TIME FOR CLASS

2024

UNLOCKING ACCESS TO EFFECTIVE DIGITAL TEACHING & LEARNING

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INTRODUCTION AND CALL TO ACTION

Digital teaching and learning are now foundational to US higher education. While the use of digital materials and tools in higher education has been steadily increasing in the last four decades, the shift to digital has increased dramatically since the start of the COVID-19 pandemic. In 2020, when campuses shut down and student access to instructors was abruptly cut off, technology-enhanced tools opened new avenues to teaching and learning. There is no evidence of reversion, as these innovations continue to improve access and flexibility in current online, hybrid, and face-to-face learning environments.

Indeed, in this year's survey, 52% of administrators ranked "improving access and flexibility for students" as the primary goal of digital learning at their institution. However, only 25% of administrators and 36% of instructors report that digital learning has, in fact, resulted in success for all students. Our research shows that students are currently limited in their access to basic digital tools and materials, such as technology infrastructure. These fundamentals must be addressed, especially as higher education increasingly integrates sophisticated technologies such as generative AI tools and data-driven teaching practices. Clearly, the promise of digital learning to increase access to education is not being fully realized. Unlocking access for all students is the mandate that institutions, instructors, digital solution providers, and enablers in higher education must fulfill.

Our national surveys of over 3,000 higher education administrators, instructors, and students suggest the following actions to significantly improve access to digital learning:

- Call to action for institutions to improve access to digital learning

  - **Administrators** must consider

    - including digital necessities in their cost of attendance (including laptops and internet access in COA allows students to apply financial aid to these costs, which thereby increases their ability to access digital materials and tools), and

    - offering more practical training to instructors on using generative AI tools for teaching as they become a mainstream component of learning.

  - **Course coordinators and departmental leadership** can increase instructor awareness of and access to resources supporting evidence-based teaching practices and the strategic use of data to support effective teaching.

  - **Instructors** should

    - continue to recognize student constraints related to technology infrastructure constraints and affordability as they design and deliver courses in all modalities and

    - leverage the potential of generative AI tools to support evidence-based teaching practices such as scaffolding for all levels of learners.

  - **Institutional research** departments should increase instructor awareness of available data to support evidence-based teaching practices.

- Call to action for solution providers to improve access to digital learning

  – **Digital tool providers** should

  · balance the features of free or low-cost versions of their tools with the added value of paid versions, considering the focus on affordability for students and instructors,

  · acknowledge the rise of generative AI tool use by students and instructors and address the associated concerns and challenges, and

  · recognize the need for data on student engagement and sentiment, especially as instructors utilize multiple digital tools for teaching.

By taking these recommended actions, we can collectively work toward increasing access and realizing the full promise of digital learning in higher education.

METHODOLOGY AND DEMOGRAPHICS

Tyton Partners conducted three national surveys of higher-education stakeholders in Spring 2024 gathering insights from approximately 1,600 students, 1,800 instructors, and 300 administrators. Survey topics covered the use of digital tools for teaching and learning, including core and supplemental course materials and tools designed to generate content, assess learning, and engage students. Respondents represent a variety of perspectives through demographics and life experiences (more details available in Appendix). Importantly, this year's student survey respondents do not represent the average racial/ethnic makeup of college students; large proportions of students from underserved racial groups (black and Hispanic in the United States, in particular) were intentionally sampled to provide enough statistical power for between-group comparisons.
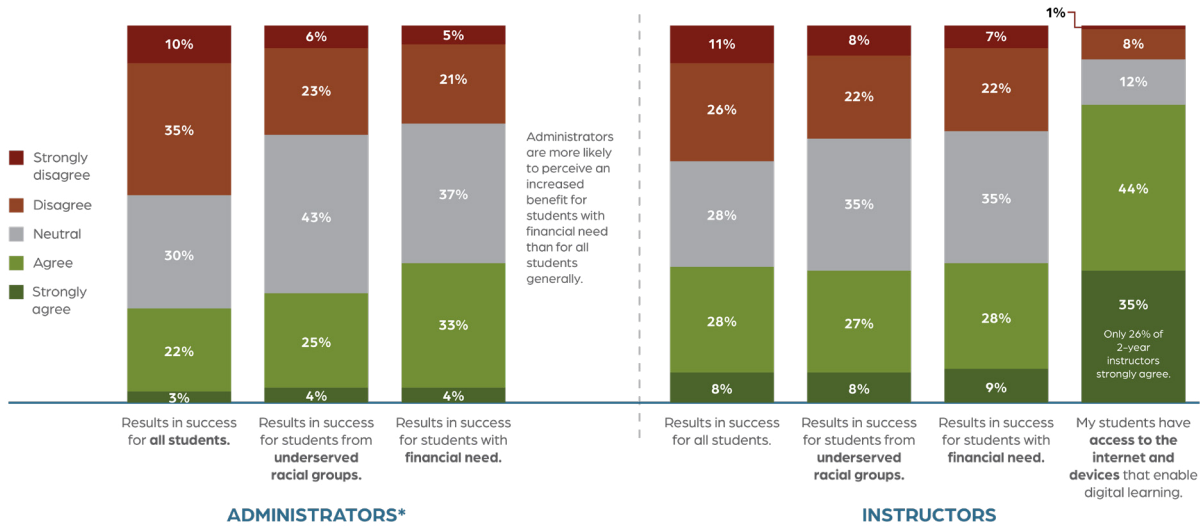
ACCESS TO DIGITAL LEARNING: BASIC TECHNOLOGY AND INFRASTRUCTURE

Administrators report that the top objective of digital learning is increased access. To fully achieve this objective, more students first need affordable access to basic technology such as the internet and devices optimized for digital learning.

Improving access and flexibility is the top objective of digital learning, according to administrators. However, most administrators and instructors do not report that digital learning has resulted in success for all students (see Figure 1). Looking at vulnerable subgroups in particular, the belief that digital learning has resulted in success for students from underserved racial groups or students with financial needs is not substantially higher.

Belief in digital learning's impact on academic success for different student subgroups

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

ADMINISTRATORS*

	Results in success for **all students.**	Results in success for students from **underserved racial groups.**	Results in success for students with **financial need.**
Strongly disagree	10%	6%	5%
Disagree	35%	23%	21%
Neutral	30%	43%	37%
Agree	22%	25%	33%
Strongly agree	3%	4%	4%

Administrators are more likely to perceive an increased benefit for students with financial need than for all students generally.

INSTRUCTORS

	Results in success for all students.	Results in success for students from **underserved racial groups.**	Results in success for students with **financial need.**	My students have **access to the internet and devices** that enable digital learning.
Strongly disagree	11%	8%	7%	1% / 8%
Disagree	26%	22%	22%	12%
Neutral	28%	35%	35%	44%
Agree	28%	27%	28%	35%
Strongly agree	8%	8%	9%	

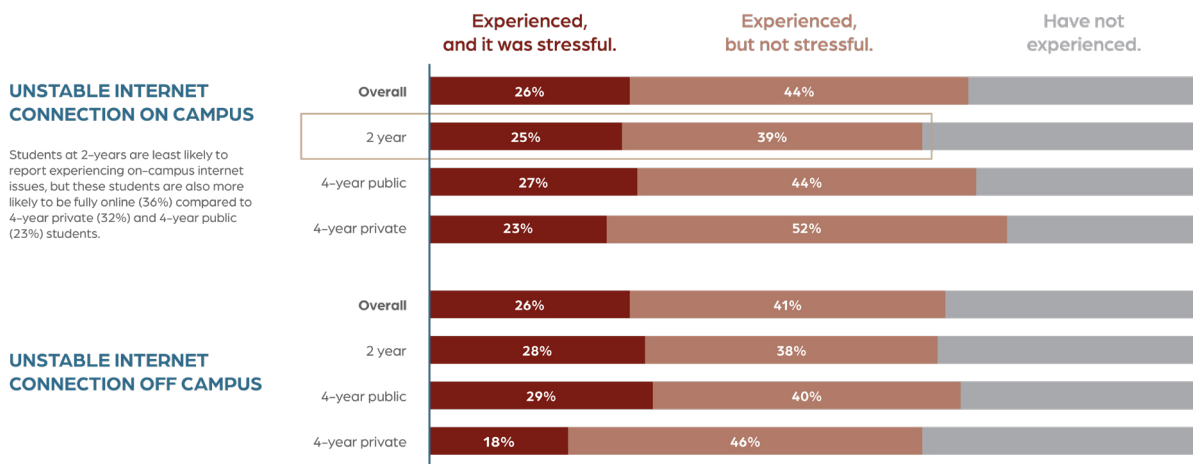Only 26% of 2-year instructors strongly agree.

Notes: *Survey question: "To what extent do you agree or disagree with the following statements?" Administrator n = 316, Instructor n = 1,718. *The difference between "all students" and "students with financial need is statistically significant at p<.05.*
Sources: *Time for Class 2024, Tyton Partners analysis*

One major contributing factor to the limitations of digital learning in improving access lies in student access to basic technology and infrastructure. Over one-third of instructors are concerned about equitable student access to technology, echoing the half of students who report experiencing stress from unstable internet and lack of access to software and devices (see Figure 2).

Figure 2:

## Internet connectivity challenges experienced by students by sector

		Experienced, and it was stressful.	Experienced, but not stressful.	Have not experienced.
UNSTABLE INTERNET CONNECTION ON CAMPUS	Overall	26%	44%	
	2 year	25%	39%	
	4-year public	27%	44%	
	4-year private	23%	52%	
UNSTABLE INTERNET CONNECTION OFF CAMPUS	Overall	26%	41%	
	2 year	28%	38%	
	4-year public	29%	40%	
	4-year private	18%	46%	

Students at 2-years are least likely to report experiencing on-campus internet issues, but these students are also more likely to be fully online (36%) compared to 4-year private (32%) and 4-year public (23%) students.

Notes: *Survey questions: "Please indicate the extent to which you have experienced the following technology issues as a college student." Student n = 1,157-1,162 (overall); students who selected "N/A" are excluded from analysis.*
Sources: *Time for Class 2024, Tyton Partners analysis*

A lack of access to basic technology hinders student outcomes considering that 50% of instructors teach at least one course fully online. And, though 58% of instructors still prefer face-to-face teaching, ~40% of instructors now prefer some online elements, as do ~70% of students (see Figure 3).

Figure 3:

Instructor and student preferred modality
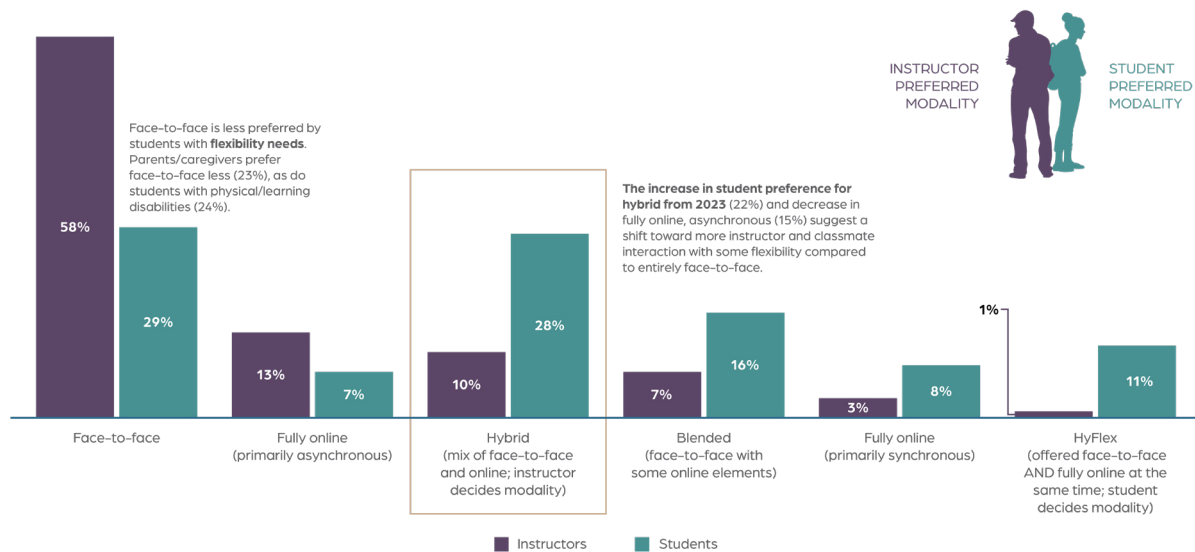
Notes: *Instructor survey question: "In general, I prefer teaching courses _____." Instructor n = 1,718. 7% of instructors have no preference. Student survey question: "If I had to choose just one way, in general, I prefer taking courses _____." Student n = 1,504.*
Sources: *Time for Class 2024, Tyton Partners analysis*

However, 70% of administrators cite that their institution does not include the cost of internet or devices in their cost of attendance (COA), limiting the application of financial aid to these necessary elements of digital learning[1]. Students (and instructors) are having to adapt to a rapidly evolving digital landscape without institutional support for the basic technological necessities of higher education today.

ACCESS TO NEW DIGITAL TEACHING AND LEARNING TOOLS: GENERATIVE AI

Administrators and instructors must align on academic integrity policies and expanding access to generative AI tools and training to balance their innovative potential to improve learning outcomes and efficiency for instructors with the ethical, pedagogical, and practical challenges they present.

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1. US Department of Education *2023 Federal Student Aid Handbook*

GENERATIVE AI IN HIGHER EDUCATION

As some students struggle with access to basic technology, they are simultaneously faced with unprecedented digital advancements with the integration of generative AI tools into higher education. This has surged since ChatGPT was released to the public in Fall 2022, impacting policies, changing pedagogy, and shifting perceptions of academic integrity. Our research in both Spring 2023 and Spring 2024 reveals significant differences in adoption, challenges, awareness of policies, and sentiments regarding generative AI tools between administrators, instructors, and students.

INCREASING ADOPTION ACROSS STAKEHOLDER GROUPS

In the past year, all key stakeholder groups in higher education—students, instructors, and administrators—have shown a marked increase in both the use and awareness of generative AI tools (see Figure 4). Students continue to lead in regular generative AI adoption rates (59% compared to ~40% of instructors and administrators), underscoring student agility in adapting to technological change. The enthusiastic uptake of generative AI among stakeholder groups confirms our Time for Class 2023 predictions that generative AI is here, and it is here to stay.

Figure 4:

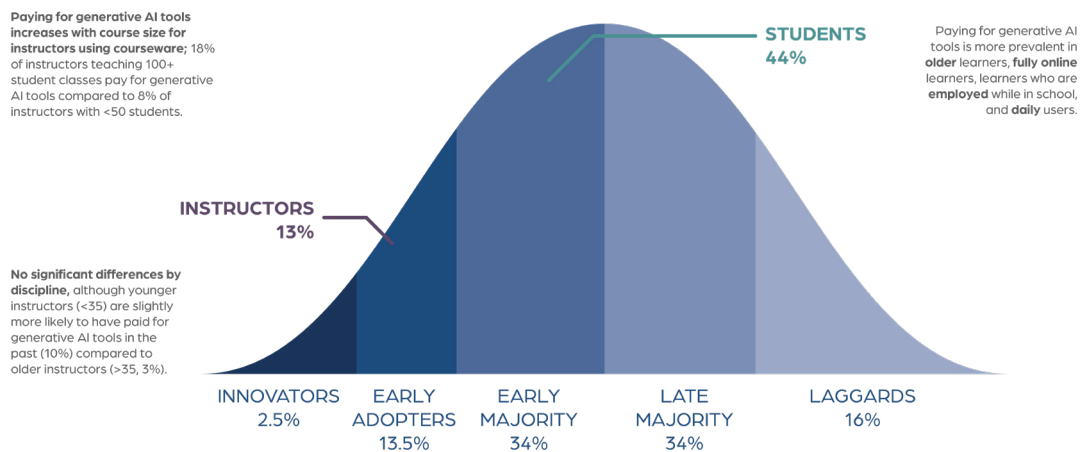## Time series of generative AI tool adoption
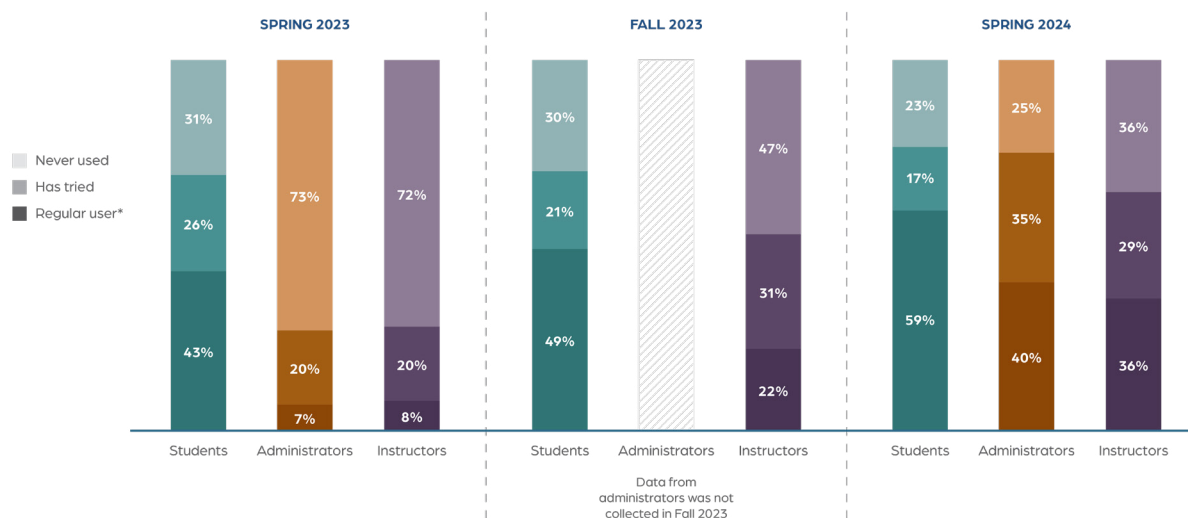
Notes: *Regular usage refers to those using generative AI at least once per month. Survey questions: "Which of the following best describes your own use of generative AI tools (e.g., ChatGPT, Bard/Gemini) for work?" Instructor n (Spring 2024) = 1,827, Administrator n (Spring 2024) = 316, Student n (Spring 2024) = 1,526. "Which of the following best describes your own use of generative AI writing tools (e.g., ChatGPT)?" Instructor n (Fall 2023) = 1,601, Instructor n (Fall 2023) = 1,001. "Which of the following best describes your own use of generative AI writing tools (e.g., ChatGPT)?" Instructor n (Spring 2023) = 1,748, Administrator n (Spring 2023) = 306, Student n (Spring 2023) = 1,545; margin of error +/- 5% for administrators, +/- 2% for instructors and students.*
Sources: *Time for Class 2023, Fall 2023 Faculty & Student Pulse Surveys, Time for Class 2024, Tyton Partners analysis*

However, 36% of instructors and 25% of administrators have still not used generative AI tools. And, despite increases in the adoption of generative AI tools overall, the adoption of specialized AI tools remains limited with a preference for generalist, freemium solutions like ChatGPT. Notably, almost half of student users opt for paid AI solutions—in particular, tools that offer specialized academic functions, suggesting more sophisticated tool use as familiarity and dependence on these technologies grow. Furthermore, instructors are far less likely than students to be using paid, specialist solutions, suggesting that the academic generative AI tool market may be meeting student needs more than instructors' (see Figure 5).

Figure 5:

Instructor vs. student use of paid generative AI tools
Respondents who are regular generative AI users*

Paying for generative AI tools increases with course size for instructors using courseware; 18% of instructors teaching 100+ student classes pay for generative AI tools compared to 8% of instructors with <50 students.

Paying for generative AI tools is more prevalent in **older** learners, **fully online** learners, learners who are **employed** while in school, and **daily** users.

STUDENTS 44%

INSTRUCTORS 13%

No significant differences by discipline, although younger instructors (<35) are slightly more likely to have paid for generative AI tools in the past (10%) compared to older instructors (>35, 3%).

| INNOVATORS 2.5% | EARLY ADOPTERS 13.5% | EARLY MAJORITY 34% | LATE MAJORITY 34% | LAGGARDS 16% |

Notes: Survey questions: "Do you pay for the use of any generative AI tools?" Instructor n = 654. "Do you pay for any subscriptions to any generative AI tools or services (e.g., ChatGPT Plus, Cheggmate) that you use for school-related work or activities?" Student n = 903. *"Regular generative AI users" are those who indicated that they use generative AI tools at least monthly.
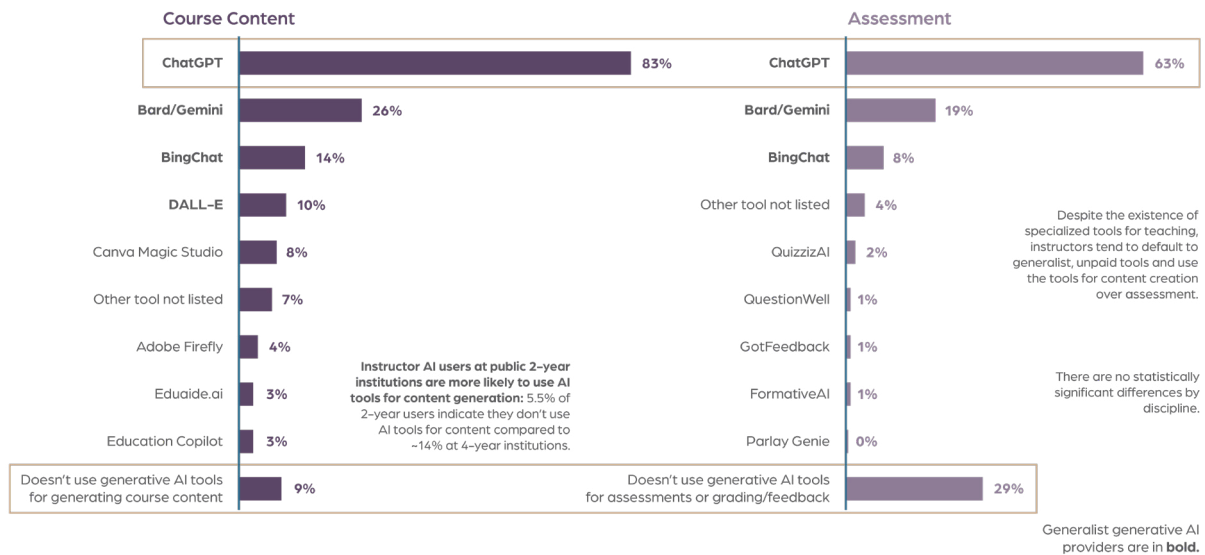
Sources: Time for Class 2024, Tyton Partners analysis

The disparity between student and instructor usage is possibly partially explained by the fact that these tools are content-producing at their core, as indicated by instructors using the tools for content (91% of instructors who are regular users and use the tools for teaching and learning) compared to assessment (71% of instructors who are regular users and use the tools for teaching and learning) (see Figure 6).

Instructor use of generative AI tool providers for assessment and content
Respondents who are regular* generative AI users and use the tools for teaching and learning

Course Content

Tool	%
ChatGPT	83%
Bard/Gemini	26%
BingChat	14%
DALL-E	10%
Canva Magic Studio	8%
Other tool not listed	7%
Adobe Firefly	4%
Eduaide.ai	3%
Education Copilot	3%
Doesn't use generative AI tools for generating course content	9%

Instructor AI users at public 2–year institutions are more likely to use AI tools for content generation: 5.5% of 2–year users indicate they don't use AI tools for content compared to ~14% at 4–year institutions.

Assessment

Tool	%
ChatGPT	63%
Bard/Gemini	19%
BingChat	8%
Other tool not listed	4%
QuizzizAI	2%
QuestionWell	1%
GotFeedback	1%
FormativeAI	1%
Parlay Genie	0%
Doesn't use generative AI tools for assessments or grading/feedback	29%

Despite the existence of specialized tools for teaching, instructors tend to default to generalist, unpaid tools and use the tools for content creation over assessment.

There are no statistically significant differences by discipline.

Generalist generative AI providers are in **bold.**

Notes: *Survey questions: "Which of the following generative AI-based instructional tools do you use [to generate course content/for creating assignments and/or providing grades or feedback]? Select all that apply." Instructor n=591. *"Regular users" are those who use generative AI tools at least monthly.*

Sources: *Time for Class 2024, Tyton Partners analysis*

IMPACT ON ACADEMIC INTEGRITY AND WORKLOAD

As adoption will continue to increase across the board, especially among students, the potential impact of AI on academic integrity remains a top concern with institutional stakeholders still wary of its implications. Given that students will continue to use the tools even if banned by their institutions and instructors (see Figure 7), institutions will have to continue to develop clear use policies, provide training to faculty, and create strategic approaches to adapting instruction to generative AI's increasingly persistent use by learners.

Figure 7:

Likelihood of using generative AI tools
if institution or instructor banned them

Legend:
- Not at all likely
- Unlikely
- Neutral
- Likely
- Extremely likely

Spring 2023:
- 24%
- 21%
- 25%
- 16%
- 13%

Spring 2024:
- 7%
- 16%
- 27%
- 28%
- 22%

+21
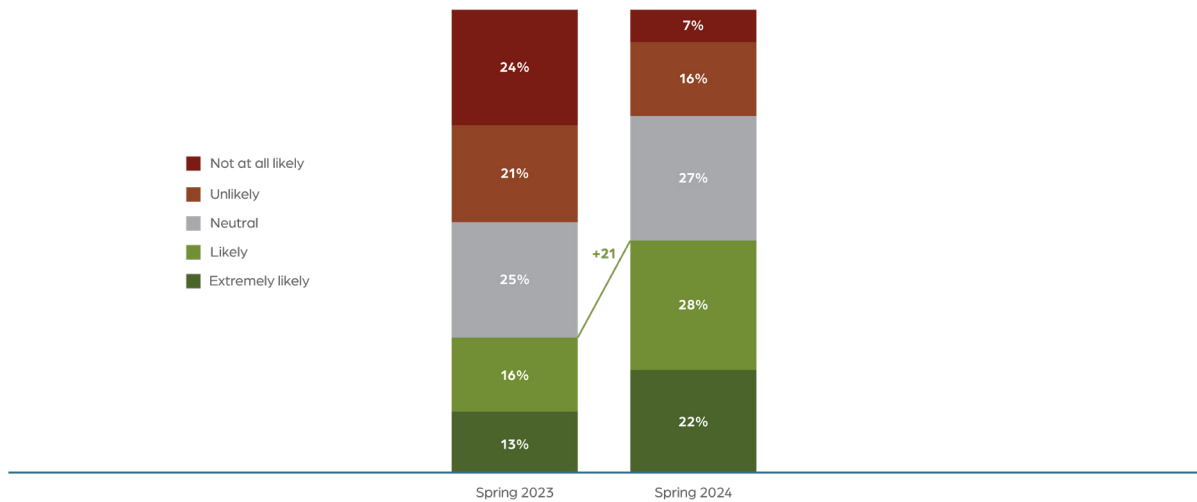
Notes: *Survey questions: "If your instructor or college/university banned the use of generative AI tools (e.g., ChatGPT or Google Bard/Gemini) for completing academic assignments, how likely would you be to still use generative AI tools?." n = 1,326 and 1,147.*
Sources: *Time for Class 2023 and 2024, Tyton Partners analysis*

Mitigating the daunting need for faculty to take informed and considered action regarding generative AI is the fact that instructors who use AI tools are less concerned about mis-use: 77% of instructor non-users expect the rise of generative AI tools to create new challenges to identifying plagiarism compared to 60% of users. Some of this concern may be from a discrepancy in what students and instructors think are acceptable use cases for generative AI tools. For instance, students are more likely to write significant portions of their writing assignments using generative AI tools contrasting what instructors deem as permissible.

It is also worth noting that instructor sentiment around generative AI's impact on student learning improves with their own use of and familiarity with generative AI. Instructors who use generative AI tools at least once a month are much more likely to believe that generative AI tools will have a positive impact on student learning than instructors who use generative AI tools less frequently or do not use them at all (see Figure 8).

Figure 8:

Instructor sentiment regarding generative AI's impact on student learning

Notes: *Survey question: "For the following question, please read the pair of statements and decide to what extent you agree with one more than the other." Regular generative AI users n = 612. Never used generative AI n = 816. *"Regular generative AI users" are those who indicated that they use generative AI tools at least monthly. **"Non-users" are those who have experimented with generative AI tools once or twice or have never used them but are aware of what they are.*

Sources: *Time for Class 2024, Tyton Partners analysis*

Concurrently, both students and instructors report increased workloads, attributed to the need for enhanced content development and integrity safeguards (see Figure 9).

Figure 9:

Impact of generative AI on instructor and student workloads
Respondents who use generative AI tools regularly (i.e., at least once per month)
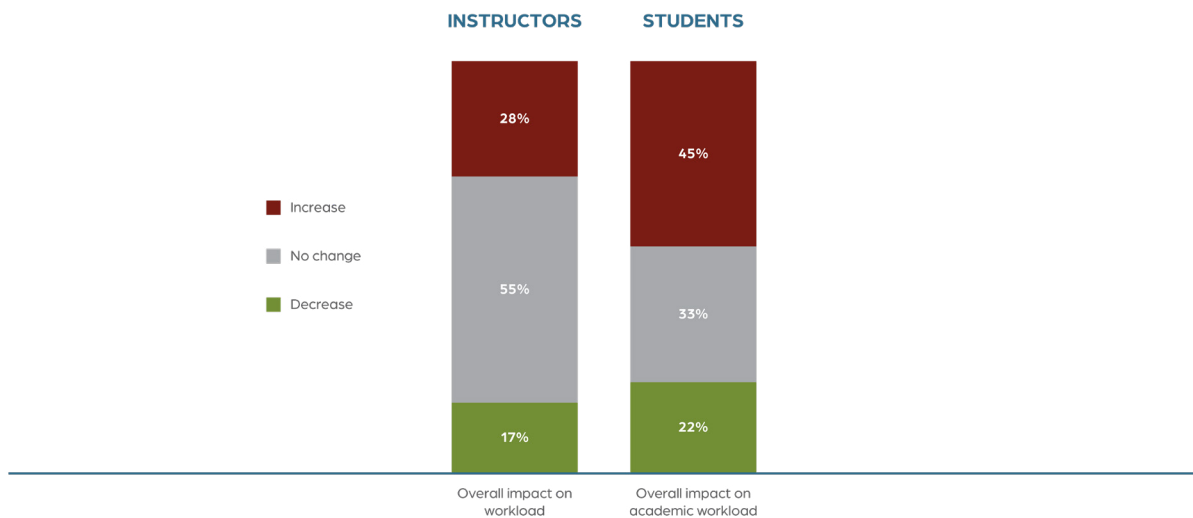
Notes: *Instructor survey question: "How has your overall workload as an instructor changed considering both your and your students' use of generative AI tools?" instructor n=652; Stu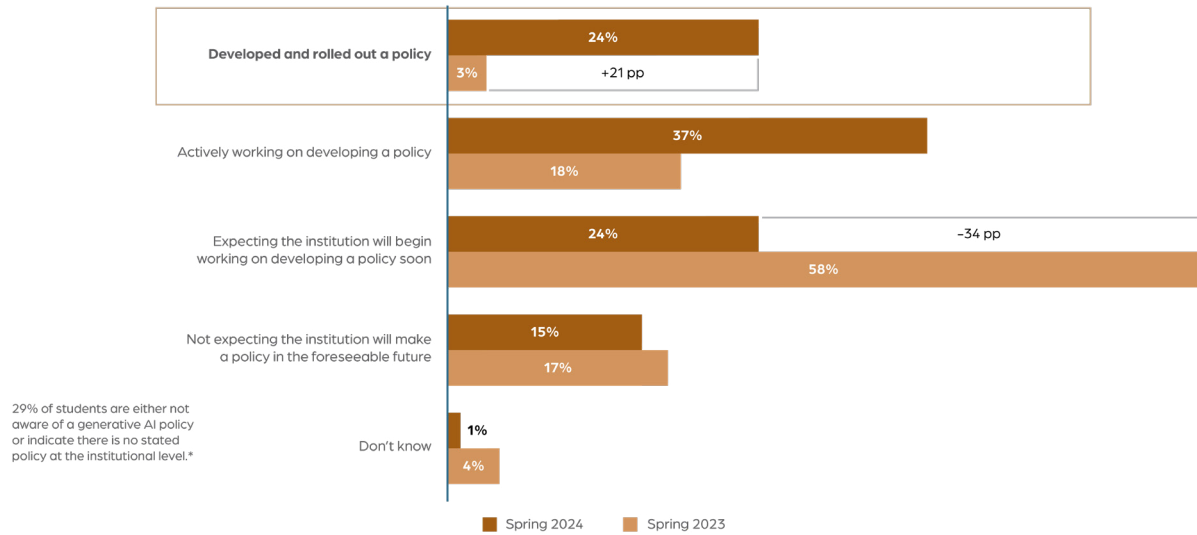dent survey question: "How has the availability of generative AI tools affected your academic workload (i.e., the amount of time you spend on academics)?" student n=903.*

Sources: *Time for Class 2023 and 2024, Tyton Partners analysis*

As shown in Figure 10, this increase in workload underscores the dual-edged nature of AI tools: they offer significant benefits but also introduce complexities that institutions, instructors, and students must navigate.

Figure 10:

Overall shift in instructor workload
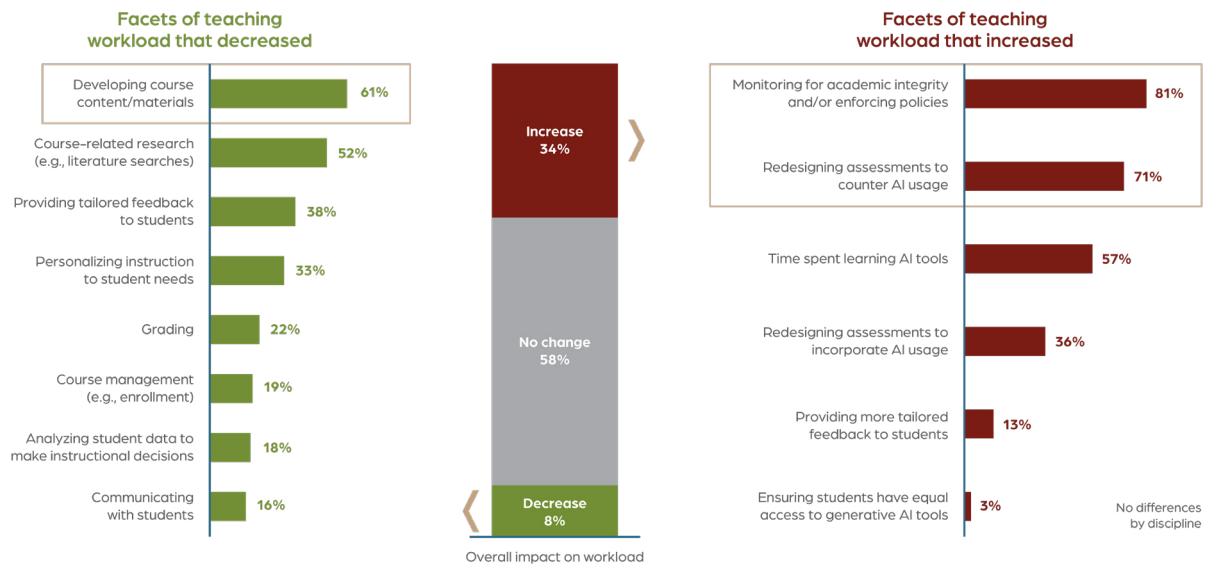
Notes: *Survey questions: "What aspects of your teaching workload increase/decrease because of generative AI tools? Select all that apply." n = 1,581. "How has your overall workload as an instructor changed considering both your and your students' use of generative AI tools?", n = 1581.*
Sources: *Time for Class 2024, Tyton Partners analysis*

INSTITUTIONAL RESPONSE: POLICY AND PEDAGOGY

With increasing AI tool adoption and widespread concern about academic integrity, institutional action is paramount. However, institutional policies are still in the early stages of implementation with 76% of administrators indicating that their institutions have not fully developed or implemented institution-wide policies regarding the use of AI tools, although 37% are actively working on policies, only 24% have them in place already (see Figure 11).

Figure 11:

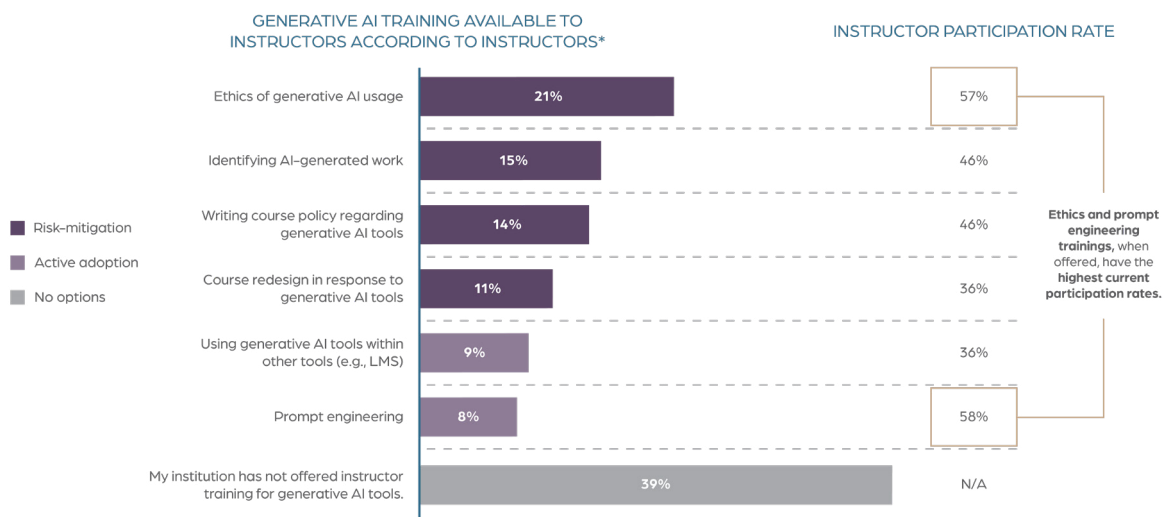## Institutional policy current status according to <u>administrators</u>

Developed and rolled out a policy
24%
3%
+21 pp

Actively working on developing a policy
37%
18%

Expecting the institution will begin working on developing a policy soon
24%
–34 pp
58%

Not expecting the institution will make a policy in the foreseeable future
15%
17%

29% of students are either not aware of a generative AI policy or indicate there is no stated policy at the institutional level.*

Don't know
1%
4%

■ Spring 2024   ■ Spring 2023

Notes: *Survey question: "Has your institution developed an institution-wide formal policy with respect to generative AI writing tools like ChatGPT?"; Administrator n = 233 (2024); Administrator n = 168 (2023). *Denominator is students who are at least aware of generative AI tools; 17% of students are not aware of generative AI policies at their institution, while 12% indicate there is no policy.*
Sources: *Time for Class 2023 & 2024, Tyton Partners analysis*

Of policies, training is top of mind for administrators, with 40% of AI-aware administrators indicating that they are currently or are planning to offer faculty and staff training on the usage of generative AI tools. While 39% of instructors do not report having any access to such training (see Figure 12), those who do report access to training indicate ethics of AI usage and identify AI-generated work as the top offered content. However, even with minimal institutional focus on prompt engineering, instructor participation in this training is higher than in the most offered topics. This discrepancy points to a potential need for instructor training that equips them with the skills to integrate AI effectively into their curricula in an evolving, AI-powered higher-education landscape.

Figure 12:

Generative AI training available to instructors according to <u>instructors</u>

GENERATIVE AI TRAINING AVAILABLE TO
INSTRUCTORS ACCORDING TO INSTRUCTORS*

INSTRUCTOR PARTICIPATION RATE

Ethics of generative AI usage	21%	57%
Identifying AI–generated work	15%	46%
Writing course policy regarding generative AI tools	14%	46%
Course redesign in response to generative AI tools	11%	36%
Using generative AI tools within other tools (e.g., LMS)	9%	36%
Prompt engineering	8%	58%
My institution has not offered instructor training for generative AI tools.	39%	N/A

■ Risk–mitigation
■ Active adoption
■ No options

Ethics and prompt engineering trainings, when offered, have the **highest current participation rates.**

Notes: *Survey question: "What types of training does your institution offer for generative AI tools? Select all that apply." n = 1,580. *Respondents who selected "Don't know" are excluded from this analysis and represent 19% of the population who saw this question.*
Sources: *Time for Class 2024, Tyton Partners analysis*

Instructors are less likely to offer or plan to offer the same training to students for assisting with assignments (only 19% of AI-aware instructors) indicating that instructors may be hesitant to take course-level action due to concern about students relying on AI tools instead of developing critical thinking skills through completing assignments.

Evidently, generative AI is still in the early stages of being integrated into academic life at both the instructional and institutional levels with 18% of AI-aware instructors and 15% of AI-aware students indicating that instructors encourage the usage of such tools. Institutions are also more inclined to revise assessment strategies (26%) and adopt detection tools (20%) rather than outright ban AI usage (18%). Such policies at both levels reflect a pragmatic approach, recognizing the inevitability of generative AI's integration into educational settings.

LOOKING AHEAD: EDUCATIONAL PRIORITIES

This pragmatic approach to generative AI tools in the classroom can expand to consider how they can augment student learning[2] (and not replace it) as the tools continue to become mainstream. Administrators and instructors are becoming aware of this shift as they move toward consensus regarding the necessity of teaching students to effectively use generative AI tools, preparing them for future workforce requirements (see Figure 13).

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2. Watkins, M. (2024, February 16). Building AI literacy with students. [Webinar]. Every Learner Everywhere. *https://www. everylearnereverywhere.org/workshop/building-ai-literacy-with-students/*

Figure 13:

Instructor, administrator, and student sentiments toward generative AI
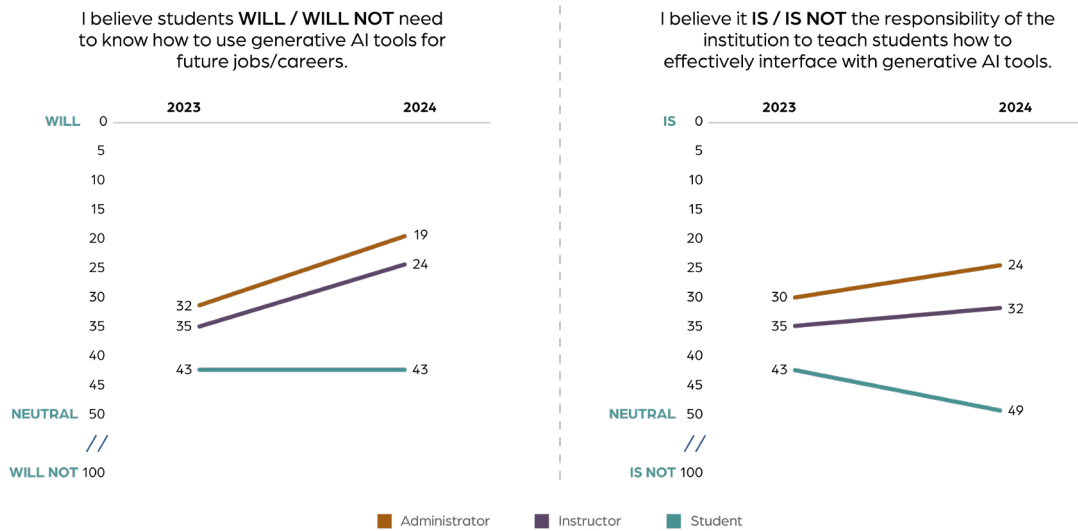
Notes: *Survey question: "For the next few questions, please read the pair of statement and decide to what extent you agree with one more than the other." Instructor n = 1418-1503, Administrator n = 150-287, Student n = 1,328-1,303.*

Sources: *Time for Class 2023 and 2024, Tyton Partners analysis*

In the classroom, 54% of administrators and 44% of instructors who use generative AI tools believe they will expand thinking by assisting with research and brainstorming. In addition, students are using AI tools for a variety of school and work activities, including making resumes and cover letters (33% of student regular users), organizing their schedule (32% of student regular users), and generating practice materials for studying (29% of student regular users).

Though sentiments regarding generative AI tools are becoming increasingly positive, increasing instructor and student access to them is not yet a priority for institutions in the near term. Less than 20% of institutions are even considering licensing generative AI tools for student and instructor/staff usage in the next one to two years, and less than 40% are considering it in three to five years (see Figure 14). Considering the speed at which generative AI has become embedded into daily and academic life, institutions may continue to find themselves far behind the curve if these long-term plans are realized as expected.

Likelihood of future institutional adoption of generative AI Large Language Model (LLM) providers, according to <u>administrators</u>
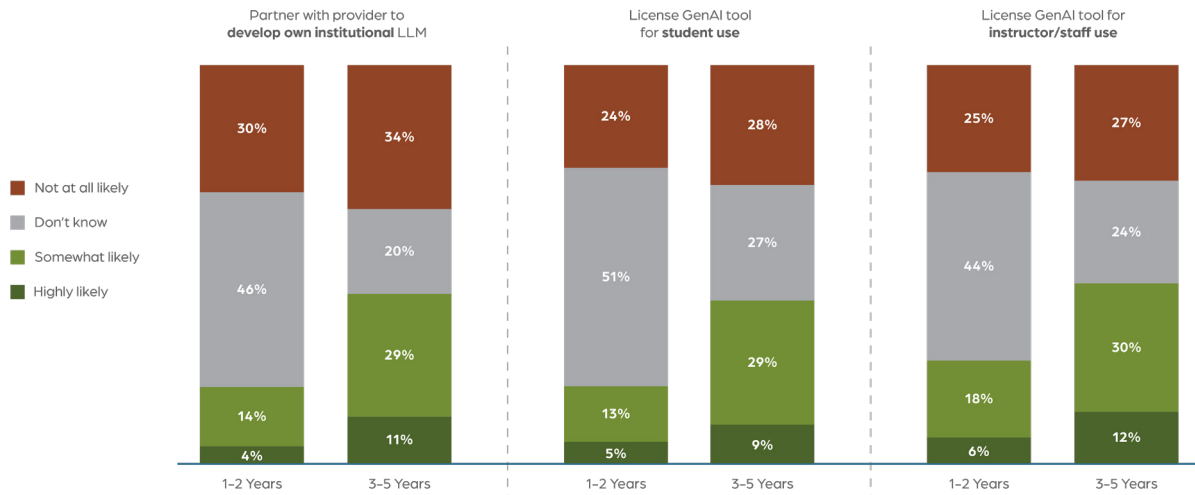
Notes: Survey questions: "How likely is your institution to partner exclusively with a GenAI model provider to develop an institutional LLM (large language model) for operations, student success, and research (e.g., ASU's partnership with OpenAI)?" n = 295. "How likely is your institution to pay to license a GenAI model provider (e.g., OpenAI, which powers ChatGPT) for student use?" n = 295. "How likely is your institution to pay to license a GenAI model provider (e.g., OpenAI, which powers ChatGPT) for faculty/staff use?" n = 295.

Sources: Time for Class 2024, Tyton Partners analysis

As the world moves toward a place where generative AI is embedded in education and the workplace, institutions must adapt to increase the value of students' education. Administrators and instructors must balance the innovative potential of AI tools with the ethical, pedagogical, and practical challenges they present. Developing clear and inclusive policies, providing robust training programs for instructors and students, and fostering expanded access to the tools themselves will be crucial for harnessing the benefits of AI while maintaining academic integrity and quality of education.

ACCESS TO RESOURCES AND DATA: DIGITAL TEACHING AND EQUITY

Instructors desire more access to the resources and data needed for effective teaching, a key component of their professional development criteria. Access to data is linked to equity-minded teaching practices, which, when prioritized, result in greater perceived success for vulnerable student subgroups.

While facing challenges of student access to digital infrastructure and learning tools, teaching has also evolved to be heavily dependent on technology—data, in particular. However, instructors report limited access to the resources and data needed for effective teaching, which can be driven by evidence-based teaching practices that have been shown to promote student learning[3]. EBTs can be implemented in various ways and any course modality and often demonstrate a positive impact on equitable outcomes in the classroom.

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3. Bill & Melinda Gates Foundation Digitally-Enabled Evidence- Based Teaching Practices: Implementing Practices to Support Equity; Every Learner Everywhere: *Evidence Based Teaching Practices*

According to the Bill and Melinda Gates Foundation, though there are many EBTs, the primary practices are as follows:

1. Instructional transparency

2. Active learning

3. Formative practice

4. Data-informed instructions

5. Metacognition

6. Fostering a sense of belonging through an inclusive learning environment

7. Assessing and activating prior knowledge

8. Peer collaboration

However, only 37% of instructors report that their institution offers professional development focused on evidence-based teaching practices (see Figure 15). Yet, "implementing effective teaching practices" is the top criterion by which instructors are evaluated for tenure and promotion and is deemed "very important" by 38% of administrators.

Figure 15:

EBTs: Comparison of import to faculty promotion versus institutional resources to support implementation
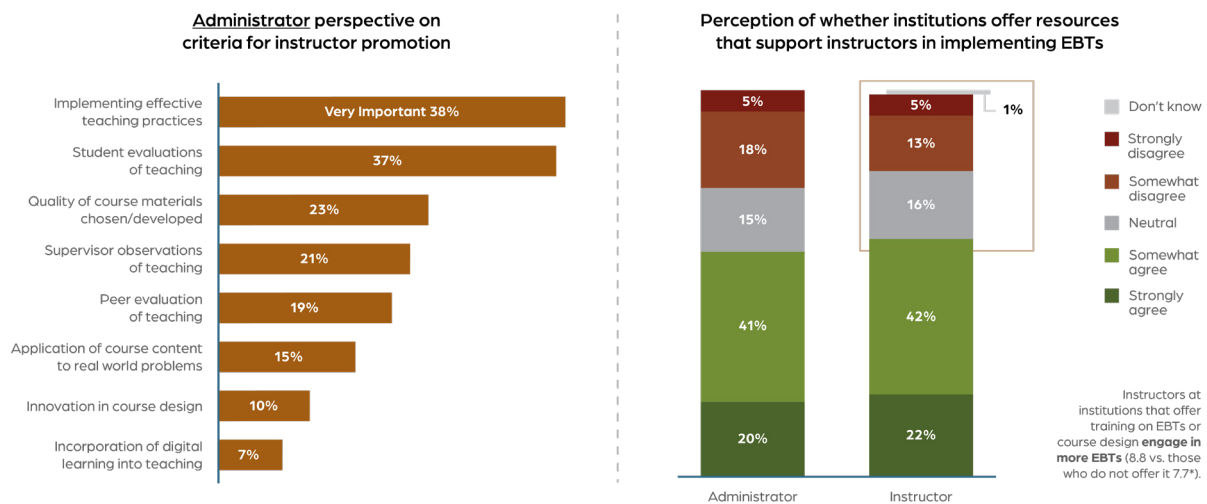
Notes: *Survey questions: "How important are the following inputs related to teaching to a faculty member's evaluation for promotion?" Administrator n = 316. "To what extent do you agree or disagree with this statement? My institution provides sufficient resources to instructors to implement effective teaching practices (e.g., Evidence-based teaching)." Administrator n = 316. Instructor n = 1,824. *Difference is statistically significant at p<.05.*
Sources: *Time for Class 2024, Tyton Partners analysis*

Effective teaching and the implementation of EBTs in the digital age require access[4] to data, and, indeed, digital teaching tools are well equipped to enable this access. However, instructors across institution types report not having data that would improve course outcomes. Figure 16 shows that two-year instructors are in acute need of student data: 64% of two-year instructors want access to data regarding student sentiment in courses, and over a third of two-year instructors also desire access to data such as interim grades in other courses and student engagement on campus.

Figure 16:

Top data points requested by instructors
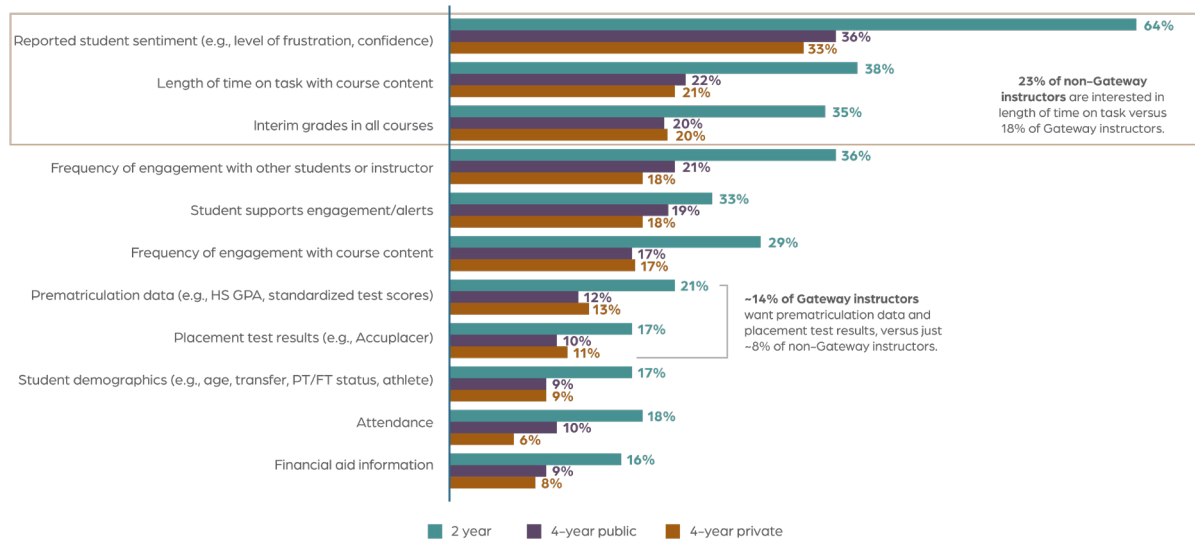
Notes: *Survey question: "What student data is NOT currently readily available to you that would help you improve student learning in your courses? Select top three." n = 426 (2-year), n = 750 (4-year public), n = 337 (4-year private). Answer choices with <15% are excluded from the chart: course load, formative assessment results, summative assessment results, 'Don't know,' and 'I have all the data I need.'*
Sources: *Time for Class 2024, Tyton Partners analysis*

Instructors teaching introductory and development courses ("gateway courses") are particularly in need of data to support scaffolding efforts in their teaching. Over half (53%) of gateway instructors report that their students' top challenge is "being underprepared or lacking prerequisites" for their class, the second top challenge after "ineffective study skills." Relatedly, "scaffolding content for all student levels" is one of their top three instructional challenges after attendance and preventing student cheating. Gateway instructors look to data points such as student sentiment and frequency of engagement to support scaffolding through foundational evidence-based teaching practices[5].

The importance of data to effective teaching is both evident in and exacerbated by the number of tools that instructors use to teach a class (see Figure 17 for one view of the landscape of digital teaching and learning products). Gateway instructors, for example, use five distinct digital tools (including core course materials and the LMS) on average compared to upper-level course instructors who use approximately four.

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4. Evidence-Based Teaching in Higher Education: Strategies and Techniques" by Claire Howell Major, Michael S. Harris, and Todd Zakrajsek. Routledge, 2016.
5. *https://ies.ed.gov/ncee/edlabs/infographics/pdf/REL_SE_Evidence-based_teaching_practices.pdf*

Even as instructors are having to leverage multiple digital tools to support effective teaching, they still report desiring access to data that is not available to them, a contradiction that providers should be aware of as they develop and market new digital teaching tools.

Figure 17:

Digital learning products suppliers
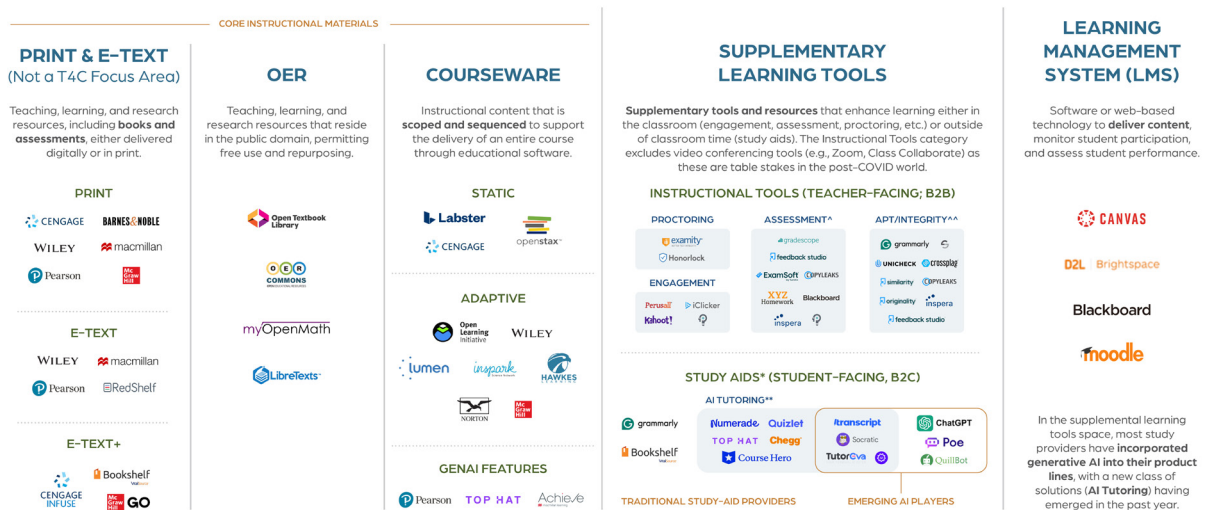
Notes: *Product has GenAI features (if not a dedicated GenAI player) or is in development, and all visualized study-aid solutions incorporate generative AI into their offerings. **"AI Tutoring" includes solutions that provide direct answers to student questions and guide the student through lines of reasoning. ^ExamSoft by Turnitin has elements of proctoring to ensure academic integrity. ^^"APT" refers to antiplagiarism tools/academic integrity tools.*
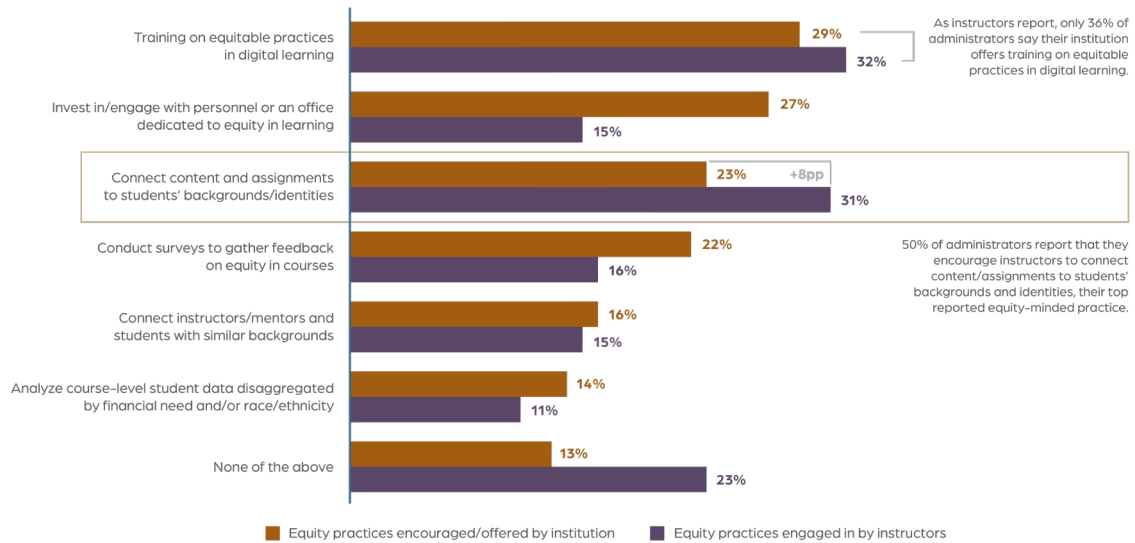**Sources:** *Time for Class 2024, Company websites, Tyton Partners analysis*

Data is also a powerful tool for identifying and implementing equity-minded teaching practices that improve outcomes for vulnerable student subgroups[6]. However, while over three-fourths of instructors report engaging in at least one equity-minded teaching practice in their courses, instructors also say their institution offers or encourages these practices at lower rates (see Figure 18).

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6. Postsecondary Value Commission. (2021c). Equitable value: Promoting economic mobility and social justice through postsecondary education (executive summary). *https://live-postsecondary-value-commission.pantheonsite.io/wp-content/uploads/2021/05/PVC-Executive-Summary-FINAL.pdf*

Equity-minded practices in digital learning according to instructors

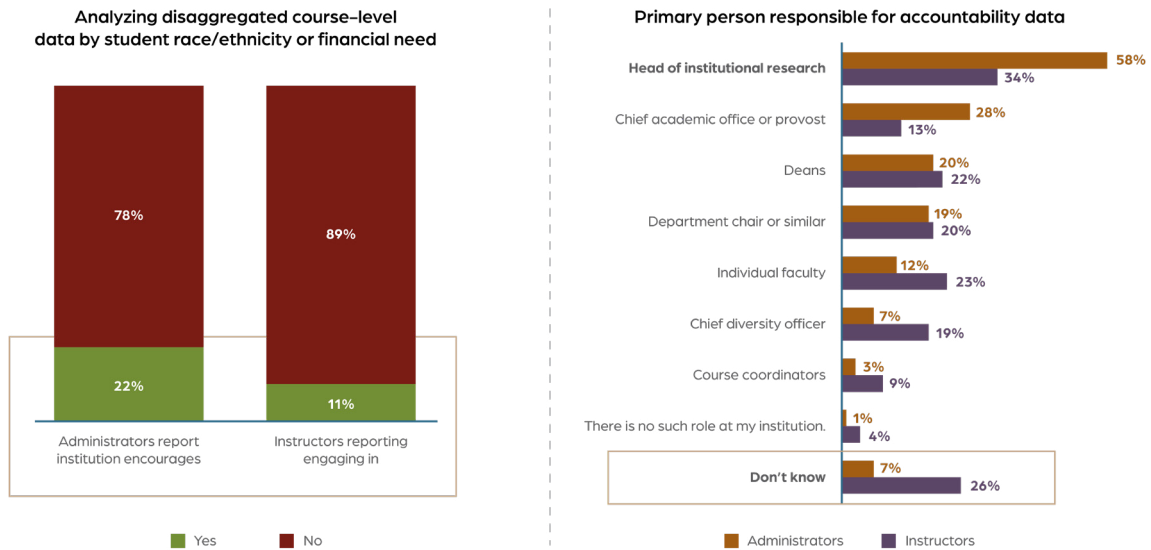Training on equitable practices in digital learning — 29% / 32%

> As instructors report, only 36% of administrators say their institution offers training on equitable practices in digital learning.

Invest in/engage with personnel or an office dedicated to equity in learning — 27% / 15%

Connect content and assignments to students' backgrounds/identities — 23% / +8pp / 31%

Conduct surveys to gather feedback on equity in courses — 22% / 16%

> 50% of administrators report that they encourage instructors to connect content/assignments to students' backgrounds and identities, their top reported equity-minded practice.

Connect instructors/mentors and students with similar backgrounds — 16% / 15%

Analyze course-level student data disaggregated by financial need and/or race/ethnicity — 14% / 11%

None of the above — 13% / 23%

■ Equity practices encouraged/offered by institution   ■ Equity practices engaged in by instructors

Notes: Survey question: "Which of the following equity-minded practices in digital learning does your institution/do you engage in?." Instructor n = 1,718.
Sources: Time for Class 2024, Tyton Partners analysis

In particular, both administrators and instructors report extremely low rates of analyzing course-level student data disaggregated by financial need status and/or race and ethnicity. Only 22% of administrators report that their institution encourages such data analysis in equity, and only 11% of instructors report doing so in their courses (see Figure 19). Importantly, of the minority that encourage this analysis, most administrators say that their head of institutional research is responsible for this kind of data—but over a quarter of instructors say that they don't know. So, if this data on equity is being captured and analyzed at all, it is most likely not being disseminated to the instructors who hold the most power to utilize it.

Figure 19:

Course-level data and primary collector

**Analyzing disaggregated course–level
data by student race/ethnicity or financial need**

	Administrators report institution encourages	Instructors reporting engaging in
No	78%	89%
Yes	22%	11%

■ Yes ■ No

Primary person responsible for accountability data

	Administrators	Instructors
Head of institutional research	58%	34%
Chief academic office or provost	28%	13%
Deans	20%	22%
Department chair or similar	19%	20%
Individual faculty	12%	23%
Chief diversity officer	7%	19%
Course coordinators	3%	9%
There is no such role at my institution.	1%	4%
Don't know	7%	26%

■ Administrators ■ Instructors

Notes: *Survey question: "Who at your institution is responsible for ensuring that course-level student data that is disaggregated by race and ethnicity is used to improve student outcomes? Select all that apply." Administrator n = 69, Instructor n = 235.*

Sources: *Time for Class 2024, Tyton Partners analysis*

Overall, 37% of instructors say that their institution prioritizes racial/ethnic equity, and 40% of instructors say that their institution prioritizes socioeconomic equity; instructors at two-year institutions are more likely to report prioritization of both (44% and 55%). Our research suggests that institutions that prioritize racial and socioeconomic equity[7] in digital learning also report that digital learning has resulted in success for those groups at more than twice the rate as those who do not (71% vs. 30%), as shown in Figure 20.

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7. Every Learner Everywhere (2021, June). Getting Started With Equity: A Guide for Academic Department Leaders. Every Learner Everywhere. *https://www.everylearnereverywhere.org/resources/getting-started-with-equity-a-guide-for-academic-department-leaders/*

Institutional prioritization of equity in digital learning and impact of digital learning on student subgroups* according to instructors
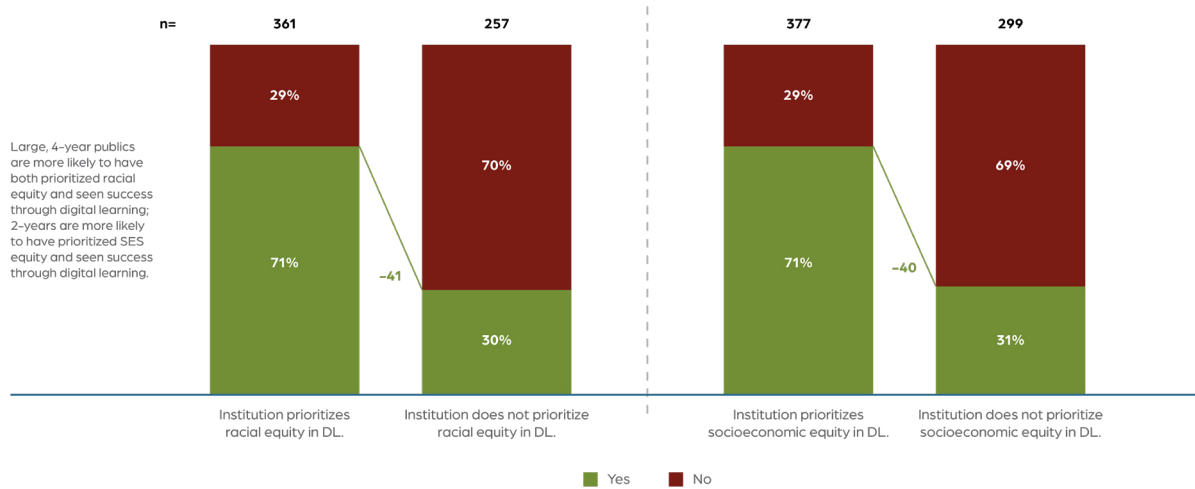
Notes: *Survey questions: "To what extent do you agree or disagree with the following statements? Digital learning has resulted in success for students from underrepresented racial groups/students with financial need?" "To what extent is racial/ethnic/ socioeconomic equity in digital learning a strategic priority for your institution?" *Differences are statistically significant at p < .05.*
Sources: *Time for Class 2024, Tyton Partners analysis*

As of Spring 2023, 73% of administrators and 57% of instructors report no restrictive changes to DEI policies at their institutions (such as eliminating bias training or equity-related personnel). Time for Class will continue to monitor the effects of equity practices on effective digital teaching as the composition of identities in higher education evolves. What is clear now, however, is that effective teaching (including the use of equity-minded practices) requires access to both supportive resources and data that instructors want and lack access to, a need that institutional stakeholders and digital solution providers can fill.

IMPLICATIONS

Our national, longitudinal research reveals a paradox in higher education: While digital learning is rapidly advancing with cutting-edge generative AI tools and data-driven teaching practices, many students still struggle to access essential technology and infrastructure. This report highlights the critical steps needed to elevate digital teaching and learning, which is now a cornerstone of higher education, by boosting access to technology, innovative tools, and data for both students and instructors. Indeed, one of the major advantages of digital learning is the vast amount of data it generates, which could ideally be leveraged for effective teaching. If the findings in this report trigger questions for you or your organization, please reach out to us so we can collaborate to answer them to the best of our ability with the data we have amassed here.

In conclusion, we call on higher education stakeholders—administrators, course coordinators, institutional research departments, instructors, and academic digital solution providers—to actively expand access to digital learning and fulfill its transformative promise to today's learners so we may all unlock the benefits for more students.

APPENDIX: DEMOGRAPHICS DETAIL

Time for Class (T4C) 2024 is a series of national, longitudinal surveys of over 4,000 higher-education administrators, instructors, and students. The survey is designed to measure the evolving nature of digital teaching and learning at higher education institutions across the United States to increase affordability, accessibility, and equity for students.

In February and March of 2024, administrators, instructors, and students received online surveys ranging from 10 to 40 minutes, depending on the individual roles. We collected responses from approximately 300 administrators and 1,800 instructors at over 900 unique postsecondary institutions, as well as approximately 1,600 students from two- and four-year private and public institutions.

Figure 21:

Overview of national surveys fielded in Spring 2024

		Administrator Survey	Instructor Survey	Four-Year Student Survey (currently enrolled)	Community College Student Survey (currently enrolled)
Qualified completes	T4C '24	316	1,827	999	527
	T4C '23	306	1,748	1,514	534
Time to complete	T4C '24	25 min	39 min	14 min	14 min
	T4C '23	26 min	38 min	11 min	7 min

This year's survey has gathered survey responses from a representative set of administrators, instructors, and students nationwide, reflecting region, age, race, gender, and other collected demographic information. Because not all questions were presented to every respondent, response numbers vary by segment. Due to rounding, percentages may equal slightly more or less than 100%.

Figure 22:

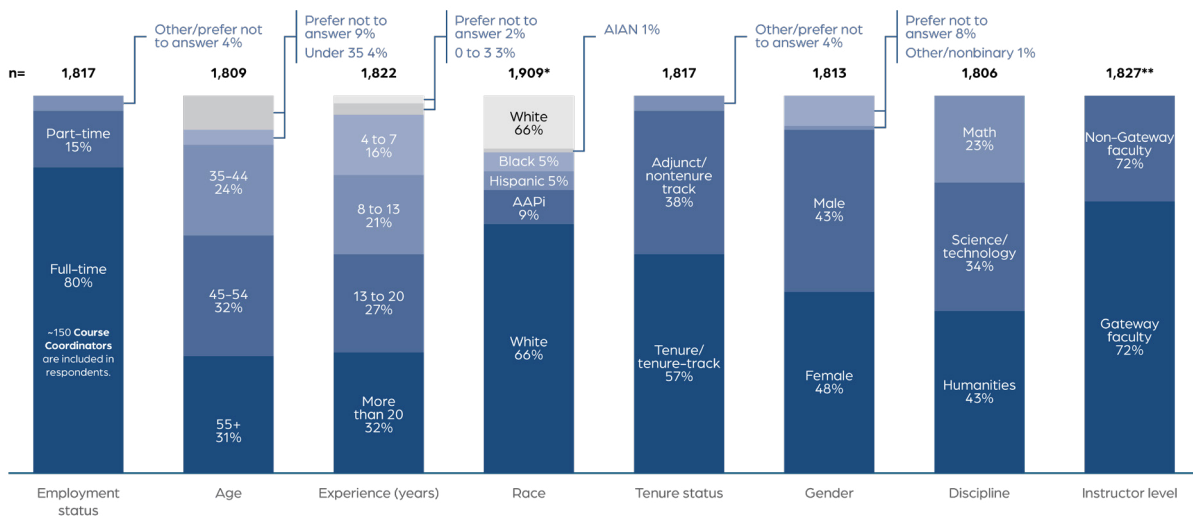# Time for Class 2024 administrator survey respondents
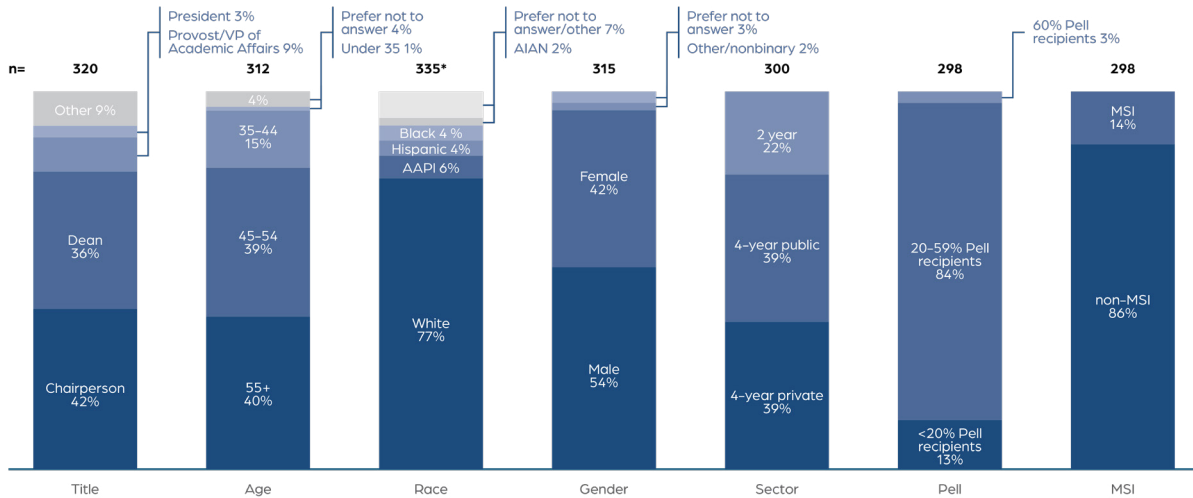
Notes: *Number exceeds total n because respondents could select more than one option. AIAN stands for American Indian/Alaskan Native background. AAPI stands for Asian American or Pacific Islander background.*

Sources: *Time for Class Administrator Survey 2024, NCES, Tyton Partners analysis*

*Figure 23:*

Time for Class 2024 instructor survey respondents

Notes: *Number exceeds total n because respondents could select more than one option. AIAN stands for American Indian/Alaskan Native background. AAPI stands for Asian American or Pacific Islander background. **Number exceeds total n because respondents could select more than one option. "Non-Gateway" includes upper-level and graduate courses. "Gateway" includes introductory and developmental courses.*

Sources: *Time for Class Instructor Survey 2024, NCES, Tyton Partners analysis*

Comparison of Time for Class 2024 instructor institutions and IPEDS distribution
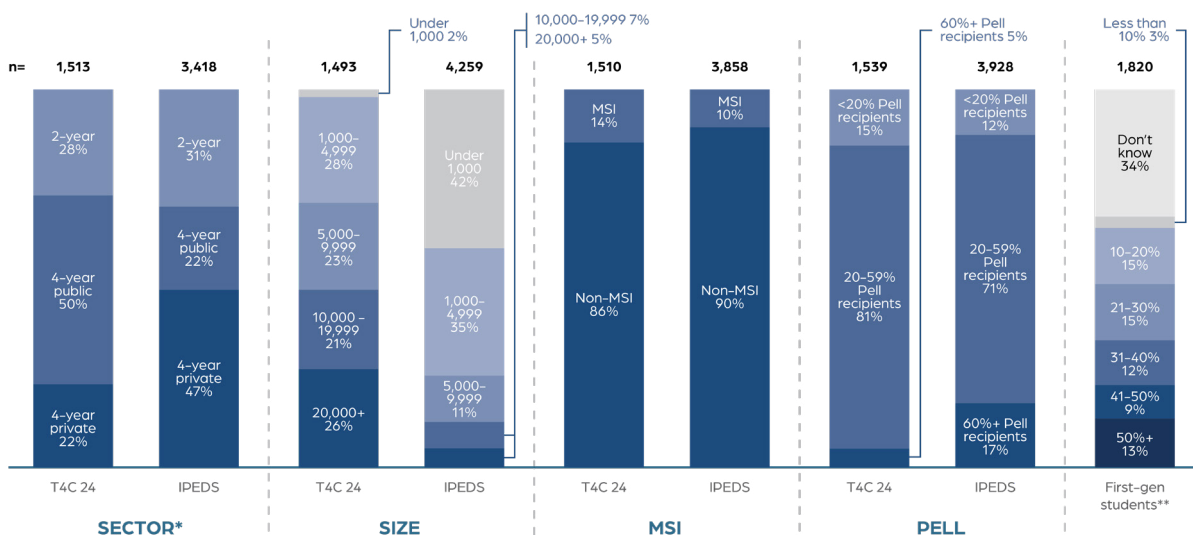
Notes: *2-year includes private and public institutions. **IPEDS does not track first-generation status.*
Sources: *Time for Class Instructor Survey 2024, NCES, Tyton Partners analysis*

Figure 25:

Listening to Learners 2024 student survey respondent characteristics (1/2)
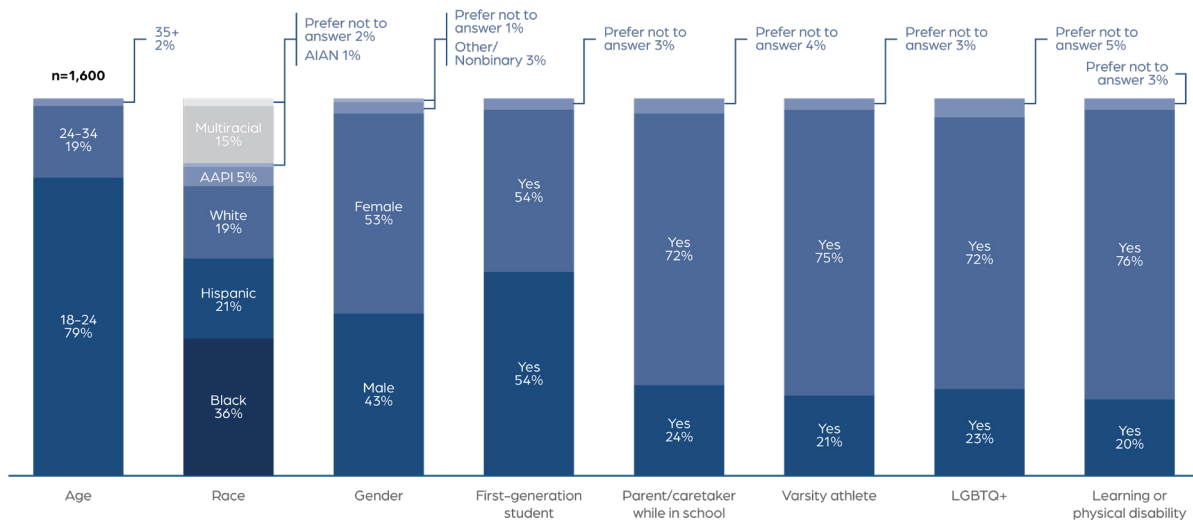
Notes: *AIAN stands for American Indian/Alaskan Native background. AAPI stands for Asian American or Pacific Islander background.*
Sources: *Time for Class Student Survey 2024, Tyton Partners analysis*

Figure 26:

Listening to Learners 2024 student survey respondent characteristics (2/2)
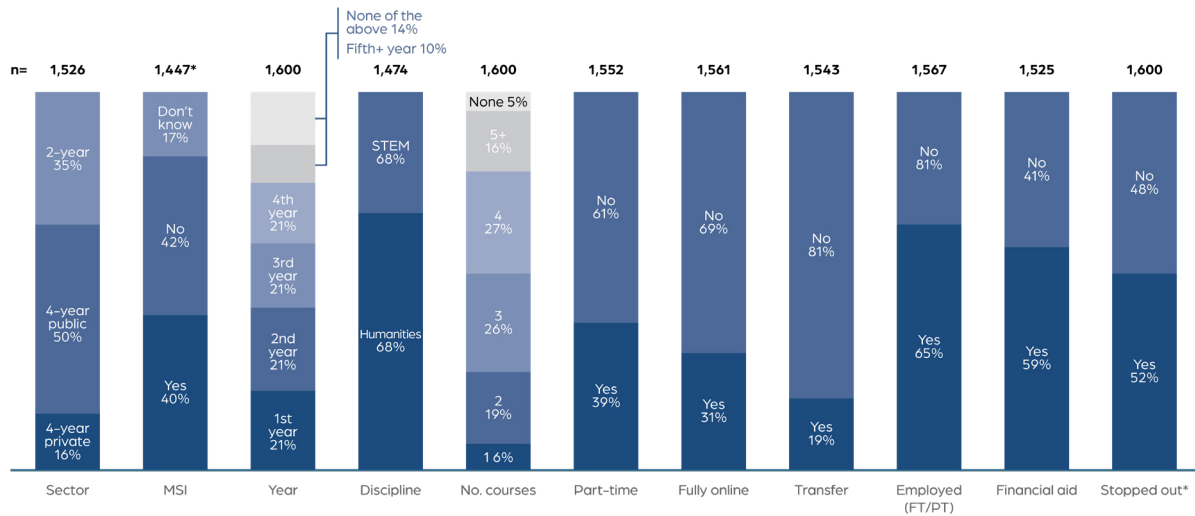
Notes: *Students who have ever taken an enrollment break between first year of college and today.*
Sources: *Time for Class Student Survey 2024, Tyton Partners analysis*

Based on the entire response set, the 95% confidence interval is +/- 2% for questions asked of instructors. Questions addressed to a smaller subset because of skip logic have wider confidence intervals. Generally, subgroups with samples of less than 10 responses were discounted. As with all large-scale surveys, T4C has the potential for bias. It is possible that respondents willing to take a digital survey, as opposed to a paper instrument, could be biased toward digital technology. It is also possible that those willing to take the time to discuss their own experiences with digital learning tools have stronger opinions than those who chose not to participate.

ACKNOWLEDGMENTS

EXAMPLES ARE NOT ENDORSEMENTS

This document includes examples and resources for the reader's reference. The presence of these materials is not an endorsement of any expressed views, products, or services. The materials feature opinions and recommendations from different experts, along with hyperlinks and websites that belong to other public and private organizations.

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