

USING DATA AND EVIDENCE TO LEAD HOLISTIC ADVISING REDESIGN:

A Guidebook for Campus Leaders for Promoting Consistent, Coherent,
and Collaborative Data Use in Advising

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VOLUME TWO

Creating a Culture of Data Use
Around Academic Advising in
Your Institution

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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 engage institutions in holistic advising redesign to advance success for Black, Latinx, Indigenous, Asian, and Pacific Islander students and students from low-income backgrounds. The network develops services and resources to guide institutions in implementing evidence-based advising practices to advance a more equitable student experience to achieve our vision of a higher education landscape that has eliminated race and income as predictors of student success. The ASN is coordinated by NASPA—Student Affairs Administrators in Higher Education, and includes 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 THE PUBLISHER

The National Resource Center for The First-Year Experience and Students in Transition was born out of the success of the University of South Carolina's much-honored University 101 course and a series of annual conferences focused on the first-year experience. The momentum created by the educators attending these early conferences paved the way for the development of the National Resource Center, which was established at the University of South Carolina in 1986. As the National Resource Center broadened its focus to include other significant student transitions in higher education, it underwent several name changes, adopting the National Resource Center for The First-Year Experience and Students in Transition in 1998.

Today, the Center collaborates with its institutional partner, University 101 Programs, in pursuit of its mission to advance and support efforts to improve student learning and transitions into and through higher education. We achieve this mission by providing opportunities for the exchange of practical and scholarly information as well as the discussion of trends and issues in our field through convening conferences and other professional development events such as institutes, workshops, and online learning opportunities; publishing scholarly practice books, research reports, a peer-reviewed journal, electronic newsletters, and guides; generating, supporting, and disseminating research and scholarship; hosting visiting scholars; and maintaining several online channels for resource sharing and communication, including a dynamic website, email list, and social media outlets.

The National Resource Center serves as the trusted expert, internationally recognized leader, and clearinghouse for scholarship, policy, and best practice for all postsecondary student transitions.

INTRODUCTION

The Advising Success Network and its five core partners have focused on creating and distributing thought leadership and assets to promote holistic advising redesign in higher education. This guidebook was created to serve as a resource for data use by campus leaders, including mid- to senior-level administrators responsible for institutional advising initiatives. The National Resource Center for The First-Year Experience and Students in Transition – working on behalf of the Advising Success Network – aimed to identify strategies and data-use practices for data-driven decision making in advising services and collaboration of data use among campus stakeholders, meaning anyone whose role and/or actions shape and affect the planning for, delivery of, and decision making around advising at any stage.

About the Guidebook

This guidebook draws upon in-depth interviews with administrators who have oversight of academic advising at 18 institutions to provide strategies and examples of what campus leaders have been doing to promote consistent, coherent, and collaborative data use in advising.

Objective of the Guidebook

Our goal is to promote data use among campus leaders to improve advising and bolster student success through equity-minded approaches. This guidebook synthesizes and identifies best practices for improving collaboration and communication of data use among campus leaders and stakeholders in advising. Moreover, it presents strategies and practices used by institutions that can inform campus leaders seeking solutions for building a data culture toward developing holistic advising, with the goal of achieving greater and more equitable student learning and success in higher education.

Throughout the guidebook, we also provide recommendations for campus leaders to improve their equity and inclusion mindedness when developing coherent data-use strategies and culture. Most interviewees acknowledged that they prioritized equitable outcomes when examining data and identifying gaps in academic advising. For example, many mentioned they always disaggregated data by demographic information, such as socioeconomic status, race, ethnicity, and financial aid. The disaggregation of data is one step in the process to achieve equitable student outcomes. To promote equity, institutional data users and decision makers (e.g., mid- to senior-level administrators, advising directors, frontline advisors) must use the disaggregated data to inform their decisions and actions related to student success. Therefore, an equity-minded practice requires institutions to take responsibility and action for student success.

We begin this guidebook by emphasizing that an equity-oriented framework should be used as a guiding lens for advising redesign efforts. We contend that institutions should invest greater effort to address equity gaps

through advising initiatives. We also recognize that many institutions strive to create an empowering culture and implement inclusive and culturally relevant practices in academic advising. For example, positions may emphasize equity and inclusion initiatives, or the diversity of service staff may increase through the hiring of advisors who come from culturally and linguistically diverse groups. However, institutions must move beyond merely focusing on diversity and inclusion efforts toward cultivating an equity-oriented data-use culture. This attention requires institutional staff to identify and develop clear advising objectives designed to reduce inequitable outcomes for racially and socioeconomically minoritized student populations (including Black, Latinx, Indigenous, Asian and Pacific Islander, first-generation, and low-income students) and to determine the role of advising in supporting retention and graduation among students.

Organization of the Guidebook

This guidebook begins by exploring some **common challenges affecting strategic data use**, which can be organized in three primary areas:

1. **Systems:** The variety of data and information systems poses a challenge to optimizing data infrastructures.
2. **Culture:** Different attitudes or perspectives in academic advising and data use among institution stakeholders may cause inconsistency and incoherence of data use.
3. **Resources:** Shortages of professional personnel, professional development and training, and data analytic solutions result in limited capacity for data use.

This series of guidebooks addresses the challenges faced by institutions in using data strategically with academic advising and presents real-world approaches and strategies campus leaders can use to cultivate a collaborative and coherent approach to data use in advising:

1. Improving the use of **systems** designed to gather and interpret evidence on academic advising
 - Develop campus-wide assessment for academic advising
 - Develop and enhance data capacity
2. Creating a **culture** of data use around academic advising in your institution
 - Establish clear objectives to understand how data can inform the use of advising
 - Define the role of academic advising in institutional initiatives
3. Improving the human **resources** needed to use data more strategically
 - Identify stakeholders of advising
 - Improve collaboration and communication among advising stakeholders for better data use
 - Provide advising- and data-related professional development regularly to advising stakeholders

This volume of *Using Data and Evidence to Lead Holistic Advising Redesign* focuses on the second challenge, **Culture**, and provides evidence-based strategies focused on *creating a culture of data use around academic advising in your institution*.

Using This Guidebook

This guidebook, along with the others in the series, was created with the following questions in mind:

- What should campus leaders and stakeholders in advising consider when using data and evidence to lead advising redesign?
- How can advising redesign promote equity at their respective institutions?

As a core partner of the Advising Success Network, The National Resource Center for The First-Year Experience and Students in Transition has identified strategies for institution leaders regarding better use of data to improve collaboration and consistency in advising practices across colleges, divisions, departments, and other institution units, such as institutional research, information technology, enrollment management, and student affairs.

This guidebook (a) describes the challenges campus leaders face when using data-driven and evidence-based approaches in decision making and (b) provides recommendations for using data and evidence strategically in an effort to create holistic advising redesign that promotes equitable student outcomes.

We drew upon interviews with administrators from 18 different campuses; each administrator had responsibility for advising at their institution.¹ The interviews gathered different opinions and approaches from a wide range of institutions with diverse structures, processes, and initiatives surrounding advising and thus explored major topics relevant to data- and evidence-based approaches in decision making. Emphasis is on how campus leaders use:

- Data in decision making and case making
- Evidence to collaborate across silos within organizations
- Data in their leadership (e.g., to collaborate with other units on campus, to foster a culture of using data)
- Assessment and evaluation strategies

This guidebook provides leaders with recommendations for using data and evidence strategically to improve student success. In addition to administrators and professionals in academic advising, we encourage campus leaders from academic affairs, student affairs, enrollment management, deans and associate deans from academic colleges, data analytics departments, information technology, and institutional research and effectiveness to use this guidebook to support holistic, equitable advising-related work on your campus.

¹ See Appendix for a more complete description of our research methods.

CREATING A CULTURE OF DATA USE AROUND ACADEMIC ADVISING IN YOUR INSTITUTION

A consistent and coherent culture of data use is necessary for implementing and sustaining data-driven and evidence-based approaches to holistic advising redesign. A culture of data use is facilitated by the development of explicit protocols, language, and expectations associated with data and its use in strategic decision-making processes (Datnow & Park, 2014; Gerzon, 2015; Mandinach & Jackson, 2012). Thus, a shared understanding around effective data-use practices should be collaboratively decided and adopted by campus leaders and stakeholders, including anyone whose role and/or actions shape and affect the planning for, delivery of, and decision making around advising at any stage. A congruent culture can help leaders allocate sufficient time, resources, and supports to help staff use data as part of their decision making and daily work.

Campus leaders also play a critical role in influencing the use of data, and their data-use practices can serve as models for employees and other stakeholders. Additionally, leadership around data use further develops norms and routines among peers on leadership teams (Datnow & Park, 2014). Therefore, fostering a culture of data use can create not only an environment for campus leaders to use evidence strategically but an environment in which data is used with both consistency and coherence (see EDUCAUSE's [2022] guide *Understanding and Developing a Data-Informed Culture* for additional information).

CHALLENGES WITH CREATING A CULTURE OF DATA USE

Many advisors and campus leaders may feel that they have lack confidence to use and interpret data, particularly through an equity-minded lens. Through our interviews, campus leaders relayed that professional advisors, faculty advisors, and advising stakeholders across different departments, colleges, or divisions do not always use common language when using data and do not always have a mutual understanding of academic advising and its objectives. Without a common language and shared agreement of advising practices, these groups might interpret data in different ways, which may lead them to differences in understanding the effectiveness or progress of advising initiatives. Maximizing the capacity of data use to achieve institutional goals and equitable outcomes among students across different advising units can be especially difficult in a decentralized structure. These differences in language and interpretation create challenges for campus leaders who are creating and leading operating environments (e.g., access to data, collaboration space, routines of data use) and are using data and evidence strategically when making institution-level decisions.



We don't have a common set of learning outcomes or a common set of expectations or even common position descriptions for advisors across the different colleges. What that means for us is that when we're trying to share data, there isn't always accountability for what colleges are going to do with the data.



— Associate Vice Provost for Student Success, University of Toledo

Administrators also relayed that it is difficult to find ways to be open and transparent about data and outcomes associated with decentralized advising units. From senior academic advising administrators to professional advisors and faculty advisors, reporting lines are often not direct. For instance, senior administrators located in central advising offices might not know what challenges or successful practices the decentralized advising units had because of the disconnected nature of the units and the lack of cross-functional communication.

OBJECTIVES FOR CREATING A CULTURE OF DATA USE

In the next section of the guidebook, we present recommendations for establishing a culture of data use. Based on our interviews with campus leaders and research on data cultures, we pinpointed two objectives for campus leaders to consider when working to promote a common culture of data use around academic advising:

1. Establish clear objectives to understand how data can inform the use of advising
2. Define the role of academic advising in institutional initiatives

Objective 1: Determine Clear Outcomes Associated With Advising for Data Use

Creating consistent and coherent objectives surrounding the use of data and evidence for advising is a precondition for using data strategically and purposefully. When campus leaders develop and communicate a consistent understanding of advising outcomes, they are better positioned to navigate the examination of data and to implement strategies for data-driven or evidence-based decision-making processes. Developing a common understanding of institutional advising objectives can help minimize misunderstandings and unspecified assumptions about advising among stakeholders and campus leaders (Starobin & Upah, 2014). This step also provides the advisors “the language needed to describe both the practice of academic advising and its scholarly identity independent of other fields and professions” (Schulenberg & Lindhorst, 2008, p. 44). Therefore, cultivating clear advising outcomes lays the groundwork for using data strategically and purposefully. Without specific, measurable outcomes, institutions will not be able to collect useful data and measure their progress in a meaningful way.

“

Some years ago, we developed this advising mission, which begins with a definition, our philosophy statement. We believe that advising involves many stakeholders. We wanted to identify the responsibilities of everyone who took part in there. We have a statement of university responsibility. We have not developed [a] full [list of] learning outcomes, but we are in the process of it. We're currently in the process of developing a strategic plan for academic advising at our institution right now, one of those pieces being to re-examine our mission philosophy statement but to also develop the learning outcomes.

”

— Associate Vice Provost for Student Success, Virginia Tech

Pause and Reflect

We offer the following guided questions and activities to aid in the establishment of the mission, overall goals, and desired outcomes of advising (Wells & Glass, 2019):

Areas	Activities
<p>Mission: How does advising lead to student success?</p>	<p>The mission of advising on campus is to _____</p> <p>(primary purpose)</p> <p>by providing _____</p> <p>(primary function #1)</p> <p>_____</p> <p>(primary function #2)</p> <p>_____</p> <p>(primary function #3)</p> <p>_____</p> <p>(primary function #4)</p> <p>Thoughts, statements, additions:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Goals: What specific outcomes and benchmarks for advising are there in institutional initiatives and goals?</p>	<p>The institutional goals associated with advising are</p> <p>1) _____</p> <p>(highlight one short-term goal)</p> <p>2) _____</p> <p>(highlight one long-term institutional goal)</p> <p>3) _____</p> <p>(highlight one other goal)</p> <p>Do advising initiatives at your institution have SMART (specific, measurable, achievable, relevant, and timely) goals and measurable outcomes?</p> <p>_____</p> <p>_____</p> <p>_____</p>

table continues on page 11

table continued from page 10

Areas	Activities
<p>Goals: What specific outcomes and benchmarks for advising are there in institutional initiatives and goals?</p>	<p>How do advising initiatives at your institution center equity and Black, Latinx, Indigenous, Asian and Pacific Islander, first-generation, and low-income student success? What, if any, goals and measurable outcomes are associated with these initiatives?</p> <hr/> <hr/> <p>How does advising support institutional initiatives?</p> <hr/> <hr/> <p>What campus-wide processes are available at your institution that can serve as momentum points for advising redesign? Examples may include strategic plans, development campaigns, self-study processes, reaccreditation efforts, leadership transitions, and more.</p> <hr/> <hr/> <p>How do the campus-wide processes you previously identified prioritize equity and student success among Black, Latinx, Indigenous, Asian and Pacific Islander, first-generation, and low-income students? In what ways do these momentum points provide opportunities to incorporate equity-centered initiatives within advising redesign?</p> <hr/> <hr/>
<p>Learning Outcomes: What data will be needed to evaluate outcomes and benchmarks?</p>	<p>Write two learning outcomes following the ABCD method, in which A is your audience, B is the behavior, C is the condition, and D is the degree to which the condition is met.</p> <p>When describing student learning, <i>students</i> are almost always the audience. However, there are many times when the audience refers to specific groups of students, such as transfer students, students on academic probation, first-year students, or students participating in an extended orientation.</p> <p>The behavior refers to the type of learning that the educational initiative was designed to support. We have provided some examples of terms to describe the type of learning in the word box below that you might use as needed.</p> <p>Condition is the educational initiative, environment, or activity designed to achieve the learning outcome. In the examples that follow, the condition is students' participation in advising.</p>

table continues on page 12

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Areas	Activities
Learning Outcomes: What data will be needed to evaluate outcomes and benchmarks?	<p>The signal that a student has learned what the initiative was designed for is referred to as the degree, which might include students' ability to perform a task they did not before, to define a new concept, or to apply knowledge. Degree can be demonstrated in quantitative ways by identifying a numerical measure or in qualitative ways by identifying how students may describe their experiences.</p> <p>1) As a result of advising, the _____ (Condition) (Audience) will _____ (Behavior)</p> <hr/> (Degree)
	<p>2) As a result of advising, the _____ (Condition) (Audience) will _____ (Behavior)</p> <hr/> (Degree)

Behaviors word box	
Define	Assess
Identify	Solve
Describe	Compare
Demonstrate	Measure
Practice	Revise
Apply	Test
Utilize	Collect
Analyze	Compose
Determine	Design
Evaluate	Formulate
Relate	Plan
Synthesize	Propose

Following Bloom's Taxonomy (1956) as well as Anderson and Krathwohl's revisions (2001), you want to use actionable, clear, and measurable verbs, such as those found in the word box, when writing learning outcomes.

Audit of Advising Initiatives and Outcomes

After establishing an understanding of the mission of and outcomes associated with advising, draw upon your responses to the previous activity to complete the questions that follow. In this audit of advising initiatives and outcomes activity, we ask that you list all advising-related initiatives in the column “Advising-related initiative” and their associated outcomes in the column labeled as such.

Advising-related initiative	Associated outcome(s)
Example: Career advising	Example: Students will become familiar with potential career paths related to their desired field of study.

Objective 2: Develop and Enhance Data Capacity

Advising is often collaboratively partnered with other institutional initiatives to promote student success outcomes, such as improved retention and graduation rates (Fountain, 2021). As such, campus leaders must intentionally identify and describe connections among desired outcomes, advising practices in supporting institution-level initiatives, and strategic plans focused on student success. Institutions can and should focus on building common goals and developing resources to tailor advising cross-functionally (i.e., across various offices, such as an advising central office, colleges and departments, and first-year advising). Campus leaders should also consider how to use data and evidence as tools to identify *momentum markers* to engage in the change process toward improving advising.

We offer a case study from Claflin University as an example of connections between advising and institutional initiatives.

Case Study: How Claflin University Aligns Advising to Institutional Initiatives

Located in Orangeburg, South Carolina, Claflin University is a private historically Black university with an undergraduate student enrollment of 2,070 in 2019–2020. Ninety percent of students enrolled identified as Black, 2% as White, 2% as Asian, and 0.5% as Latinx; 4% identified as part-time. A major advising initiative that Claflin implemented was guided career pathways, which aimed to reduce the number of undecided first-time first-year students, increase the number of students who enroll with a well-defined career goal, increase the percentage of

students who graduate on time, and increase the percentage of graduates who secure employment in their fields within one year of graduation.

Through the guided career pathways initiative, first-year advisors help students develop educational goals and explore majors and careers related to their interests and strengths. Additionally, faculty advisors help students plan experiential learning activities for their career goals, finalize guided career pathway plans, select additional cocurricular activities based on career goals, and monitor student progress for goal achievement. Part of this initiative is a concerted effort to use data and evidence to monitor students' progress and develop their academic pathways. An administrator explained:



We have become intentional about our data collection and use of data in advising. We track our students and their number of major changes. Through advising conversations and the use of Focus2Career [an online career assessment], the academic advisor helps students narrow their career choices, develop career-related goals, and choose a major that is good fit for their career choice. Once career choices are selected, students are referred to the Career Development Center for career exploration and career counseling. If students decide to change their majors within this process, we track those major changes as part of our data collection. The advisors use this information to intervene when necessary and to make sure students are exploring career options.



Data collection efforts associated with the guided career pathways initiative have enabled administrators, staff, and faculty to respond accordingly to students' needs to facilitate greater learning and success:



Faculty advisors know the career goals of their advisees and their advisees' cocurricular activities (or experiential learning activities). Some data we have been using is the number of students who have participated in experiential learning and graduating students who have received [employment or advanced degree] opportunity offers. Advisors, department chairs, and deans share these data with the Coordinator of Experiential Learning. Also, we have incorporated a few career readiness topics into the seminar courses for each major. These career readiness topics help us to ensure that students are highly qualified for experiential learning opportunities as well as for the workforce.



Additional examples of advising initiatives (including academic, career, and financial advising) across different institutional types can be found in case study collections from the National Resource Center, including *Career Advising as a Tool for Student Success and Educational Equity* (Fountain & Portillo, 2021) and *Academic Advising as a Tool for Student Success and Educational Equity* (Fountain, 2021). The American Association of State Colleges and Universities also developed a practical toolkit for leaders seeking to integrate career advising in at their institution, *Integrating Career Advising for Equitable Student Success: A Higher Education Toolkit* (Ahmed et al., 2021).

Pause and Reflect

Self-guided questions to consider regarding the ways that academic advising can best contribute to institutional initiatives through data and evidence include

- How can advising add significant value to institutional initiatives?
- How do organizational structures support institutional initiatives?
- How can advising best drive student success through data and evidence?
- How does data and evidence use:
 - Help position advising within institutional initiatives?
 - Help advising staff track and report student outcomes and determine how they meet institutional goals?

Mapping Advising Initiatives and Outcomes to Institutional Goals/ Objectives

In the following table, draw upon the previous activities to inventory advising initiatives and their associated objectives. After completing this step, describe how advising initiatives and objectives connect to institution-wide goals/ objectives and answer the questions to consider that follow.

We have memorandums of understanding and project charters that establish our relationship with IRES/ Information Technology, specifically, those who work with PeopleSoft (student information system), Salesforce (customer relationship management), and Blackboard (learning management system). So, every advisor can have some aspects of data accessible to them, which have been previously approved from a data governance standpoint.

Advising Initiative	Associated outcome(s)	Connection to institutional goals/objectives

THE ROLE OF ADVISING REDESIGN IN PROMOTING EQUITY

Advising stakeholders must recognize their responsibility in facilitating student success as well as a culturally sensitive culture of data use. Creating and sustaining this equity-driven culture requires administrators, professional and faculty advisors, and campus stakeholders to engage with data without engaging in deficit thinking. Disaggregation of data can provide more student context, and decisions made from the data should not be driven by existing ideas or presumptions but from an equity-minded approach. Therefore, whether a culture of data use leads to more equitable outcomes is largely influenced by the extent to which the data users engage in deficit thinking. In an effort to reframe deficit thinking, we encourage stakeholders to consider how they can use asset-based thinking when developing a culture of data use at their institution.

TABLE 1
REFRAMING DEFICIT THINKING FOR EQUITY MINDEDNESS

	Deficit-oriented approaches	Equity-minded approaches	Reflection questions
Focus	Student deficiencies and weaknesses	Centering students' strengths and assets	<ol style="list-style-type: none"> 1. What strengths do students bring with them to your institution? 2. In what ways do advising initiatives support students' assets? In what ways do they not capture students' strengths?

Questions to Consider

1. In what ways do you see alignment occurring among advising initiatives, outcomes, and institutional goals/objectives? Specifically, in what ways do you see vertical and horizontal alignment occurring?

Horizontal alignment: the connection of objectives to assessment and program design and implementation

Vertical alignment: the idea that each stage of the undergraduate career leads to the next and that programs are designed to support each step accordingly and sequentially

2. Where do you see misalignment between advising initiatives, outcomes, and institutional goals/objectives?

3. How is equity incorporated into advising initiatives, outcomes, and institutional goals/objectives?

4. What data can you use to determine connections among initiatives, outcomes, and institutional goals/objectives?

5. What types of data would you like to collect to better create and facilitate alignment?

SUMMING IT UP: PRINCIPLES IN PRACTICE

It can be easy to get lost in the numbers, levels, and complexities of using data to improve campus advising. This guidebook can be used to begin the conversation around using data strategically by establishing the importance of a shared understanding of which data are most important and the ways that data and evidence can inform and improve advising practices. To establish these expectations, some level of assessment, reflection, and data collection must be done.

It is important to convey information cross-functionally and with stakeholders, as this will allow them to see the inherent value in using institutional data to drive advising change on campus. It could be particularly impactful to share quick, meaningful stories with leaders. A university president may ask to see advising data, but they do not have time to see all advising data in the data stores. They want to see a dashboard that shows the high-level report that tracks advising on a macro level, allowing them to connect and engage with the data. Improving academic advising requires a shared understanding of the inherent value in using institutional data on campus. By defining how advising aligns with an institution's plans and initiatives, identifying stakeholders and key campus partners, and having clear objectives for data use and academic advising, institutions, regardless of type, can establish a clear understanding of who, what, when, where, and how the data will be used in advising spaces on campus. Additionally, with meaningful data, leaders can create a cohesive narrative about students' needs, experiences, and strengths and make a strong case for the allocation of institutional resources when needed.

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APPENDIX

RESEARCH METHODS

Review of Literature

We reviewed current educational reports, literature, and research on leadership in data use, data-driven and data-informed decision making in educational settings, and cultures of data use. We also reviewed articles posted on the website of NACADA: The Global Community for Academic Advising. We used the information we learned through reviews to develop an interview protocol and to provide justification for the major themes we identified.

Interviews

We recruited campus leaders to participate in interviews through convenience and purposive sampling. We purposefully sampled to get perspectives from a range of institutions. Three approaches were used to invite campus leaders. First, we sent out calls to the National Advisory Board of the National Resource Center for The First-Year Experience and Students in Transition to ask them to nominate campus leaders they thought would be suitable to discuss our topic. Second, we identified active members in NACADA and sent out recruitment emails to campus leaders. Third, we sent a call to the Advising Success Network HBCU Professional Learning Community.

Between December 2020 and February 2021, we conducted semistructured interviews with 21 campus leaders who had responsibility for academic advising at 18 institutions. We gathered different opinions on using data from individuals at institutions that differed by structure of academic advising, types of institutions, and enrollment size. The summary of characteristics of the institutions is presented in Table A.1. Our interviews explored major topics relevant to data-driven and evidence-based approach in decision making, such as how campus leaders use data in decision making and case making, how campus leaders use evidence to manage up and down in organizational chart, how campus leaders use data in their leadership (e.g., collaborate with other units on campus, foster a culture of using data), and how campus leaders use assessment and evaluation.

All participation in our interviews was voluntary. In this report, we do not identify the campus leaders' names in illustrative cases or direct quotations. Some direct quotations have been edited for grammar and clarity.

Analysis

We audio recorded and transcribed all the interviews. Then, we conducted content analysis to identify major themes to understand how campus leaders use data and evidence strategically. The themes presented in this guidebook are related to strategies used to build a consistent and coherent culture of academic advising and a culture of data use. We also identified examples to illustrate practices and strategies used in specific institutions.

Limitations

Our approach had several limitations. First, we interviewed a select number of campus leaders. Their perceptions and experiences do not necessarily reflect those of other institutional leaders and are not designed to be generalizable across multiple institutional types. Second, the leaders we interviewed engaged in different efforts and inputs associated with improving academic advising, which does not mean those institutions are most successful or have best practices in academic advising. The purpose of our interviews was to explore the practices and strategies used by campus leaders and to synthesize suggestions and strategies that other campus leaders can adapt to meet their institutions' needs.

TABLE A.1

SUMMARY OF CHARACTERISTICS OF INTERVIEWED INSTITUTIONS

Category	Number of institutions
Four-year institutions	14
Community colleges	4
Historically Black colleges and universities	3
Hispanic serving institutions	9
Private institutions	2
Institutions participating in the Integrated Planning and Advising for Student Success (iPASS) project	1
Institutions participating in Guided Pathways initiatives	1

Note. Several institutions fall into more than one category.