



AI Use in Higher Education

Insights from a Magna Publications Survey

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INSIGHTS FROM A MAGNA PUBLICATIONS SURVEY

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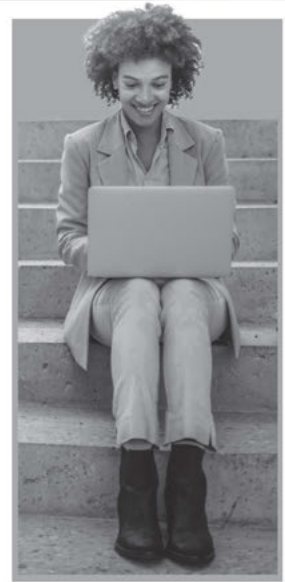
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Introduction

Artificial Intelligence (AI) has emerged as a transformative force profoundly influencing—if not revolutionizing—our everyday lives. From automated feedback to adaptive learning and intelligent tutoring systems, AI is reshaping the way we teach and how students learn. It's also creating enhanced administrative efficiencies in admissions, enrollment management, and student support services and early interventions for at-risk students that will impact retention. These are times of unprecedented opportunities and challenges.

To gain a deeper insight into how higher education institutions are using AI in applications such as classroom teaching, research, process automation, and to improve the student experience, Magna Publications conducted a survey of college and university partners from July 3, 2023, through August 10, 2023. In total, 1,872 faculty, administrators, and student services professionals took part in this survey. The survey asked about personal practices, institutional applications, impact on students both in school and post-graduation, professional development related to AI, challenges encountered in using the technology, and opportunities envisioned for the future.

The following analysis reviews survey responses and suggests trends based on those responses.

Is Your Campus Using AI?

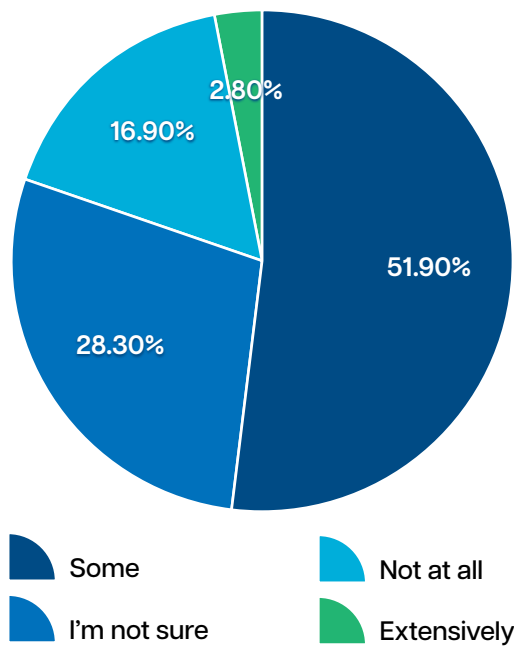


Figure 1. AI Use on College Campuses. Compiled from 1,215 Faculty, Leadership, and Student Services responses

Responses by Discipline

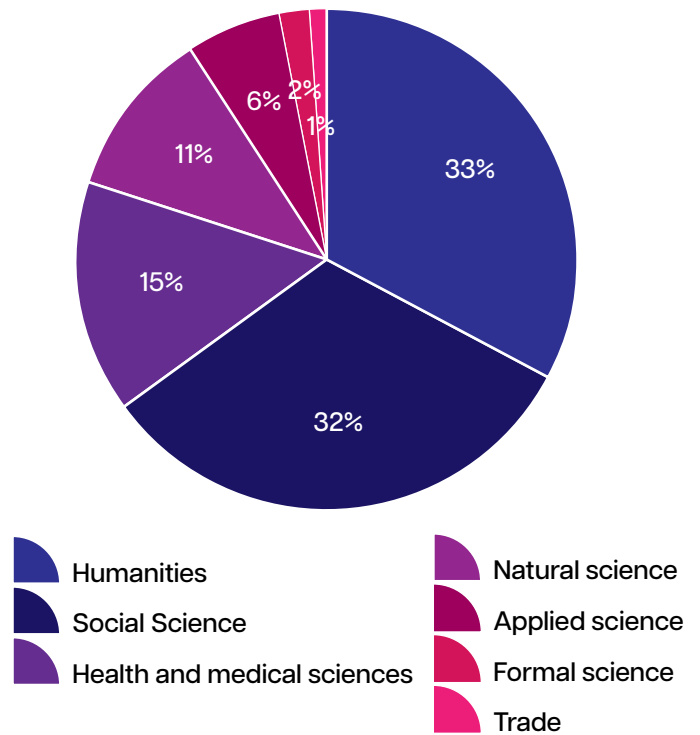


Figure 2. Survey Responses by Discipline

Faculty

Out of the 1,872 respondents to this survey, 74% selected “Faculty, Instructor, Teacher” as their classification. Their questions focused on teaching, classroom impact, and functionality of AI at their institutions. For this group, nearly 50% reply that their colleges and universities are using AI, yet many of them are unsure about its use. Only 3% of respondents indicate extensive AI use at their institutions.

IN THE CLASSROOM

While some colleges and universities (24%) are integrating AI into their curricula and programs, most faculty (45%) were not sure if this was happening on their campus at the time of the survey.

- ✓ When asked about classroom use of AI, top responses from faculty included developing course content, research, and data analysis, creating adaptive learning materials, and personalized learning for students; however, the predominant answer was nothing (42%).

I am using AI for: (Check all that apply)

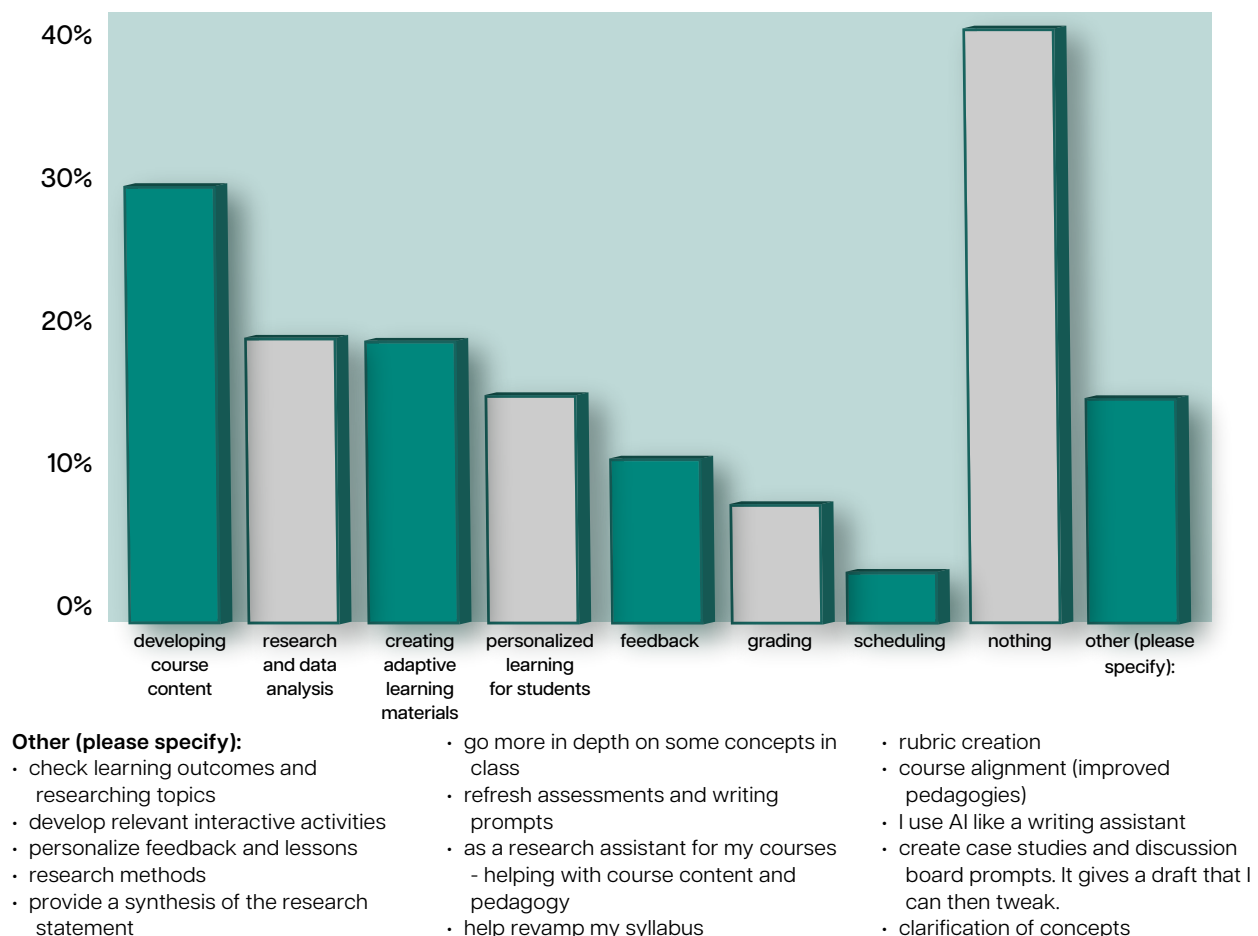


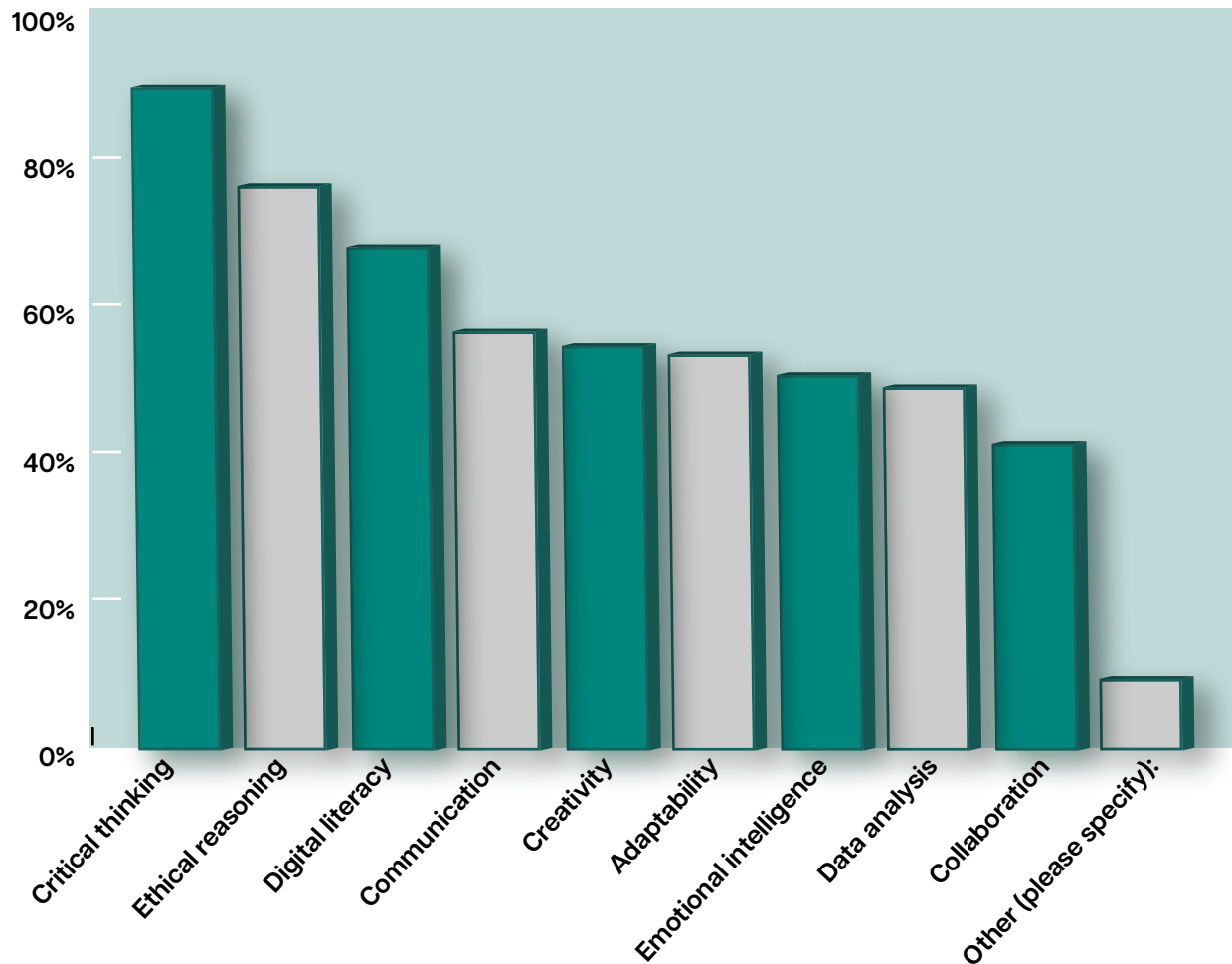
Figure 3. AI Use in the Higher Education Classroom

- ✓ For those who are using AI in the classroom, applications include:
 - “AI is being used for course content such as case studies, conducting research, and there is some use for personalized learning using AI platforms.”
 - “I teach a business communications course. I include a discussion of how AI might be used in the research and writing process. I share examples of AI-generated content that is problematic as part of the discussions—not to dissuade the usage of this technology but to encourage an ethical approach informed by critical thinking.”
 - “AI (ChatGPT) will be the first way my students will write when I return from sabbatical. They must document prompt and output and then critique that before drafting the intended paper themselves.”
 - “I am using AI to go more in depth on some concepts in class. I also plan on teaching my students how to use AI to understand concepts that may be confusing for them after class, to make decisions during class activities (e.g., simulations), and to improve their ideas and writing on assignments.”
- ✓ Responders have changed their curriculum to prepare students for a work world that will include AI by updating existing courses to supply discussion and application of AI (83%), while some (17%) have added introductory-level courses to the curriculum.
- ✓ Feedback from faculty about curriculum changes to prepare students for a work world includes:
 - “A new concentration has been added. Cross-disciplinary courses are offered, such as statistics applied to data science, machine learning and applications.”
 - “Added AI instruction to prepare students to use it. Added checks for writing assessments.”
 - “Included expectations and restrictions in the syllabus.”
 - “We are trying to map and identify courses where digital literacy including AI is currently being used.”
 - “We are working together to attend workshops and find ways to use AI as a learning tool in the classroom and to help our students be good consumers of information by teaching them about critical thinking and ethics.”

IMPLICATIONS FOR STUDENTS

- ✓ Faculty predict the top three skills students will need to be successful in a world where AI is becoming increasingly prevalent are critical thinking, ethical reasoning, and digital literacy.

What skills do you think students will need to develop to be successful in a world where AI is increasingly prevalent? Check all that apply



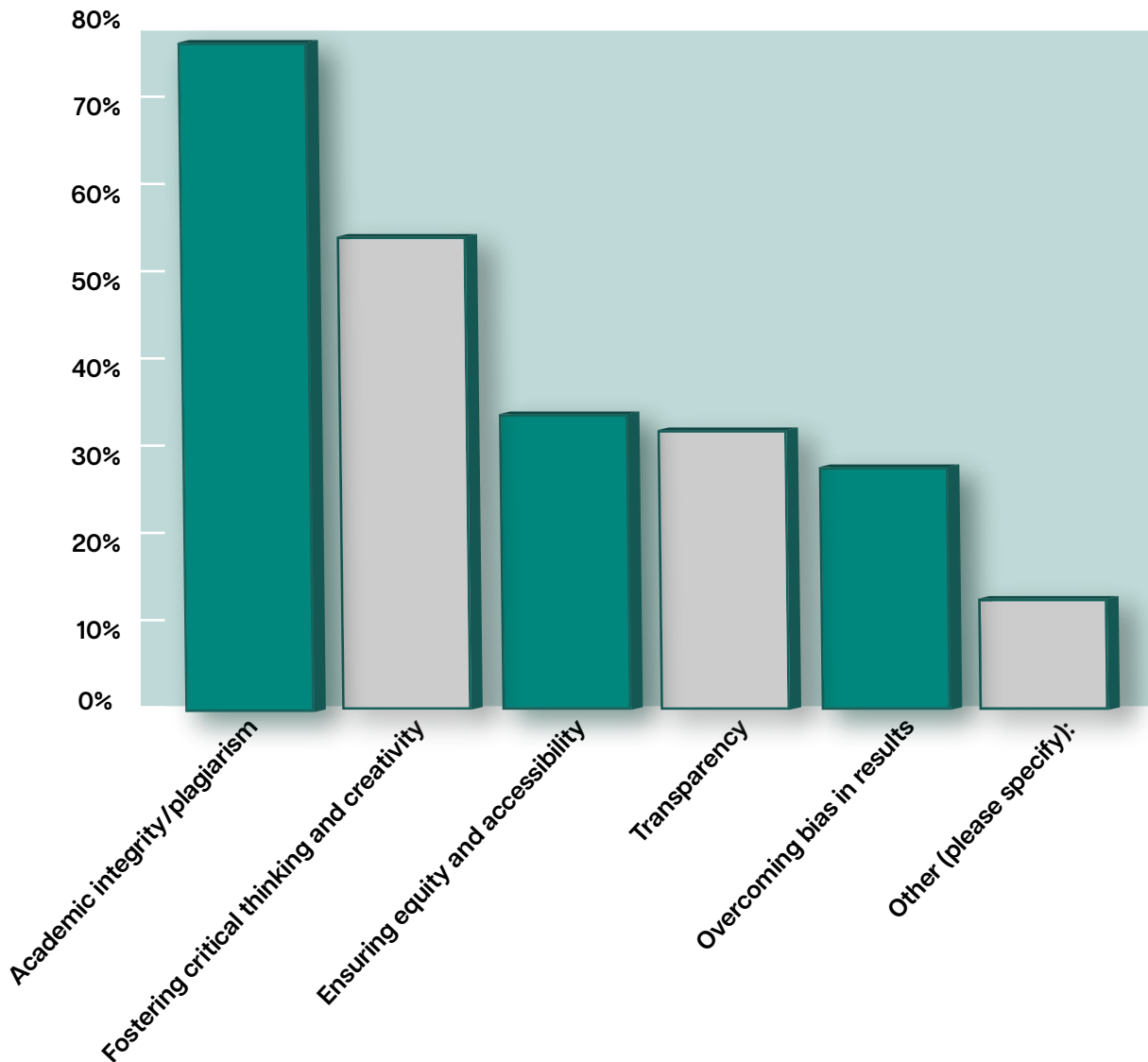
Other (please specify):

- problem solving
- information literacy
- core fluency in basic discipline-specific vocabulary
- research and verification skills
- a new and improved understanding of the ethical issues generative AI brings with it
- problem formulation and problem decomposition
- query design
- security and safety factors
- knowing how to be smarter than anything artificial or manmade
- fairness, transparency and bias in data

Figure 4. Skills Students Must Develop, According to Faculty

- ✓ Of those surveyed, academic integrity/plagiarism was the leading challenge faced while using AI in teaching.

What challenges have you faced in using AI in teaching? Check all that apply



Other (please specify):

- Being able to communicate EXACTLY what I want the AI to do is a challenge for me, my students.
- It's a mess. Students are taking shortcuts with AI. Most instructors are not learning/keeping up with the tech capabilities.
- Developing policy, procedures and regulation
- I have not face any, but I believe there are many challenges such as
 - academic integrity
 - Getting past students' impression that if output is computer-generated, it must be "equal or better than" human output.
 - Bias of other instructors who are undermining the change.
 - The sheer rate of change is dizzying. The coming year is going to be very busy on this front.
 - Hallucinating AI! I don't trust research results at all. Too often Bard and ChatGPT gave me patently wrong information.
- No guidance from our School as yet and differing opinions among faculty.
- AI has been a poor substitute for looking up law and applying to facts patterns.

Figure 5. Faculty Challenges Related to Using AI in Teaching

PROFESSIONAL DEVELOPMENT

- ✓ Faculty are staying informed about AI through professional development workshops, webinars, and campus PD programs.
- ✓ Of recent offerings, 40% of surveyed faculty have attended 1–2 AI training experiences over the past 12 months, while many have not attended any (25%). Only 11% have attended 6 or more.

CONCERNS

- ✓ Faculty concerns about using AI in higher education predominantly identified plagiarism, academic integrity, and the loss of critical thinking for students.
- ✓ Some faculty are concerned with bias and hallucination (a confident response by an AI that does not seem to be based on available data).

ADVICE AND OPPORTUNITIES

- ✓ When asked “What advice would you give to other educators who are just starting to explore using AI?” Faculty replied:
 - “Don’t just see the threat—think critically and try to think about ways to help students do the same.”
 - “Do not be afraid.”
 - “Be open to its possibilities. Help students to use it wisely, just as they use other technologies with wisdom.”
 - “Dig in, good and bad times ahead!”
 - “Research and come up with a plan for your department that can be adapted to your group of students.”
- ✓ When asked about their vision for future opportunities or developments for using AI in higher education, faculty replied:
 - “I think AI might help in the analysis of large language data sets. I think that it might also help us to develop more ways to communicate to a broader range of people.”
 - “Opportunities to customize learning and use alternative learning methods to assist students who struggle to learn the information.”
 - “AI should come along to improve teaching and enhance students’ critical thinking. I intend to use AI as much as I can in my teaching and encourage my colleagues to do so.”
 - “As this tool evolves, I think it can substitute for the classic review paper. Ask the AI to review topic X. Then read and critique that review, and then develop new research directions to address gaps in that research. This will push for greater open access scholarship.”

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—Rebecca Balog, Virginia Commonwealth University, Adjunct Professor

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Campus Leadership

Out of the 1,872 respondents to this survey, 21% identified Department Chair, Center for Teaching and Learning, VP of Academic Affairs/Provost, Administration as their position. Their questions centered around vision, processes, professional development and learning, and student experiences related to AI. Sixty-four percent of these responders report that their campuses are using AI, 18% are not using AI at all, and only 3% are using AI extensively. Fifteen percent of respondents are unsure if their campus is using AI.

PROGRAM AND CURRICULA

- ✓ While 51% of responders have not changed their curriculum to prepare students for a work world that will include AI, 24% of responders have updated existing courses to include AI applications and 11% have added introductory courses.
- ✓ Examples of how AI is currently being integrated into curricula and programs include:
 - “It is being discussed extensively, but only used in some departments, not all. It really all depends on the department and course. Yes in things like Project Management, no in things like Religion and Philosophy”
 - “Student success metrics will begin using AI. Not sure which application. Textbook applications online use AI to give our students personalized help.”
 - “A first course in AI A course in Pattern Recognition”
 - “Some of our textbooks have it built into their online platforms. Our campus has not devised a formal plan, so I am doing that this fall in my department with the help of other faculty. We hope to show students how to use it ethically in writing assignments.”
 - “I’m using it to write case studies for class. We are discussing how we may be able to integrate it into curricula to help students learn ways to ethically use it as a source to support their counseling work (e.g., help with treatment planning, research on client issues, developing fact sheets for clients, etc.). I’m considering how to use it to help with administrative processes, but it takes a lot of time to think about, which I don’t currently have (hence the need for AI administrative support).”
 - “Experimentation by faculty and administrators. Policy discussions and no AI integration into curriculum now.”
 - “All courses must include an AI intensive activity by Spring 2024. Ethical AI use is encouraged in our courses.”

IMPLICATIONS FOR STUDENTS

- ✓ The primary reason AI is being used at higher education institutions is to enhance the student experience (65%).

- ✓ The areas in which AI was found to be most effective include research and student support, although many respondents (43%) selected N/A for this question.

In which areas have you found AI to be most effective? Check all that apply

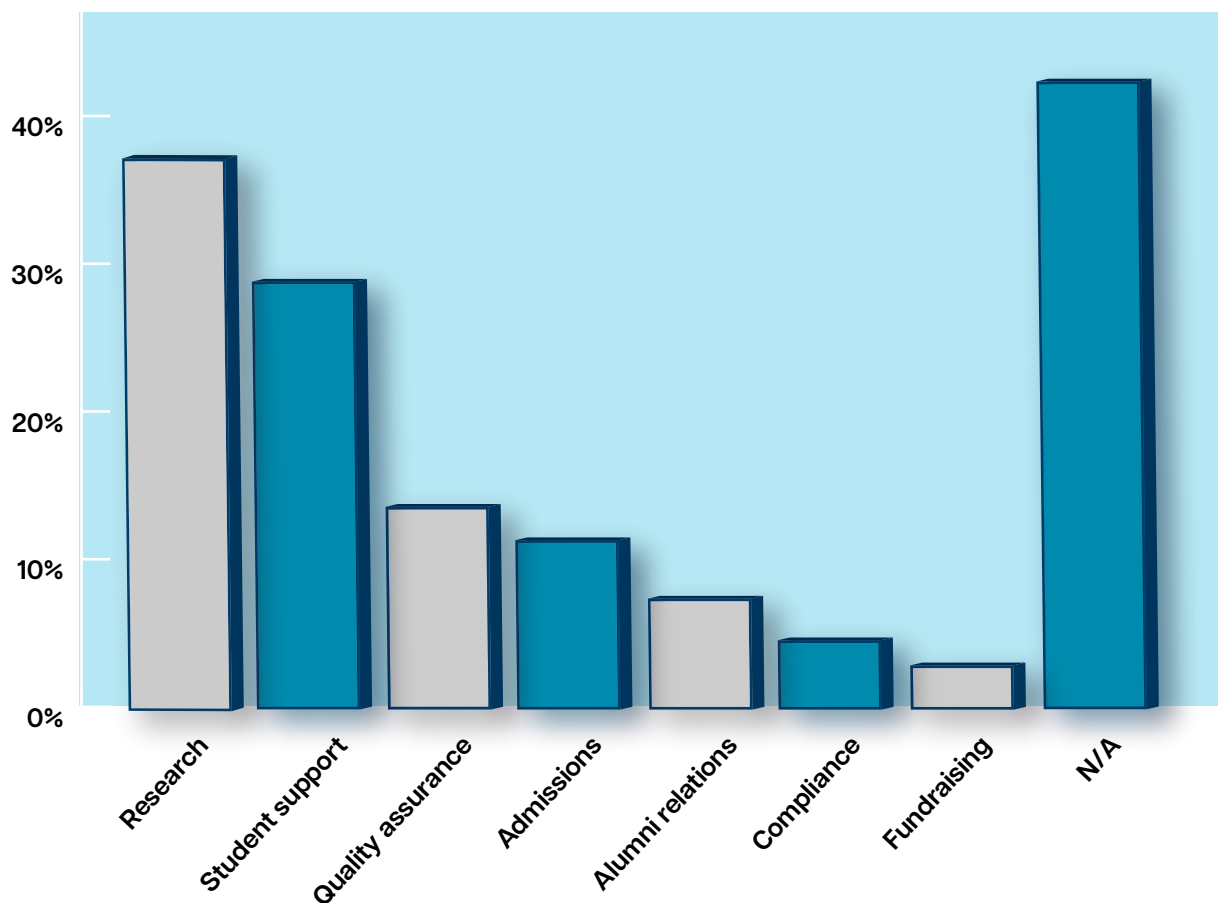
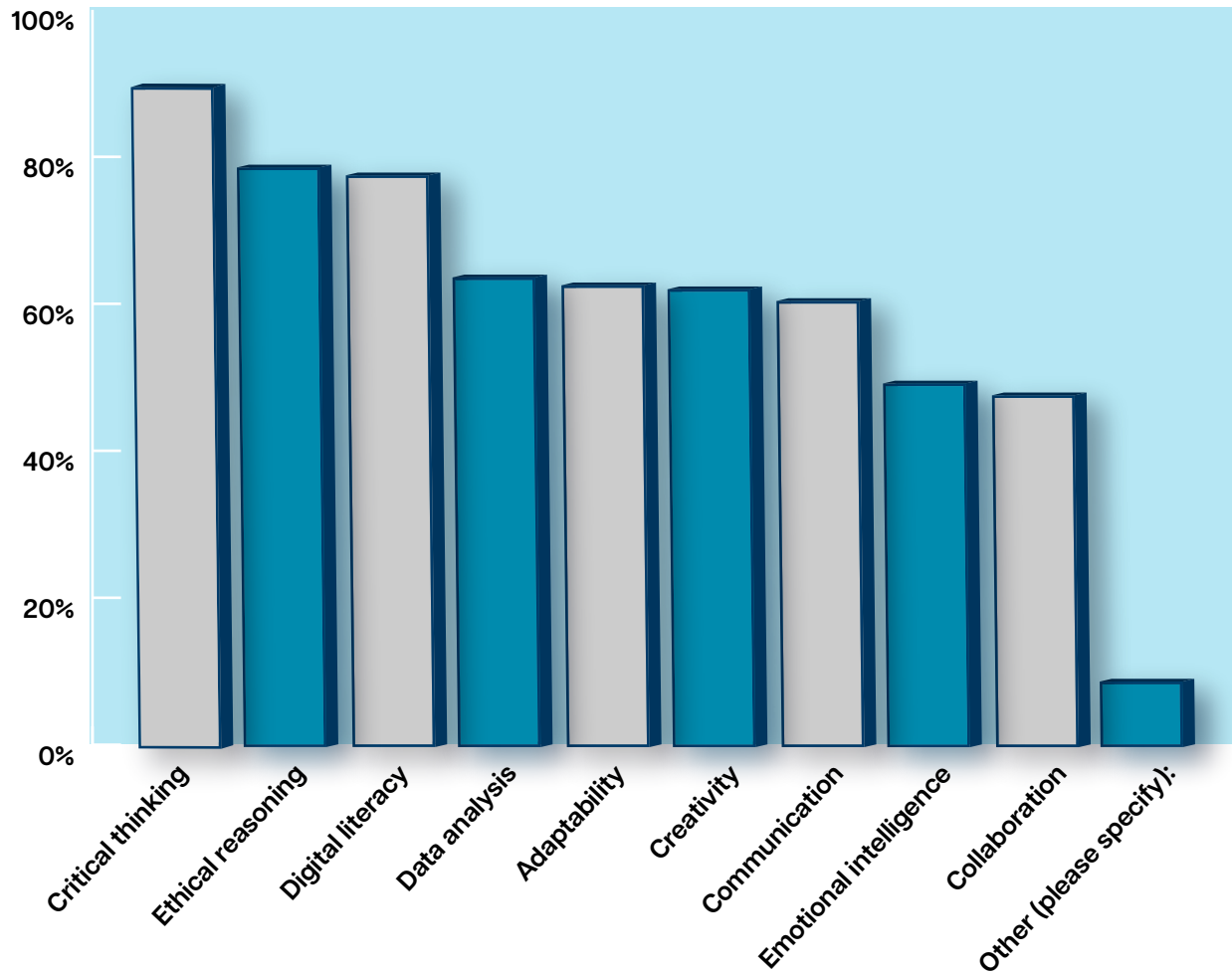


Figure 6. Most Effective Uses of AI, According to Leadership

- ✓ This group believes the skills needed for students to succeed in a work world that includes AI are critical thinking, ethical reasoning, and digital literacy.

What skills do you think students need to succeed in a work world that includes AI? Check all that apply



Other (please specify):

- metacognition, reflection, ethical aspects, academic integrity
- ability to formulate prompts for effective results
- above average knowledge of information, since AI output depends on the quality of the input
- leadership, professionalism, teamwork
- systems thinking
- desire to learn and be curious; independence; initiative to do their OWN thinking and their own work
- critical visual literacy and analysis

Figure 7. Skills Students Must Develop, According to Leadership

PROFESSIONAL DEVELOPMENT

- ✓ AI-related training opportunities provided for faculty and staff included topics such as basic AI literacy, ethical and responsible AI, and professional development formats included courses or videos.

What training have you added for faculty and staff related to using AI? Check all that apply

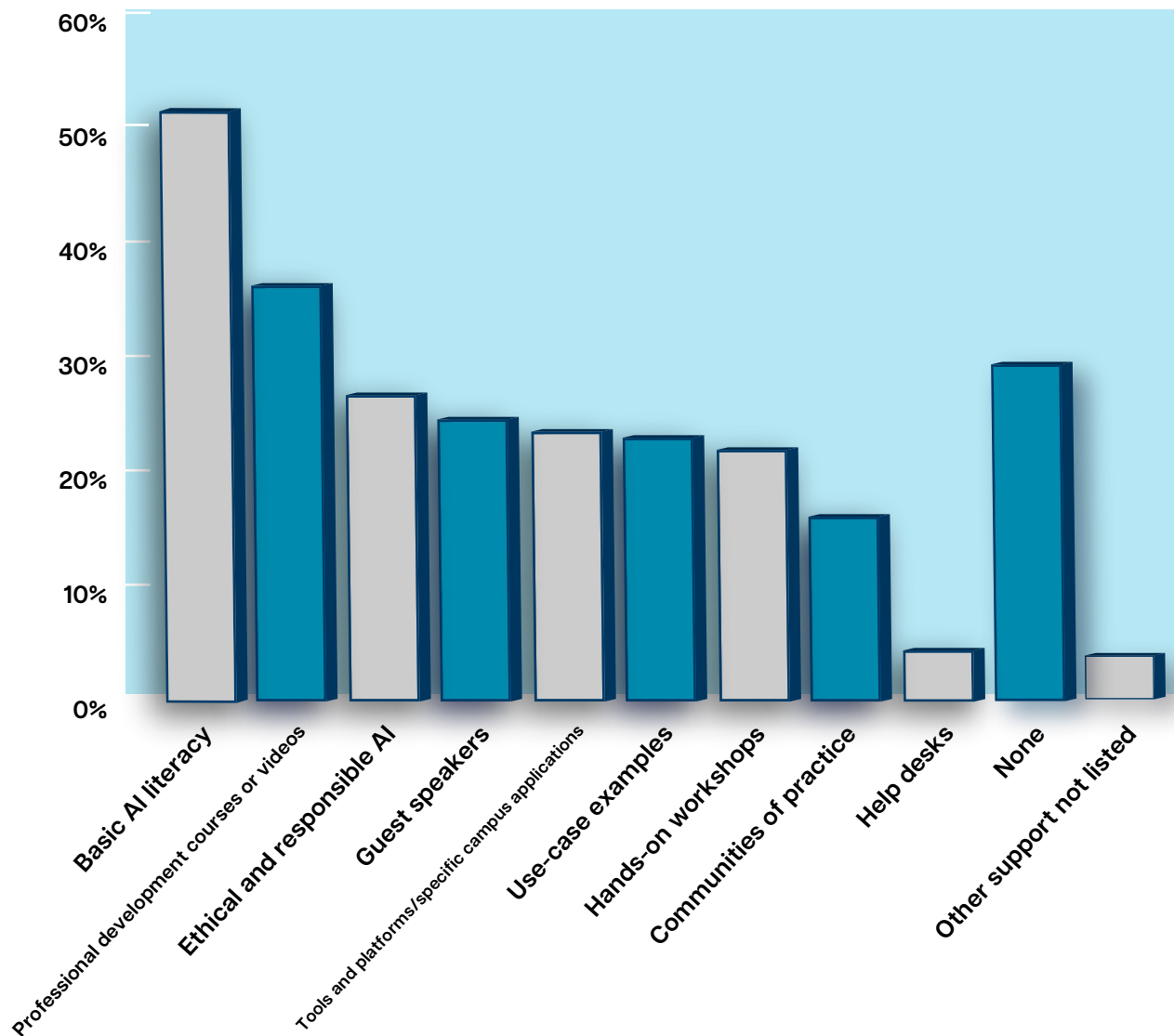


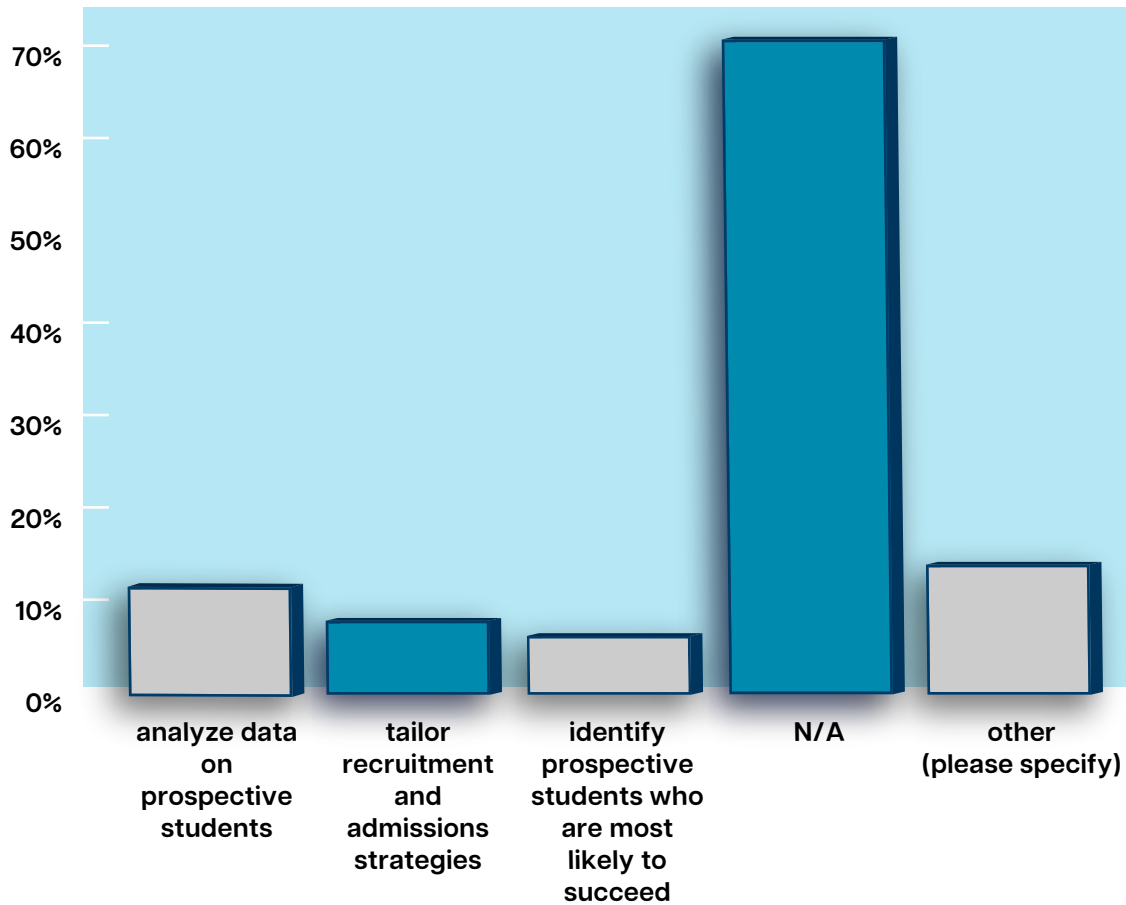
Figure 8. Professional Development for Faculty and Staff

- ✓ According to these leaders, the types of partnerships or collaborations with industry that would most help higher education institutions to stay up to date with AI innovations were:
 - Industry-academic research collaborations
 - Industry experts as guest lecturers
 - Internship programs and work placements

RECRUITMENT AND RETENTION

- ✓ When asked about AI usage related to recruitment or admissions at their respective institutions, the majority (70%) stated they are not using AI, while some said they are using AI to analyze data on prospective students (12%), or to tailor recruitment and admissions strategies (8%).

Is your institution using AI in recruitment or admissions to: (Check all that apply)



Other (please specify):

- one program is piloting an AI add on for admissions purposes

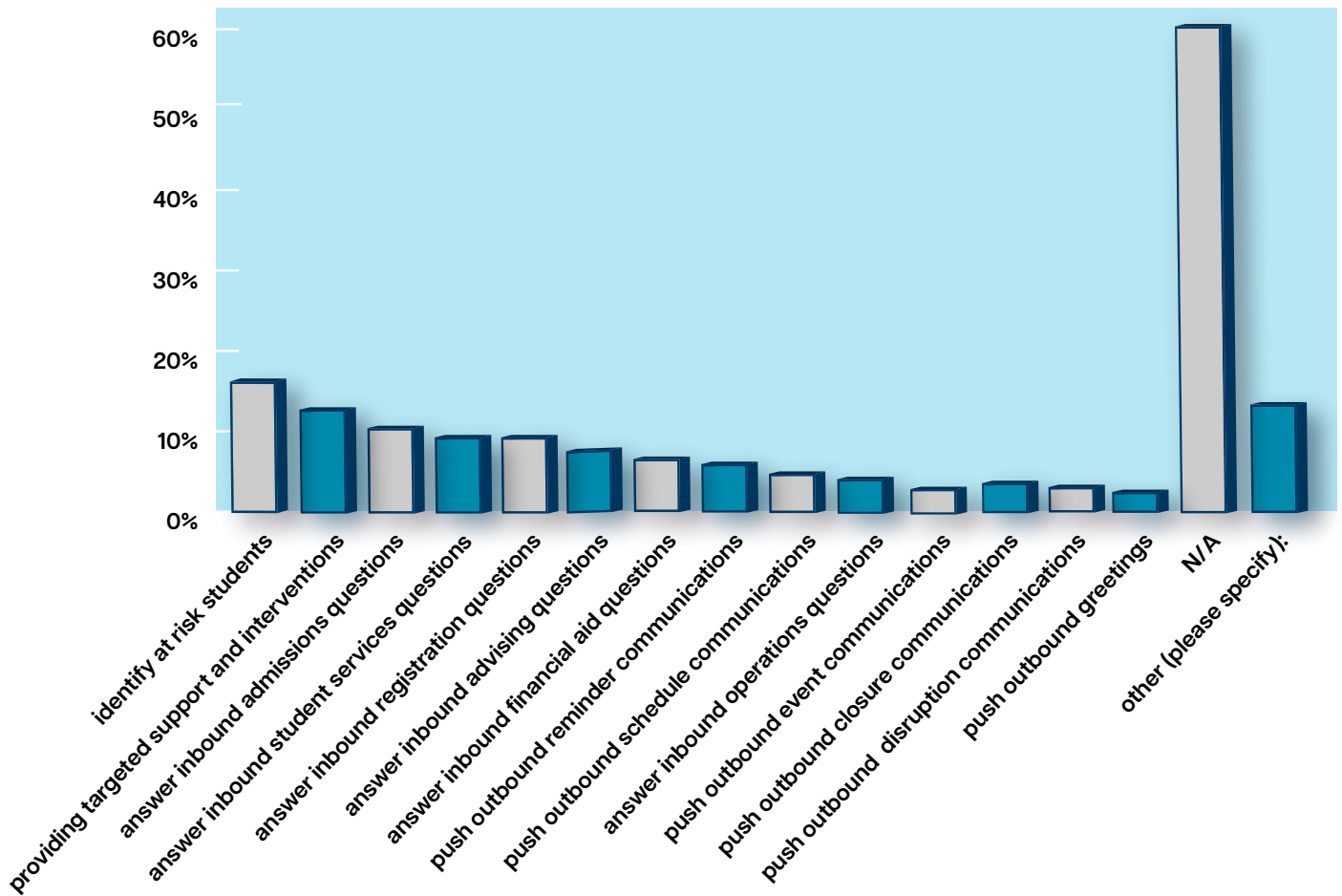
- our student database includes a dashboard with metrics and risk assessment

- assist with inquiries on our website

Figure 9. Use of AI in Recruitment and Admissions

✓ And, when asked about AI usage related to retention at their institutions, some are using AI to identify students who may be at risk of struggling academically or dropping out, and to pre-emptively provide targeted support and interventions to at-risk students. However, the majority (60%) said they are not using AI for retention

**Is your institution using AI to help with retention to:
(Check all that apply)**



Other (please specify):

- Planned uses for student success services.

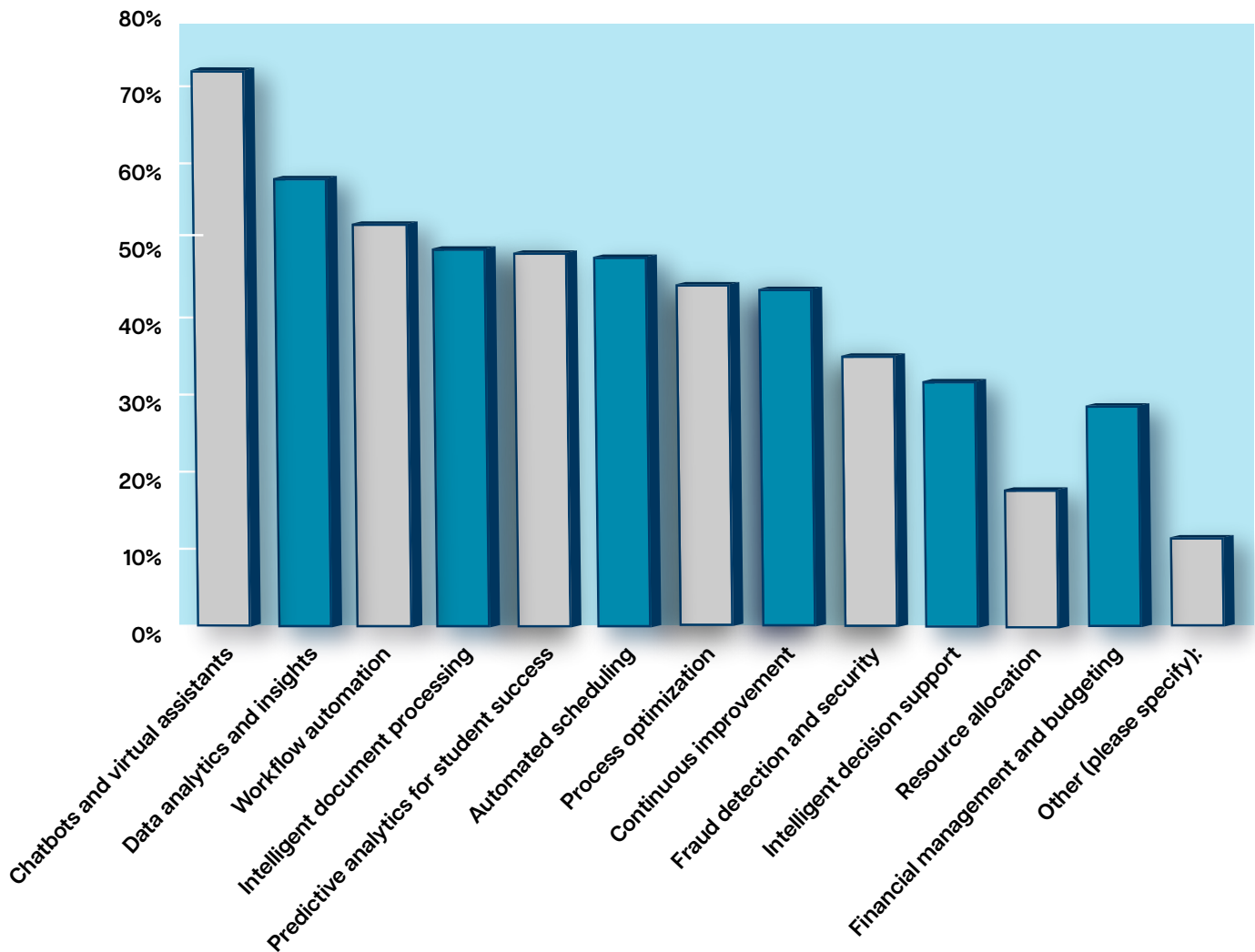
- Things are in the works, nothing has rolled out yet like an AI Bot to answer frequent questions in classes.

- Push outbound notifications for students struggling in courses.

Figure 10. Use of AI in Retention

- ✓ When asked how AI can be used to improve the efficiency and effectiveness of administrative processes in higher education institutions, this group cited chatbots and virtual assistants, data analytics and insights, and workflow automation as the topmost responses.

**How can AI be used to improve the efficiency and effectiveness of administrative processes in higher education institutions?
Check all that apply**



Other (please specify):

- just beginning to assess this.
- unsure at this time
- process integration across silos
- training and professional development
- all of these are possible

- personalized student centered progress-tracking, feedback, and curricular delivery
- ability grouping, analytics based feedback
- a tool to enhance learning for both

- employees and students
- providing personalized feedback
- AI is used in a simple manner of assessing data and providing a pre recorded answer but not the creation of an answer.

Figure 11. Using AI to Improve the Efficiency and Effectiveness of Administrative Processes in Higher Education Institutions

CONCERNS

- ✓ Challenges of incorporating AI identified by the respondents include:
 - “None yet-too new-in exploration and experimentation phase”
 - “Faculty resistance to learning about it. Fear of academic dishonesty from students”
 - “Ethical consideration; the perspective differences between faculty and students; open communication and providing institutional support could help, but we just started.”
 - “Plagiarism from students turning in papers written using AI. That is why we have now begun to embrace the use of AI to aid students in conducting research and have moved away from the grade being paper based alone and more toward discussion and evaluation of their understanding of their research.”
- ✓ Concerns about using AI in higher education include:
 - Academic integrity
 - Lack of critical thinking skills
 - Ethics and privacy issues
 - Plagiarism

ADVICE AND OPPORTUNITIES

- ✓ Advice from administrative to other institutions just starting to explore AI use include:
 - “Get faculty buy-in.”
 - “...create a community of practice to reflect on these topics. We did that with all the faculty, and it was very enriching to hear and reflect on multiple disciplines in terms of challenges and opportunities of AI integration.”
 - “Embrace it correctly and educate ALL staff and students on the benefits of using AI.”
 - “Embrace AI as a new opportunity which can’t be missed to survive and develop further, invest time and funds in partnership networking and collaborative initiatives, etc.”
- ✓ Future opportunities or developments for AI envisioned by the respondents include:
 - “AI can help automate many tasks to hopefully improve the student experience across many touchpoints, resulting in better student engagement and satisfaction.”
 - “There are opportunities for differentiation of student experiences, increased analytics to facilitate data-driven decisions, and a host of other benefits.”
 - “I would like to see how AI can assist with course design and development, how it can create tests and assignments, how it can improve students’ retention and writing techniques.”
 - “AI will allow [us] to fully analyze the students’ journeys from high school through college into their work careers. Institutions that will leverage those insights will be able to provide the most personalized and effective student experience, from application through studying to job start. The first institutions to leverage AI in that way, will set a new standard that will match the high expectations of Gen Z and Gen P, and create the expectation for every institution to match them. Practically speaking, this means that I am starting to explore EdTech solutions that integrate all IT systems and therefore enable us to leverage all the data we are collecting.”

- “AI use, understanding, and prompt engineering are already in demand skills while will grow in scope and need. We see the world of work changing dramatically by the time our students are in the workforce and we’re trying to pivot to meet those new demands and expectations.”

MEASURING SUCCESS

- ✓ Is it working? The top measurement tools for the impact and effectiveness of AI applications include key performance indicators related to improved student outcomes, user feedback or satisfaction surveys, and key performance indicators related to enhanced faculty-student engagement.

How do you assess the impact and effectiveness of AI applications? Check all that apply

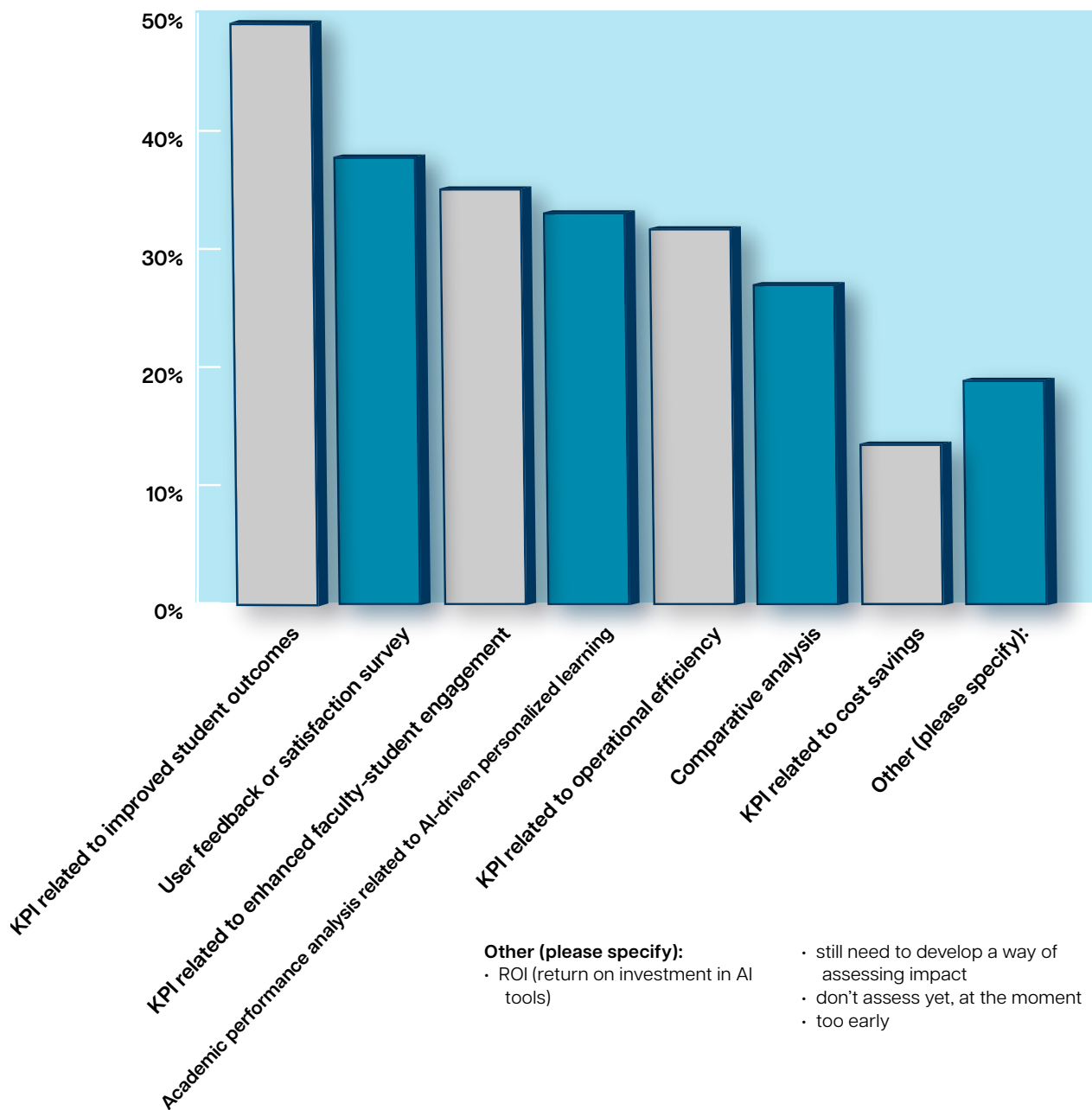
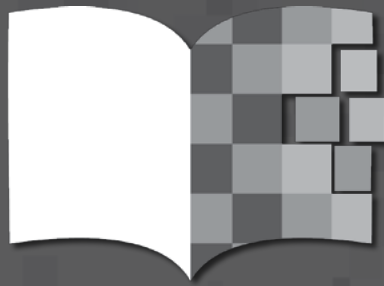


Figure 12. Assessing the Impact and Effectiveness of AI Applications



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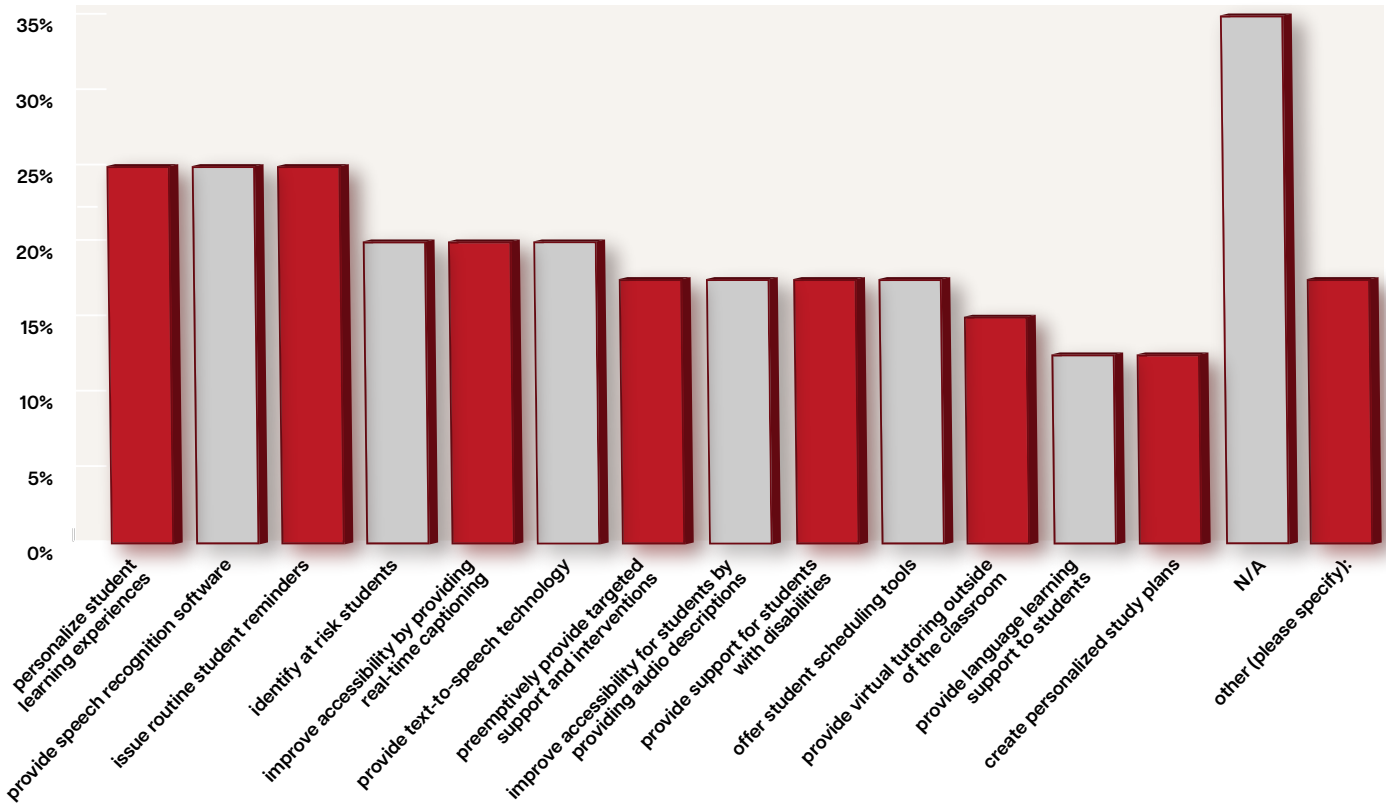
Student Affairs and Student Services

Out of the 1,872 respondents to this survey, 5% identified Student Services or Student Affairs as their role. They were asked tailored questions about processes, student experience, and recruitment and retention.

USE

- ✓ Most campuses (51%) are using some student services related AI applications, 4% are using it extensively, and some responders (27%) were not sure if their campuses were using AI. Eighteen percent report that their campuses are not using AI at all.
- ✓ Of the surveyed who are using AI in their positions on campus, the following services or applications are in use:

Are you using AI to: (Check all that apply)



Other (please specify):

- presentations
- I am using it personally when I'm working on a project specifically using AI chat
- general communications
- by admitting them in the institution
- using an example (ChatGPT) as a teachable example for (critical) information literacy and academic misconduct
- brainstorming workshop ideas, gathering different icebreakers, writing better emails

Figure 13. Applications for AI in Student Services

- personalized student learning experiences
- speech recognition software
- issue routine student reminders
- identify students who may be at risk of struggling academically or dropping out
- improve accessibility for students with disabilities by supplying real-time captioning
- provide text-to-speech technology for students with visual impairment
- offer student scheduling tools
- provide virtual tutoring
- provide language learning support such as speech recognition and translation tools, language modeling, and automatic grading of language assignments

IMPLICATIONS FOR STUDENTS

- ✓ While 19% of responders state that AI has improved the overall student experience at their institutions, 12% believe it has not improved the overall student experience, and 69% of responders answered do not know.

Has AI improved the overall student experience at your institution?

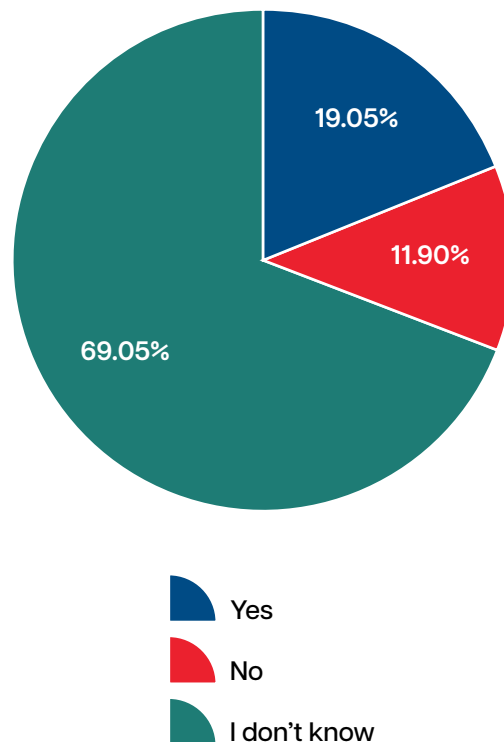


Figure 14. Impact of AI on the Student Experience

CONCERNS

- ✓ Reported challenges related to incorporating AI into student services include a lack of education around AI applications, concerns over integrity, and a lack of information on how it can be used in student affairs processes.
- ✓ Shared concerns about using AI in higher education include:
 - “Loss of critical thinking skills (students and employees), loss of jobs, academic integrity issues, more barriers for students with less digital literacy or accessibility, just to name a few”
 - “Built-in biases. Removing human interaction and connection. Eliminated the need for education-if you can teach AI to do what a human is doing for less, why bother teaching humans the knowledge/info? Furthering the belief that students can learn on their own and do not need a college education. Further elimination of critical thinking activities from a rigorous educational experience”
 - “The decrease in the student’s ability to think critically, analyze articles and formulate their thoughts. With the age of computers, the art of handwriting has decreased, I fear that the art of creative writing will also decrease.”

ADVICE AND OPPORTUNITIES

- ✓ Advice from student affairs professionals to other colleagues about AI includes:
 - “research and understand so as to control”
 - “Development of policy and ethical use”
 - “Don’t use it to write for you remember that AI is simply an amalgamation of content that is already out there; it is not intelligence.”
 - “Educate yourself as to the most effective use for your discipline. Explain to your students your view on the proper use of AI and examples of unethical uses with consequences for breaches in ethics.”
- ✓ Future opportunities or developments for the use of AI in Student Services or Student Affairs include:
 - “More efficiency. Ability to target services to students most in need at the right time.”
 - “It is a great tool to set up automatic reminders for registering for courses and payments, sending out notifications and fun ways to connect with students.”
 - “We have used AI as a method for understanding concepts and for generating argument points. This has been helpful, but we also must caution students on overuse and that it is not a method to circumvent lectures or supply texts.”
 - “Minimize the wait time for academic/career advising since many questions can be answered using AI.”
 - “To borrow a phrase from a colleague, ‘cognitive offloading’: letting the AI produce rote or boilerplate work, leaving more time for work requiring creativity or innovation.”

Key Takeaways and Summary

All three respondent categories expressed concern about academic integrity, ethical reasoning, and plagiarism. While these concerns have validity, there are ways that institutions can be proactive.

- ✓ Training for all community members, including students.
- ✓ Developing metrics for incorporating AI into the classroom or work life.
- ✓ Creating campus-wide standards, guidelines, and best practices.
- ✓ Partnering and collaborating with industry for both training and program development.

Opportunities stated in each of the reporting groups include:

- ✓ Personalized learning experiences, especially for struggling students
- ✓ Research
- ✓ Process automation

All groups are concerned that a lack of understanding about how to use AI will lead to its misuse, or underuse. Given that there were many “n/a” or “don’t know” responses, all groups could benefit from training or professional development. Helping students, teachers, staff, and leadership understand the positive aspects of teaching and learning with AI is necessary to prevent the negative concerns related to academic integrity, lack of critical thinking, and ethical issues from materializing.

This survey supplied valuable insight into the current feelings about and use of AI in higher education. Higher Educational institutions are in the process of learning how AI can be incorporated into their innerworkings. Applications from research to process improvement and efficiency to helping students learn in a personalized and inclusive way indicate that AI is a powerful tool that is here to stay. Comments throughout the survey suggested that it was time to embrace AI and use it as a tool before it passes them by, and that institutions must develop policies and procedures related to AI in order to keep moving forward.

"I recommend it all the time."

"Variety of topics and direct application of the information. I recommend it all the time."

—Cheryl Ford-Smith, Associate Professor, Virginia Commonwealth University

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