

WHITE PAPER

DATA NEEDS OF ADMISSION PROFESSIONALS

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NACAC is an organization of professionals from around the world dedicated to serving students as they make choices about pursuing postsecondary education.

NACAC is committed to maintaining high standards that foster ethical and social responsibility among those involved in the transition process.

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Introduction

For admission and enrollment leaders, longstanding practices only go so far in guiding decision-making. Especially in the shadow of the COVID-19 pandemic, what worked in past years may no longer be relevant to the needs of today's prospective students or to an institution's bottom line. Personalized engagement—rooted in data—forms the new foundation for institutions adapting to shifting market dynamics. The charge for today's admission and enrollment leaders is to gather as much insight as possible about their prospective students and to anticipate how to engage next. Meanwhile, the ethical use of data has never mattered more.

This is the trajectory for higher education. Being data-driven doesn't mean abandoning the relational art of admission, or latching onto the latest artificial intelligence (AI) fad. It means ensuring your admission and enrollment strategies are informed by your data and that your teams are empowered to act on it.

But how can you get started? In March 2020, NACAC convened a working group of admission professionals and ed tech experts to answer this question. Their findings are outlined in this white paper, which will form the basis of a new Strategic Data Management for Enrollment Leaders preconference workshop, Sept. 23–24, preceding the 2020 NACAC National Conference.

Read this white paper to discover:

- How to build a data culture
- Ways you should be thinking about data collection and analysis
- Why actionable data boosts your team's effectiveness
- How to communicate with leadership to achieve realistic and sustainable goals

In the words of one participant, 'I tell my staff they work in technology now whether they like it or not;' it is "foundational to what they do." While this mindset might not come naturally to admission professionals, using data strategically is fast becoming a key skill in the profession.

Data-Needs Framework

The following six data-related topics were identified by the working group as those with the greatest need for admission professionals.



National Association for
College Admission Counseling



Data-Needs Framework

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Building a Data Literacy Culture



Data Administration



Creating a Data Collection Strategy



Using Data to Make Informed Decisions



Prospect Development



Predictive Modeling/ Enrollment Forecasting

1. Building a Data Literacy Culture

Increasing data use begins with expanding the data culture and level of data fluency among staff. Creating a culture of evidence was cited as critical to achieving data literacy goals. Staff should have the ability to ask the right questions of data and to know how and where to look for data, how to interpret data, and how to be critical of data. This culture begins from the top; leaders must plan for data-sharing and collaborating both within admission offices and across departments on campus. An example was cited of a four-year institution that merged with a two-year institution and now has a single financial aid and admission office. The representative of the four-year institution “did not find a lot of strategic use of data at the two-year level,” and there is a need “to change that culture to get to a more data-centric mindset.” Previously, the two-year institution had a “lack of understanding of enrollment data.”

A data culture is also critical to help staff “envision what they can do,” that even if data are not available through an existing database, that database can be customized, or external data can be used. Staff must be aware of the various data sources on campus, and how these datasets work together. They should also be thinking about long-term data plans.

Data Communications: A number of guiding principles can help increase trust in data across staff on campus. For example, data should be:

1. **Transparent:** Data findings should state clearly the data source and parameters.
2. **Consumable/Accessible:** Communicating data findings not only through spreadsheets but also through visual formats and in relatable ways for each audience will help those new to data understand it on a deeper level.
3. **Actionable:** Data can be used to help make policy and programmatic decisions.
4. **Meaningful:** Data must be put into context—using, for example, a historical trend or peer comparison—to be truly meaningful and tell a story.

In addition, it was emphasized that good leaders share data widely; “It’s not just their data, but the *institution’s* data.” Leaders need to set aside dedicated time for them and their staff to look at data.

Admission professionals must learn how to communicate data findings to senior leaders; colleagues in other departments with an enrollment focus, such as marketing and financial aid; and institutional research and information technology staff. In addition, staff often need to use data across campus for “influencing to build buy-in and alignment.”

Data Training: As part of building a data culture, staff must be trained to use data, and informed about the importance and role of data in their jobs, starting with the hiring process. Participants stressed the importance of informing prospective hires about expectations for data literacy and use in their jobs. In addition, it is critical to provide continual training for staff, tailored by position. Admission counselors may need a different skill set or knowledge of different datasets than admission directors, for example.

Admission professionals and other staff on campus using data must work to establish the fundamentals of “right versus wrong” in terms of how data are used. In addition to the legal or regulatory guidelines for handling data as related to privacy, data administrators must ensure the methodologies used, and the decisions made using data, do not compromise or adversely affect students.

2. Data Administration

In addition to instilling a culture of evidence, policies and procedures must be in place before data can be used. The institution and individual departments must consider data security, privacy, ethics, and governance in their policies and procedures to ensure data are used and shared correctly.

Data Governance

Data governance includes the following considerations to ensure data are correct, clean, and consistent:

- Data dictionaries and manuals; organization structure
- Code maintenance (important for system migration)
- Privacy and permissions; who has access to which data
- Clear understanding of infrastructure limitations
- Business rules
- Data integrity policies and practices

These elements should be part of a campus-wide planning process to determine strategies and “get people on the same page.” Governance also requires ensuring that data can be connected longitudinally, to help tell a story.

Ethics

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Many examples of ensuring the ethical use of data were discussed. For example: Should admission offices have access to data such as Free Application for Federal Student Aid (FAFSA) submissions or financial aid awards? One participant emphasized the importance of using predictive modeling to determine how to award aid; otherwise institutions will under-award by allocating aid dollars to students unlikely to attend. Predictive modeling “can be helpful...but can also lead down a bad path.” He pointed to the concepts of strategic aid awarding and “leveraging” aid as being ethical “slippery slopes” that could lead to inequities. Third-party companies who advocate for leveraging financial aid and “encourage giving less aid to students with more interest” present another ethical concern.

The same participant noted that institutions want to enroll students who are a “good fit.” His institution, a large, public four-year university, discourages students with financial gaps from enrolling. Based on internal research, these students often drop out with debt. While this practice may attempt to avoid negative outcomes for students, it does raise ethical questions about advising an individual not to pursue opportunities that could eventually improve their lives, based on patterns of previous students.

Another area cited for potential ethical concerns is prospect development and building a database of potential students. Some institutions search for students by zip codes but should be aware of potentially related bias and ethical implications. Questions such as these should be discussed when developing departmental and institutional governance structures, and for individual projects’ data plans, to ensure ethical guidelines are followed by all data users.

Admission Data Sources



Student applications

Attendance at events and visits

Focus groups and surveys

Engagement surveys

Student action data



Summer academic programs,
sports camps, audition data

FAFSA data

ACT/SAT score sender files

Data from search records

Housing data



Alumni, family groups

Web/email analytics

Local market data

State reporting

High school data



Local college
access organizations

NSC data

IPEDS, EPS, NCES resources

Segment analysis services

Vendor data

3. Creating a Data Collection Strategy

The following aspects of data collection must be considered and documented as part of project-specific data plans:

1. **Data dictionary** – Staff collecting data must understand the importance of creating a data dictionary, what it looks like, and differences based on research objectives and institution type.
2. **Data software/tools** – Staff can be overwhelmed by the multiple options for data vendors and need to be educated to understand the differences between various software programs, their pros and cons, costs, specific uses, and limitations, as well as the type of assistance IT can provide.
3. **Data planning and organizing** – While developing a data plan, identify the data or measures that support and evidence conversation and decision-making surrounding institutions' admission-related priorities and strategies. Also identify and consider any infrastructure barriers that may exist in gathering the needed data. How can you plan for, around, and build capacity?
4. **Data sources** – What sources are available, and which are applicable to your institution? What are the research questions associated with a particular project? Also, how will you merge various sources?

The following were provided as commonly used admission data sources.

Internal:

- Student applications
- Attendance at events and visits
- Focus groups and surveys
- Engagement surveys such as National Survey of Student Engagement (NSSE)/ Community College Survey of Student Engagement (CSSE)
- Student action data (time stamp everything)
- Summer academic programs, sports camps, audition data
- FAFSA data
- Data from ACT/SAT score sender files
- Data from search records purchased
- Housing data
- Alumni, family, active alumni groups
- Web/email analytics

External:

- Local market data
- State reporting
- High school data
- Local college access organizations
- National Student Clearinghouse (NSC) data
- Integrated Postsecondary Education Data System (IPEDS), College Board's Enrollment Planning Service (EPS), other National Center for Education Statistics (NCES) resources
- ACT and College Board's segment analysis services
- Vendor data from Civitas, Education Advisory Board, RNL, and others

Professionals should also be prepared to document the reasons for needing outside data and the benefit those datasets will have for the institution, and to determine whether those datasets may have any associated ethical concerns.

Deciding on the best data sources requires evaluating sources and vendors and determining which information is needed for various functions, such as environmental scanning, predictive modeling, building a prospect pool, geo-demographics, territory management, and financial aid.

Internally, staff should consider what datasets they can build if questions cannot be answered via external datasets such as IPEDS. It was also recommended that admission professionals consult with IT to assess what data may be available through a central warehouse, and what infrastructure may be needed to access additional data sources. Professionals should also be prepared to document the reasons for needing outside data and the benefit those datasets will have for the institution, and to determine whether those datasets may have any associated ethical concerns.

One participant voiced that many institutions do not leverage external data well; it can be difficult, but it is possible. His policy is “one version of the truth for every student,” meaning different data sources may provide the same data points for students. For example, you may receive test scores from different vendors, but one source usually stands out as the most reliable. He has a clear system of rules, a hierarchy of which source is the best for each data point, so there is “one place for one piece of information.” This helps create greater transparency and ease of reporting and can save money by eliminating duplicative and unreliable datasets.

4. Using Data to Make Informed Decisions

Once data are collected, they can be analyzed and acted on. As one participant stated of this process, it is helpful to develop a “vision for what you want to do, building strategy around that. Start with a goal...data needs are organic under that.”

Build a Comprehensive Data Strategy

The following steps help build a comprehensive data analysis strategy:

1. Formulate the questions you are attempting to answer. Start with institutional strategic objectives; what do you need to accomplish.
2. Determine how you would use the data available to answer these questions.
3. Assess what additional data you might need, both internal and external.
4. Develop a hierarchy of the different data sources available; identify the best source for each piece of information.
5. Consider which platform/tools would allow you to bring data sources together to paint a clearer picture of disparate data and make it actionable.
6. Become a savvy data reader. Learn concepts such as: orders of magnitude and scale; sampling and who is included, excluded, and how that may bias the data; correlation vs. causation; metadata; how to investigate by disaggregating data; and the difference between averages, medians, etc.
7. Report data findings strategically, both internally and externally. Learn to identify what is actionable and what can be improved.
8. Recognize data limitations. Related to the above point about understanding the difference between correlation and causation, it is important to note that causation is difficult to prove in higher education, and even with correlation, one must be careful in drawing conclusions.

These lists are “most schools’ biggest budget item” within admission offices, yet one participant expressed that often, “little thought” goes into selecting the best vendor. This aspect of the job is important to admission professionals; an “increasingly productive pool...will allow success in this role.”

Examples were provided of the following areas that admission professionals can use data to inform:

- Funding formula impacts such as recruitment, strategic use of financial aid, return on investment, and other net revenue factors.
- Marketing and communication strategies, such as “where in the market they should be going for” and “how to effectively deploy” campaigns.
- Segmenting, including search, communications, and yield strategies. Admission professionals use data to determine how many additional students are needed each year and “where will they come from.”

As noted under data administration, admission professionals must be cognizant of the ethical implications of certain data analyses and mindful of privacy concerns.

5. Prospect Development

Prospect development is a major component of admission data analyses. A participant described this process as a funnel of prospective applicants that may begin with 50 times the number of students needed (for example, 250,000 to enroll 5,000). Admission professionals are “constantly evaluating and changing vendors based on research and analytics.” Different vendors are better for different types of students to recruit, for example there may be a vendor who is best for sophomore or junior names. These lists are “most schools’ biggest budget item” within admission offices, yet one participant expressed that often, “little thought” goes into selecting the best vendor. This aspect of the job is important to admission professionals; an “increasingly productive pool...will allow success in this role.”

The prospect development process consists of the following:

1. Identify institutional goals/strategies.
2. Evaluate historical data and identify characteristics of best fit students.
3. Identify sources to find students.
4. Evaluate “What is realistic?” What enrollment goals (e.g., out-of-state enrollments) can resources support.
5. Use data to evaluate which vendors to use.
6. Track data effectiveness, accuracy, yield.
7. Review vendors annually.
8. Allocate budget items accordingly.
9. Leverage vendors (e.g., saving criteria).

Evaluating vendor choices consists of determining the best vendors to use for different situations. Community colleges need to make sure they select the best vendor for nontraditional students. Participants also noted the future of prospect development may be impacted by test optional policies; if students decide not to take the ACT or SAT, their names will not be available in the prospect pool.

A participant noted that vendors typically do not provide search values. Instead, his institution’s systems are programmed to store search criteria as values that go in data warehouse. He recommends creating a database of search parameters, otherwise this is a “missed opportunity.” This information can also feed into predictive modeling.

One participant’s institution added a new full-time position for prospect development because the overlap between sources has become time-consuming. Another participant noted the overlap is beneficial because it provides additional information about each student.

Leveraging Partnerships



Campus Partners



Campus Data Experts



Staff Resources



Campus Resources

6. Predictive Modeling/Enrollment Forecasting

Predictive modeling uses statistics and known data to predict outcomes, typically a student's predicted success and likelihood to enroll. It can also help admission leaders identify barriers as well as momentum points. Predictive modeling that utilizes multiple behavioral steps and external factors can be highly effective. But it can also be costly. Understanding “how much does it cost to hit targets” is essential to strategic success. But understanding the most cost-effective way to reach your targets is the ultimate goal. Admission professionals need to know how to use this method strategically.

Other modeling types include regression, historical analysis, and classification trees. One institution developed a point system correlating with institutional goals whereby each a modeling score is computed for each student based on effort and desirability; based on these scores, each student is placed in a matrix with 16 quadrants on scales of desirability and probability.

Another participant warned against the “potential for bias” and “need for transparency...not a black box.” When results are used for institutional scholarship and other financial aid decisions, ethical considerations should be considered.

Data used to enhance predictive modeling include FAFSA completion, housing deposits, orientation registrations, obtaining a student ID, participating in advising, submission of health forms and insurance waivers, confirmation deposits, submission of final high school transcripts, and other identified behavioral steps to become a student.

Using Data to Meet Challenges

Data plays a key role in helping institutions address a variety of challenges, such as summer melt and targeting shifting demographics. The timing of “when to look at data throughout the cycle” as well as whether interventions would help address challenges should be considered. Institutions should also consider what role various tools and types of analyses described here, such as predictive modeling and prospect development, can play a role in helping an institution's efforts to improve equity and diversity. Below are related considerations and recommendations suggested by working group participants.

Relevant Legislation – In addition to the policies set by data governance manuals and institution-wide privacy and sharing agreements, staff using data need to be aware of privacy laws such as the Family Educational Rights and Privacy Act (FERPA) before using and sharing data. Staff accessing external data should also become familiar with Freedom of Information Act (FOIA) requests, and what is needed to put in writing. In addition, admission professionals need to familiarize themselves with legislative issues at the state level affecting campus programs and policies, such as dual and early enrollment.

Leveraging Partnerships – in addition to increasing data literacy among admission professionals, leveraging existing data resources across campus is key to efficiently maximizing data capacity, in the following ways.

- **Campus Partners:** Participants listed Institutional Research (IR), IT, financial aid, advising, marketing, the provost and academic chairs, and housing as potential partners, “since what you do in enrollment affects the rest of the institution.”

Perhaps during these times, data will play an even more important role to determine what inputs are needed to sustain a college campus and help it thrive. In fact, as was the case during the recession of 2008, postsecondary institutions may see a boom in enrollments as displaced workers look to education for career retooling.

- **Campus Data Experts:** Admission departments can also “leverage support from data experts on campus” to help staff improve their data skills, including IR and the college of business. “If you need to learn you can gain insight from those colleagues...you don’t always need to look outside the institution for a solution, you have experts on campus.”
- **Staff Resources:** One institution hires college of public health statisticians to conduct predictive modeling, and also hires graduate and undergraduate students who have the opportunity to learn coding. Another participant cited a college that hires students from a data fluency course, who are “responsible for preparing the first pass of some reports that end up getting shared with leadership,” which is “good experience to get internships and jobs.” Institutions can get “creative about structuring that, engaging data experts on campus.”
- **Leveraging Campus Resources:** One participant recommended NSSE as an “influential tool that institutions use” to show gaps in student populations that may need growth. It is important to be strategic about “taking helpful data from those tools, not taking data from other departments that aren’t as helpful.” Admission professionals should be knowledgeable consumers of data, “recognizing when data is valuable or not.”

Increased data literacy is needed for effective partnerships and relationships with vendors, because “if you don’t know what to ask, you get what they give you.”

Future and Next Steps

The working group identified members to lead the development of pre-conference workshop segments addressing each of the broad topics above. These workshop leaders are meeting to develop workshop content and identify presenters.

Admission data is needed to meet institutions’ strategic objectives, particularly growth and diversity benchmarks. There are always going to be some external factors beyond an institution’s control, such as the coronavirus outbreak, which will ultimately have devastating effects on the US economy and unfortunately, for some college campuses. Perhaps during these times, data will play an even more important role to determine what inputs are needed to sustain a college campus and help it thrive. In fact, as was the case during the recession of 2008, postsecondary institutions may see a boom in enrollments as displaced workers look to education for career retooling. As one participant stated, “If we’re going to get better, what does that look like in numerical terms. Data becomes the foundation.” While many campuses will welcome an influx of enrollments, data should be used, following proper training, development of data governance plans, and adhering to ethical and privacy guidelines, to ensure that increased enrollments expand institutions’ equity and help fulfill strategic goals.