Success Factors for Advising Technology Implementation

Insights from Practitioners and Providers to Support Reflection, Action, and Improvement

ADVISING SUCCESS NETWORK | SOVA | EDUCAUSE

Background

ADVISING SUCCESS NETWORK

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 THIS PROJECT

Campuses are increasingly turning to a collection of technology solutions to provide more efficient and effective planning and advising services, target students who need the most support, and ultimately improve student success, particularly for Black, Latinx, Indigenous, Asian, and Pacific Islander students and students from low-income backgrounds. Advising technologies can be used for performance measurement and management; diagnostics; academic planning and audit; caseload management and communication; and alerts, signals and notifications.

Many campuses are turning to a variety of advising technology tools to make their outreach to students more sustained, strategic, integrated, proactive, and personalized, ultimately contributing to advancing the student success mission and student learning. However, successful implementation of advising technology depends on a complex combination of institutional readiness, the functionality of the tools themselves, and solution provider "fit" around campus conditions, vision, and expectations. This resource is the product of structured dialogues designed using the appreciative inquiry model and conducted with learning teams consisting of advising and IT staff from an institutional partner and staff from a solution provider. The findings described here are designed to support improved practice on the part of key internal stakeholders involved in advising technology implementation and use; these include executive and mid-level leaders in student services, academic affairs, IT, and institutional research (IR). It is also designed to promote learning and continuous improvement for solution providers as they partner with institutions. Specifically, this resource aims to (1) help institutions assess their readiness for quality implementation of advising technology, and (2) strengthen high-functioning collaboration between institutions and solution providers.

This project was completed in collaboration with Sova. Sova's mission is to help America fulfill its social contract to provide real upward mobility for more people through higher education. Anchored in a commitment to improving the lives of working people, Sova works shoulder to shoulder with researchers, policymakers, and institutional leaders at all levels to close equity gaps in opportunity and outcomes for today's learners. To learn more go to www.sova.org.

How to Use This Resource

While it may be used effectively across the implementation life cycle, this resource is best used in the early stages of advising redesign. Institutions can use it to assess readiness for technology investment and orient teams to the general design features sought in advising technology, or when refining the implementation and use of a particular advising technology.

This resource can also be used in tandem with the *Advising Technology Procurement & Planning Playbook*, written by the Ada Center. Related sections in the Ada Center Playbook include "Build and Empower a Cross-Functional Procurement Team," pp. 16–20, and "Interview End Users to Develop 'User Stories,'" pp. 26–29. Although there are overlapping themes, the playbook is focused specifically on the procurement process, whereas this tool provides a broader report on the synthesis of the learning teams' conversations about ideal design features and campus conditions for successful implementation and adoption of advising technology.

As a readiness assessment tool, the examples of exemplary institutions and discussion questions are intended to signal the critical importance of campus conditions in the successful implementation of advising technology and to help teams build their overall capacity and consider the extent to which the institution, including its leadership, culture, and existing technology ecosystem, is ready for effective implementation of an advising technology solution. With respect to common features and functions of advising technology, this guide aims to orient teams to typical prioritized product capabilities and user experience considerations.

The appreciative inquiry discussion guide is also available in Section 4 for campus teams and solution provider partners who want to replicate this activity with their own context in mind. Ideally, the dialogues would take place between solution providers and campus teams; however, this process can be just as powerful when conducted with a wide range of functional and technical areas represented across the institution—to generate shared vision, identify capabilities that might need development, connect technology features with process and principles, and build on points of momentum within the campus.

Table of Contents

Principles for Advising Technology Implementation

The learning teams' collaborative inquiry process produced a set of core principles that solution providers and institutions agree should orient the work of preparing for successful implementation of advising technology.

IN THIS SECTION

Overarching Principles
Design Features
Campus Conditions

OVERARCHING PRINCIPLES

1. A holistic view of advising, and a deep appreciation of the place of advising within a comprehensive student success strategy, must orient those tasked with procuring and implementing advising technology.

2. A widely shared commitment to the use of technology solutions to empower students and those who serve them is vital for any advising technology to achieve its full potential.

3. Broad recognition that successful near- and long-term implementation is the result of rigorous attention to both technical and human dimensions of change management.

4. Solution providers and campus teams must recognize the foundational importance of cultivating a relationship that promotes trust, honest and open communication, and mutual accountability.

5. Assuming joint responsibility across campus teams and solution providers for intentional learning, real continuous improvement, and the longer-term work entailed in successful implementation is indispensable for achieving the potential of advising technology.

DESIGN FEATURES

The following principles describe the features and functions of advising technology identified by the learning teams as critical to achieve the ideal implementation:

1. Clear and concise data requirements

2. Seamless interoperability

3. Tailored implementation support to institutions

4. Intuitive functionality that creates clear value for advisors, faculty, and staff

5. Adaptive functionality that creates clear value for students

6. Excellent dashboarding that empowers effective action for students

CAMPUS CONDITIONS

The following principles describe the campus conditions identified by the learning teams as critical to achieve the ideal implementation:

1. Active commitment of senior leadership

2. Ability to provide clean source data

3. Skillful implementation leadership

4. A widely embraced culture of evidence

5. Effective silo-spanning coordination and collaboration

6. Ability to apply student-level data toward improved action for students

These principles will be expanded upon with detail and discussion prompts throughout the rest of this resource.

Methodology

This resource is the product of structured dialogues between eight learning teams, each composed of advising and IT staff from an institutional partner, and staff from a solution provider. A range of solution providers representative of the advising technology marketplace were asked to invite an institutional partner to engage in a series of three discussions conducted over a one-month period in late 2020. The process was designed using the appreciative inquiry model, an organizational development approach grounded in the research-based conviction that intentionally strengths-based, scaffolded, collaborative deliberation yields uncommonly rich insight into complicated issues.

Not only does the appreciative inquiry model promote shared understanding of complicated issues across boundaries, but the process itself is also an intervention. It is a vehicle for both generating knowledge and strengthening relationships, where the pace and quality of implementation are impacted by the quality of relationships between institutions and solution providers and between different functional units within an institution.

PARTICIPATING LEARNING TEAMS

AdmitHub & Georgia State University

Anthology & Drew University

Aviso Retention & Linn-Benton Community College

Civitas & Austin Community College

Ellucian & Gateway Technical College

Jenzabar & University of Mary

Signal Vine & Missouri State University

Technolutions & Oklahoma State University Institute of Technology

The content of this resource was generated through the learning teams' self-documented dialogue using the three structured dialogues.

DISCOVER
The first dialogue sought to capture **"The Best of What Is"** through paired interviews and a joint summary of high points related to technology functions and features, as well as campus conditions for successful implementation.

DREAM
The second dialogue was built on the first and focused on **"What Could Be."** In this session, learning pairs shared their concrete vision for an ideal world with respect to effective design and implementation of advising technology.

DESIGN
The final dialogue distilled lessons learned about critical capabilities and campus conditions for effective advising technology, particularly from the perspective of those closest to implementation, and invited learning teams to generate top 10 lists that describe **"What It Should Be."**

The documentation from the eight learning teams' dialogues was then synthesized into a draft that was shared with participants for member checking and finalized into this resource.

SECTION 3:

Success Factors

PART 1.

Readiness Assessment

The efficacy of advising technology often relies on the culture, campus conditions, and context in which it is placed. Without clean and robust data, a product may produce unreliable or inaccurate insights. Without a strong leadership team and the commitment and bandwidth to see a project through, initiatives can stall and falter. This section provides several guiding questions and considerations to help teams assess where they are set up for success and where there may be gaps needing remedy before they initiate a procurement effort.

IN PART 1

Leadership

Institutional Culture

Technology and Data Ecosystem

Leadership

EXECUTIVE LEADERSHIP

Technology implementations require several levels of commitment and capacity, and it is executive leaders who set the tone for the institution. The president and core executive leadership team must understand the potential of the technology initiative and create space for those deeper in the institution to prioritize the work that comes with quality implementation. They must be prepared to engage in effective budget analysis and plan for the commitment of resources (including staff time), often in a resource-constrained environment. Advising technology implementation and change management also benefit greatly when executive leaders act as sponsors and champions, actively participating in case-making for internal stakeholders.

At exemplary institutions, this typically includes the following:

- ☐ Leadership has a willingness to evaluate internal processes and procedures to enable change and better serve students.
- ☐ Leadership promotes a common mission and values that empower all staff to act for the benefit of students.
- ☐ Executive support exists for investment in advising resources and training.
- ☐ Leadership provides clear job expectations for all advisors and other staff involved in procurement and implementation.
- ☐ Leadership can facilitate change management processes with clear, repeated messaging.

CONSIDER: *To what extent does your institution's **executive leadership** exhibit an **active commitment** to an advising technology initiative?*

❓ DISCUSSION QUESTIONS

Given these considerations, what may need to be changed or improved? What steps might leadership need to take to develop a more involved and supportive role in advising redesign and advising technology initiatives?

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MID-LEVEL LEADERSHIP

Advising technology implementations often involve a year or more of intensive, focused work, followed by a commitment to sustainability and continuous improvement. This makes strong implementation teams that attend to the functional and technical or administrative aspects of the work particularly vital to the success of an advising technology initiative. These implementation teams typically mirror or overlap heavily with the group of individuals the institution assembles to serve as the product procurement team. Early inclusion of mid-level leaders from across a wide range of functional and technical areas throughout the institution, and explicit care in developing a culture of transparency that invites feedback, can significantly improve the pace and quality of implementation.

At exemplary institutions, this typically includes the following:

- ☐ Individuals show an understanding of the value of the tool and a commitment to its use.
- ☐ Individuals show a willingness and ability to work through the implementation phases.
- ☐ Individuals are able to clearly articulate what advising means and what outcomes they seek.
- ☐ Individuals are equipped to use data effectively to build understanding and trust with frontline faculty and staff affected by implementation.
- ☐ Individuals are able to build high-functioning relationships with senior leaders and to provide assurance to those deeper in the institution by serving as a buffer and translator between senior leaders and frontline faculty and staff who will use the tool.
- ☐ The institution/implementation team has clearly identified advising stakeholders and knows how to translate across silos to build shared understanding and support for high-quality implementation (e.g., Who are your champions? Where are the collaborative relationships to drive advising services?).

CONSIDER: *To what extent do you have **mid-level leaders** who can provide **skillful procurement and implementation leadership?***

? DISCUSSION QUESTIONS

Given these considerations, who at your institution should be included on the procurement/implementation team? If a team is already in place, is there evidence that it is exemplifying the tenets above? How could the team be improved or better supported?

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Institutional Culture

Advising technology implementation relies on and touches all facets of an institution. Advising technology can open access to insights, but it is up to institutions to use those data and insights with integrity and purpose. It is ultimately people, not technology, that make positive change for students; therefore, institutional culture has an enormous impact on the quality of implementation and ultimately on how the technology adoption improves student experience and outcomes.

At exemplary institutions, this typically includes the following:

☐ The campus exemplifies a strong understanding of the student body and a commitment to understanding and prioritizing the lived experience of marginalized and racially minoritized students.

☐ The institution is dedicated to continuous improvement, as evidenced by regular, routine, courageous conversations about student outcomes and the availability of data to identify what is effective for Black, Latinx, Indigenous, Asian, and Pacific Islander students and students from low-income backgrounds. What processes or practices may need fine-tuning?

☐ Multiple opportunities are available for professional development and training concerning how to access, understand, and leverage data (e.g., how to use data in operations; how to read data and what they mean; orientation to what the software looks like).

☐ Process and bandwidth have been established to collect and analyze data so that all staff can gain insights that support their roles and responsibilities.

☐ Executive leadership, implementation teams, and other departmental stakeholders are committed to communicate frequently, early, and often throughout procurement and implementation stages.

☐ Institutional staff have a widely shared understanding of the difference between *retention strategies* and *student success strategies*, and an ability to work on both.

? DISCUSSION QUESTIONS

Who are your students, really? What assumptions are you making about your students that need to be unpacked or dismantled? Are you focusing on the structures and practices that your institution needs to address? Are you consciously moving away from deficit-based language and incorporating equity-minded language when you talk about your students? Are you finely disaggregating data as you examine the effects of your policies and practices on students from different demographic groups?

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Given these considerations, how ready is your institutional culture to make the best possible use of advising technology to support your students? Where are the biggest challenges and opportunities with respect to strengthening your culture for successful implementation of technology?

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CONSIDER: *To what extent does your institution have a widely embraced **culture of evidence** and the ability to manage effective **silo-spanning coordination and collaboration?***

Technology and Data Ecosystem

Before launching into implementation, institutions must identify and work through any disconnects between the technology and the data ecosystem. Too often, institutions procure technology without considering whether the campus has the level of data hygiene required for implementation. "Dirty" data, such as duplicate records, incomplete or outdated data, and the inaccurate parsing of record fields from disparate systems, can slow or stall implementation. Likewise, unanticipated integration challenges due to the tendency of institutions to procure and stack new products without assessing the readiness of the campus's technology ecosystem can derail implementation.

Solution providers and tech-savvy institutions both recommend performing the following checks. Typically, IR and IT are best positioned to weigh in on these considerations.

- ☐ Do you have clearly defined and broadly accepted data definitions that span departmental units and are used consistently in your existing core systems of record?
- ☐ Given your prioritized product capabilities, what kind of data will need to be pulled into the product to allow it to display accurate and actionable information?
- ☐ Where are critical student, academic, and other relevant data currently stored (e.g., SIS, pen and paper, Excel)? To what extent can the new product integrate with these core systems, and what workarounds may be needed to integrate or migrate data sets if full interoperability is not possible (which is often the case)?
- ☐ Given your stakeholder needs, how frequently will different information displayed in the product need to be updated to maintain the integrity and user-friendliness of the product? Note that while access to real-time data is ideal, it is not always possible for all data points.

? DISCUSSION QUESTIONS

Who at your institution needs to be engaged to ensure you are ready to integrate a new technology and orchestrate a plan to ensure your data are clean?

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Given these considerations, how ready is your current data ecosystem to make the best possible use of advising technology to support your students? Where are the biggest challenges and opportunities with respect to strengthening your student records for successful implementation of a new advising technology?

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CONSIDER: *To what extent is your **technology and data ecosystem** ready for an advising technology implementation?*

Product Capabilities and User Experience Design

Once advising and institutional leaders feel ready to move forward with an advising technology initiative, one of the first steps in the planning process involves deciding what product might best achieve the student success and equity outcome(s) that the institution has articulated while also meeting the needs of various stakeholders. This can be an arduous process given the many competing perspectives across units. While product capabilities and preferences will ultimately vary by institution, this section provides an overview of some of the most common product requirements, organized by stakeholder.

IN PART 2

Advisors and Student Support Staff

Students

Administrators

Advisors and Student Support Staff

Universally, advisors and other student support staff say they want a user-friendly "one stop shop" for all advising tools, a system that is streamlined and easy to navigate for even the most novice of technology users. They see this as a way to prioritize their efforts and maximize the impact of the time they have with students.

Specifically, these practitioners have most regularly called for the ability to:

☐ Track student interactions across offices so that faculty and advisors alike know whether students are on or off their plan

☐ Store conversation history with students

☐ Take and store notes about student interactions

☐ Create both automated and customizable nudges to students

☐ Track student progress through courses, academic plans, and key student experience milestones (e.g., completion of critical advising meetings, application for graduation)

☐ Create specific groups, caseloads, or cohorts for tracking and communicating with students

☐ Create and store a library of templatized email outreach to students

Students

Like advisors, students also frequently cite a need for a digital "one stop shop" to house all of the tools needed across the student experience, from billing and financial aid to course planning and tutoring. Most advising technology tools have a student-facing component, though it may be priced differently or separately from advisor- and support-staff-facing tools.

Students and practitioners who advocate for them frequently include the following product capabilities on their wish lists:

☐ Ability for students to use the platform for multiple use cases (e.g., registration, tuition payment, and planning for courses) rather than "jumping around" to different platforms

☐ Ability for students to collaborate and/or communicate with advisor and/or other support staff

☐ Ability for students to customize communications so that they receive only the notifications they need and/or have indicated they want by opting in

☐ Ability for students to view and navigate the product from a mobile phone

☐ Alerts about upcoming deadlines and milestones (e.g., alert to meet with an advisor about a low grade, alert about an upcoming financial aid deadline)

☐ Local organization of student journey from entry to present, with a situational awareness viewpoint

Administrators

It is vital that institutions have both the proper data and the capacity to draw insight from finely disaggregated data to empower effective action for students. Using data effectively to empower students and those who support them is a critical piece of the puzzle. Some advising technology products offer more robust dashboards, while others prioritize usability. Whereas data dashboard features are often used by executive leadership, student success leads, and IR, they could also be used across a variety of stakeholders, depending on an institution's data management and privacy/access policies.

Administrators and other leaders often asked for the following capabilities:

- Ability for the system to pull from multiple data sources, core technology systems (e.g., SIS, LMS)
- Ability to define and track specific key performance indicators that executive and mid-level leadership need in order to evaluate initiative and student success
- User-friendly interface that is easy to navigate for nontechnical staff
- Ability to disaggregate and display data graphically through engaging data visualization tools
- Ability to see data trends at a high level, as well as data on an individual-student level
- Ability for multiple users across departments to access the data dashboard so it can be used broadly to improve student success

? DISCUSSION QUESTION

In considering the points above, how ready are you as a campus to translate and use data to empower those who support students to make sound decisions and improve action?

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Structured Appreciative Inquiry Dialogue

IN THIS SECTION

- *Introduction*
- *Recommended Participants*
- *Overview of Process*

Session 1: Discover—"The Best of What Is"
Session 2: Dream—"What Could Be"
Session 3: Design—"What It Should Be"

INTRODUCTION

The following pages include a structured appreciative inquiry dialogue process that is intended to support service providers and institutional partners in the identification of the key campus conditions, technology features and functions, and overarching agreements necessary for the successful implementation of advising technology in their particular setting.

RECOMMENDED PARTICIPANTS

Appreciative inquiry is most effective when a broad set of stakeholders is included; however, this resource was developed with input from smaller groups that included one to three campus representatives from advising, IT, and/or IR departments, as well as one to three solution provider representatives from leadership, research and development, or implementation support roles.

OVERVIEW OF PROCESS

This series of structured dialogues can be facilitated in three separate sessions of about 60 to 90 minutes or one extended session of about four to six hours. These sessions can be self-facilitated using the guide prompts, or a nonparticipating facilitator can be used to help guide the structure of the sessions and support synthesis of ideas.

The three structured dialogues include:

DISCOVER

The first dialogue captures **"The Best of What Is"** through paired interviews and a joint summary of high points related to technology functions and features as well as campus conditions for successful implementation.

DREAM

The second dialogue is built on the first and focuses on **"What Could Be."** In this session, learning teams will share their concrete vision for an ideal world with respect to effective design and implementation of advising technology.

DESIGN

The final dialogue will distill lessons learned about critical capabilities and campus conditions for effective advising technology, particularly from the perspective of those closest to implementation, and will invite learning teams to generate top 10 lists that describe **"What It Should Be."**

While the Design session concludes with a distillation of critical capabilities and campus conditions for effective advising technology implementation, campus groups may want to schedule a final "what's next" session to begin planning how to turn ideas into action.

Discover—"The Best of What Is"

STEP 1: INTERVIEWS

Break into interview pairs, ideally including two individuals from different departments or organizations. In this exercise, focusing on what worked well, the interviewer will ask the interviewee the questions below. The interviewer will write down the key points shared by the interviewee, capturing the actual words used as much as possible. When all questions are asked and answered, roles will switch and the interviewee will become the interviewer, asking the same questions.

When taking notes, be sure to use the language of the interviewee to accurately reflect the message conveyed.

Interview Questions

1. What do you value most about yourself, your work, and your organization/institution?

2. What is the core purpose of your work that gives life to how you engage with me?

3. Describe a high point in our work together that relates to features and functions of advising technology. Now describe a high point in our work that relates to campus conditions for effective implementation of advising technology.

4. If you had three wishes that, if fulfilled, would result in an ideal situation with respect to features and functions, what would those wishes be?

5. If you had three wishes that, if fulfilled, would result in an ideal situation with respect to campus conditions, what would those wishes be?

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STEP 2: HIGH-POINT HIGHLIGHTS

Create a joint summary of the most important themes of the interviews as they relate to both technology functions and features, as well as campus conditions for successful implementation. This step can be completed by individual learning pairs, or, after sharing ideas with each other, learning pairs can gather into a large group and collectively identify the key themes from the interviews.

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Dream—"What Could Be"

STEP 1: INTERVIEWS

Review your notes from Session 1 and discuss the following questions. This step can be conducted in learning pairs or as a large group with a facilitator.

When taking notes, be sure to use the language of the interviewee to accurately reflect the message conveyed.

Interview Questions

1. If you came to work and everything was as it ought to be, or you had the ideal in place with respect to effective design and implementation of advising technology, how would you know?

2. What does this discussion of your ideal world tell you about your most vital aspirations when it comes to features and functions of advising technology and campus conditions for effective implementation?

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STEP 2: HIGH-POINT HIGHLIGHTS

Using your notes, create a joint summary of the most important themes of the interviews as they relate to both technology functions and features, as well as campus conditions for successful implementation.

1.   In an ideal world, advising technology solution providers would offer the following features, functions, and services to institutions through their products:

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2.   In an ideal world, institutions would ensure that the following campus conditions are in place to ensure effective implementation and use of the technology:

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Design—"What It Should Be"

STEP 1: INTERVIEWS

Reflecting on Sessions 1 and 2, use this session to distill the lessons learned about the critical capabilities and campus conditions for effective advising technology. Be sure to spend time understanding the perspectives of those on the ground, closer to implementation.

When taking notes, be sure to use the language of the interviewee to accurately reflect the message conveyed.

Interview Questions

1. What are the 10 most critical discrete capabilities for advising technology (e.g., personalized student text messages, notifications when students veer off degree plan, advisor dashboard of student profile, interoperability, transparency of data)?

2. What are the 10 most critical campus conditions (e.g., strong partnership between IT and student services with clearly communicated project goals, clear and established data definitions, clean/audited source data)?

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STEP 2: HIGH-POINT HIGHLIGHTS

Using your notes, create a joint summary on page 3 of the most important themes of the interviews, ensuring that both sides of the learning teams spend time understanding the perspectives of those on the ground, closer to implementation.

List 10 capabilities required to achieve the ideal world.

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List 10 critical campus conditions required to achieve the ideal world.

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