2024 SURVEY

Datatelligent

STATE OF DATA ANALYTICS IN HIGHER EDUCATION

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As we work with higher education institutions, we have a unique bird's-eye view of the challenges leaders face in using data to inform and drive decisions. At the same time, we have been driven by The Joint Statement on Analytics developed by AIR, EDUCAUSE, and NACUBO: "We strongly believe that using data to better understand our students and our own operations paves the way to developing innovative approaches for improved student recruiting, better student outcomes, greater institutional efficiency, and cost-containment, and much more. Data are an institutional strategic asset and should be used as such." In the five years since the Joint Statement on Analytics was published, we have seen growth in higher ed data analytics, but there is still a lot of work to do. Since we have a large network of higher ed data enthusiasts through our Data Analytics Alliance for Higher Ed, we decided to start an annual survey to assess the current state of data analytics.

It is with great pride that you are reading the inaugural report from the survey: State of Data Analytics in Higher Education! We share these results to help you understand that you are not alone and what others are thinking about. With the growth of Artificial Intelligence in data analytics, we also provide some insights into the use of AI.

There is much work ahead – we want to join you in your journey to improve data analytics maturity at your institution. Please connect with us and provide feedback on the annual survey. Let us know if you have any questions.

Finally, we thank all the contributors to this report, mostly the survey participants who helped make this inaugural report a reality!

Larry Blackburn, Chief Executive Officer
Steven Wightkin, PhD, Chief Product Officer

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About the Survey

During the period March through May 2024, Datatelligent requested participation in a short survey using a survey tool.

The survey was distributed via email to participants of the Data Analytics Alliance for Higher Education and to contacts from higher education institutions from across the country—reflecting the diversity of public and private, community colleges to research institutions.

Questions included:

1. What is your primary role or focus at the institution?
2. What best describes your institution’s culture of data maturity?
3. What are the top three barriers to improving your data analytics, with or without AI tools?
4. What action are you or your institution taking to address your top barrier(s) over the next year?
5. Which of these AI tools/applications are already in use at your institution?
6. What best describes your institution's implementation of AI tools to your Data and Analytics?
7. If you have a policy, please link to your AI policy or upload it.

Survey Participants

The primary audience of the survey is those responsible for institutional research in colleges and universities across the U.S. The primary respondents were professionals working in Institutional Research/Institutional Effectiveness.

The breakdown of the primary roles of respondents were:

- Institutional Research / Institutional Effectiveness (69%)
- Informational Technology (11%)
- Administration (11%)
- Admissions / Enrollment (4%)
- Academic Affairs (2%)
- Other (13%) included similarly titled positions such as IR/Analytics, Business Intelligence, Advancement-Prospect Research, Data and Strategic Analytics, Director of Assessment

69%

of Respondents are in Institutional Research / Effectiveness

Culture of Data Analytics

Data Analytics Maturity Model

DATA AWARE

- Aware of need to use data
- Manual, non-standard reports
- Decisions are rarely driven by data

DATA PROFICIENT

- Proficient on producing standardized reports
- Data used for historical trends

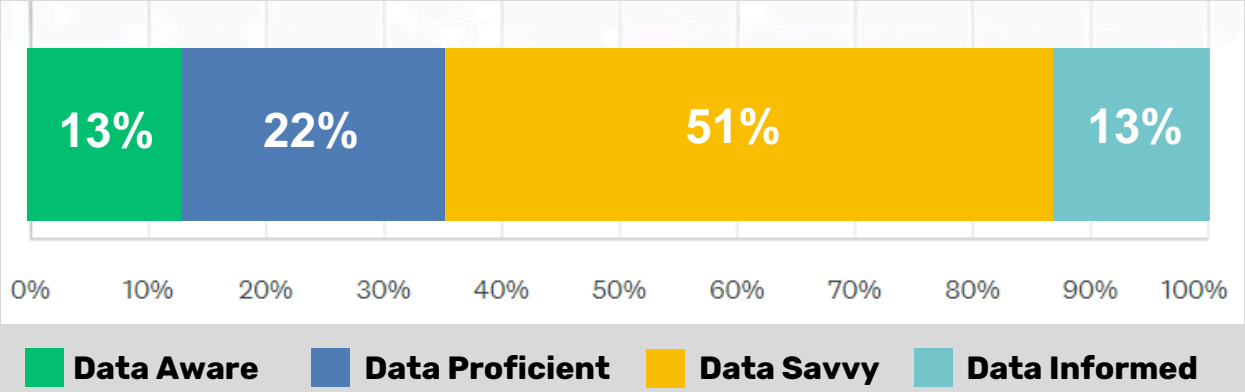
DATA SAVVY

- Using data insights to make some decisions
- Data is inconsistent and often still in silos

DATA INFORMED

- Data-first thinking. Data analytics integrated into all processes
- Data from all sources is available in a Unified Data Platform

Respondents rated their institutions' culture of data maturity. The majority of survey respondents (51%) rate their institution's culture of data maturity as "Data Savvy," where data is used for decision-making though inconsistent and in data silos.



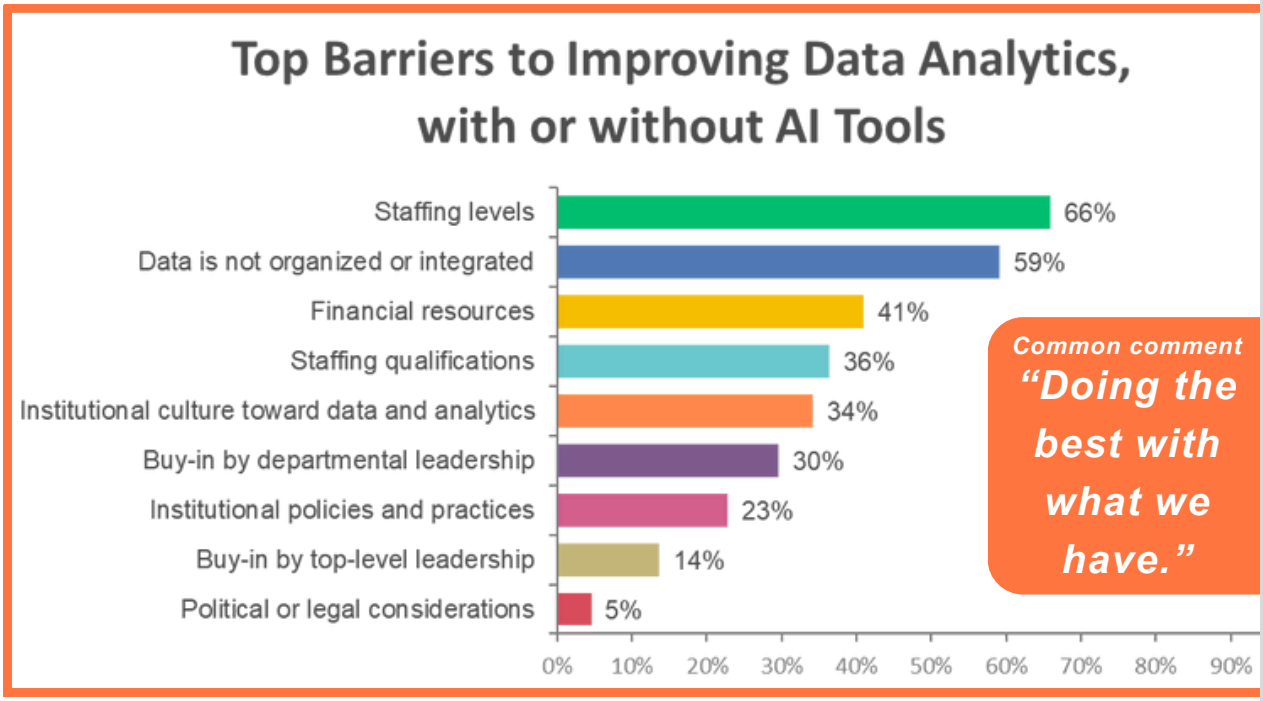
The survey suggests that the needle has not moved much since Educause released its 2022 Horizon Report Data and Analytics Edition. In that report, authors identify many technological trends, including underscoring how institutions are being asked to support decisions with data but are limited because existing data infrastructures are outdated and disorganized.[i]

Many barriers remain as institutions seek to improve their data analytics for decision-making. **Two-thirds (66%) of respondents most frequently reported staffing levels as the barrier**.

The second most frequently reported barrier is that Data is not organized or integrated (59%). Institutions often operate numerous systems that do not integrate or require manual processes to extract and interpret the data.

About half of all respondents (49%) reported Financial Resources as a top barrier. The chart below illustrates the top barriers to improving data analytics.

Related to staffing level is staffing qualifications, which one-third (36%) of respondents reported as a top barrier. Conversations with institutions reveal that the challenge with staffing results from budget constraints, competing priorities for investments, and the competitive market for staff talent with the requisite technical and analytical skills.



Another top barrier is Institutional culture toward data and data analytics, as about one-third (34%) of respondents reported. This barrier is often related to the idea of "buy-in." The survey revealed that Buy-in by department leadership was reported by thirty percent (30%), and Buy-in by top-level leadership was reported by fourteen percent (14%) of respondents. Over one-fifth (23%) reported Institutional policies and practices as a top barrier. Only five percent (5%) reported Political or legal considerations as a top barrier.

Plans for the Next Year to Address Barriers

When asked about actions the respondents or institutions are taking to address the top barriers over the next year, over half (55%) shared specific steps they are planning or are in process. Many reported that they were working with the administration to seek needed funding to invest in staffing and tools. Several reported taking steps to focus on data governance, management, and integration. A few mentioned a data lake approach as their strategy to blend data from various systems with similar data. However, the lack of internal skillsets to implement was mentioned as slowing down the processes.

The top themes in the plans to address barriers are:

Theme	Plan
Data Governance and Integration	Developing frameworks, integrating, and improving data management.
Staffing	Increase staffing through employees, interns, and outside consultants despite resource constraints.
Technology and Tools	Implementing new technologies: data lakes, centralized CRMs, and AI tools.
Training and Education	Training staff on data, technology, and AI tools.
Strategic Planning	Working to align data initiatives with institutional strategic goals.
Stakeholder Buy-in	Using small analytic projects to improve buy-in for larger projects.

Overall, most respondents are in active planning or implementation of specific steps to improve their data analytics.

Types of Artificial Intelligence

Type of AI	What it is	Examples
Pattern Recognition	Computer programs that can automatically identify patterns or irregularities in data through use of Machine Learning (ML) algorithms	Alexa or Siri speech recognition Document recognition Google Translator
Predictive	Predicts future performance or outcomes through use of historical data, current data, and statistical models through ML	Fraud Detection Churn Prevention Budget Forecasting
Generative	Computer programs that can interact with humans using natural language to create new content by using Large Language Models (LLMs)	Chat GPT or MS Copilot Image, music or video generators such as Dall-E, Firefly, Canva, Invideo

The survey asked both about what tools are already in use at the institution and about the institution's implementation of AI tools in Data and Analytics. The majority of institutions already use **Generative (61%)** AI tools/applications, while less than half report using **Predictive (48%)** or **Pattern Recognition (35%)**.

AI Tools in Use

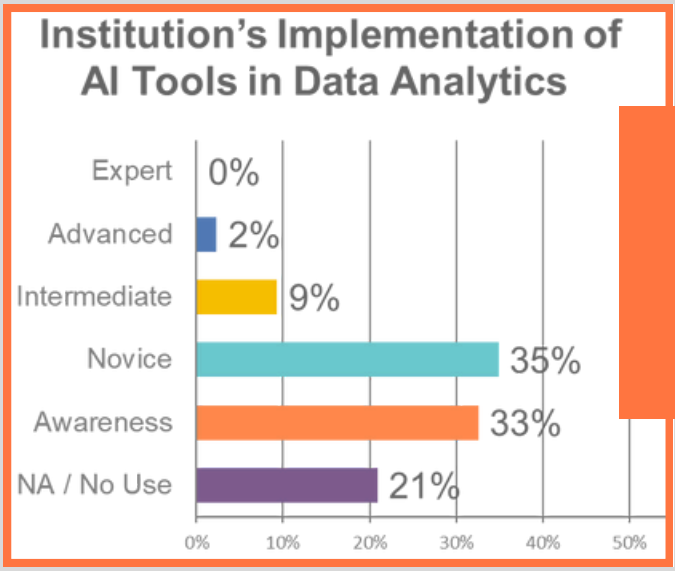
61%
Generative

48%
Predictive

35%
Pattern Recognition

Implementation of AI Tools and Policy

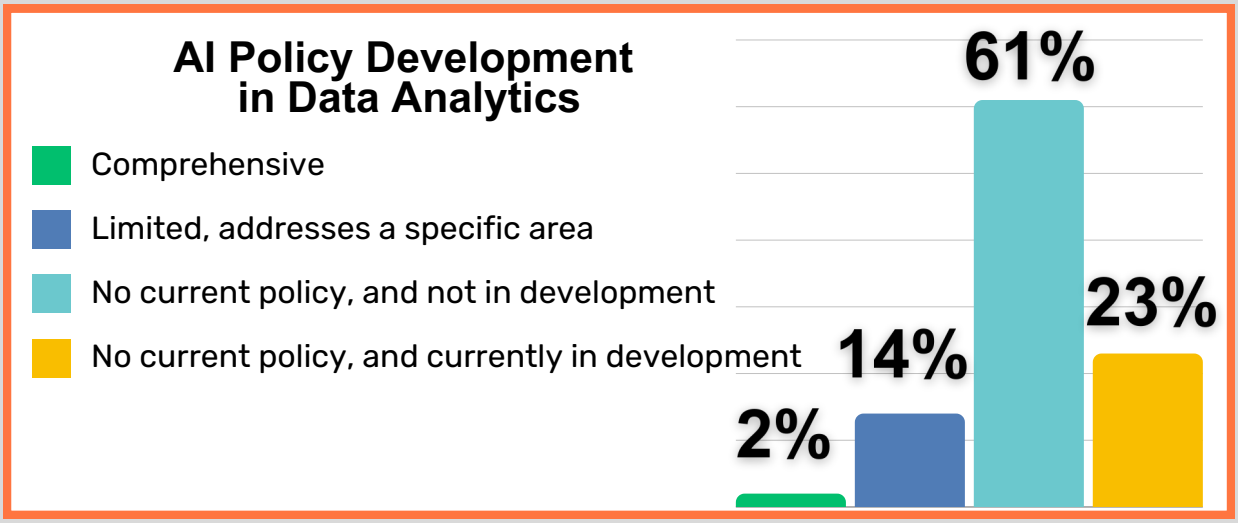
When asked, "What best describes your institution's implementation of AI tools in your Data and Analytics?" no respondent described their institution's implementation of AI tools in data analytics as "Expert"—even though some institutions include data science in their curriculum.



89%

of respondents were Novice and below in the implementation of AI tools

Finally, when asked whether or not they had AI policies and to describe them, most (61%) higher education institutions do not have AI policies and are not yet developing them. From dialogue on Datatelligent's Data Analytics Alliance meetings and webinars, we understand many institutions are working to integrate AI policies and practices within those for the use of technology tools.



Staffing, lack of data integration, and other listed barriers are certainly major barriers to higher education. Updated models from McKinsey and Company reinforce that adoption will likely be slower than originally projected. McKinsey and Company estimated and have re-estimated the economic and workforce impacts of AI on productivity. [ii]

References

[i] Betsy Tippens Reinitz, Mark McCormack, Jamie Reeves, Jenay Robert, and Nichole Arbino, with Jeremy Anderson, John Hamman, Connie Johnson, Olivia Kew-Fickus, Rob Snyder, and Mary Stevens, 2022 EDUCAUSE Horizon Report, Data and Analytics Edition. Boulder, CO: EDUCAUSE, 2022.

[ii] The Economic Potential of Generative AI: The Next Productivity Frontier, McKinsey Global Institute, June 2023, available at https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier.