — in as much detail as possible. Accessing data can help focus the mapping on areas where students struggle the most.

Facilitating Meaningful Process Mapping

To facilitate meaningful process mapping on campus it is important to have a clear idea of the process that the institution wants to learn more about. For example, some institutions focus on summer melt or onboarding in an effort to increase their yield from application to enrollment. Other institutions focus on the process of communicating to students to better understand how those impact how their students understand and act on information they receive. Whatever the focus, it is important to have a scope, or a clear delineation of the beginning and end of the process being explored. This will keep all activity focused on only the processes included in the

scope and will avoid “scope creep.” It is also critical to include all stakeholders that have first-hand knowledge of the process being examined.

Finally, there is no substitution for the student voice when looking at any student-facing process on campus. Including the opportunity for students to provide feedback on the process map can enhance understanding and allow for more contextualized approaches to improvements.

One recommendation is to map out the experience for different student populations to

visualize how each experiences the process. Student input from those populations you wish to focus on can help build out the reality of their experience of the process. When it’s not possible to bring students into the activity, using student personas can be an acceptable alternative, as long as those personas are robustly developed and used with empathy and humility.

The Basics: How to Develop a Process Map

Step 1: Identify the problem

- a. What process needs to be mapped/visualized?
 - Example: Is this mapping onboarding? First year of college? Entry through graduation?
- b. Identify what type of process map will best illustrate the process in full. This may be a preliminary decision; and be prepared to shift to a different type of process map if needed.
 - See the section “Types of Process Maps” below for more information to inform the decision.

Step 2: Figure out boundaries of process

- a. When does the process start?

Process mapping presents an opportunity to understand student-facing processes on campus and how they impact the student experience.



- For onboarding at application? At recruitment? What defines the beginning of this process?

b. When does the process end?

- For onboarding is it on the first day of class? At enrollment?
- If the process encompasses the first year, is the ending after 30 hours? After the completion of a particular set of courses?

Step 3: Brainstorm all the activities involved

- It is critical to have many voices around the table, so activities aren't missed.
- These do not have to be in order at this stage. Just focus on documenting every activity or interaction in the process.
- Say them out loud and write each one on its own Post-it Note, on easel paper, or whiteboard.

Step 4: Using the activities from step 2, determine the sequence of the steps

- When considering the order of steps as they are experienced by the student, it may help to ask the following questions:
- Does a student have to complete this step? Is it mandatory at this point? Can they do it later?
- Does a student need to be on campus to complete this activity?
- How does a student know they need to complete the activity? Are they notified? Is this in the process map via letter, text, phone call, or email (personal or student)?

Step 5: Draw the basic flowchart symbols

Step 6: Finalize the process map

Review with other stakeholders to make sure everyone agrees with the process map.



Types of Process Maps

How the process is illustrated will depend on what the focus is and what is being examined. For example, when looking at the student experience of application and intake processes, a cross-functional — or swim lane — map may be the best layout because many departments on campus are involved in this process. A swim lane map allows for the visualizations of each department in the process.

Based on the experiences of other institutions in process mapping, the following types of maps are typically most useful and manageable to develop:

High-Level Map: Shows how the process works or what communications are sent in a few high-level steps. The purpose is to provide quick insights into what the process or communication campaign does, which can be useful when communicating to leadership.

Detailed Map: Developing a strong detailed map of processes and communications should be the core

team's focus for this project. A detailed map helps explore the actions and interactions behind the major steps, which is typically where the areas for improvement can be found.

Keep in mind that it can take a long time to create a detailed map. Teams could also consider creating a high-level map and choosing the level of detail to map for each major step based on team discussions.

Swim Lane Map: Separate the steps into lanes according to who does the activity or sends the communication. This style of process map clearly shows who does what, when they do it, and an arrow crossing a lane indicates a handoff. The drawback is that they can be visually complex.

Teams should consider using a swim lane map for parts of the student experience that demand higher levels of collaboration across departments or a high level of communications from different departments in a short time period.

Tips for Effective Process Mapping

- Map the process as it currently exists. Process mapping the true process is the first step to understanding the current student journey and then making improvements to that journey.
- Don't lose focus on why this is an important exercise. This is to understand the student experience. This is not a fault-finding exercise.
- Don't gloss over the bad. Sometimes it helps to bring someone in from the outside to facilitate and keep things moving as the process is examined. It keeps institutions focused on what the process is as opposed to why the process is that way.
- Allow the project to evolve as unanticipated needs emerge but beware of allowing the mission scope to expand too far.
- Identify metrics of importance to enable mapping to speak effectively with data. Ensure both quantitative – statistics, numbers, and surveys — and qualitative — observations, interviews and case studies – data.
- Ask a team member or colleague to go through the process as if they are a student can also help bring new information to light. While they may have their own biases, such as being more likely to persist through complex challenges, they are also likely to spot and report different sticking points or questions to explore than students will.

Other Methods of Understanding the Student Experience

Dot Polls

Dot polls are a quick way to capture data on a few key questions at a time. Originally used at farmers' markets, they are meant to be used during an activity.³³ A dot poll is a large piece of paper with a question with up to four possible answers. Participants are given colored dot stickers and asked to place the sticker under the answer they choose. Dot polls can quickly survey why a student is participating at the event, how long they attended, or their intention for future engagement. Dot polls can sway answers toward the majority as they fill because participants see the previous answers. But even with that limitation, they are an easy and interactive way to gather data and should be part of your data collection tools. Dot polls can be done virtually using whiteboards and "stamps" that participants add to the relevant responses. These can be done at the end of an event for quick feedback, or as an icebreaker for focus groups or other types of data collection to get everyone thinking broadly about the topic for discussion.

An alternative method using the same concept is to use beans and a set of jars, with one jar for each answer option. Participants drop their beans in the jar with the option they endorse. Using opaque jars allows for more confidential, and quick, data collection.

Shadowing

For projects that have more resources and a longer timeline, shadowing a few students as they go through their time on campus for a day or two can be incredibly insightful. If possible, begin shadowing before students get to campus. When conducting a shadow, the researcher follows the student through their day.

This is a challenging way to collect data as it relies on good notes by the researcher, since recordings don't tend to work in transit. Shadowing students reveals everything from where they do homework, what businesses and organizations they participate in off campus, and how they navigate home and work responsibilities with their academic work. Shadowing students can also be useful for building process maps.

In the next section, we expand on what we learned about students and explore how students experience the college environment and what that means for their success.

Natural Observation

Observation is typically narrower in focus than shadowing. For example, teams may be focused on the student experience of library services. Teams may then conduct an observation session, spread over a few days at different times to document how students use library services, move through library spaces, the challenges that come up, and how all of this changes

at different times of the day. It is critical when observing to be as inconspicuous as possible to minimize any discomfort or potential changes to student behavior. As such, where individuals

observe from and who conducts the observation are important. Students serving on the design team are great at conducting observations in public spaces on campus as they are least likely to stand out.

Notes taken through observations should avoid assumptions or value statements, though these can be included in a section for questions the team may want to explore in other ways, such as focus groups. Instead, notes should be a detailed account of student behavior and actions, any routines or commonalities, any core differences in behavior across different student populations, and what the observer hears students say or ask.

It is critical when observing to be as inconspicuous as possible.

33 Brewer, L. J., Lev, L., and Stephenson, G. (2008). Tools for Rapid Market Assessments. Oregon State University.



QUESTIONS FOR EXPLORATION & ACTION STEPS

Now, using the information gathered and reflected on, consider which of the data collection tools will support learning more about the various groups of students.

The goal is to gather information from the groups of students who are not currently thriving. Learning more about their experience will heavily and positively influence the design or redesign. The questions below will assist in outlining which tools are used for each student subgroup. It is recommended to use multiple tools for each group to allow for data collection from more students, and because the different methods are likely to prompt different responses.

- ▶ Which student populations are most adversely impacted by the problem or opportunity?
- ▶ Reflecting on what is already known about their campus experience, which tools for gathering their input would be most likely to gather the richest information? For example, students enrolled part-time, who are working or parent-ing, may have less time to spend attending a focus group on campus or engaging in a process mapping activity.
- ▶ What are the most critical questions the team has about this student population's experience related to the problem or opportunity?

As data is being collected, particularly data on students' experiences, biases and assumptions can creep in to how we hear student feedback and analyze the data. To help the team prepare to notice and challenge their own biases, have team members think through and discuss the following questions:

- ▶ How does my identity impact how I understand my student's experiences?

- ▶ What assumptions am I making about our students and their experiences?
- ▶ Am I understanding and accepting of others' perspectives and experiences?
- ▶ How can I continue to check my biases in the design process?
- ▶ How can we support each other in seeing when our biases are impacting our actions and decisions?

Possible biases include:

- ▶ "I never had those support services, and I did just fine at college."
- ▶ "Our students are adults and should be able to figure out processes on their own like in the 'real' world."
- ▶ "I was unaware this need impacted their ability to stay in college."
- ▶ "This problem is urgent so we can't spend long planning."
- ▶ "I know of a student who ... therefore this is a big problem on our campus."





TOOLBOX FOR SECTION III

More Guidance on Focus Group Protocols

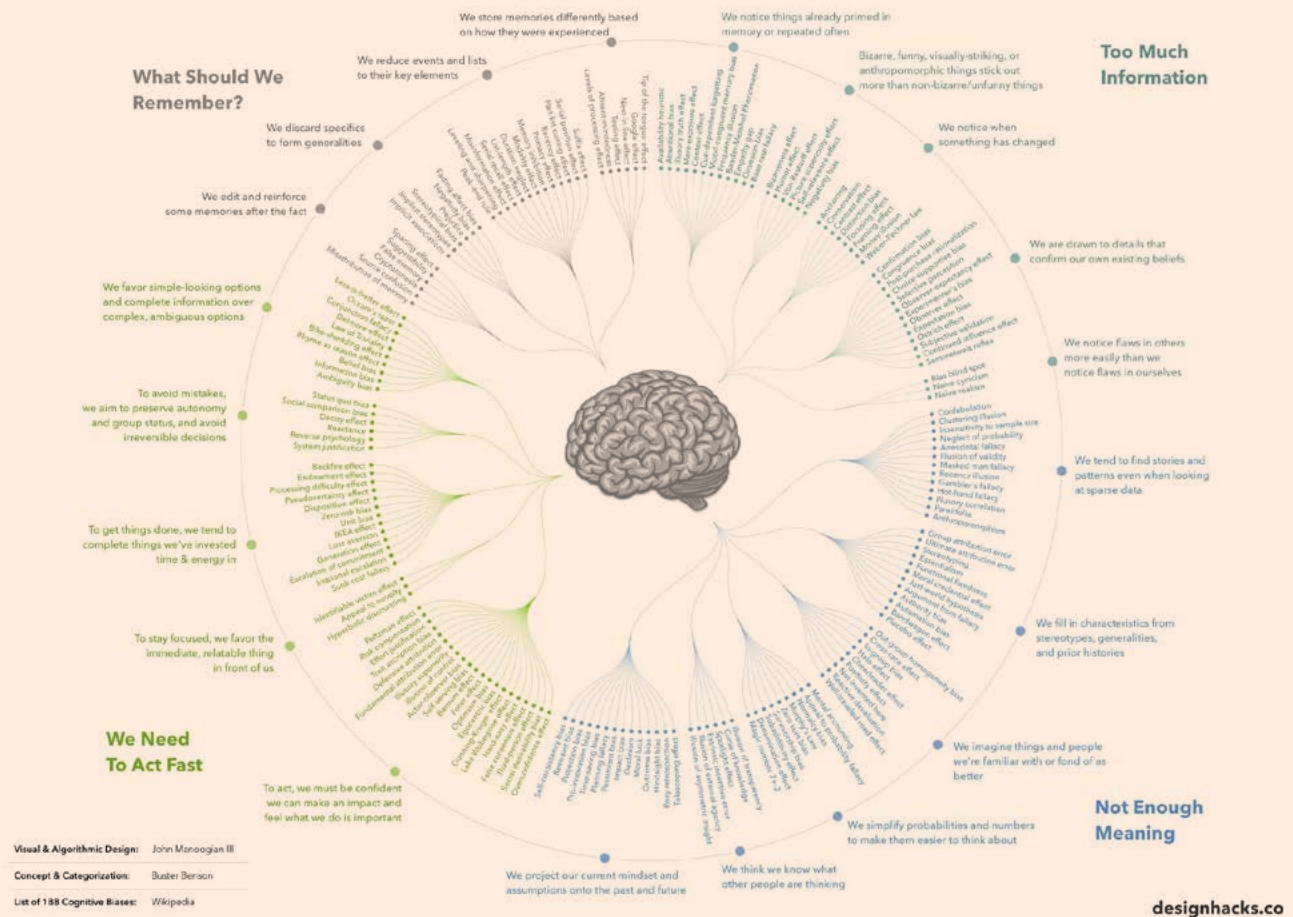
The following resources offer more in-depth guidance on planning and conducting focus groups.

- ▶ Toolkit of resources and tips for planning and facilitating effective focus groups with students: <https://cccse.org/publications-resources/focus-group-toolkit>
- ▶ Learning module and tools to help higher education practitioners learn how to use focus groups, student surveys, and secret shopper methods to gather data on the student experience: <https://collegeexcellencecurriculum.aspeninstitute.org/module/understanding-the-student-experience/>

Examine Biases Using the Cognitive Bias Codex

This comprehensive visual summarizes the literature on bias into easy-to-understand groups of biases. This tool can be used to facilitate discussion among the design team of biases that may show up commonly during the process of understanding the problem and identifying solutions.³⁴

COGNITIVE BIAS CODEX



34 Manoogian, J. (2016). Cognitive Bias Codex. Wikimedia. https://commons.wikimedia.org/wiki/File:Cognitive_bias_codex_en.svg

SECTION IV

Using Data to Design the Student Experience

Now that the team has expanded its understanding of the challenge it is trying to solve, who is served and how an institutions' policies, processes, structures, and culture impact these students, the question becomes: How do we use these data to make informed, equity-minded decisions? This section will address that question through the lens of student-centered design.

Making Sense of the Data

To become more equity-minded data practitioners, after disaggregating data and deepening the data we collect, McNair, Bensimon and Malcom-Piqueux describe the next important step as “sense-making” — a “process of critical reflection, contextualization, and meaning-making of the data to inform actions.”³⁵ The information must be discussed, reflected upon to draw insight into any gaps, barriers, or bright spots. This data can be used to help guide a deeper analysis to find where redesign and improvement is needed.

- ▶ By the end of this section, you will:
- ▶ Be able to identify the critical steps in the student-centered design process,

- ▶ Know what equity-minded decisions mean and be able to name some examples from the institution,
- ▶ Have practiced using multiple tools from the student-centered design process that can be infused into existing decision-making processes,
- ▶ Value the potential of these tools and the process itself to center decisions on students across the institution's structures, processes, and culture, and
- ▶ Be able to use these tools in an equity-minded way to mitigate biases that exist within the decision-making process and culture.

35 Bensimon, E. M., Brown McNair, T., and Malcom-Piqueux, L. (2020). *From Equity Talk to Equity Walk: Expanding Practitioner Knowledge for Racial Justice in Higher Education*. Jossey-Bass.



Translating Your Process Map into Action

After the process map is complete, it will be possible to see where there are gaps, patterns, or barriers in the student experience that do not match what students need or the institution intends. Conducting a SWOT (strengths, weaknesses, opportunities, and threats) analysis is one simple framework to identify changes that need to be made to simplify and enhance the process. The mapping team should tackle some of the easy and quick changes to build momentum for the longer-term or more complex changes. It is important to see where the opportunities for redesign align with your institution's student success goals, which can help this work remain a

priority for the institution and may help to resource this work for the long term.

Synthesizing and Summarizing Focus Group Data

Once the data has been gathered through a focus group or interviews, the team should work on analyzing

it in a way that will inform the next steps. Analyzing findings for this purpose should go beyond listing the top takeaways, though that can be useful as part of a set of tools. In the chart below, we outline some

ways to synthesize focus group or interview data and simultaneously create a set of design tools to help inform the generation of ideas for addressing the problem or opportunity of focus.

“
It is important to see where the opportunities for redesign align with your institution's student success goals.

Ways to Synthesize Findings for Design	
Affinity Diagram	Organizes large amounts of language data (ideas, opinions, issues) into groupings based on their relationships. These can be organized by obstacles, interactions, goals, and student information. They can also be organized by sub-theme, such as financial barriers or personal versus career goals. Categories are not fixed and can change throughout this process.
Personas	A profile of a type of stakeholder that identifies key demographic or contextual information in addition to a description of key observations of how that individual experiences the problem. Critically, a persona should be developed based on behaviors and attitudes, not solely on demographic information.
Empathy Map	<p>Visual documentation of how key stakeholders think and feels about their experience of the problem, as well as what they say and do when reflecting on the problem.</p> <ul style="list-style-type: none"> • Say: What are some quotes and defining words the student said? • Do: What actions and behaviors did you notice? • Think: What might the student be thinking? What does this tell you about their beliefs? Pay attention to body language, tone, and choice of words. • Feel: What might the student be feeling? Pay attention to body language, tone, and choice of words. <p>The next steps are to identify student needs (emotional or physical necessities, not solutions). Last, note any insights from the map or interview that could inform the solution.</p>
Journey Map	Documentation of the decisions and actions a stakeholder takes before, during, and after encountering the problem. This could be a linear step-by-step timeline, or it could be organized by phase of experience (such as awareness, initial interaction, progression, and conclusion). The critical component of a journey map is that it visualizes the processes from the student's perspective.
Mental Models	An explanation of a stakeholder's thought process when they experience the problem that is being addressed. It is a representation of the surrounding world, the relationships between its various parts, and a person's intuitive perception about his or her own acts and their consequences.
How Might We ... ? Questions	Designers often turn their problem, or aspects of their problem, into questions to stimulate those tasked with generating ideas. Questions that begin with the phrase "How might we ...?" are great design tools. For example, if the challenge is that not enough students have a defined career goal by the end of their first semester, then the design questions could be "How might we help more students narrow down their career options by the middle of the first semester?" The trick is to make sure the question isn't too narrow or solution-focused to restrict creativity of the team yet not so broad that the ideas don't address the core of the problem.

A Note on the Value of Personas

Personas are one of the most commonly referenced and understood tools of the design process. Student personas are research-informed depictions of the students an institution serves. They leverage data about student identities, experiences, responsibilities, and personality to create meaningful descriptions and visualizations of a broad range of students. One of the values of institutions creating their own personas comes from the act of gather-



ing and analyzing these data to see their students beyond basic demographics and to understand how their other attributes and experiences help shape their experience of the institution. This can help eliminate myths or assumptions about students, elevate the voices of those students who may be minoritized or forgotten in traditional data disaggregation, and help make data more actionable for the lay person.

Persona Design Tips	Persona Use Tips
<ul style="list-style-type: none"> • Use both quantitative and qualitative data to develop complex personas that reflect the reality of a population. • Develop personas that represent distinct groups of students. The idea is to showcase the range of students served, not to develop personas that proportionally represent your students. • Define student personas by the characteristics that are more useful and striking. Typically, it is best to define personas by behavior, values, or other key attributes, instead of by basic demographic data. This approach is more informative and can help minimize the risk of stereotyping. • Use a template to ensure consistency across personas. • Update personas every couple of years to reflect how the students you serve change. • Include only the necessary information to make them as usable and realistic as possible. 	<ul style="list-style-type: none"> • Acknowledge that personas are only one tool to help facilitate understanding of students. Other tools, such as an empathy map, may be needed to support the process of understanding. • Practice humility by acknowledging what is known and unknown about the students represented in the personas. • Constantly check biases and assumptions. • Focus on the behavior and experiences of the personas rather than basic demographic information. • Be open to new information as it arises. The personas are not the only source of truth. • Don't use personas as a reason not to bring the voices of actual students into the decision-making or solution-seeking process. • Always remember that there are real students behind the personas.

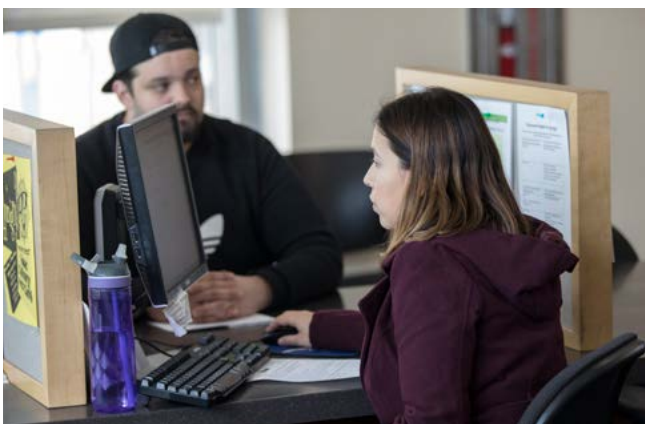
Step 3: What If?

After the design team has synthesized the data and developed a thorough understanding of the many aspects of the problem or opportunity they are trying to address, the next step is to generate a large quantity of ideas which address the problem/opportunity. The ideal is to address the root causes of the problem directly, to avoid applying a Band-Aid and moving on to the next problem. The design team may choose to generate solutions that can address the root causes and provide relief to those most adversely impacted by the problem in

the shorter-term. Participants must feel comfortable in sharing their ideas and proposing solutions that are bold or provocative. Environments that embrace strict hierarchy tend to stifle creativity of the participants and their willingness to engage meaningfully. The design team and senior leadership may need to reflect on how best to organize one or more brainstorming sessions to ensure all stakeholders feel confident in leveraging their voice.

Here are a few challenges that may occur and some suggested solutions:

Challenge	Solution
Latch on to a preferred idea before considering several options, particularly if an idea is preferred by someone with formal authority and decision-making power or the idea has worked at other institutions.	Identify a strong facilitator for the brainstorming sessions. Ideally, this is someone equipped who can encourage quieter participants and address power dynamics. The design team should set rules for the brainstorming and encourage all team members to remind others of these rules during the session(s).
Begin evaluating ideas as they are suggested.	Provide the opportunity for individuals to consider their own ideas and perspectives before being exposed to those of others, whether they are given pre-work or by building it into the brainstorming session.
Identify strategies that were successful at other institutions and brainstorm ways to implement those strategies, rather than spend time generating new ideas.	Identify a facilitator who is not on the design team and can remain focused on the needs of the group rather than shift between facilitation and participation. The facilitator can focus participants on the core issue and prompt divergent thinking.



Inclusivity, Power, and Humility in the “What If” Step

On the surface, brainstorming ideas appears to be simple and formulaic. Brainstorming sessions conjure images of a group of individuals in a room together sharing high-level descriptions of ideas, using copious Post-it Notes to document and organize ideas. However, this image discounts the realities of those involved. Power dynamics, social dynamics, lack of diversity of experience and thought, timing,



and other factors all play a significant role in how participants show up and engage in brainstorming sessions. Power dynamics can not only result in the group agreeing to support the most senior person's preference, but it also stifles creativity. The presence of formal authority, except in a small number of situations, encourages participants to stick to suggesting proven or "safe" ideas so as not to risk sharing ideas that may be ridiculed or fail. True innovation and complex problem solving is not possible without setbacks and some outright failures. Social dynamics during brainstorming sessions can stifle the participation of some people based on their comfort in the space, their perceived risk associated with suggesting bold ideas, and their approach to problem solving. Introverts and those who prefer time to process information before speaking struggle to contribute during

traditionally designed brainstorming sessions due to the inherent bias towards the most outgoing or extroverted voices. Participants who feel like outsiders in some way may be less likely to contribute due to fear of saying the wrong thing. They may also feel like their voice won't be heard even if they do share ideas.

Ultimately, how the design team organizes and plans for their brainstorming session is critical to the success of this step in the process. Effective brainstorming sessions are typically structured intentionally to embrace diverse personalities, perspectives, identities, and roles. They rely on collaboration but also provide the opportunity for deep individual reflection. And they are aiming not only to generate a large quantity of ideas related to a topic, but to focus the idea generation and discussion on one or two specific questions so the ideas are high-quality and specific.

Step 4: What Wows?

Take a breath if the team has made it this far! By now, the team has spent countless hours meeting, discussing, brainstorming and most importantly getting in touch with the needs of students. There are just a few more steps in this process.

This stage covers the breadth of ideas and begins to narrow the to two or three that are most likely to have the biggest impact, or to "wow" students and other stakeholders. The ideas should be those that are most aligned to the criteria the design team developed in the "What Is?" step. However, it is important to never throw out those ideas most beneficial to students, particularly those who are most harmed by the problem as is. Even if these desirable ideas can't be fully realized, getting 80 percent of the way there is more impactful than ideas less desirable for students. The selection of the ideas may be merged into a long brainstorming session, or it may be a standalone activity.

Before beginning step five, in which the design team will develop prototypes and test their ideas with stakeholders, the team should develop a list of metrics, both qualitative and quantitative, that will help them assess the impact and effectiveness of each idea

during testing. Keep these metrics simple for now. A full program evaluation plan can be developed for the ideas that end up being taken forward.

It is best to have at least two options to test via rapid prototyping in the next step. If there are not two that meet the criteria, consider looping back through the "What If?" step to refine one or more options to end up with two to three options, or consider if altering components of the design brief would provide more flexibility.

1. Bring back the metrics from step two. This will help ground people and minimize personal preference or bias.
2. Who is most burdened by each idea? Who benefits most? Is this going to reduce equity gaps in experience and/or outcomes?
3. What wows those most impacted?
4. Who makes the ultimate decision about what moves forward? If it's "leadership," how will that decision-making process ensure the voices of those most impacted are elevated?



Step 5: What Works?

This is the final step of the student-centered design process and is actually a series of sub-steps that lead to continuous improvement of the chosen ideas until one or two are identified to be fully implemented:

1. Develop a simple and quick prototype.
2. Test the prototype by sharing it with at least two groups of stakeholders.
3. Gather feedback from each group.
4. Refine the prototype based on the feedback.
5. Repeat until the idea is ready to implement or drop.

Guidance on Developing a Prototype

Many teams find this stage to be most daunting given the challenges related to developing and testing a prototype quickly within the institution's environment, as well as the concerns related to the consequences of making mistakes. The prototyping process is intended to be a safe way to test ideas while limiting the impact of any mistakes because it is quick, inexpensive, and a demonstration rather than implementation.

Things to keep in mind during this step:

- ▶ This step — which participants often enjoy the most — should allow as much creativity as possible.
- ▶ Don't overthink it. Just get started: Having something to work on is easier than trying to create the perfect prototype on the first try.
- ▶ Remember the purpose of a prototype is to demonstrate your idea for feedback. Try not to get attached to an idea so that feedback can be received and interpreted objectively.
- ▶ Build the prototype with student behavior and needs in mind — use the design tools and other information collected in the “What Is?” step to help with this.
- ▶ The prototype should be shared, and feedback collected, from students who have lived the experience and as well as students who stand to benefit the most.
- ▶ Check assumptions and biases when interpreting feedback.
- ▶ Look for the gaps that the prototype doesn't fill.
- ▶ Multiple prototypes should be tested and shared to help focus the decision.

Selecting the Final Design(s)

After multiple rounds of prototyping, feedback, and refinement, the design team should again use the design criteria developed in the “What Wows?” step to select the design idea(s) to move forward with. Teams should keep in mind that most complex problems don't have one solution so they may need to move multiple ideas forward at one time or prioritize those ideas to be implemented first. It is recommended that large-scale changes are combined with smaller changes to drive momentum in the shorter-term while not delaying changes that are likely to have a bigger impact.

In the event that no ideas prove fruitful, the design team may need to return to step two to gather more information about the root causes of the problem or opportunity they are trying to address. Through this additional information, the team may discover that another idea from the previous brainstorming sessions has potential or new ideas may emerge.



Infusing Design Thinking into Strategic Planning at Northern Kentucky University

In 2018, while celebrating its 50-year anniversary and closing out its six-year strategic plan, Northern Kentucky University (NKU) welcomed a new president with a bold vision. Feeling a sense of urgency to improve the student experience and increase outcomes, President Ashish Vaidya challenged the institution to reframe its thinking about who the institution serves and how they design programs, services, and learning experiences to meet their students where they are.

President Vaidya delegated the development of the strategic plan framework to a team of 12 administrators, faculty, staff, undergraduate and graduate students, and community members. The team knew they needed to learn more about their students, including their challenges and experience on campus. They used tools from design thinking to gather a vast amount of qualitative data; President Vaidya and the team held over 2,000 face-to-face engagements, including forums, “talkshops” (large forums where participants are facilitated through table conversations on critical topics designed to center real-world experiences and inclusive participation), pop-up events in heavy-traffic areas of the campus, and a regular event called “Whiteboard Wednesdays” open to all.

To gather input from students less likely to attend such events, the core team walked around the campus plaza with pizzas, took their questions into classrooms, leveraged social media, and used whiteboards in high traffic location for students to provide feedback. The team also talked to alumni associations, local public schools, community college partners, regional businesses, and local non-profits. The goal was to ensure everyone had a voice in the process.

In the face-to-face engagements, participants would discuss barriers, opportunities, and outcomes

associated with a college education for different student populations. Faculty and staff were shown student input and personas to ground their understanding of the reality of their students’ lives. They would then brainstorm the kinds of services and policies that could empower that student to be successful.

These data were added to the multiple efforts taking place across campus to collect and analyze open-ended qualitative data from across the campus community gathered through surveys. Within two months, the team had collected and analyzed the data that provided a foundation for identifying the needs their strategic plan would need to address.

Once the framework was developed, the next phase of their approach was designed to root out the most promising ideas by empowering everyone in their campus community to generate and share their ideas for reaching their strategic objectives. In Fall 2019, the 2020 NKU Innovations Challenge was launched. NKU leadership had set aside a moderate budget to fund successful ideas that were clearly tied to the strategic framework. Projects not selected for funding were shared with the relevant strategic planning teams.

NKU leadership credits its strategic planning framework with encouraging innovations focused on meeting students where they are and becoming a more “student-ready” institution. The inclusion of students as experts in the problem identification and idea generation phases shared power with those most likely to be impacted by the decisions being made, ensuring the selected ideas would address the most critical needs. Additionally, the use of design tools and shared data throughout ensured everyone involved was grounded in the reality of students’ lives and their obstacles to success.



From Idea to Action: A Framework for Change

At its core, the student-centered design process is a series of tools and guidance to structure how institutions solve complex problems while keeping their students at the center of their decisions. The process can be followed as-is or the tools can be embedded into an institution's existing decision-making approach. It can be used for strategic decisions and it can be used to solve simpler problems. The case study of Northern Kentucky University, earlier in this chapter, illustrates one way an institution has employed the tools of student-centered design in a creative manner to drive a community-inclusive approach to strategic planning.

Once ideas have been tested and approved for implementation, the design team moves to identify what needs to change for successful implementation. At this point, institutions can employ tools from research into student success efforts and change management.

For example, Kezar's framework for organizational change in higher education³⁶ mentioned in Section II prompts institutions to explore structures, processes, and attitudes as they work towards institutional change. Structural and process change can sometimes be easier to implement, but attitudinal change has the most profound impact. Many core practices must be in place for holistic student supports to take root:

- ▶ **Structural change** occurs when policies, structures, and procedures create a framework for new behaviors that improve the student experience throughout the institution.
- ▶ **Process change** alters how people do their job and is transformative when enough individuals change their practices to ensure that large numbers of students encounter new or improved interactions.



36 Kezar, A. (2013). *How Colleges Change: Understanding, Leading, and Enacting Change*. New York, NY: Routledge.

- ▶ **Attitudinal change** occurs when individuals understand their work and view work processes in new ways. Attitudinal change can take place at the individual level and the institutional level.







Each of these types of changes can be implemented or influenced on three different levels:

- ▶ **Level one** changes are primarily based in individual attitude, behavior, and/or choice. This level sees an individual identifying changes in each of these areas that they can advocate for or implement themselves.
- ▶ **Level two** takes a departmental approach to examining types of changes that can be advocated for or implemented. These changes typically require departmental leadership endorsement, resources, and facilitation to ensure a cohesive approach.
- ▶ **Level three** explores the changes that need institutional leadership support to enact. They may involve policy, scaled practices across the institution, and structural changes to ensure the institution has the foundation to achieve a stated goal or strategy at a systems level.

Taken together, these two frameworks can help institutions understand how they are designed and develop comprehensive plans to address complex problems. For each level of change, the design team can identify what structures, processes, and attitudes need to change in order to implement the chosen ideas at scale, so they become part of the fabric of the institution rather than a special project.

As the team moves into implementation, the development of momentum markers can help track progress. Impacts on student outcomes are typically lagging indicators that can take anywhere from months to years to be fully realized. Examples of momentum markers include:

- ▶ **Progress on implementation milestones:** These are closely tied to the work/action plan and should be celebrated early and often. Examples include the strategy being approved

	Level 1 Changes 	Level 2 Changes 	Level 3 Changes 
Structures 			
Processes 			
Attitudes/ Culture 			

by leadership, a process map being completed, or a technology function that is turned on.

- ▶ **Shifts in structures, processes, or attitudes:** These are typically the outputs of implementation efforts. Examples include the development of clear roles and responsibilities for campus offices involved in the work, the development of shared definitions of important concepts such as advising or equity, or the development of a new policy.
- ▶ **Improvements in the student experience:** These are the short- and medium-term outcomes of the team's efforts. Examples include an uptick in the proportion of students using a support service, higher student satisfaction with a service, or fewer students dropping out.



Redesigning Structures and Processes to Meet the Needs of the Students we Serve

Waukesha County Technical College (WCTC) was looking for a way to keep the students that they already had at their institution. While they knew the majority of their students enrolled part-time, it wasn't until they dove deeper into examining their part-time students that they realized that the average number of credits being taken each semester was only six. At that rate, their students would have to persist for 10 semesters, take all the right courses, and pass them all. That would take students 10 semesters — or five years — to complete a degree. This stark data showed the college that they were designed to serve students that they never had.

After further data exploration, WCTC decided to compress their semesters to an eight-week model. This allowed their students to continue to take two classes at a time but gave them the opportunity to

complete those six credits in eight weeks, and then take another two classes in the second eight-week mini semester. They also recognized their advising approach would need to change. Their advisors worked with both existing and prospective students at the time, meaning advisors were often tasked with recruitment efforts in addition to their regular advising duties. This left little time for advisors to develop relationships with their students to understand their academic, career, and personal goals. As they made the shift to compressed semesters, they built on the momentum by shifting the recruitment efforts and prospective student advising into the enrollment office. To support this shift, a welcome center was set up to provide many services to prospective and new students in one place, reducing the amount of time students needed to spend on campus seeking support.



QUESTIONS FOR EXPLORATION & ACTION STEPS

**As data is translated into insight and ideas,
the following questions should be considered:**

- ▶ How can the tools and tips identified in this section be infused into the current redesign process?
- ▶ What challenges or pushback are anticipated when using these strategies?
- ▶ What gaps in knowledge and understanding need to be bridged in order to increase support for the use of these tools and strategies?
- ▶ How will decisions be made around which ideas will be moved forward and tested?
- ▶ What metrics will be used to quickly evaluate whether these ideas are addressing the root cause(s) of the problem or opportunity?
- ▶ What metrics will be used to ensure these ideas improve the experience and outcomes of the students most disproportionately impacted by the status quo?



TOOLBOX FOR SECTION IV

Student Persona Example

The following persona is one of nine personas developed by a team at The Waikato Institute of Technology in New Zealand. It is reprinted here with permission.



MOTIVATED MATIU

Motivated Matiu is Māori, aged between 25 and 40 years old. He has insecurities around housing, food, finance, and transport which means that sometimes he can't make it

to class. He has faced many challenges in previous education experiences, including racism, being put down and bullying, and carries the scars from this. Matiu may have dependants, and if he does, they are the motivation for study. Matiu is motivated to change his story, but he does not have many positive role models around him, so this is a challenge.

Matiu may start study at a lower level but if he experiences success he will be motivated to continue to higher levels.

Matiu may have family in his life who believe in him and he may feel connected to his tribe, however sometimes what his family thinks is important is different to what he thinks he should do. Matiu has not had many positive role models, or someone to guide him, and at times has floundered. He has reflected on what has occurred in his life and is now motivated to change his story.

The main text gives more detail about who this persona might be and how they may experience life and education. Notice the text uses words like "may/might" to allow for experiences that may diverge while keeping core behaviors consistent. Notice also that the text includes aspects of the persona's life that may impact their education experience.

Ideally, persona names help communicate one of the core behaviors/feelings of the persona. It instantly gives the user an idea of how the persona might approach or experience education.

Matiu gets through the initial stage of enrolment OK, but finds StudyLink challenging and starts worrying about finances, transport, access to Wi-Fi and scheduling around his commitments. He wants help to navigate this phase as he tries to sort everything out. Once Matiu is past his first day of course, he starts

to understand that what he expects of Wintec, and what Wintec expects of him is different. As Matiu

"I feel demanding asking for help all the time"

Quotes can help bring the Persona to life and give them more agency on the page. These quotes can be adapted or lifted from interviews or focus groups with students similar to the persona.

engages in his course he sometimes feels that the way Wintec does things conflicts with his worldview. For instance, the pōwhiri for new students is optional at Wintec, when for Matiu this should be compulsory. He needs to work through how to reconcile these differences as he progresses through his course.

Positive experiences for Matiu include the face-to-face and one-on-one interactions with tutors who are positive role models. In contrast, negative experiences include figuring out how to use Moodle, getting together the required equipment and resources for study, or disruptions by other students. Preferring face to face interaction, Matiu struggles with online learning. He also feels frustrated if he doesn't receive

(Continued on next page)



TOOLBOX FOR SECTION IV (cont'd.)

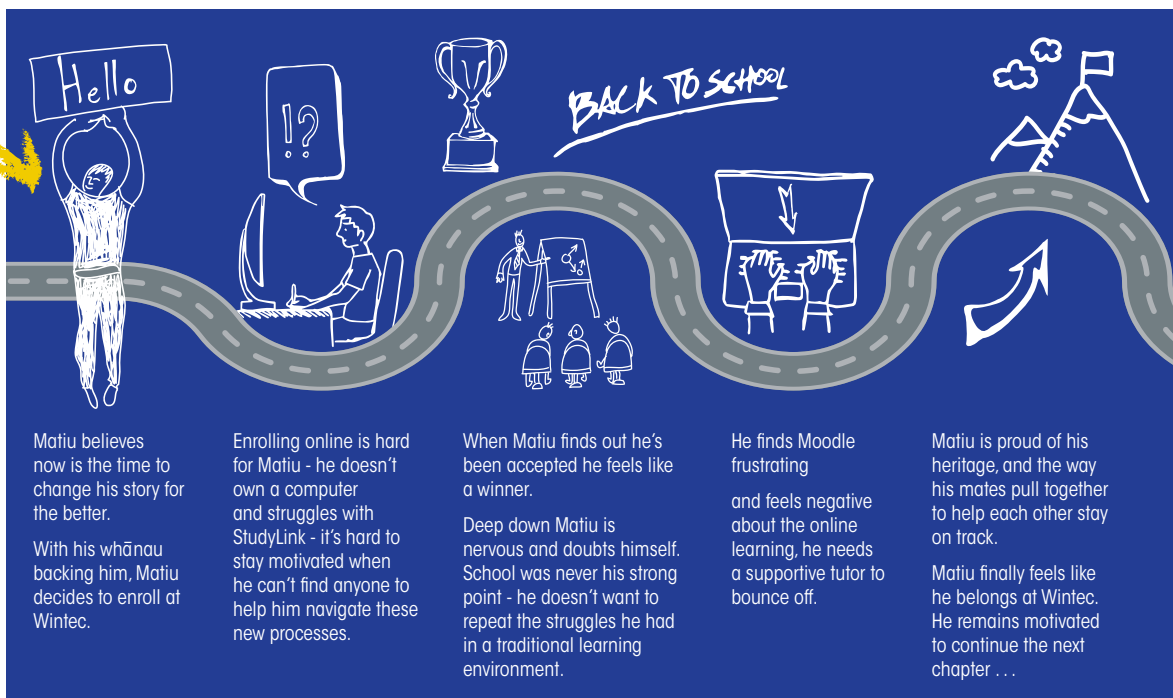
Student Persona Example (cont'd.)

feedback on his assessments and progress. Matiu wants positive relationships and certainty with where he is going. When he is successful in attaining these, he has a strong sense of belonging at Wintec as a student. This sense of belonging and the relationships he develops are pivotal to Matiu's success as a student and completing through to graduation.



A short narrative or visual depicting the persona's journey at the institution can help the user see how positive and negative experiences impact their experience over time. In this example, the road visual along with the sketches is used to indicate high and low points.

Summaries of core pain points and highlights of the persona's experience at the institution can help the user to understand how the persona's story connects to the institutions structures, processes, and attitudes.





TOOLBOX FOR SECTION IV (cont'd.)

Different Approaches to Generating Ideas in the “What If? Step”**Brainwriting**

Rather than sharing ideas verbally one at a time, this method has each individual participant spend a few minutes writing down their ideas on paper. Once their time is up (typically between five and 15 minutes), they pass their ideas to another participant, who spends time building on those initial ideas. This is repeated multiple times and then the papers are collected and used to facilitate discussion of those ideas with the full group (or in small groups if the full group is large).

Brainwriting can help reduce anxiety or reluctance to participate, particularly where power dynamics are in play. They also provide valuable time for individuals to sit with their own thoughts before others pose their own ideas, allowing each individual to offer ideas crafted from their perspective. It can also be productive with both small and large groups, which is not true for traditional brainstorming. One drawback is that succinctly describing an idea to address a complex problem in writing can be challenging. However, designing a session that builds in discussion of ideas can alleviate that challenge.

Worst Possible Idea

A fun way to begin or refresh a brainstorming session is to ask the group to share the worst possible idea to address the problem. Encouraging participants to embellish some of the worst ideas, either by mixing and matching the different bad ideas or by adding more detail to the ideas can help participants warm up and get into the flow of idea generation and collaboration. It can also result in ideas being generated that flip the worst ideas on their heads. However, this method is usually most effective when it is somewhat new to the group.

Perspectives Brainstorming

This approach leverages personas, empathy maps, and other design tools that take the perspective of key stakeholders. Participants or small groups of participants take on the persona of one stakeholder and focus on generating ideas from their perspective. Ideally, one participant or small group is asked to take the perspective of multiple stakeholders as they generate ideas. If participants don't have data-based design tools or are not actively aware of their own biases and assumptions, they can end up generating ideas that are not grounded in the reality of the stakeholder. These ideas can end up being ineffectual or even harmful despite the best intentions of the team.

Question Assumptions

This is an excellent practice when the culture of the institution is focused more on anecdotes about who they serve rather than the reality of their students. As a group, make a list of all the assumptions related to the problem, whether or not they are true or held by the majority. Discuss what is informing the assumption and whether the assumption is based on known facts.

This approach enables the group to make decisions based on reality, rather than assumptions, which are typically formed based on individual experience and incomplete facts. It can also surface assumptions driving individuals' perspectives that were not previously known.

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TOOLBOX FOR SECTION IV (cont'd.)

The Medici Effect

Examine how other industries or cultures have solved similar problems or opportunities. This approach is based on the Frans Johansson's 'facts of innovation':

New ideas are generated from combinations of old ideas, but not every idea combination is ideal.

The people, knowledge, and innovations that have the greatest impact are those that have come from multiple attempts or a large quantity of ideas.

Diversity of the team, in terms of experience, perspective, and approach to thinking leads to an exponential increase in ideas and a higher quality of ideas.

The ultimate premise is *"when you step into an intersection of fields, disciplines, or cultures, you can combine existing concepts into a large number of extraordinary new ideas."*³⁷

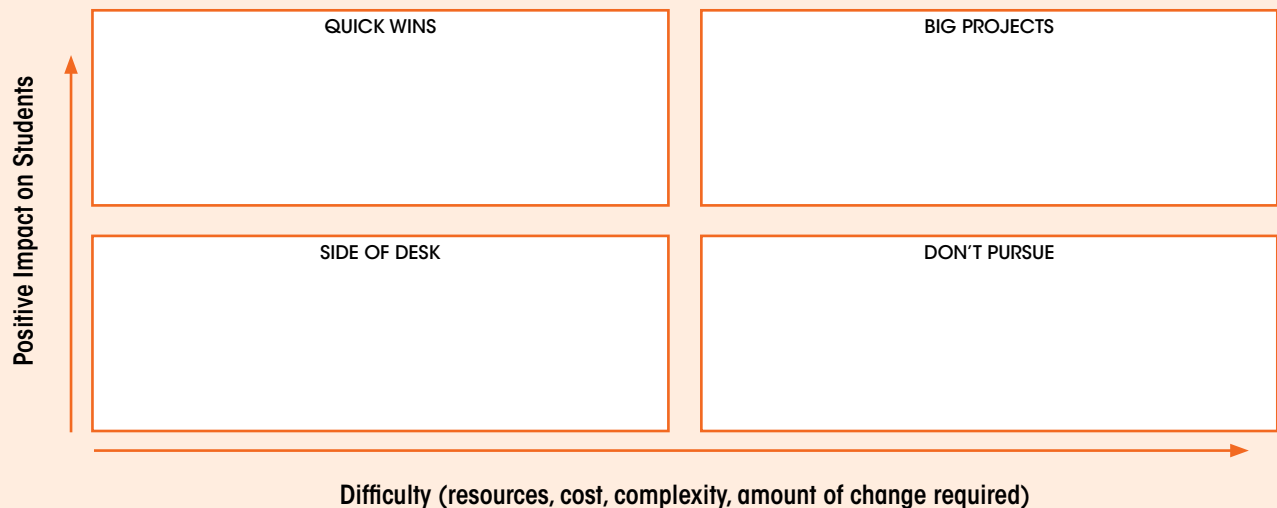
The main benefit of this approach is that it can generate ideas not yet considered popular or even applicable to higher education. Additionally, it can break down artificial barriers between disciplines and cultures.

A Simple Approach to Prioritizing Ideas

An alternative to using complex design criteria is to use a simple prioritization matrix. For example, the visual below shows the positive impact of the idea to students on the Y axis, and difficulty, measured in resources, cost, complexity, and other aspects, on the X axis. This activity can help the team identify which ideas to move forward. A mix of quick wins and big projects is ideal, as it provides motivation and momentum while also working towards more systemic changes.

This simple activity can also be paired with more complex design criteria to ensure the ideas selected meet intended outcomes.

Activity: What Wows? Prioritization Grid



37 Johansson, F. (2006). *The Medici Effect: What Elephants & Epidemics Can Teach Us About Innovation*. Harvard Business School Press.



TOOLBOX FOR SECTION IV (cont'd.)

Tips for Prototyping Ideas

The following are some examples of how to generate prototypes to test with stakeholders. It is important to carefully consider which option will most effectively convey an idea, as well as which options have the capacity to be developed. Teams can also consider using multiple methods to prototype and test ideas.

- ▶ A step-by-step map of the new process or service.
- ▶ A storyboard that illustrates the new service or experience. Under each visual, there is a written explanation of what is happening.
- ▶ A video recording or live role-play.
- ▶ A paper or virtual mock-up of computer screens for a new technology tool or process.
- ▶ A physical model (small or large) that demonstrates a new product or space layout.
- ▶ A rough or pilot version of a new software, tool, experience, or service.

Tips for Receiving Useful Feedback

While staff, faculty, and administrative feedback are important, student feedback is paramount. If the redesign doesn't work for students, it is unacceptable, and another option needs to be prototyped and tested.

- ▶ Consider how best to communicate the idea: Who is your audience and what are the goals?
- ▶ Welcome constructive criticism and dig deeper to identify the root causes of any critique.
- ▶ Don't try to sell or defend the idea.
- ▶ Pay attention to nonverbal reactions.
- ▶ Focus on feedback about the "why" and the "need" the prototype is helping address, not the more cosmetic feedback.
- ▶ Be sure to have a method of receiving feedback that enables the facilitator to focus on active listening — for example, by having an additional person available to take notes or a device to record the discussion.
- ▶ For a relatively complex design or redesign of a process, consider breaking it up into major or key steps and then rapid prototype each one individually. Coordination of the results will be necessary to ensure the overall process works as intended.



Conclusion

This guidebook has covered how the data institutions collect can help colleges better understand the students they serve, and how best to use those data to design the college experience for these students.

However, there is still a lot to learn about how to do this work well. Some questions we continue to work on deepening our understanding of include:

- ▶ How can we efficiently collect these data early on in a student's journey?
- ▶ How can we ensure these data are updated as student experiences and needs evolve throughout their journey?
- ▶ How can we safely store and use these data without risking students' privacy?
- ▶ What approaches can ensure data are well understood by those using them to make decisions?

This work is complicated, particularly when institutions move to scale the collection and use of these new data points to the whole campus community. As

we learn more about this work and find new examples of institutions doing it well, this guidebook will be updated.



We welcome feedback and questions about this guidebook's content, as well as requests for topics to focus our exploration of new lessons and strategies. We invite questions and requests at hss@achievingthedream.org.



Since 2004, Achieving the Dream has helped hundreds of colleges and millions of students achieve their goals of success. Informed by research and more than 15 years of practice with institutions of varying demographics, sizes, and contexts, ATD has helped them:

- Enable institution-wide systems and culture change
- Anticipate necessary changes in college structures and processes
- Envision the ideal student experience
- Plan how to engage stakeholders in making the case for change
- Prioritize the barriers to student success
- Provide insights and transformational strategies to improve equity
- Share evidence-based strategies for change
- Track implementation progress and impact of change initiatives

