UNIVERSITY OF MARYLAND

2022 EDUCAUSE Student Survey

University of Maryland Full Report

February 2023

Prepared by Academic Technology Experience, Division of IT

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TERPS & TECH

How UMD is meeting students' evolving technology needs.

In Summer and Fall 2022, UMD students took part in the national Educause survey, which assessed their attitudes and experiences around academic technologies. These data offer a glimpse into students' evolving needs and show how UMD students compare to students across the country who answered the same survey (National Survey Respondents: *N* = 827; UMCP Survey Respondents: *N* = 674 (4% response rate)).

Students prefer face-to-face learning, and they leverage online resources to make the most of their in-person time.

Two-thirds of undergraduates (64%) prefer courses that are completely or mostly face-to-face. However, the vast majority of students also suggested that online resources and asynchronous learning opportunities are very important to their education, citing their needs for flexibility, self-pacing, and balance with other obligations. A year after returning to campus, we are establishing new baseline instructional practices, where tools such as Zoom and Panopto provide the affordances students need to individualize their learning experiences.

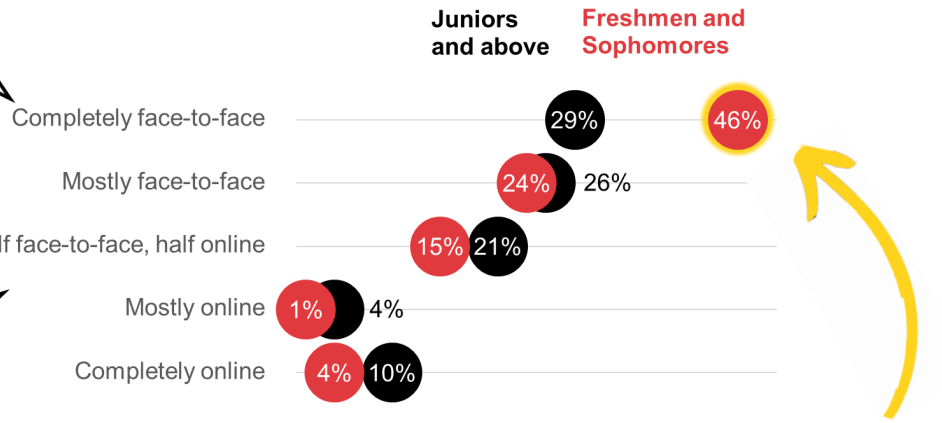
STUDENT VOICES

"I learn better in a classroom setting and perform better in the classes that I have in person. In online classes I get distracted and do not retain the information as well."

STUDENT VOICES

"Blended courses may offer better flexibility to work with my schedule as a working adult. Reduced time in transit allows my days to be more efficient."

Freshmen and sophomores favor completely face-to-face learning more than upperclassmen.



Class standing could be a window into related factors associated with preferred instructional practices, including age, housing status, work hours, and prior experience with online learning.

Wi-Fi issues are a common source of stress for students, on and off campus. This is an ongoing challenge for college campuses nationally, especially since students have come to rely on online resources more since the COVID-19 pandemic.

57%

Percentage of students who reported experiencing stress due to unstable internet.

Access to online resources and academic technologies reduce stress.

Students' increasing reliance on online resources, such as lecture slides and videos, means that access to these resources is more important than ever. Over half of students (57%) reported having the appropriate software and applications needed to perform tasks for their courses, and the majority of students who said they needed assistive technologies had access to them.

Students use technology to review course materials and stay connected with their instructors and peers.

9 in 10

Report online access to homework, presentation slides, and lecture notes is important to their learning.

STUDENT VOICES

"When professors post lecture notes as well as an outline for their course structure either weekly or very clearly on the syllabus, I find myself more focused on the current topics and able to stay on top of the courseload with less stress."

Did you know...

52% of Zoom meetings in Fall 2022 were one-on-one?

6 in 10

Prefer online office hours and advising.

4 in 10

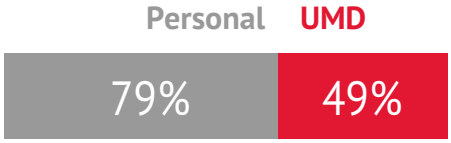
Need closed captioning.

Students trust UMD with their data.

Students feel positive about UMD's institutional data privacy and security measures, likely attributable to training programs such as Defend Your Shell. Similar to national trends, more students show greater familiarity with personal data privacy and security practices rather than UMD's practices as an institution, suggesting that the relationship between personal and intuitional data practices can be expanded.

58% Students have confidence in UMD's ability to safeguard their personal digital information.

More students are familiar with **personal data privacy and security policies** compared to **UMD's data privacy and security policies**.



% Average, above average, and very high familiarity self-rating

Questions or comments? Email us at acadtechfeedback@umd.edu

Executive Summary | 2022 EDUCAUSE Student Survey

January 2023

Report Prepared by:
Jonathan Engelberg, PhD

The COVID-19 pandemic redefined the role of technology in higher education and in students' lives. To better understand students' current technological needs, UMD participates in the yearly EDUCAUSE Student Survey, a national survey effort that assesses undergraduates' attitudes and experiences surrounding their relationship to technology. The 2022 EDUCAUSE survey focused on three main areas: (1) the involvement of online and hybrid learning modalities in the multifaceted student experience, (2) access to and use of technologies for student success, and (3) data privacy and security. This report summarizes the findings from UMD student responses with reference to a national benchmark when applicable.

Main Findings

1. **Students measure success in different ways.** When asked about their markers of undergraduate success, no single measure emerged as the most important to the majority of students. The diversity of students' goals brings into focus a theme of students' responses throughout the report, namely, that no single learning approach, technology, or modality fits all students. Rather, UMD can meet students' academic, social, and emotional needs by providing the multifaceted tools and affordances they need to individualize their learning experiences.
2. **Students prefer face-to-face learning, and they leverage online resources to make the most of their in-person time.** Two-thirds of students (64%) prefer courses that are completely or mostly face-to-face, but a large majority also rely on access to online course content and asynchronous learning opportunities, citing their needs for flexibility, self-pacing, and balance with other obligations.
3. **Access to online resources and academic technologies reduce stress and meet differential student needs.** Most students report having access to the devices, resources, and assistive technologies they need to avoid stress-inducing situations. Access to learning resources online (e.g., lecture slides, recorded lectures, online office hours) provides flexibility and enables students to better manage their schedules. However, in line with national trends, students on and off-campus continue to struggle with reliable Wi-Fi.
4. **Students trust UMD with their data and are more familiar with their own personal privacy-related practices than they are with those at UMD.** Moreover, students who are more familiar with UMD's privacy and security policies express greater trust. Many are unsure how UMD uses and protects their data, presenting opportunities for UMD to expand its data education efforts and, in the process, build more trust among its community.

Administration Timeline and Caveats

A few caveats are necessary when interpreting the data presented in this report. When UMD first administered this survey in July, it received an unusually low response rate of 2.7% completed responses (relative to ~10% in previous years), likely in part because EDUCAUSE offered no incentives for participation as it had in years past. The national survey itself seemed to yield substantially fewer respondents relative to prior years (*N* = 820, compared to thousands in prior years). At UMD, the decision was made to re-administer the survey in November (see Figure 1) to increase the sample size and generalizability of findings. This readministration may have allowed a small number of respondents to answer the survey multiple times, but they are undetectable due to the confidentiality of their responses. Another caveat with respect to benchmark comparisons is that the makeup of national survey respondents differed significantly from UMD's, including, for example, a much larger proportion of older, part-time students relative to UMD's survey targeting full-time undergraduates. The full report following this executive summary presents more information on UMD's survey administration and its comparability to benchmarking data, including efforts to understand the low response rate and determine the prevalence of potential repeat respondents.

The final sample of UMD students included 674 undergraduates (response rate = 4% out of 16,000 emails sent across July and November combined), still a relatively small sample size that warrants caution in extrapolating from the current data to the larger UMD population.

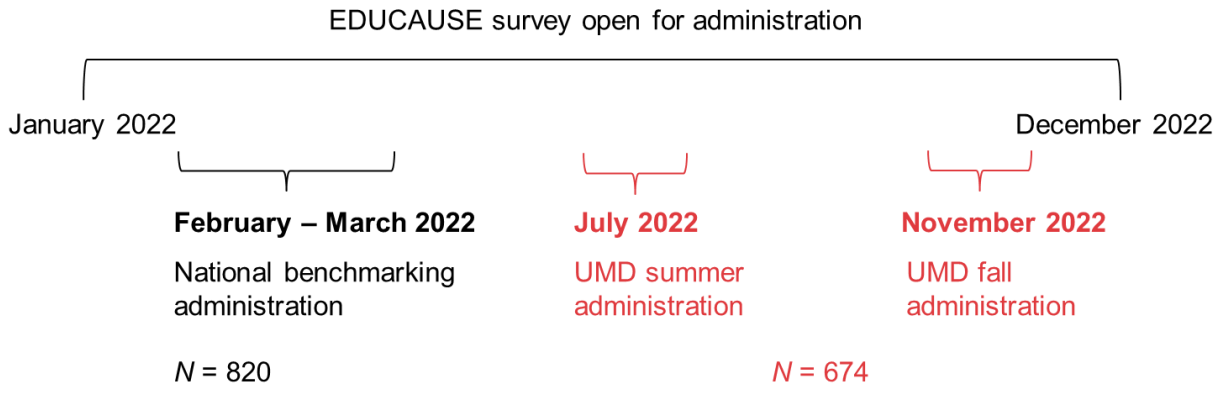


Figure 1. Timeline of the 2022 EDUCAUSE survey administration nationally and at UMD

Findings

Measures of Student Success

What does success mean for students in 2022? The answers can inform the context in which students live and learn as well as lead to insights on their goals for technology use. When asked to choose the single most important measure of success in their undergraduate experience, students differed in their definitions, with no answer garnering agreement from over a quarter of respondents (see Figure 2 below). The most common responses involved succeeding academically and/or gaining tangible benefits (Completing a degree, 22%; Securing a job, 20%), a dominance of achievement-oriented measures that parallels recent trends in national studies[1]. Nonetheless, a meaningful subset of students selected responses that are more closely associated with themes of academic engagement or growth (Achieving personal growth, 12%; Gaining general knowledge; 7%). The variability in students' measures of success may call for commensurate variability in the tools, learning technologies, and affordances that UMD provides to help them meet their goals, as we will see below.

Figure 2. Students' self-selected measures of success. Note that students could only select a single response and were therefore required to identify their one most important measure. National benchmarks are indicated with gray lines (white when overlapping with UMD data).

[1] Jennings, N., Lovett, S., Cuba, L., Swingle, J., & Lindkvist, H. (2013). How students define success in college. *Liberal Education*, 40-47.

The Multifaceted Student Experience

Students value the in-person learning experience. Two-thirds of students prefer *courses* that are completely or mostly face-to-face (64%), and a similar majority (61%) prefer always or mostly *meeting* in-person when completing academic work with other students. However, a number of potentially interrelated factors affect these preferences, suggesting that students enjoy some flexibility in options to meet their specific circumstances. Most notably, modality preferences vary by class standing (see Figure 3 below), with freshmen and sophomores reporting greater preferences for completely face-to-face learning (46%) compared to juniors and above (29%). Please note that this question asked about general preferences in course modality; more specific information about modality preferences for types of learning activities can be found in the Technologies for Student Success section.

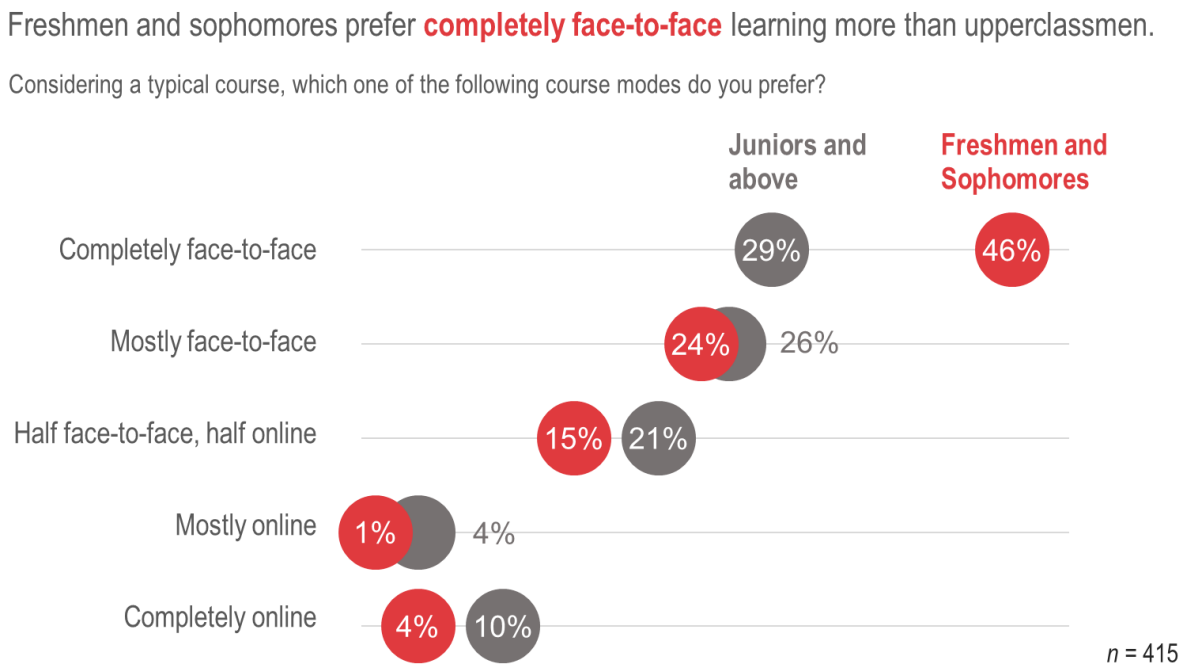


Figure 3. Comparison of modality preferences between underclassmen and upperclassmen.

Class standing could provide a window into many other factors associated with preferred instructional practices, including age, housing status, work hours, and prior experience with online learning. For example, of UMD students responding to this survey, 74% of upperclassmen live off campus, compared to 20% of underclassmen; 21% of upperclassmen work 20 or more hours, compared to 8% of underclassmen; and only 3% of upperclassmen report never having taken online or blended courses in the past, compared to 40% of underclassmen. The same profile that characterizes many upperclassmen at UMD – living off-campus, working, and having prior experience with online college courses – also predicts greater preferences for online or blended learning options, relative to students who do not fit that profile (Figure 4). The national benchmark also provides some

insight into this question. Nationally, there is a much more balanced preference for online and face-to-face, compared to the marked preference for face-to-face expressed by UMD's survey respondents (e.g., 64% of UMD students prefer a course that is face-to-face compared to 41% of the national benchmark respondents). Recall that the national benchmark respondents were demographically different from the UMD respondents on factors that might impact this question, such as age and part-time status.

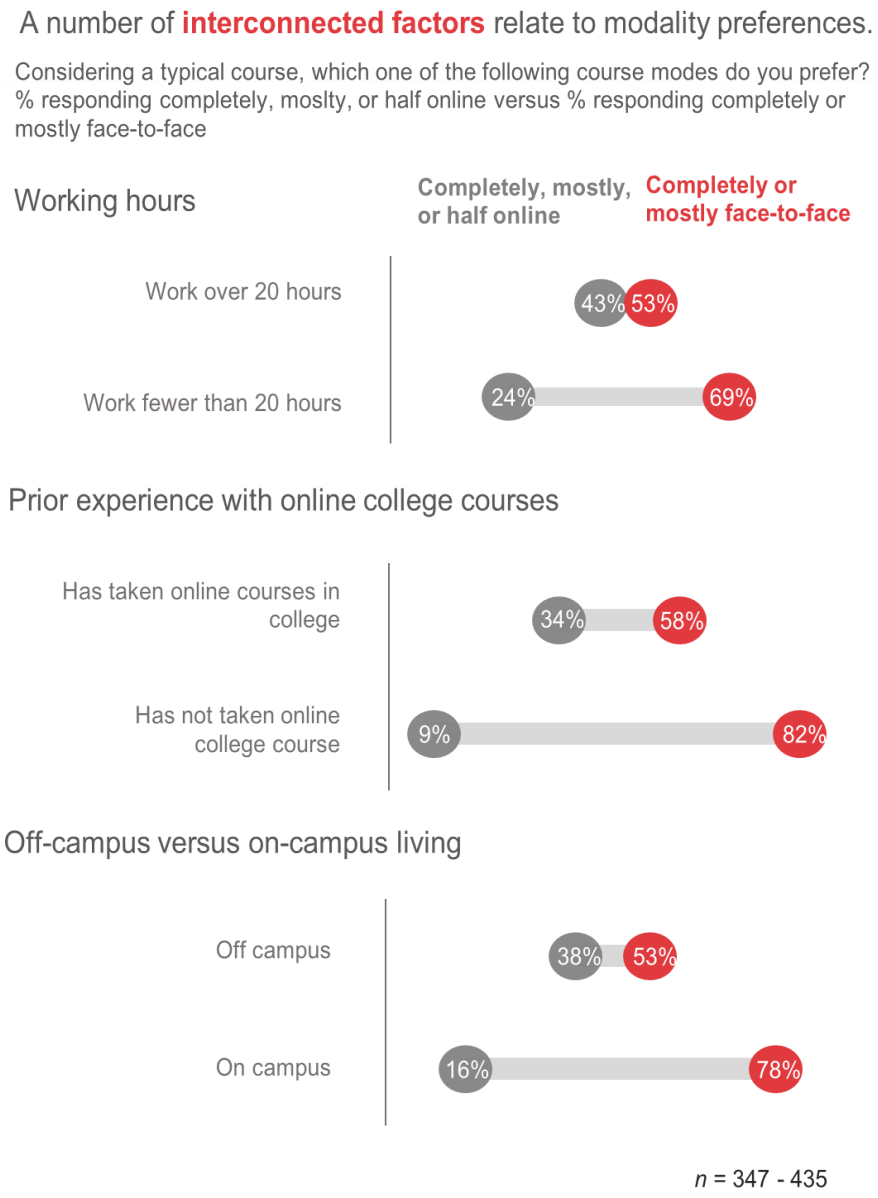


Figure 4. Comparison of modality preferences between students who work over 20 hours versus those who work fewer than 20 hours per week, students who have taken online college courses versus those who have not, and students who live off campus versus those who live on campus. Note that percentages do not add up to 100% because students had the option to select a No Preference response, not represented in this figure.

From the current data, it is impossible to say which of these factors most influence students' preferences, but text responses reinforce the hypothesis that a combination of personal circumstances, past experiences, and course-related factors all can play a role. Students favoring face-to-face learning suggested that they had experienced difficulties learning online due to a lack of engagement or motivation. On the other hand, some students felt that blended or online options offered more flexibility towards work or family obligations, illnesses, disabilities, and other constraints.

> "I learn better in an in-classroom setting and perform better in the classes that I have in person. In online classes I get distracted and do not retain the information as well."

> "I had never considered taking an online class before the pandemic. While I prefer classes in person, I would not [be] opposed to taking an online class in the future and may actually prefer it depending on what the class is and whether or not I believe having the class online would be beneficial or harmful."

> "When initially beginning college at UMD as a freshman before the pandemic, I was hesitant to take blended courses out of fear of my own lack of ability to keep up with the coursework. After moving online as well as returning to in-person, I have found some courses are more suited for an online environment and I do not have trouble keeping up with the coursework. It actually balances my schedule more as I do not worry about walking time as much and encourages me to continue to attend lectures rather than skip when I am feeling more tired than usual. Online access makes me a much more engaged student."

> "Blended courses may offer better flexibility to work with my schedule as a working adult. Reduced time in transit allows my days to be more efficient."

Technologies for Student Success

Despite students' general preferences for face-to-face learning experiences, they have come to rely on an expanded suite of online resources to make the best use of their in-person time. When asked about the online resources that are important to their learning, a majority of students indicated that most course materials are very or extremely important to access online, especially homework assignments (91%), presentation slides (90%), and class or lecture notes (90%) (see Figure 5). In general, access to these learning resources online is important to more UMD students than students nationally, suggesting that UMD students learned the affordances of these tools during the pandemic and want some of them to remain. It is notable that some of the resources students consider important include those that were less frequently used or made available prior to the pandemic, such as recorded lectures (79%) and online office hours (61%). For example, in Fall 2019, fewer than 400 daily hours of recorded video lectures were delivered via Panopto on a typical weekday. In Fall 2022, there were typically over 2,000 hours of video lectures delivered each weekday[2], one example of how UMD is rising to meet students' needs and expectations in an evolving academic landscape. Similarly, Zoom usage remains elevated relative to pre-pandemic baselines, and the majority of Zoom meetings (52%) in Fall 2022 were one-on-one, likely including a large proportion of online office hours and academic advising sessions.

[2] Academic Technology Experience team (2023). *Systems and Services Report: Academic Innovation & Technology Highlights (Fall 2022)*. Retrieved from https://infogram.com/1pzglr02jglm9js2djqlknyneqi1mev552w?live

More students report that it is important to access **course materials** online than **course content**, although approximately half or more of students find all of these learning artifacts important to access online.

How important is it to your learning to be able to have access to each of the following things online? % Very or Extremely Important

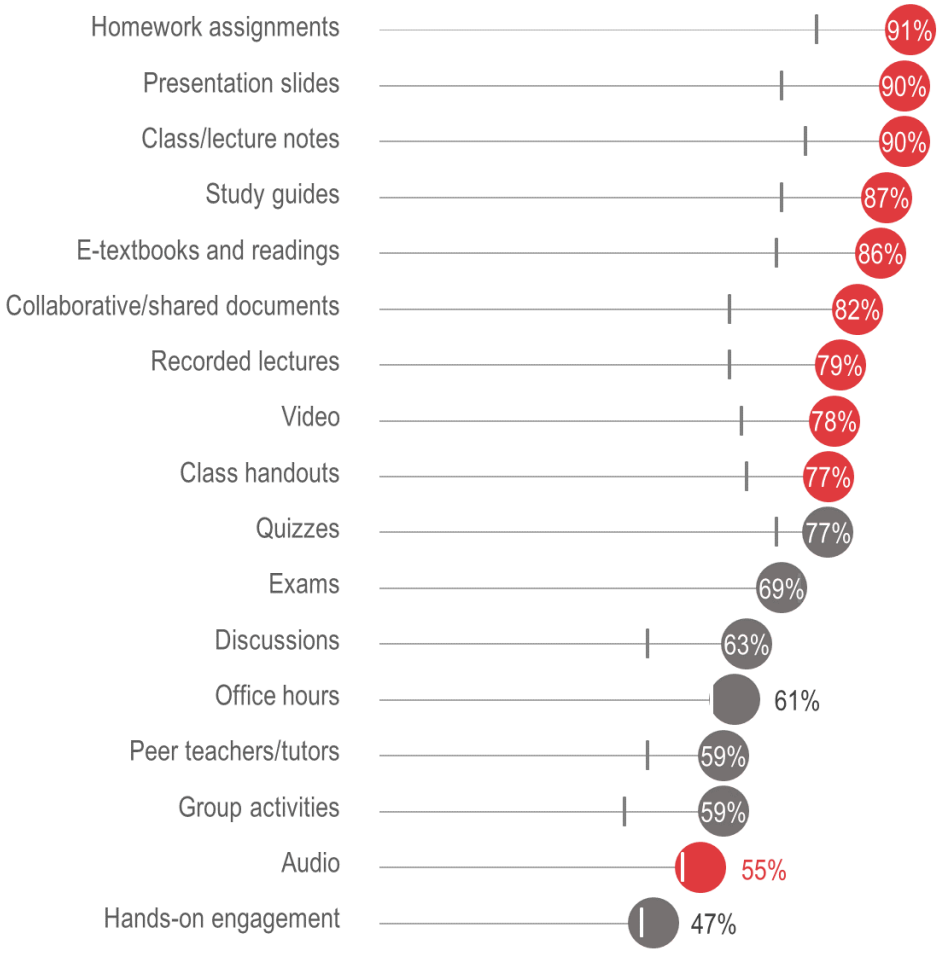


Figure 5. Resources that students indicated as very or extremely important to access online. Course materials (e.g., readings, lectures) are highlighted in red whereas other course content is plotted in gray. National benchmarks are plotted in gray bars (white when overlapping with UMD data).

Most UMD students report having access to the technologies necessary for learning. Nearly every student (98%) can access their primary device whenever they want, and 93% also use secondary devices (most commonly their smartphones) to complete academic work. Additionally, most students reported that they had not experienced many device- or access-related situations that could cause stress. For example, the majority of students had

their devices properly configured to perform academic tasks (59%) and were always able to run required applications or software (60%). The one situation that caused stress for most students (57%) was unstable internet connections, although it should be noted that the survey did not ask questions distinguishing between on-campus and off-campus Wi-Fi issues. Unstable internet connections were also the most common source of stress among the national EDUCAUSE sample (34%), and they will likely remain predominant concerns across college campuses as students rely more on online resources.

In text responses, students noted that online course content enabled them to revisit material, stay up-to-date with assignments, and self-pace their learning such that they were better prepared for their in-person classes. However, the centrality of online content to their learning also led them to emphasize Wi-Fi issues as an area of particular concern.

> "When professors post lecture notes as well as an outline for their course structure either weekly or very clearly on the syllabus, I find myself more focused on the current topics and able to stay on top of the courseload with less stress. I find canvas announcements one of the most useful features for professors to communicate upcoming assignments, projects, or exam details that may not have been initially listed. It also keeps me up to date with any changes to the coursework plans and very accessible on the canvas page."

> "Wi-fi is variable in its connectivity. This leads to some occasions where I cannot access the materials for the class due to internet issues."

Assistive academic technologies are key to making course materials accessible, and most students requiring assistive technologies at UMD reported having access to them (see Figure 6). The most commonly required assistive technologies include closed captions on videos, digital highlighters, and digital players/recorders, and of students needing these technologies, roughly 4 in 5 reported that they have access. These numbers speak to the reach and significance of UMD's accessibility efforts, such as Panopto Professional Captioning, which provided 702 captioned videos (totalling approximately 136 hours) in Fall 2022 alone[3].

[3] Academic Technology Experience team (2023). *Systems and Services Report: Academic Innovation & Technology Highlights (Fall 2022)*. Retrieved from https://infogram.com/1pzglr02jglm9js2djqlknyneqi1mev552w?live

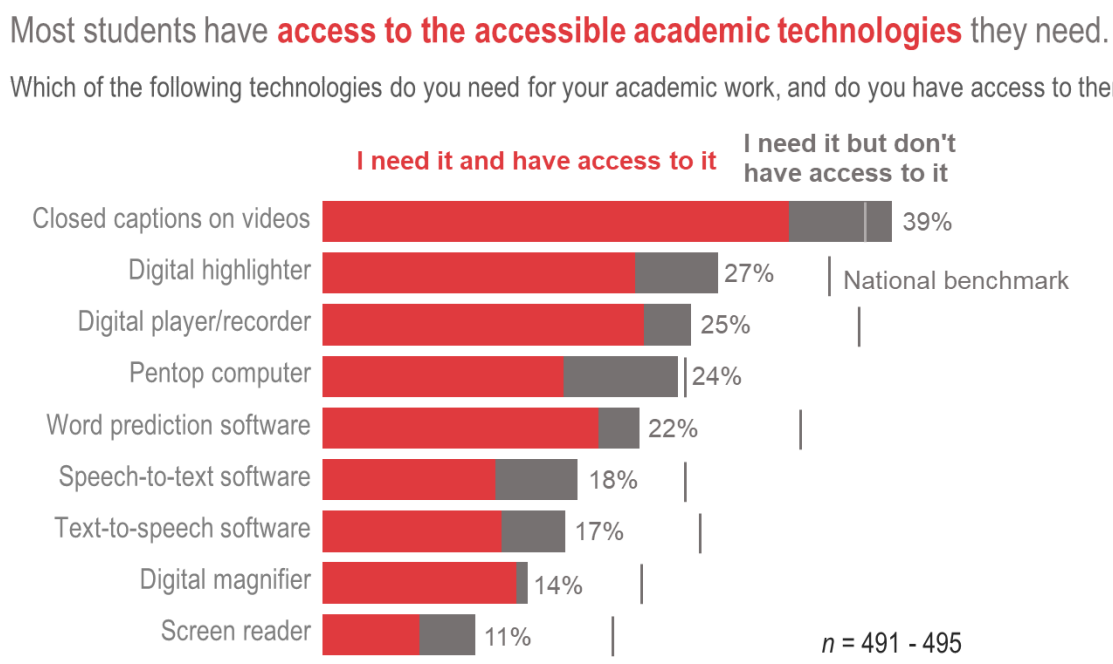


Figure 6. Academic assistive technologies that students report they need. Percentages indicate the total proportion of UMD students who reported needing the technology, combining those who have access (plotted in red) and those who do not (plotted in gray). Gray lines indicate the total proportion of national respondents who reported needing the technology.

UMD also promotes access by providing physical resources, spaces, and solutions to IT-related issues. A majority of students (62%) used UMD-provided services for at least one academic need in the current term. Figure 7 shows that the most commonly used of these services involved students leveraging UMD's resources as a physical campus to access hardware (e.g., computer labs) and Wi-Fi, suggesting that students derive value academically from being on or near campus. It is worth noting that more UMD students utilize these services compared to the national benchmark, suggesting that UMD students are more aware of these resources, have more need for them, and/or have more access to them than students at other institutions. Additionally, one in five UMD students (21%) received help from UMD IT support, roughly double the number of students who received help from external IT support services (11%).

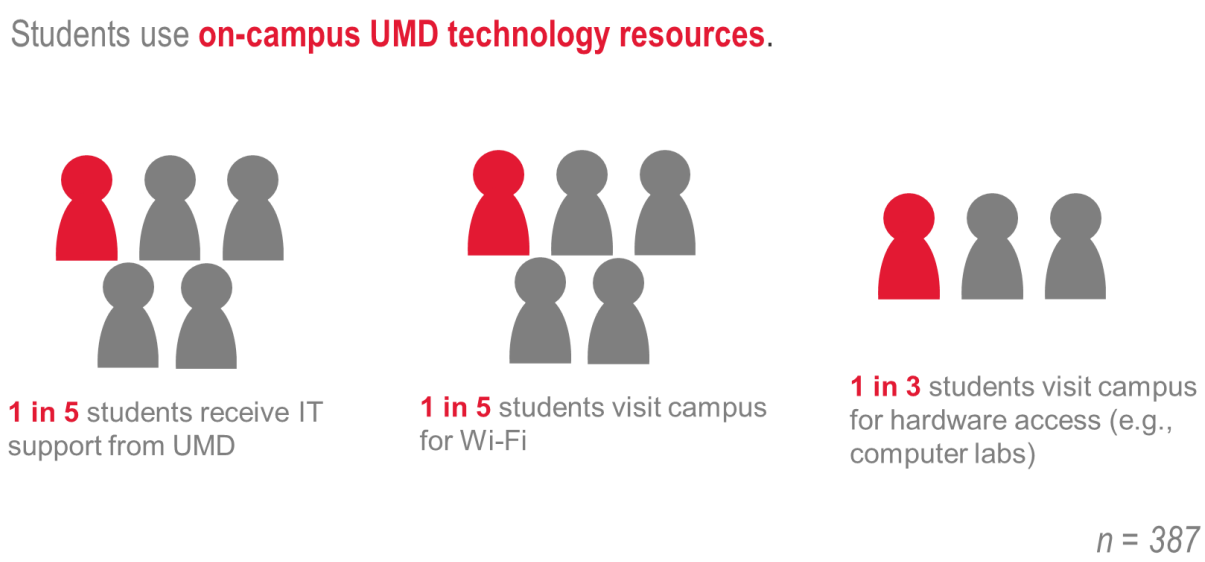


Figure 7. The top 3 most common responses among students who reported that they used IT services provided by UMD in the current academic term.

Upperclassmen were disproportionately represented among students who used these services. Most notably, nearly half of upperclassmen (46%) reported visiting a physical campus location for hardware access, compared to only 22% of underclassmen. This difference possibly reflects a greater need for specialized hardware in upper-level courses and further underscores the importance of providing varied technology and accessibility options to suit students' different stages in education.

Data Privacy and Security

Overall, students trust UMD with their data. At least half of students have confidence in UMD's ability to safeguard their personal digital information (58%, compared to 16% who do not; the remaining responses were neutral) and trust UMD to use their data ethically and responsibly (51%, compared to 18% who do not). These numbers are in line with national benchmarks (see Figure 8). However, gaps exist predominantly in students' understanding of UMD's data use and practices. Only 39% of students understand UMD policies about data use, storage, and protection, and only a quarter (24%) understand how UMD uses their personal data, results that differ relative to the national EDUCAUSE sample (52% and 43%, respectively). That said, it is important to re-emphasize that the demographics and institution types represented in the national benchmark differ significantly from UMD's. For example, the national sample includes some smaller technical colleges whose data requirements and operations are likely very distinct from those of a large, four-year R1 university like UMD, and whose students might have an easier time understanding the scope of their college's data use and policies.

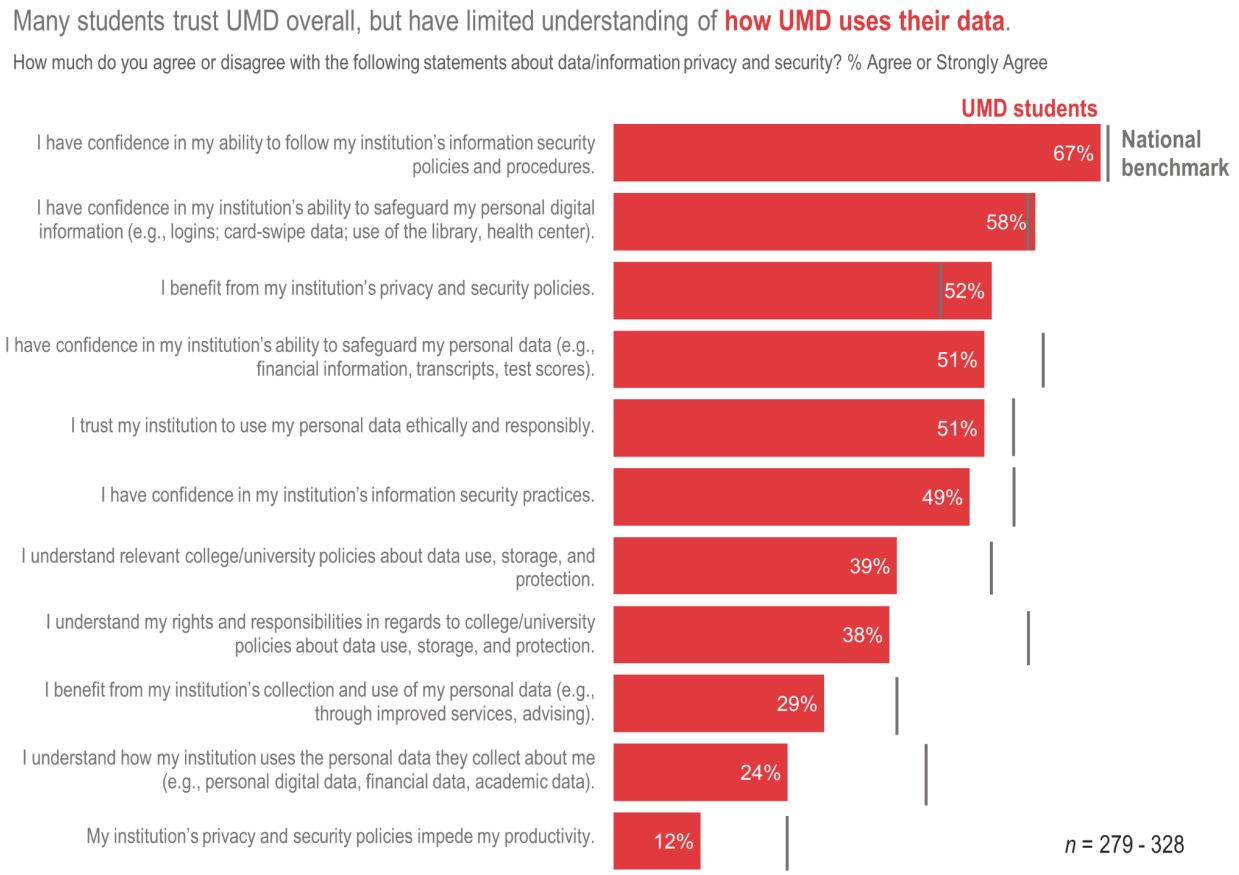


Figure 8. UMD students' agreement with statements regarding data privacy and security, plotted in red bars, compared to the national EDUCAUSE benchmark data plotted in gray lines.

Overall, UMD students are literate in policies surrounding data use and protection, according to self-report. They profess better familiarity with their own data privacy and security practices compared to UMD's (see Figure 9), a point which, although perhaps expected, suggests that the relationship between personal and institutional data practices can be expanded. This finding does mirror national trends and indicates that, where we observe gaps in students' understanding of institutional data policies, it could be because personal data privacy and security is just being well understood by the student population, which can be a building block for education on institutional policies.

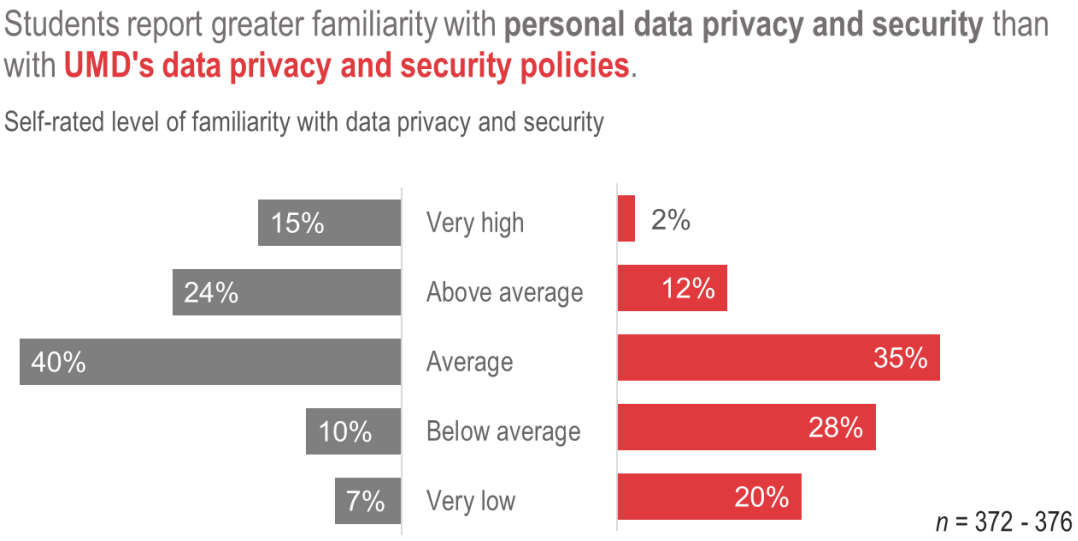


Figure 9. Comparison of students' self-reported familiarity with personal data privacy and security policies (in gray) versus their familiarity with UMD's data privacy and security policies (in red). Percentages do not sum up to 100% because students could select a "Don't know" response option.

Importantly, there exists a relationship between students' understanding of UMD's data practices and their willingness to trust UMD with their data: those who report average or above familiarity with UMD's policies also have more trust in UMD to use their data ethically and responsibly (see Figure 10). This finding suggests that UMD's ongoing data education and awareness programs, such as Defend Your Shell, are key to building greater trust through greater understanding, and conversely that a lack of understanding might relate to some of students' lingering apprehensions. In particular, students voiced special concern with third-party software applications needed for school, especially the ability of software companies to store and protect their personal data (90% of students expressing some concern). It is possible that more education regarding UMD's use of personal data and its relationship to third-party vendors could address some remaining concerns.

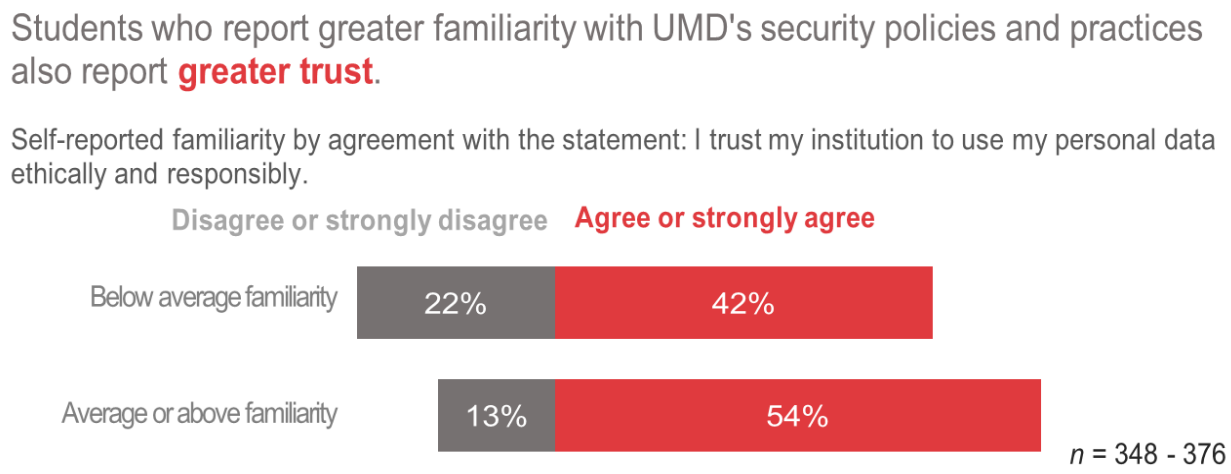


Figure 10. Comparison of students' trust in UMD's ethical and responsible handling of their data between those who reported below average levels of familiarity with UMD's data security policies and practices, and those who reported average or above levels of familiarity. Percentages do not add to 100% because students could select a Neutral response option not represented here.

Further evidence for the importance of institutional data training efforts is that they are the most common resource from which students have learned about UMD's security and privacy policies (Figure 11). A quarter of students (26%) suggested that information provided by UMD is also a primary resource for learning about personal data security and privacy, highlighting UMD's role in promoting general and transferable practices around data use.

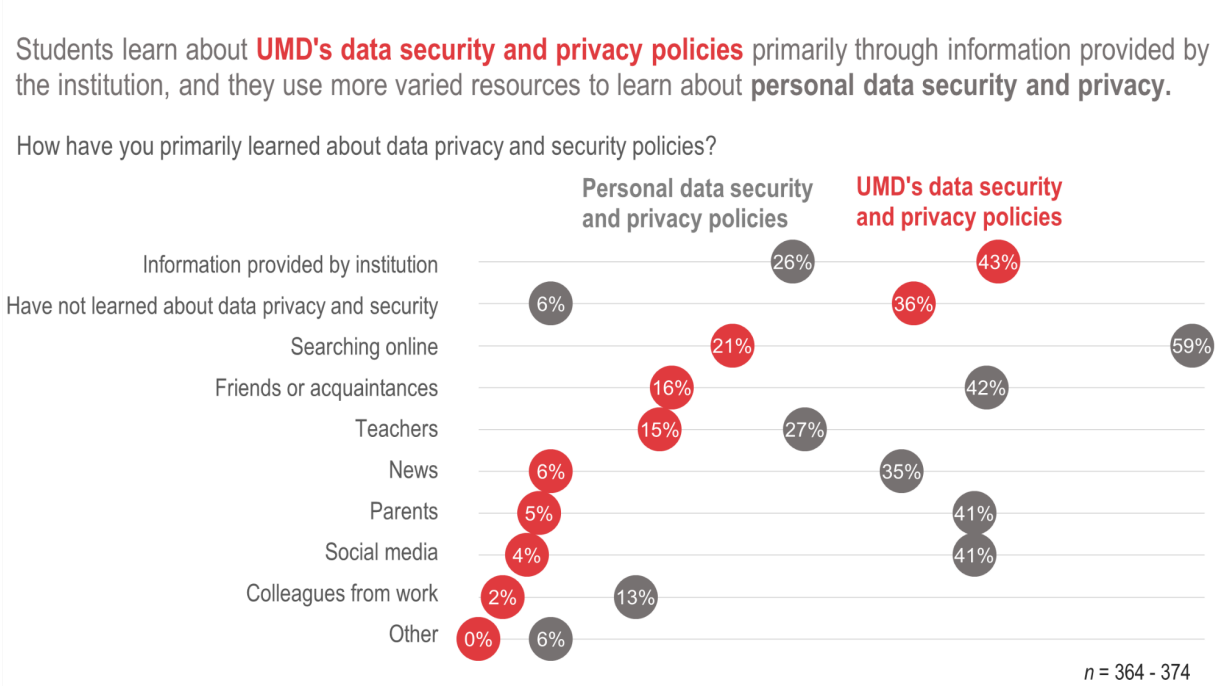


Figure 11. Comparison of the resources students use to learn about UMD's data security and privacy policies, highlighted in red, versus personal data security and privacy policies, in gray.

Text comments support the notion that some concerns stem from students' lack of understanding or trust regarding how their data is used, particularly by third parties. Other responses expressed concerns not specific to UMD, but instead reflected a general wariness regarding the safety of any personal data collected by large institutions or on the internet. These comments suggest a potential ceiling to some students' capacity for trusting UMD (or any college) with their data, although UMD might address some concerns through continued transparency about its internet protection policies, such as the use of Box and GlobalProtect VPN.

> "I don't know how my institution uses [my data], and because I don't know and the school isn't too transparent about it, I have to be on the safe side and assume that they don't protect my data as well as I feel they should."

> "I trust that my institution itself is able to safeguard my personal data. I do not trust that any other institution that may have access to that data is able to safeguard my data."

> "Anything connected to the Internet is vulnerable. Safety can't be guaranteed."

Conclusion

The COVID-19 pandemic unearthed systems and decades-old trends that higher education institutions are still grappling with today. One such trend is the multifaceted needs of students, even within one institution such as UMD, where students define success not only as completing a degree or securing a job but also as achieving personal growth.

While technology is never a solution in itself, it can be a tool to help meet these differential needs. For instance, students who commute or have job or internship responsibilities may need more flexibility, which can be met through adding a few hybrid or online courses to their schedule. While the majority of UMD students do prefer face-to-face courses, there is a desire for course materials to be available online to suit individual learning needs and schedules. Technologies supporting asynchronous lectures and coursework management (e.g., Panopto and ELMS-Canvas) play important roles in enabling flexibility with less friction.

The move to more materials, tools, and resources online brings with it a focus on data privacy and security, where the majority of UMD students are familiar with personal practices they can take to safeguard their data. This is a good starting point for understanding UMD's institutional policies and practices, and while more UMD students have an advanced understanding than undergraduate students nationally, there is still room to educate students on how UMD stores and uses student data. This result is tied to the field of learning analytics, which is the relatively new method of using learning-related data sources to inform practice, with users including not only administrators but instructors and students themselves. As use of and practices around learning analytics grow and become more standardized, understanding of UMD's security and data privacy practices will also increase.

2022 EDUCAUSE Survey – Frequency Report

Prepared by

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This report provides a summary of all quantitative survey results. For each survey item, this report presents the percent of respondents who selected each response option and the number of responses for each individual question. When available, national benchmarking data are also plotted in gray for comparison to UMD students in red.

1. Survey administration

Administration dates: This survey was administered twice to the undergraduate population at UMD. Following an unexpectedly low response rate of 2.7% completed responses to the Summer survey, the decision was made to re-administer the survey in the Fall in order to increase the sample size and enhance the generalizability of findings (see Appendix section 3a). Data from the Summer and Fall are consolidated in the results reported here. The survey was accessed through a link in an email invitation co-signed by the Assistant Vice President of Academic Innovation and Technology at UMD.

The initial Summer administration of the survey occurred July 12 - July 29, 2022. Reminder emails were sent on July 19, July 26, and July 28. The Fall re-administration occurred November 1 - November 24, with reminder emails sent on November 8, November 11, November 15, November 17, and November 22.

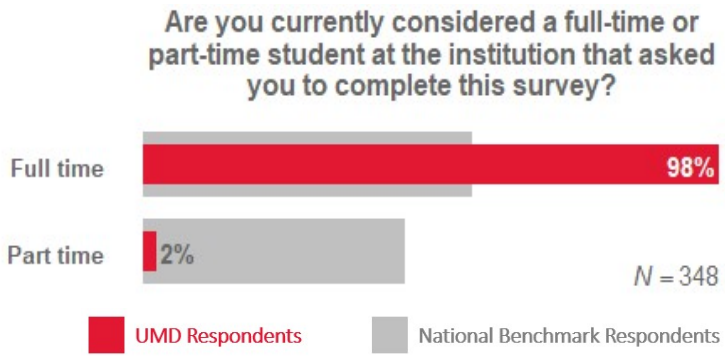
Target population: The target population included all full-time undergraduate students enrolled at UMD during Summer and Fall 2022. The survey was administered to students through an enterprise email tool connected to current university records. In each administration of the survey, 8,000 emails were sent (2,000 students per class year) to obtain a representative sample of UMD undergraduates.

Response rate: 674 students responded, out of 16,000 e-mail links that were sent across the two administrations. The response rate was 4%. Note, however, that it was possible for some students to receive the link in both the Summer and Fall administrations of the survey. Student emails were obtained through the UMD Office of the Registrar via a listserv in order to keep student identities confidential, which led to an inability to confirm if any students received the survey twice (see the Duplicate responses section below for more information). Therefore, the true response rate, calculated as the number of responses divided by the number of *unique* students who received the link, is likely slightly higher than 4%.

Completion rate: Of the respondents, 38% completed the entire survey, and 50% completed at least 90% of the survey. In this analysis, all responses are included on a per-question basis; as a result, the *N*-size per question may vary but is displayed for each item.

Benchmarking: Benchmarking data for each question, plotted in gray, are taken from the EDUCAUSE national sample of 820 respondents (not including UMD respondents). Comparisons to UMD students should be made with the following caveats. First, the national survey took place in February and March of 2022, rather than in Fall and Summer, and differences in responses between UMD and other schools may partly reflect the different times of administration. Second, the known demographics of the national sample differ significantly from those of UMD. For example, the plot below shows that the national sample includes a much greater percentage of part-time students, unsurprisingly as UMD survey links were targeted towards full-time students. This difference in enrollment status might be expected to produce differences in certain survey responses, such as greater preferences towards online learning among part-time students.

Unlike the national EDUCAUSE survey respondents, the UMD survey respondents were mostly full-time students.



Duplicate responses: Because it was possible for students to receive a survey link in both the Summer and Fall, or to click the same link more than once during each administration, thorough efforts were conducted to detect potential duplicate respondents (see Appendix section 3b for details on the methodology and findings from this investigation). It was determined highly unlikely that repeat respondents constituted any substantial proportion of the sample, and the decision was made to maximize sample size by retaining all respondents in this analysis, but the possibility of a small number of repeat respondents should be noted.

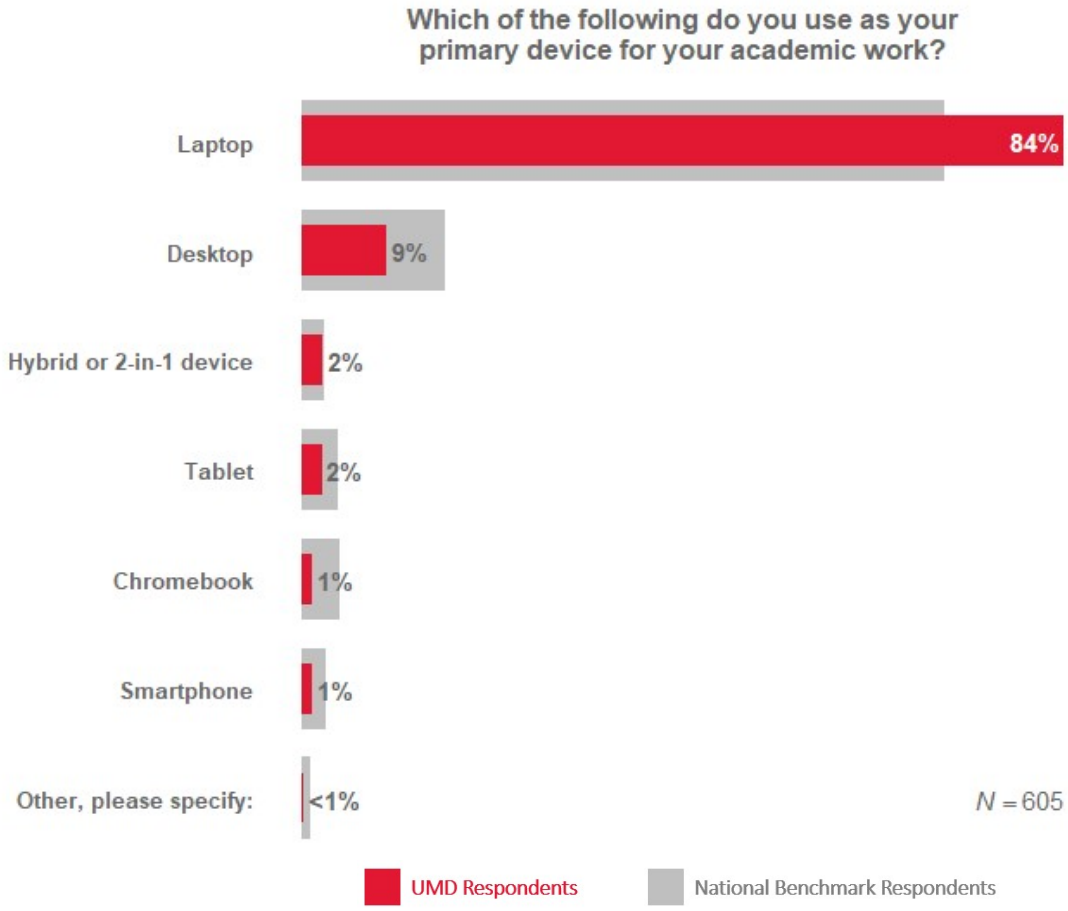
2. Results

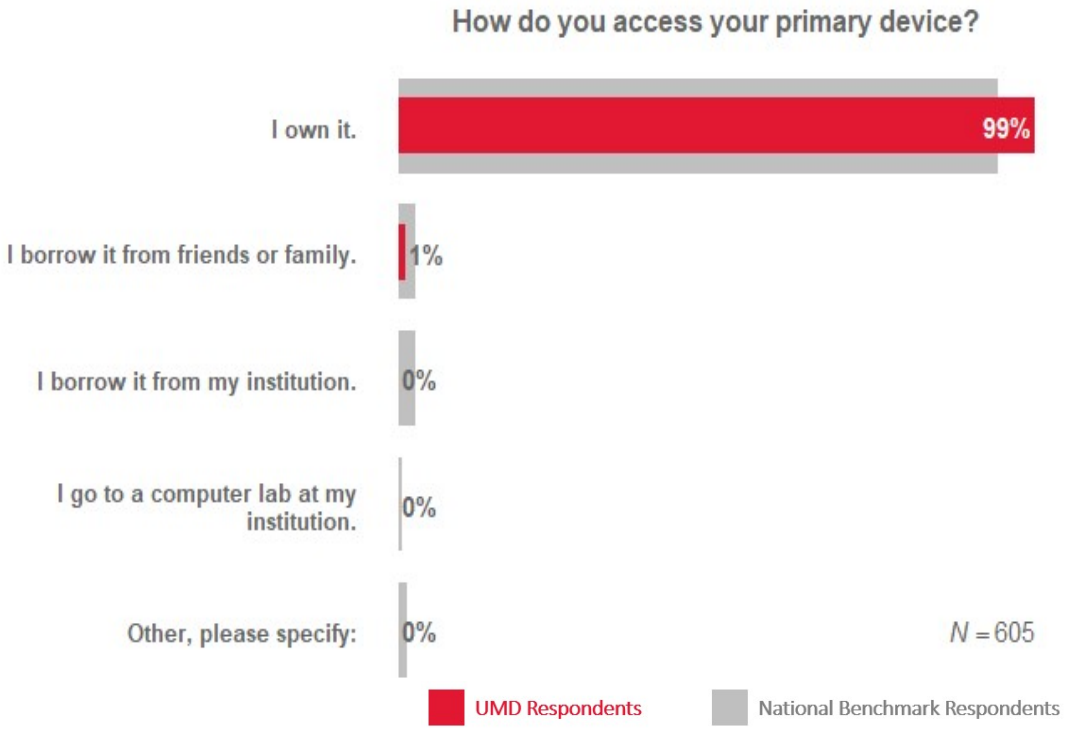
We removed non-responses from the percentage calculations. Percentages may not always sum to 100% because all figures were rounded to the nearest integer, and because students were able to select more than one response for some questions. The number of respondents is displayed below each graphic.

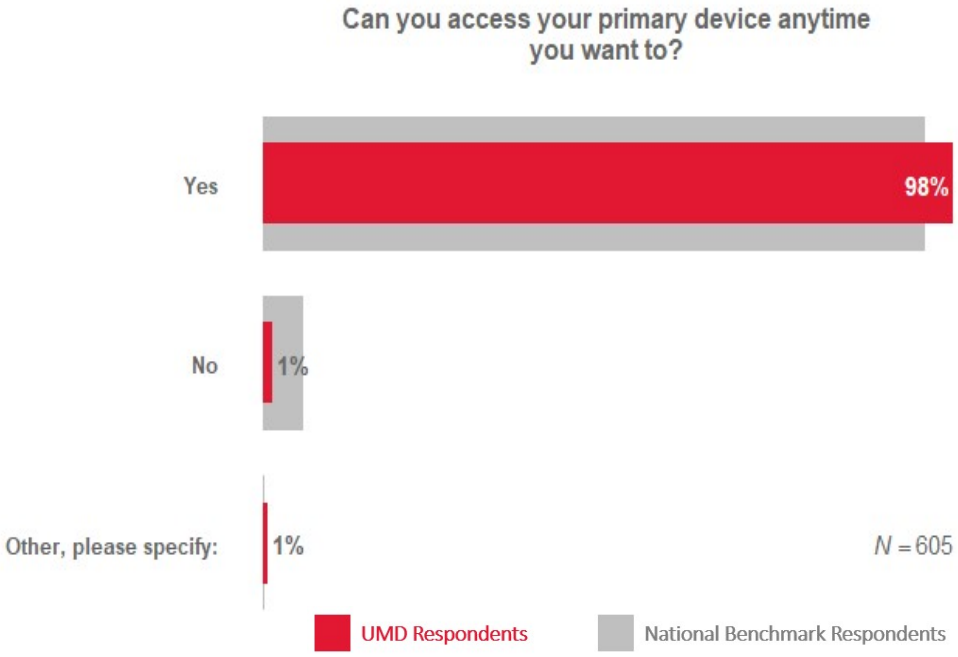
UMD student responses are plotted in the thinner **red bars**, and national benchmarks, when available, are plotted in wider **gray bars**. Benchmarking was not provided for some questions, in which cases only the red bars for UMD are plotted.

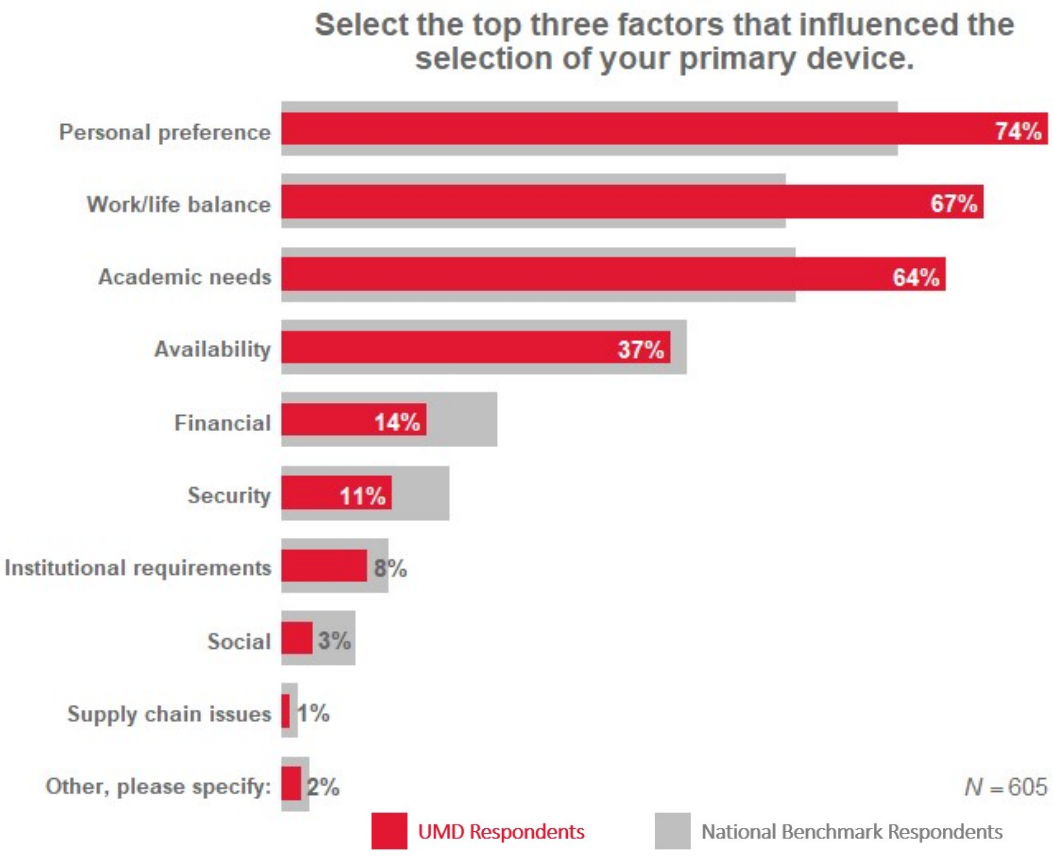
2.1. Equitable Student Access

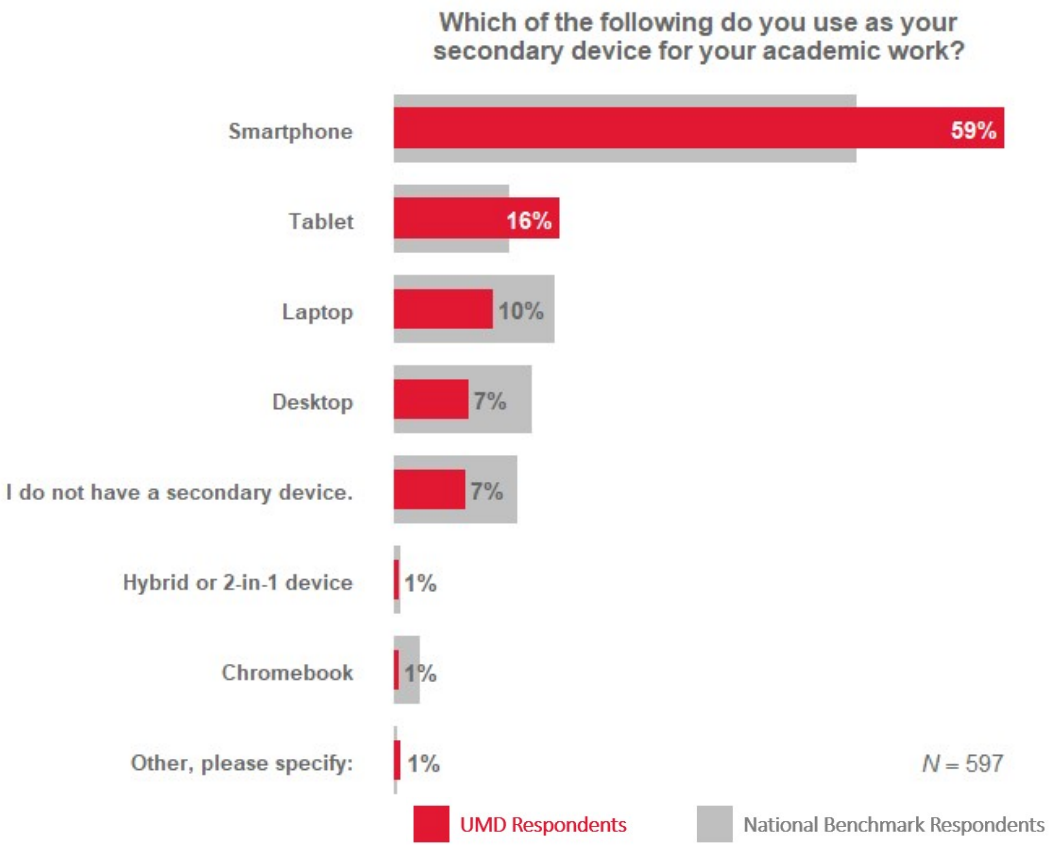
Devices for academic work



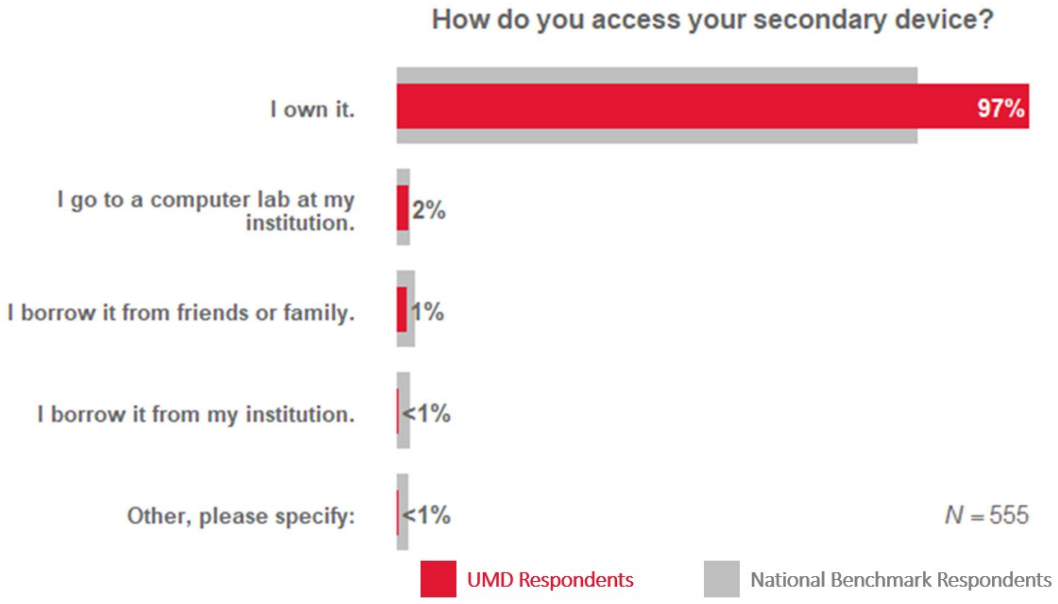

How do you access your primary device?
I own it.
99%
I borrow it from friends or family.
1%
I borrow it from my institution.
0%
I go to a computer lab at my institution.
0%
Other, please specify:
0%
N = 605
UMD Respondents
National Benchmark Respondents

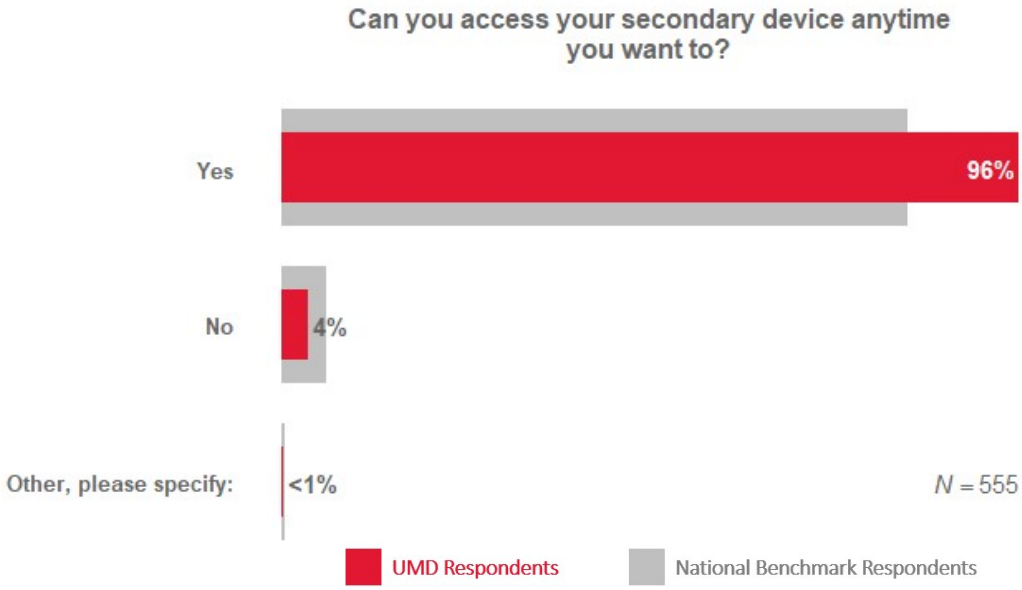

Can you access your primary device anytime you want to?
Yes
98%
No
1%
Other, please specify:
1%
N = 605
UMD Respondents
National Benchmark Respondents

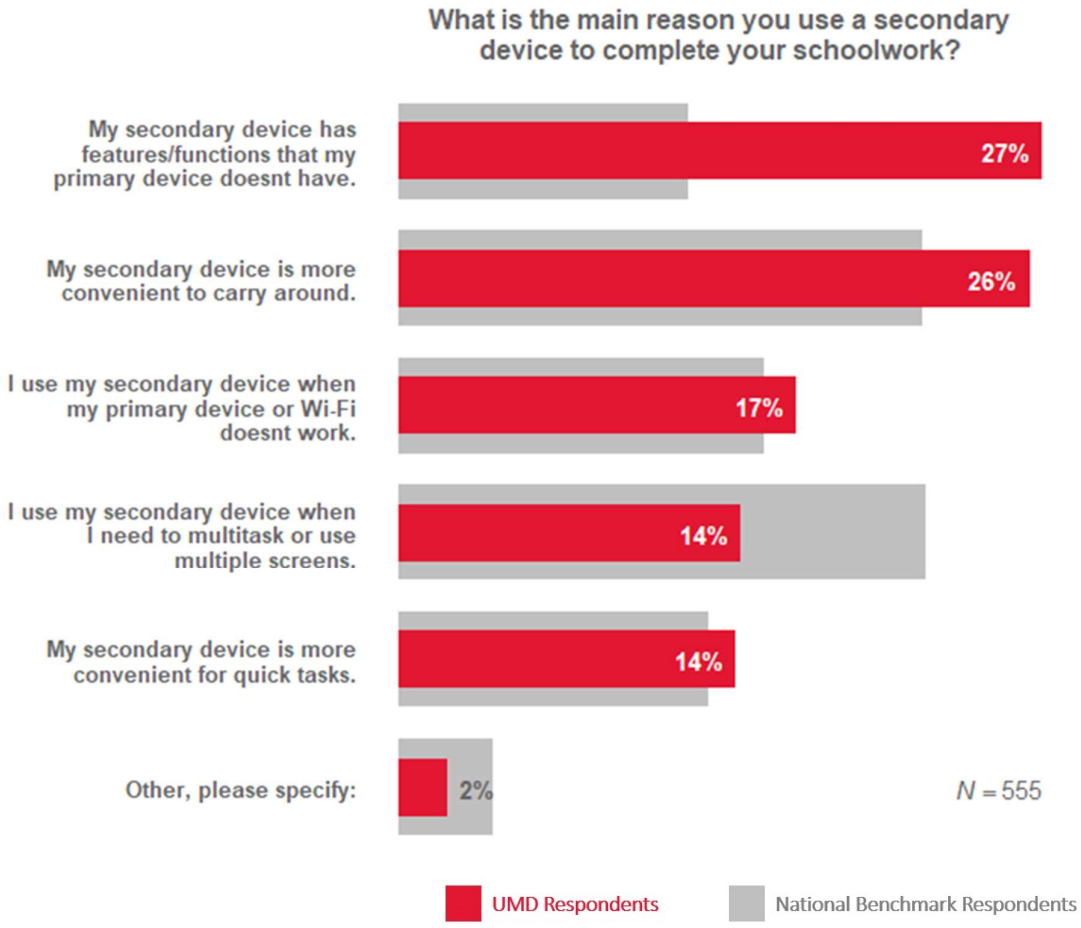

Select the top three factors that influenced the selection of your primary device.
Personal preference
74%
Work/life balance
67%
Academic needs
64%
Availability
37%
Financial
14%
Security
11%
Institutional requirements
8%
Social
3%
Supply chain issues
1%
Other, please specify:
2%
N = 605
UMD Respondents
National Benchmark Respondents



Students who indicated that they did not have a secondary device did not answer the following three questions, resulting in slightly lower *N*-sizes.

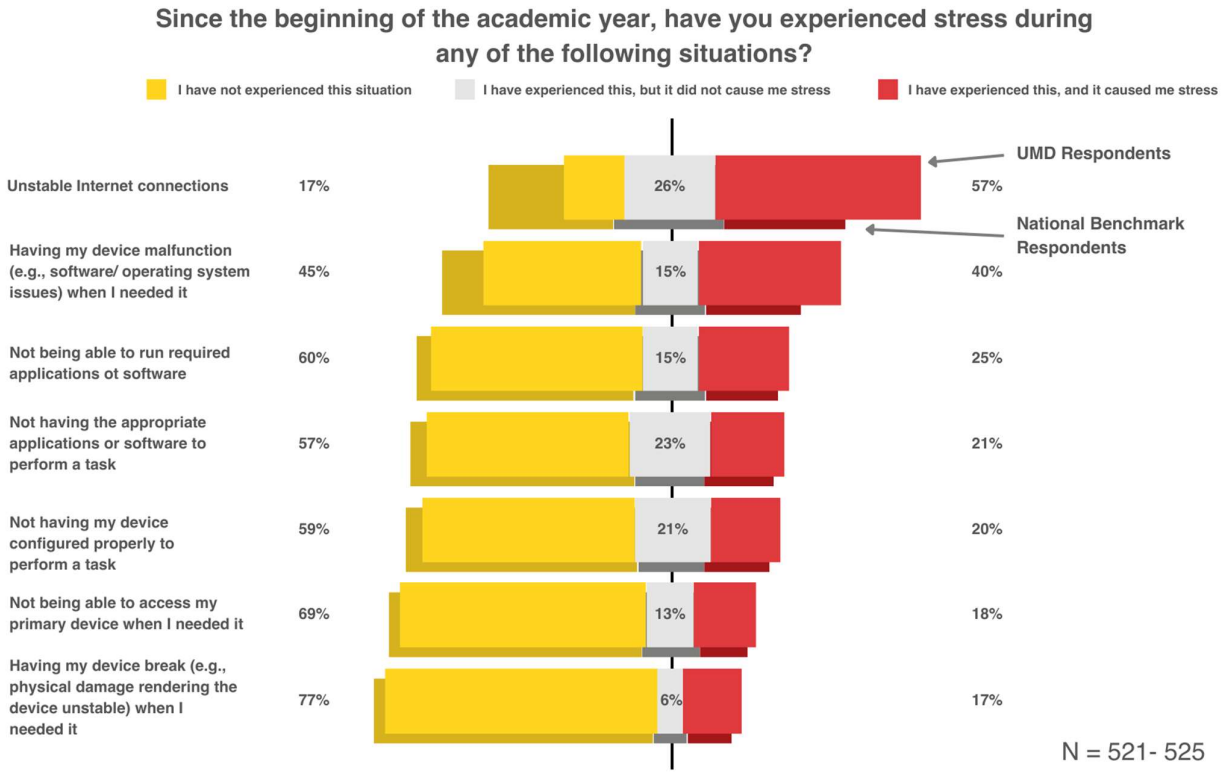



Can you access your secondary device anytime you want to?
Yes
96%
No
4%
Other, please specify:
<1%
N = 555
UMD Respondents
National Benchmark Respondents

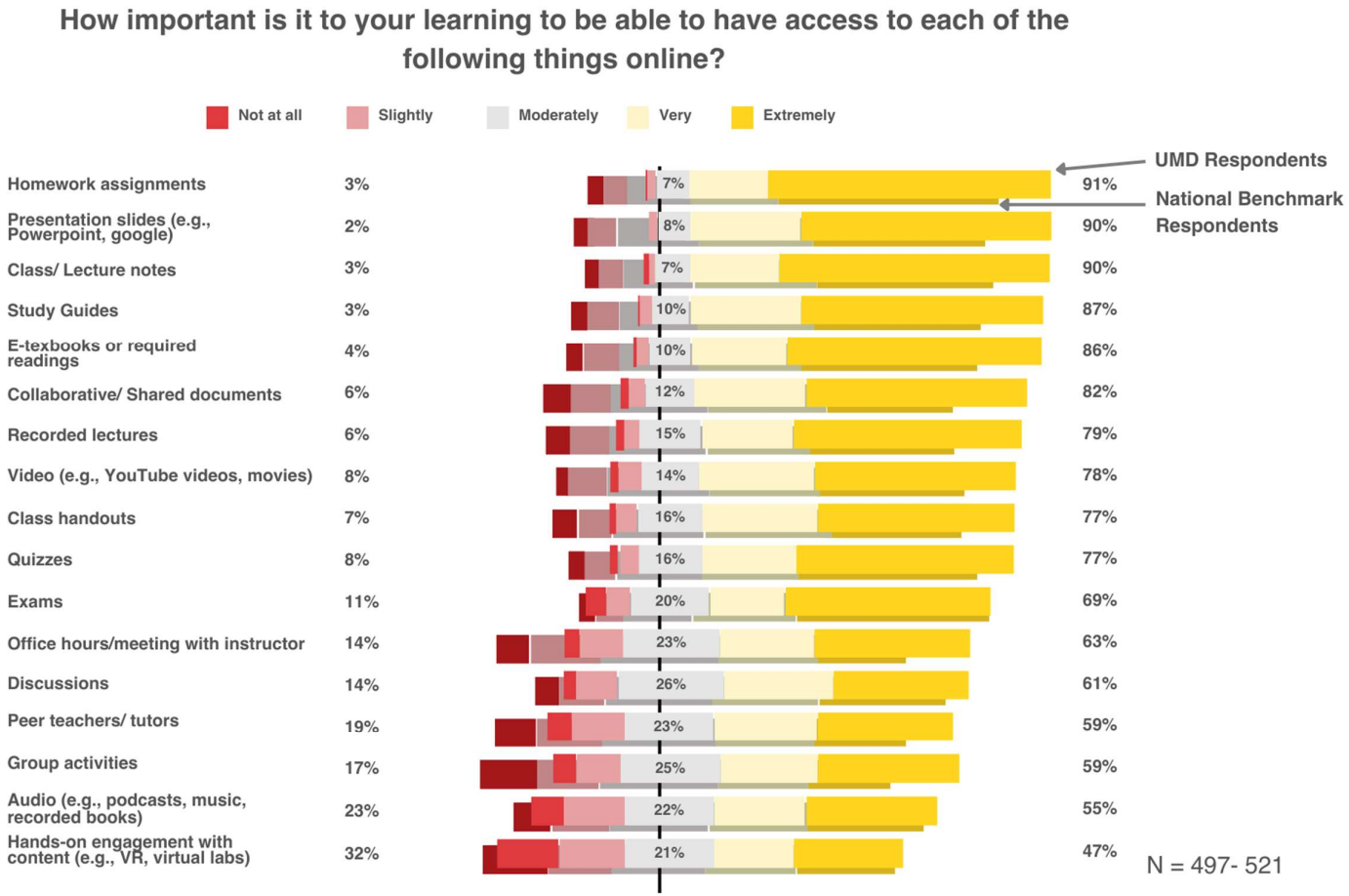

What is the main reason you use a secondary device to complete your schoolwork?
My secondary device has features/functions that my primary device doesnt have.
27%
My secondary device is more convenient to carry around.
26%
I use my secondary device when my primary device or Wi-Fi doesnt work.
17%
I use my secondary device when I need to multitask or use multiple screens.
14%
My secondary device is more convenient for quick tasks.
14%
Other, please specify:
2%
N = 555
UMD Respondents
National Benchmark Respondents

Device issues and needed resources

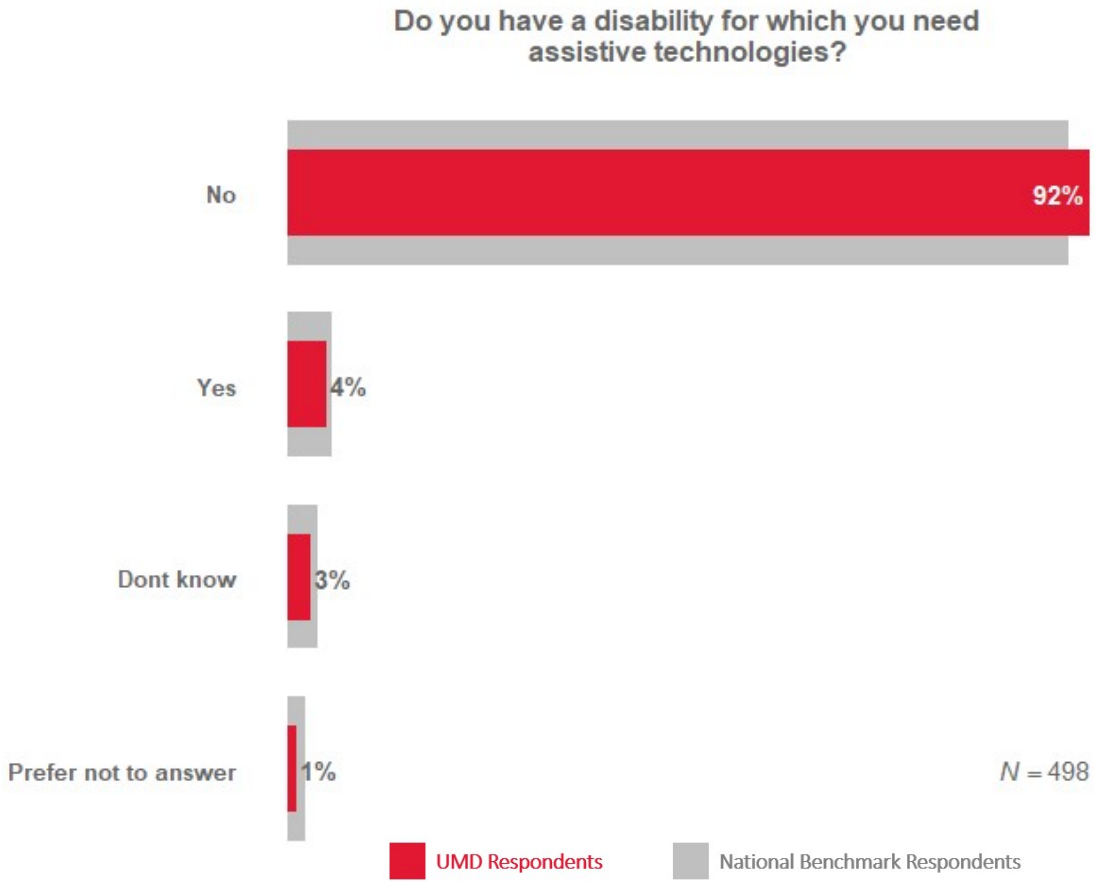
For Likert-type questions (i.e., questions that respondents answered along a scale) as in the figure below, the data from UMD students are plotted in brighter bars and in front of the national benchmarking data, represented by darker bars. The range of *N*-sizes for the questions represented in the figure is reported rather than the *N*-size for each question.



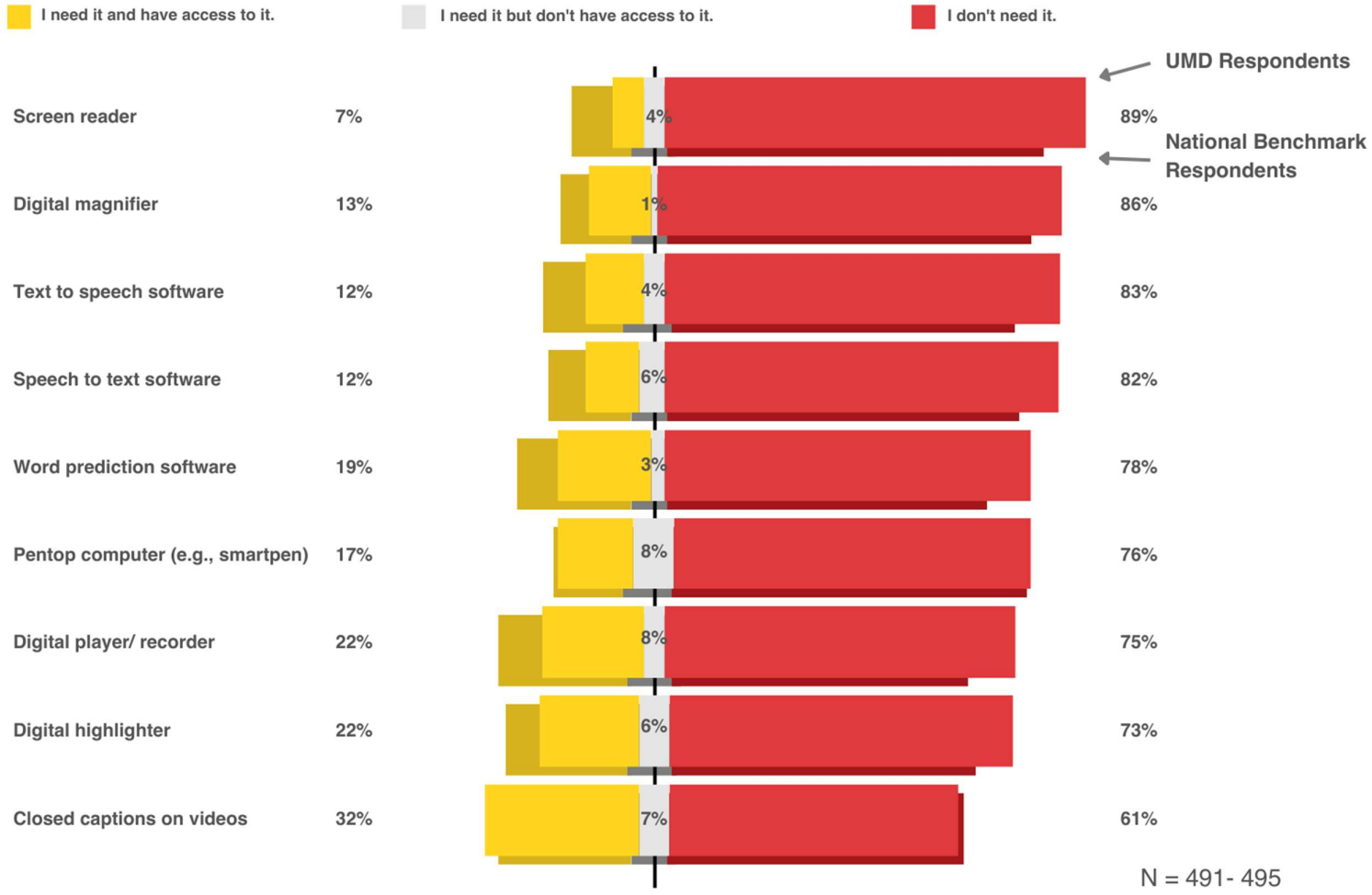
The following question included a "Don't Know" response option. Students who selected this option (n = 4-36) are not included in the figure below. The highest uses of the "Don't Know" option were in response to hands-on engagement with content (n = 36), peer teachers/tutors (n = 20), and audio content (n = 16).

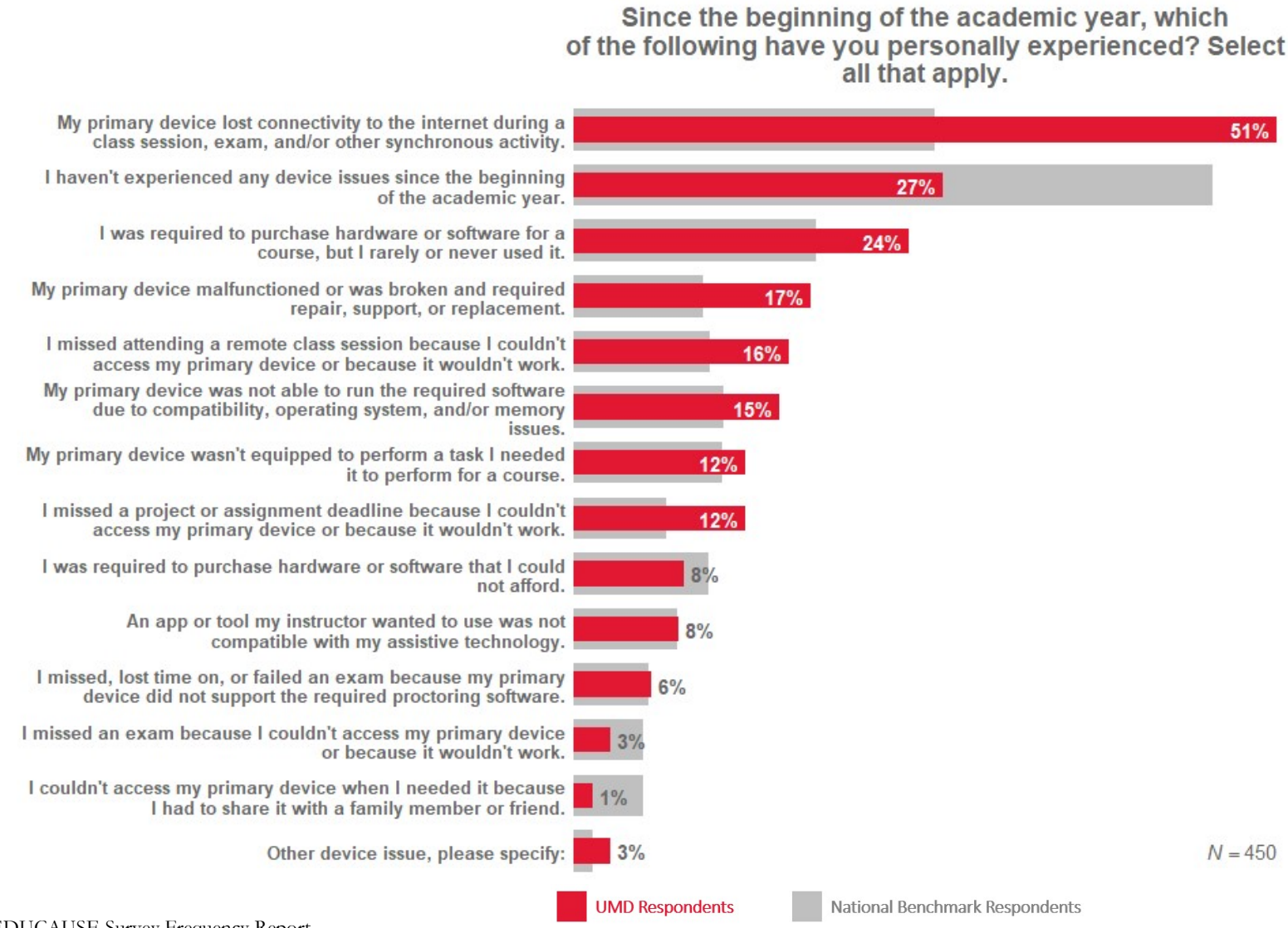


Assistive technology

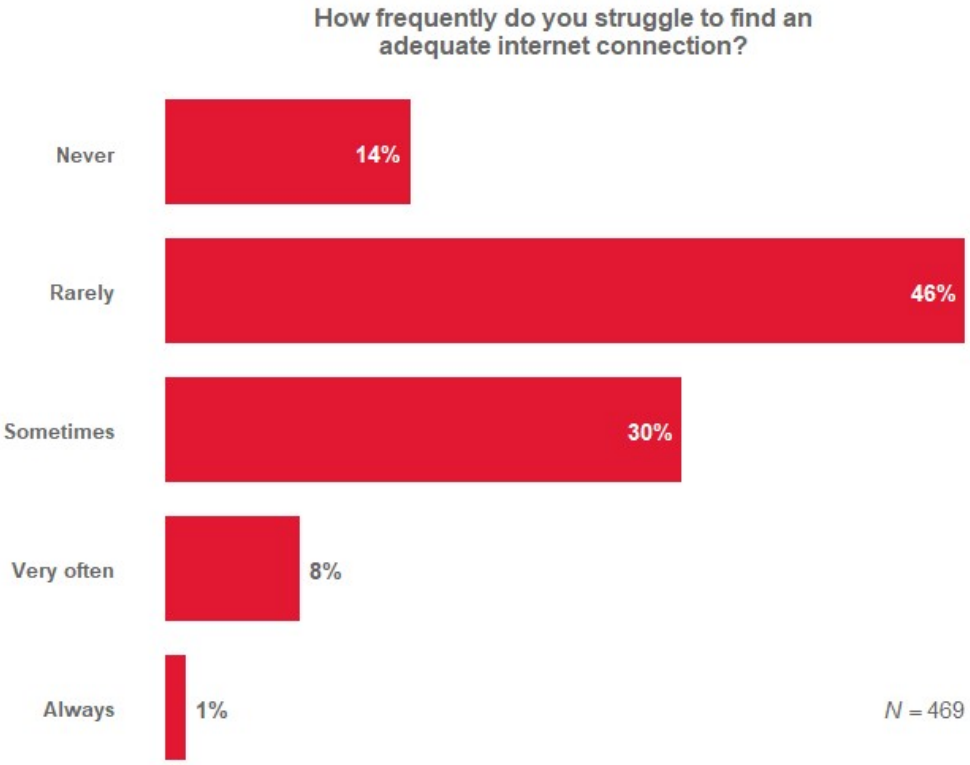


Which of the following technologies do you need for your academic work, and do you have access to them?

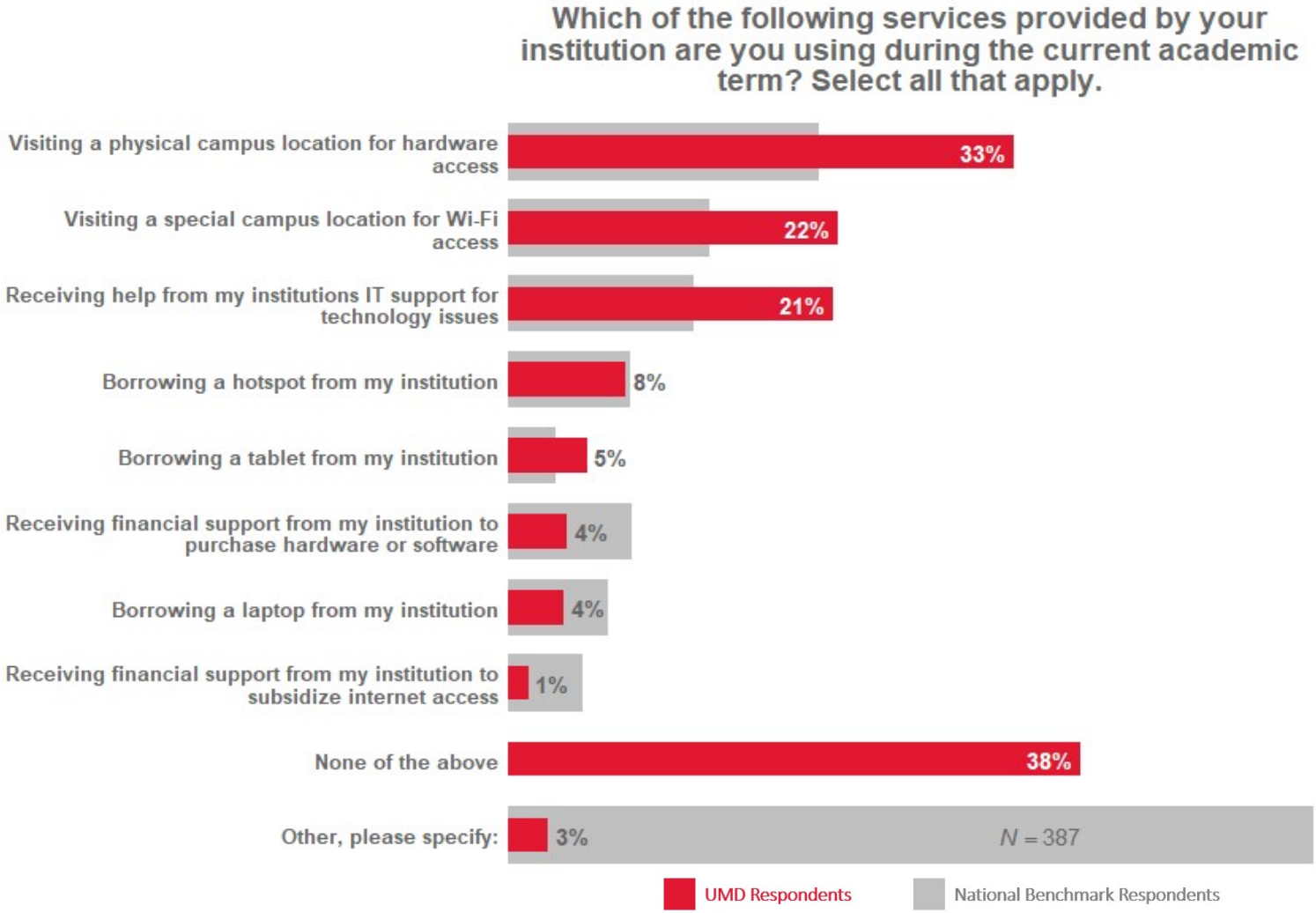


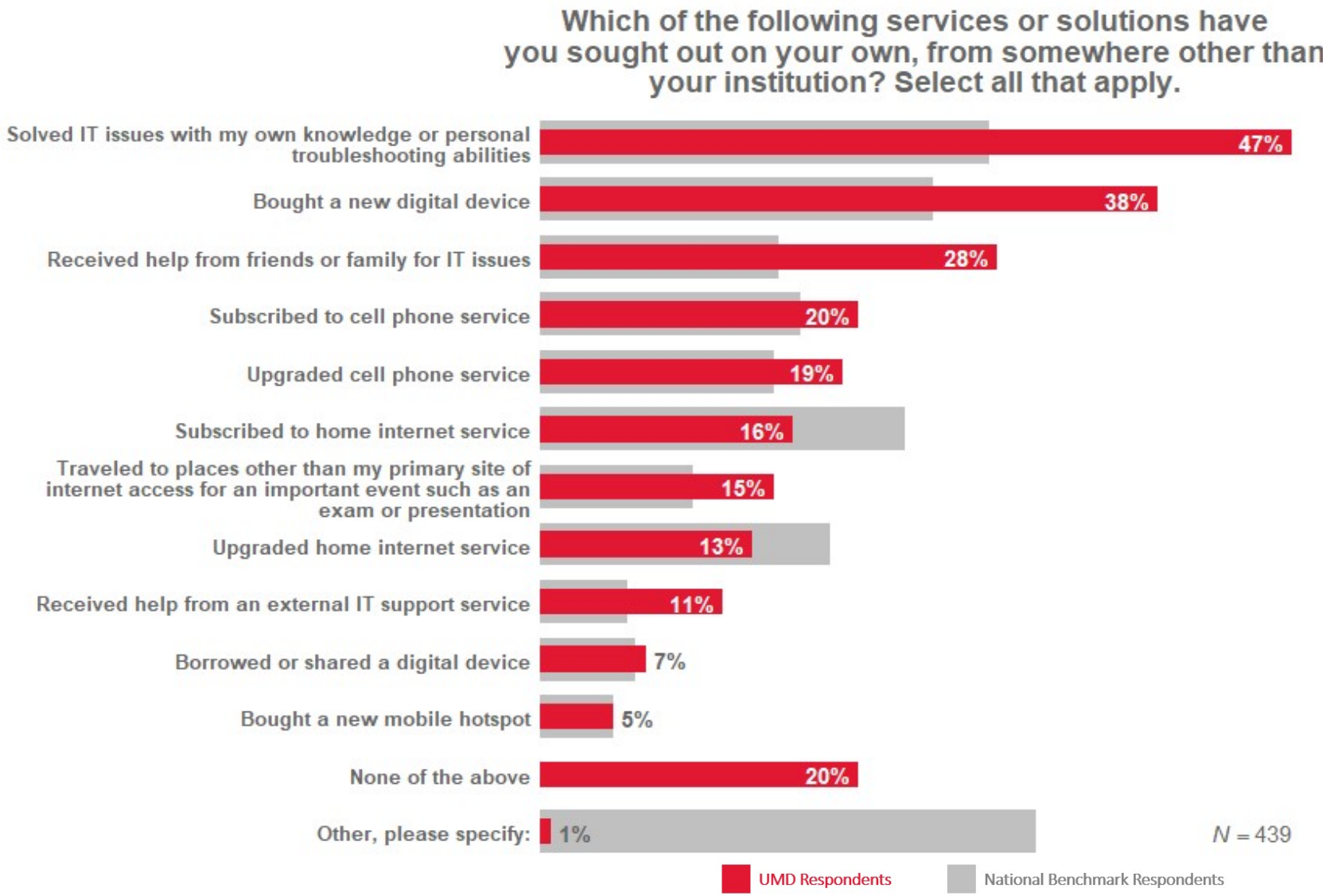

Since the beginning of the academic year, which of the following have you personally experienced? Select all that apply.
My primary device lost connectivity to the internet during a class session, exam, and/or other synchronous activity.
51%
I haven't experienced any device issues since the beginning of the academic year.
27%
I was required to purchase hardware or software for a course, but I rarely or never used it.
24%
My primary device malfunctioned or was broken and required repair, support, or replacement.
17%
I missed attending a remote class session because I couldn't access my primary device or because it wouldn't work.
16%
My primary device was not able to run the required software due to compatibility, operating system, and/or memory issues.
15%
My primary device wasn't equipped to perform a task I needed it to perform for a course.
12%
I missed a project or assignment deadline because I couldn't access my primary device or because it wouldn't work.
12%
I was required to purchase hardware or software that I could not afford.
8%
An app or tool my instructor wanted to use was not compatible with my assistive technology.
8%
I missed, lost time on, or failed an exam because my primary device did not support the required proctoring software.
6%
I missed an exam because I couldn't access my primary device or because it wouldn't work.
3%
I couldn't access my primary device when I needed it because I had to share it with a family member or friend.
1%
Other device issue, please specify:
3%
N = 450
UMD Respondents
National Benchmark Respondents

The national benchmarking data provided by Educause did not include the following question.



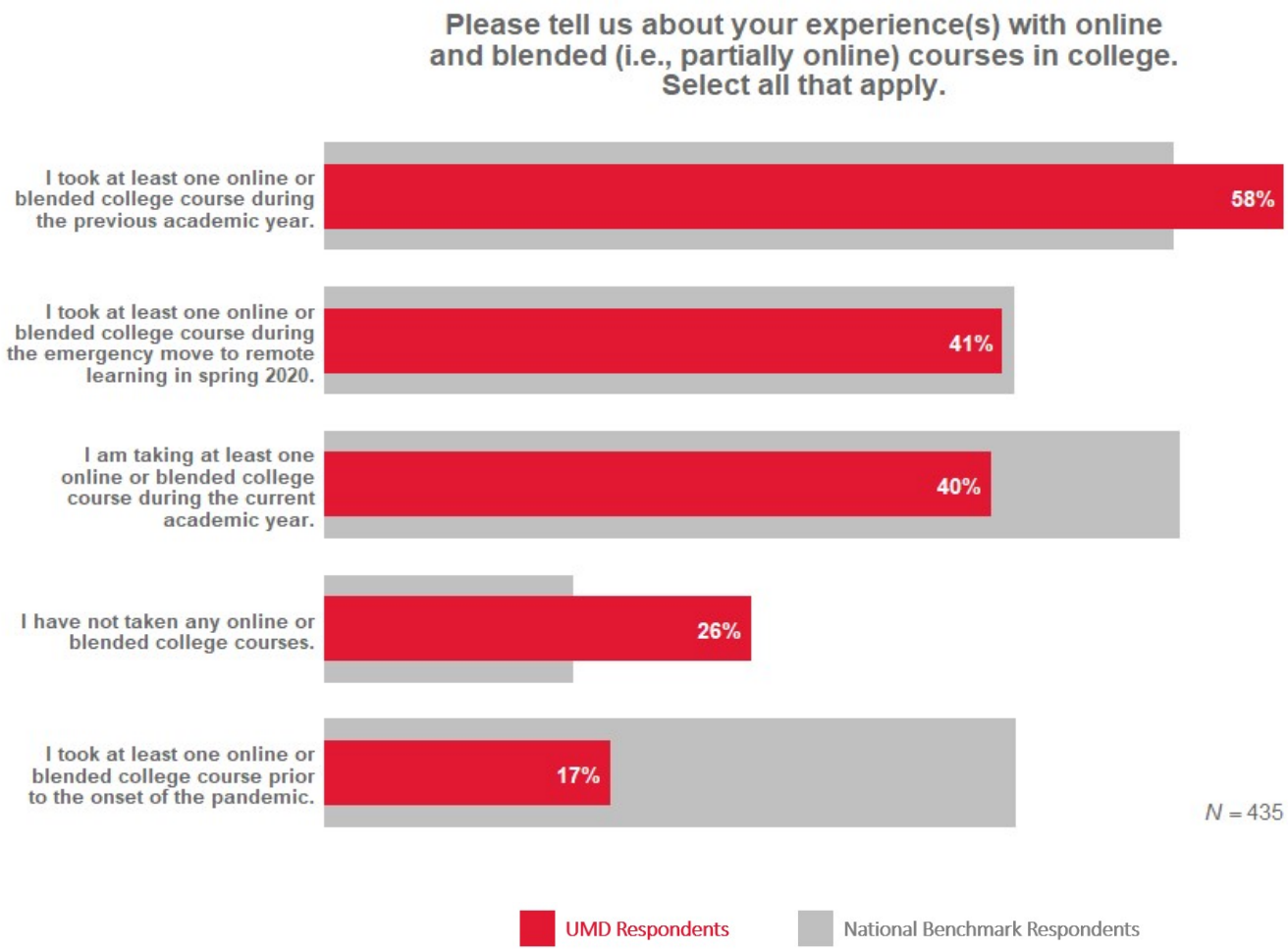
For the following two questions, no benchmarking data were provided corresponding to the "None of the above" category, whereas an abnormally high percentage of national respondents (relative to UMD) selected "Other, please specify." It is likely that respondents in the national survey were not provided the "None of the above" option, or this option was combined with "Other" in data processing.

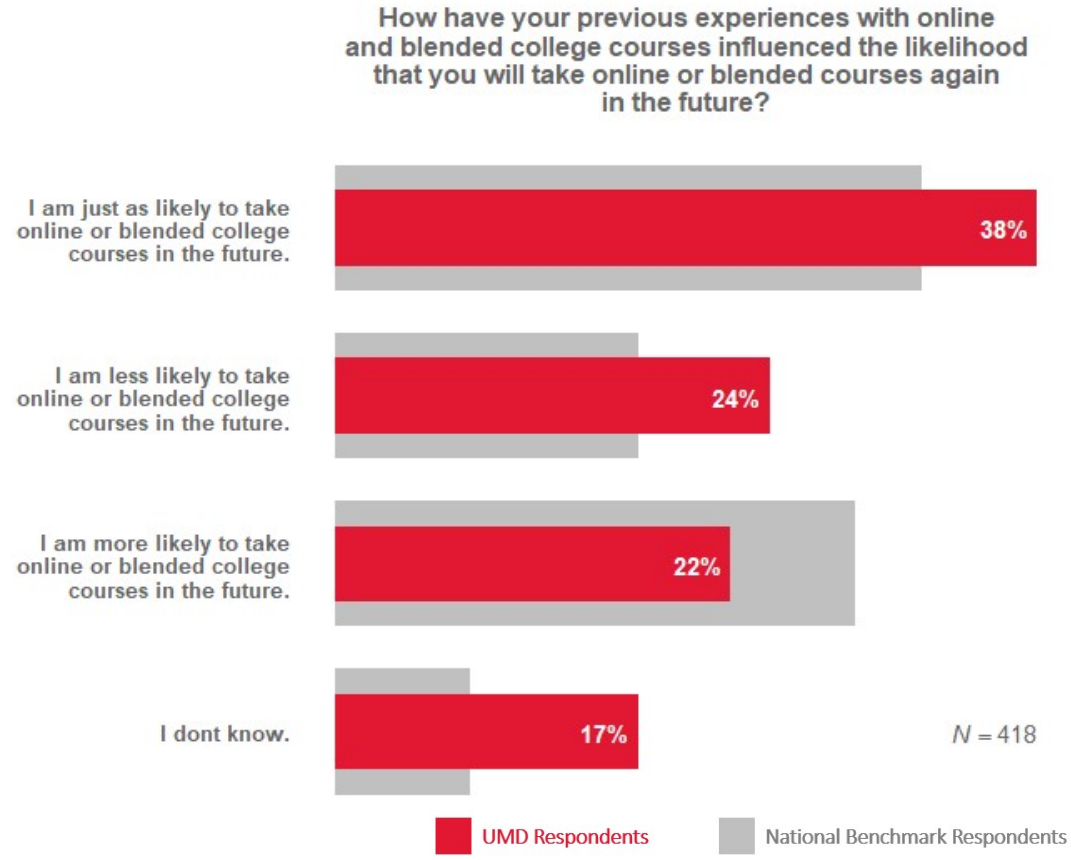


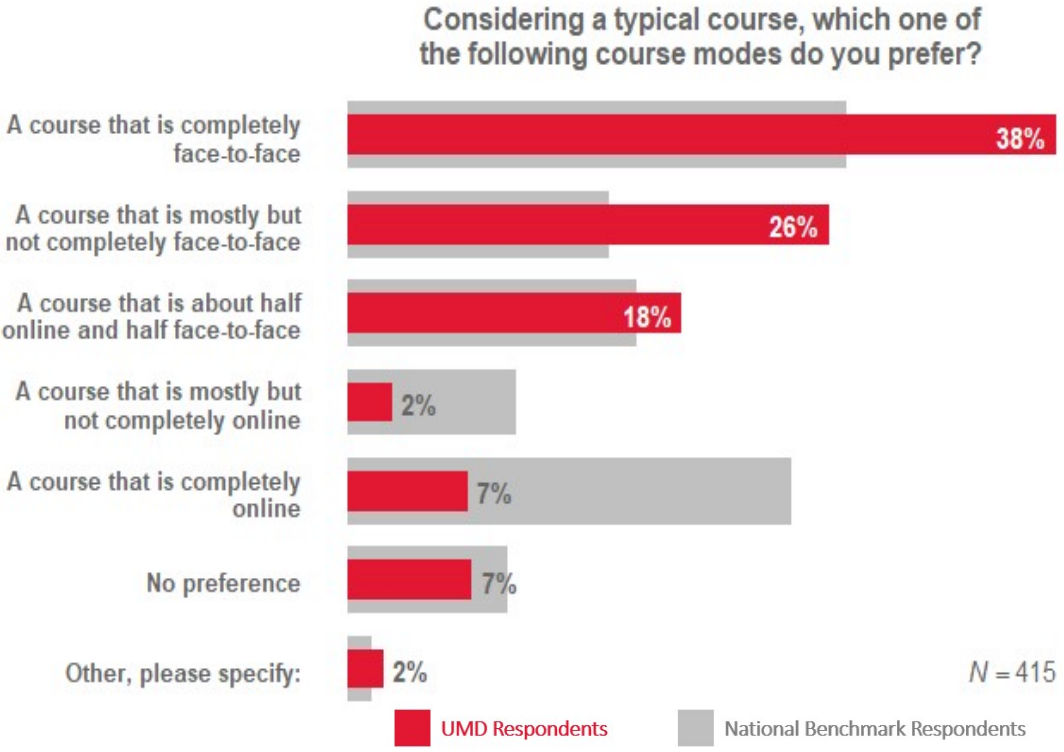

Which of the following services or solutions have you sought out on your own, from somewhere other than your institution? Select all that apply.
Solved IT issues with my own knowledge or personal troubleshooting abilities
47%
Bought a new digital device
38%
Received help from friends or family for IT issues
28%
Subscribed to cell phone service
20%
Upgraded cell phone service
19%
Subscribed to home internet service
16%
Traveled to places other than my primary site of internet access for an important event such as an exam or presentation
15%
Upgraded home internet service
13%
Received help from an external IT support service
11%
Borrowed or shared a digital device
7%
Bought a new mobile hotspot
5%
None of the above
20%
Other, please specify:
1%
N = 439
UMD Respondents
National Benchmark Respondents

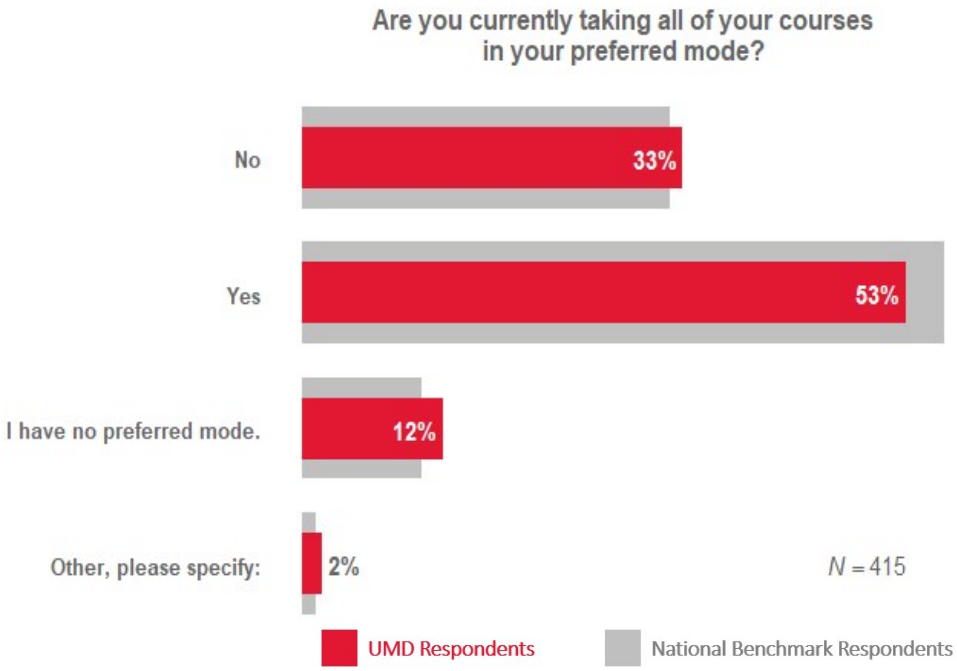
2.2. The New Normal

Experience and preference for course modes (i.e., online/blended/face-to-face)

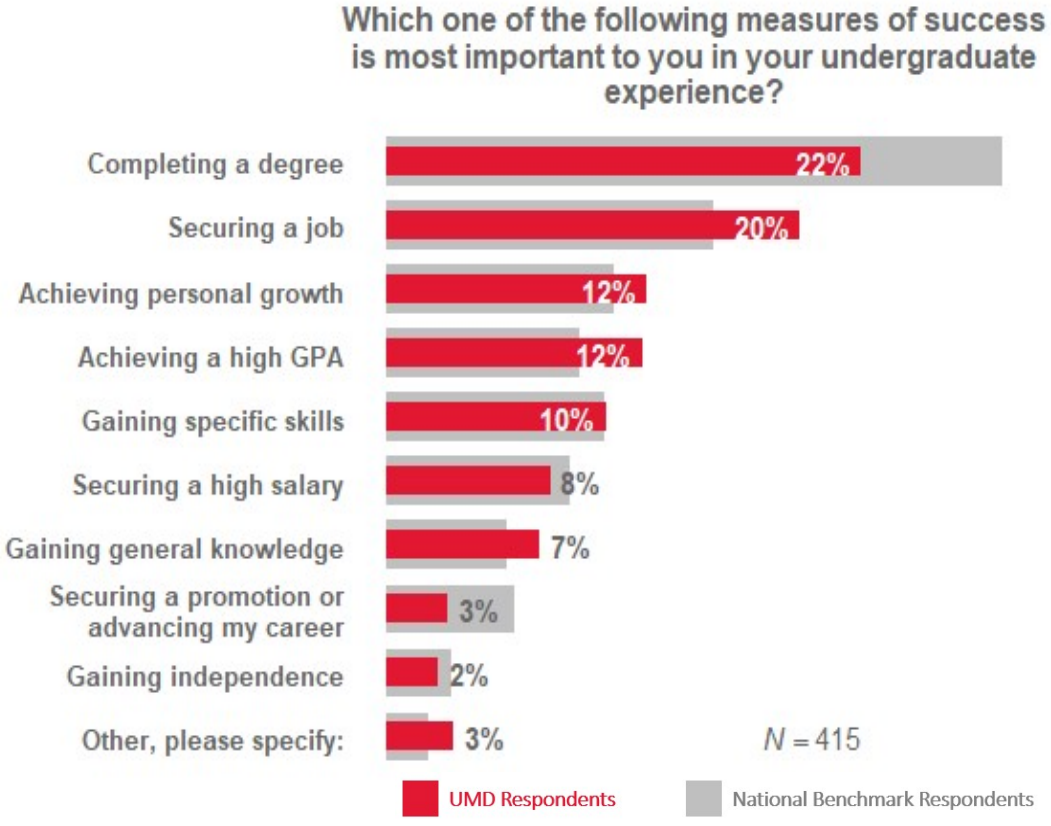


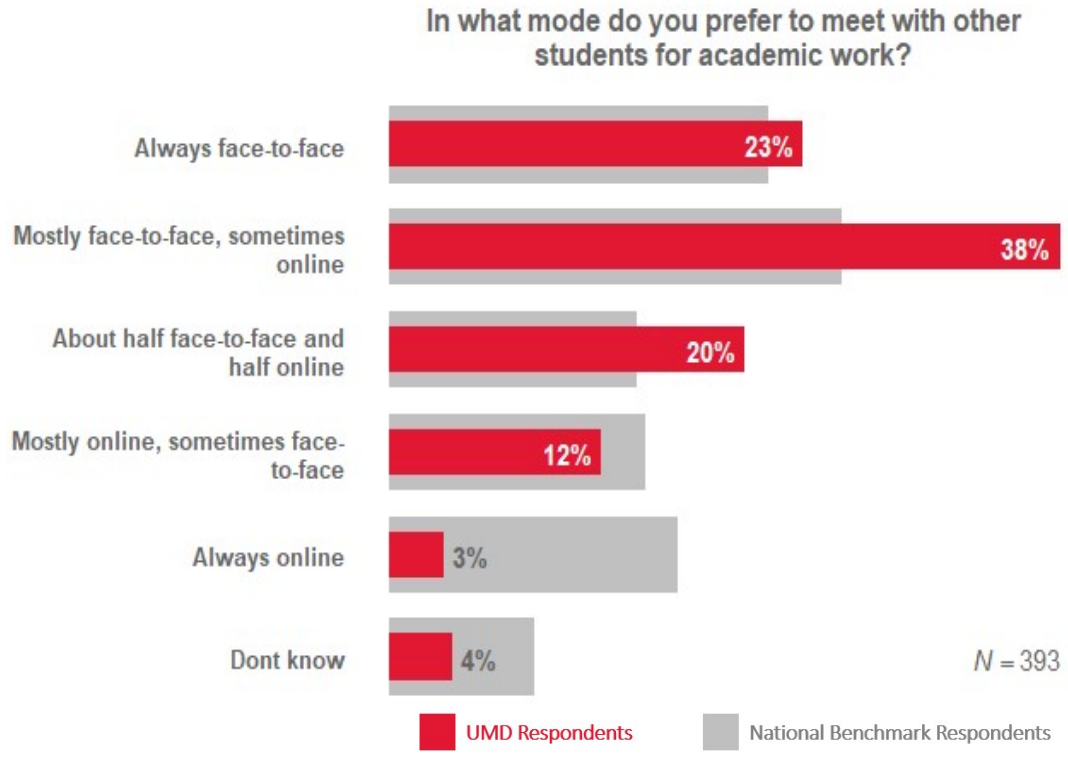

How have your previous experiences with online and blended college courses influenced the likelihood that you will take online or blended courses again in the future?
I am just as likely to take online or blended college courses in the future.
38%
I am less likely to take online or blended college courses in the future.
24%
I am more likely to take online or blended college courses in the future.
22%
I dont know.
17%
N = 418
UMD Respondents
National Benchmark Respondents

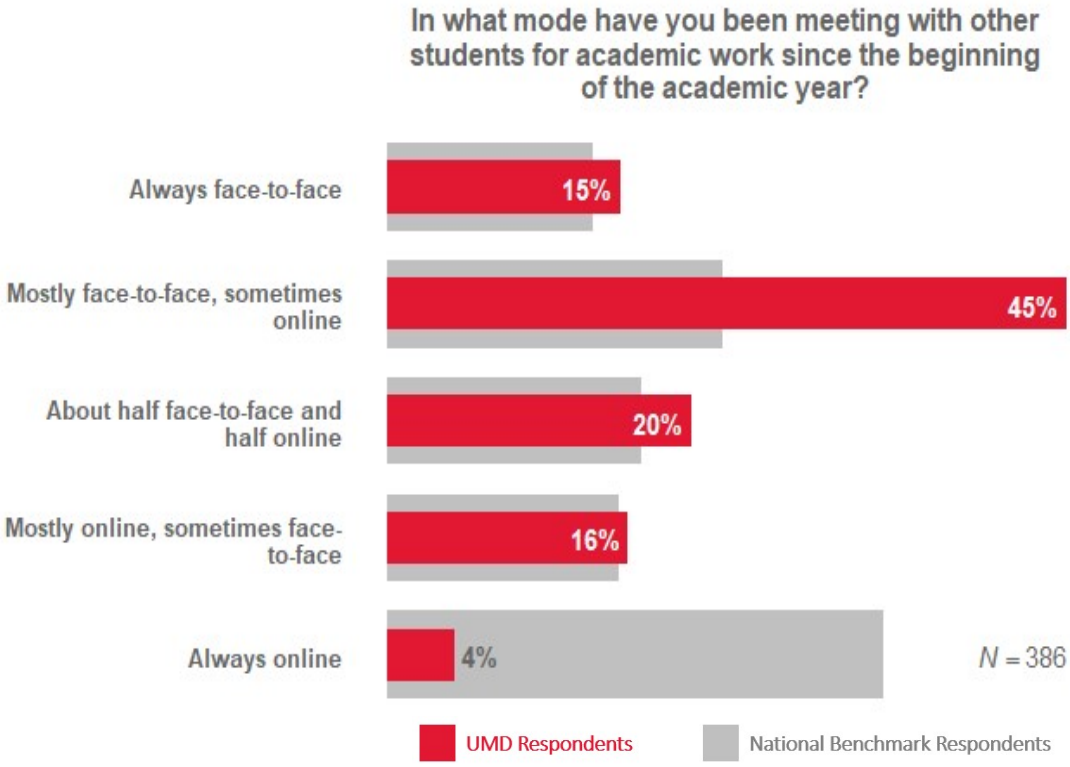

Considering a typical course, which one of the following course modes do you prefer?
A course that is completely face-to-face
38%
A course that is mostly but not completely face-to-face
26%
A course that is about half online and half face-to-face
18%
A course that is mostly but not completely online
2%
A course that is completely online
7%
No preference
7%
Other, please specify:
2%
N = 415
UMD Respondents
National Benchmark Respondents



Student goals

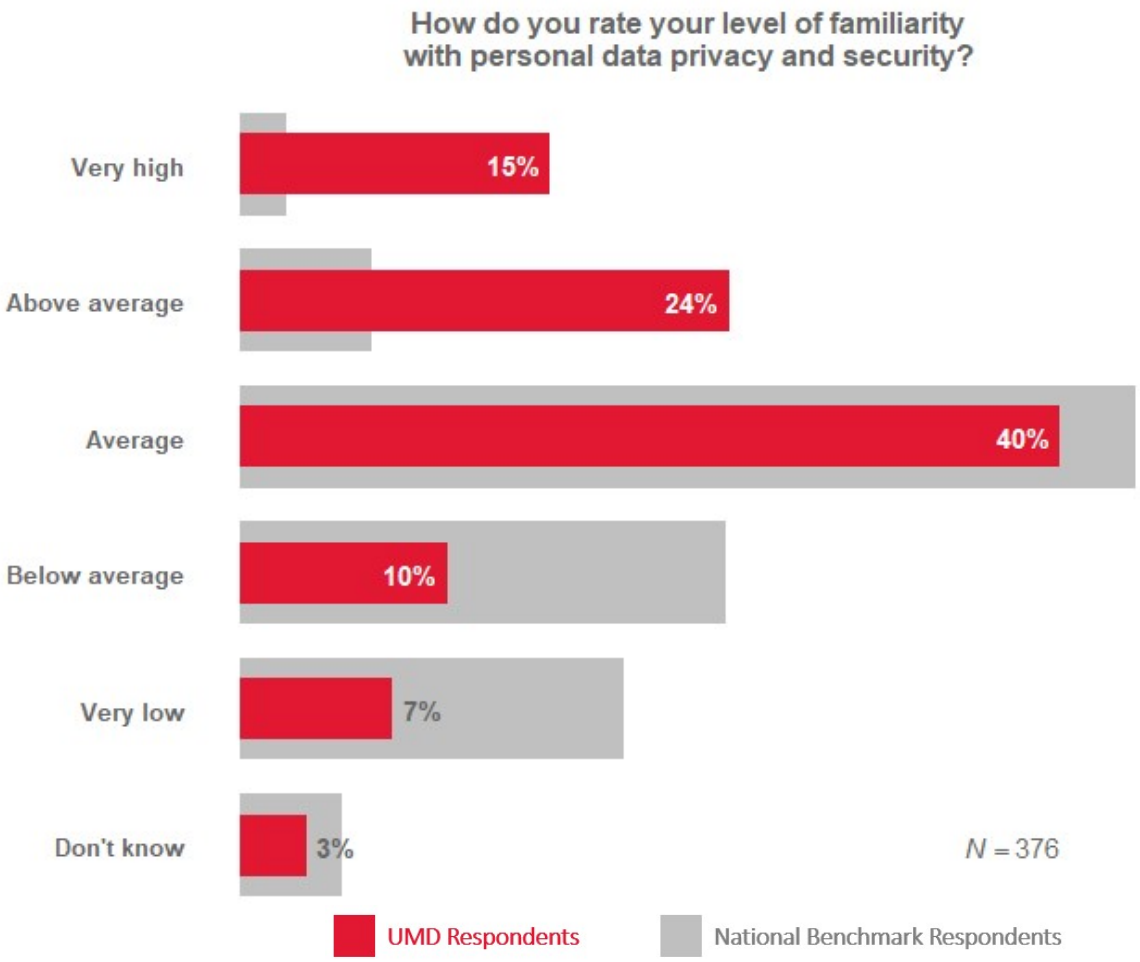


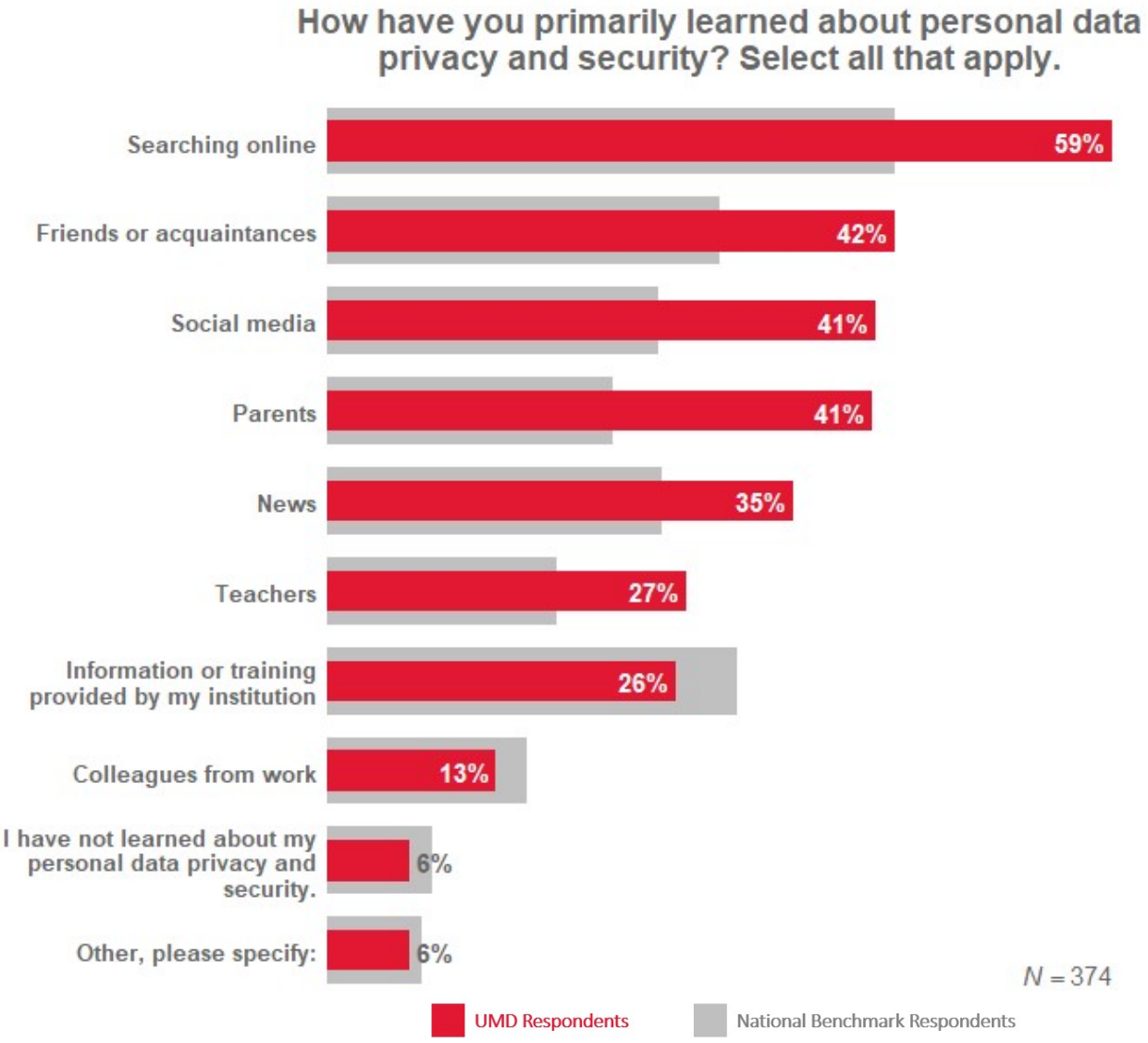

In what mode do you prefer to meet with other students for academic work?
Always face-to-face
23%
Mostly face-to-face, sometimes online
38%
About half face-to-face and half online
20%
Mostly online, sometimes face-to-face
12%
Always online
3%
Dont know
4%
N = 393
UMD Respondents
National Benchmark Respondents

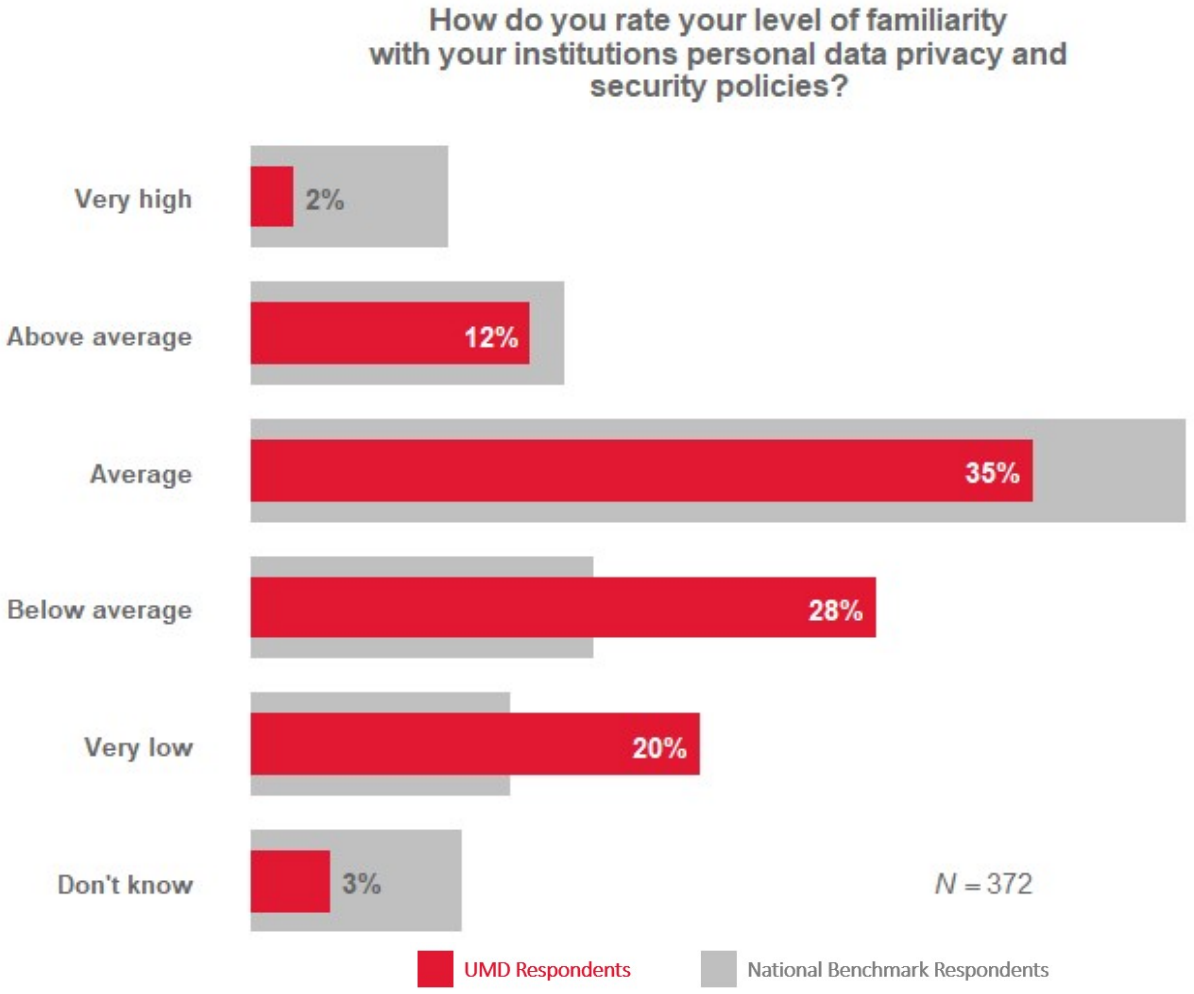

In what mode have you been meeting with other students for academic work since the beginning of the academic year?
Always face-to-face
15%
Mostly face-to-face, sometimes online
45%
About half face-to-face and half online
20%
Mostly online, sometimes face-to-face
16%
Always online
4%
N = 386
UMD Respondents
National Benchmark Respondents

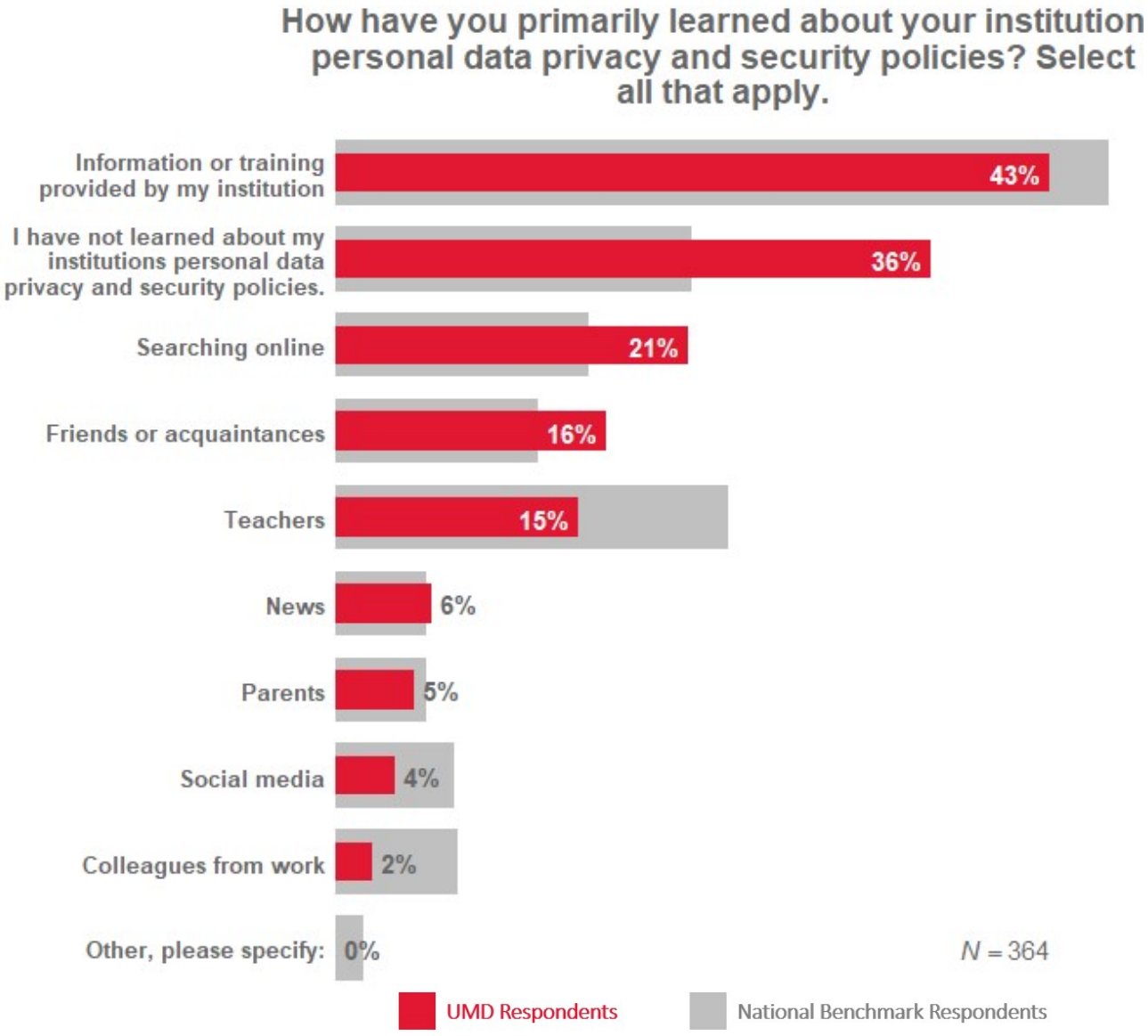
2.3. Data Privacy and Security

Familiarity with data privacy and security



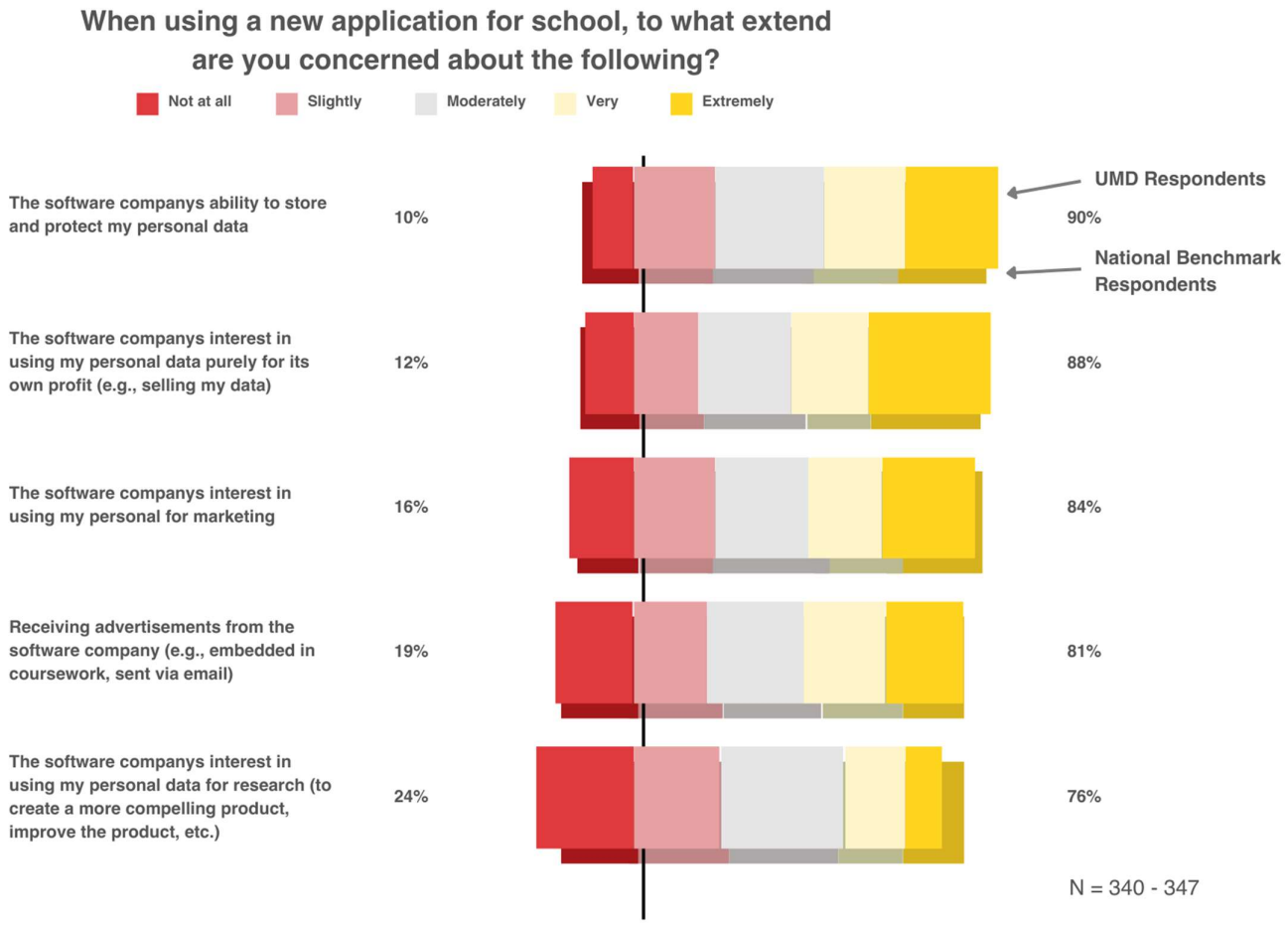

How have you primarily learned about personal data privacy and security? Select all that apply.
Searching online
59%
Friends or acquaintances
42%
Social media
41%
Parents
41%
News
35%
Teachers
27%
Information or training provided by my institution
26%
Colleagues from work
13%
I have not learned about my personal data privacy and security.
6%
Other, please specify:
6%
N = 374
UMD Respondents
National Benchmark Respondents


How do you rate your level of familiarity with your institutions personal data privacy and security policies?
Very high
2%
Above average
12%
Average
35%
Below average
28%
Very low
20%
Don't know
3%
N = 372
UMD Respondents
National Benchmark Respondents

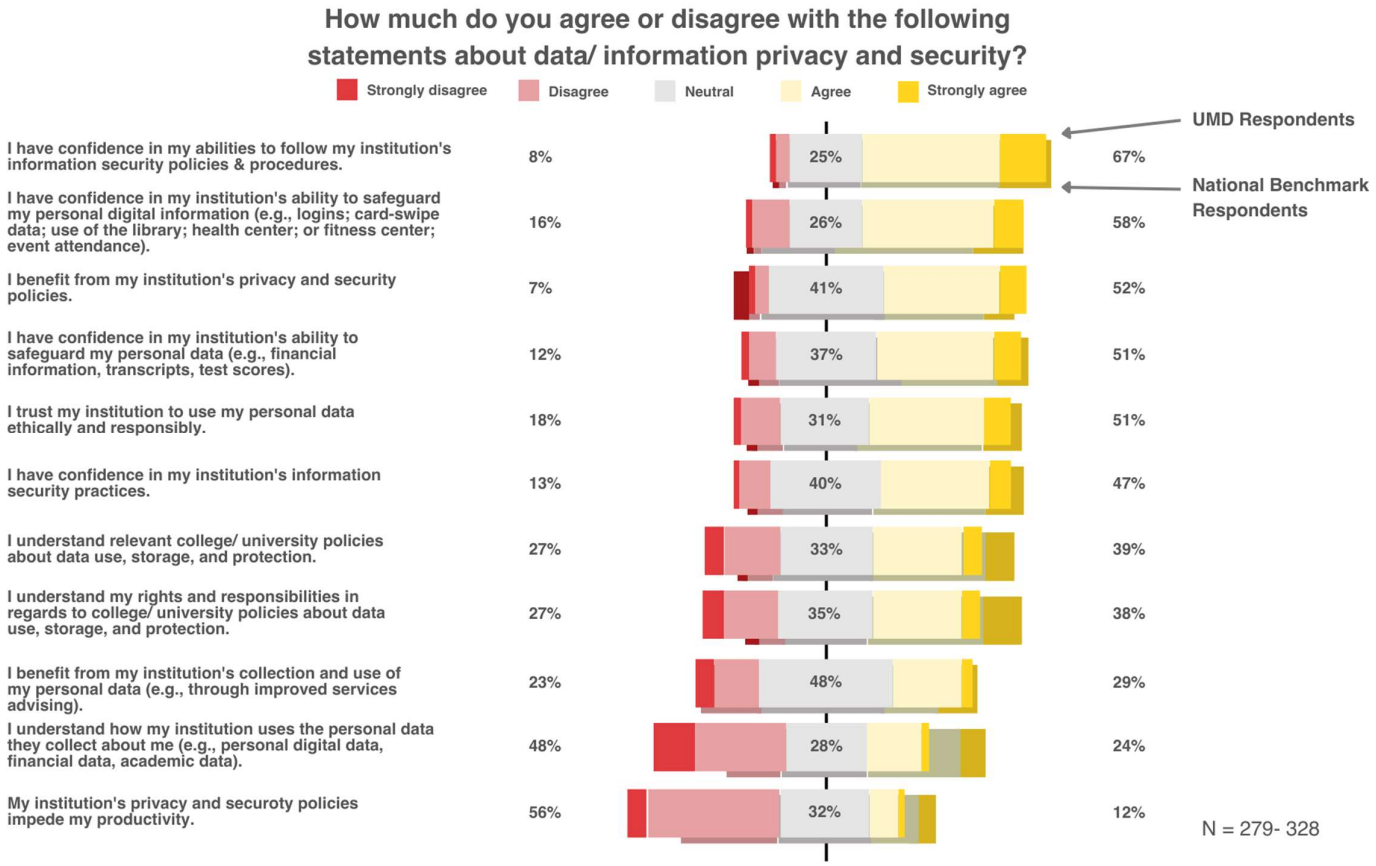

How have you primarily learned about your institution personal data privacy and security policies? Select all that apply.
Information or training provided by my institution
43%
I have not learned about my institutions personal data privacy and security policies.
36%
Searching online
21%
Friends or acquaintances
16%
Teachers
15%
News
6%
Parents
5%
Social media
4%
Colleagues from work
2%
Other, please specify:
0%
N = 364
UMD Respondents
National Benchmark Respondents

Concerns and confidence regarding data privacy and security

Students who selected a "Don't know" response option (*n* = 3-9*)* are not depicted in the following figure.

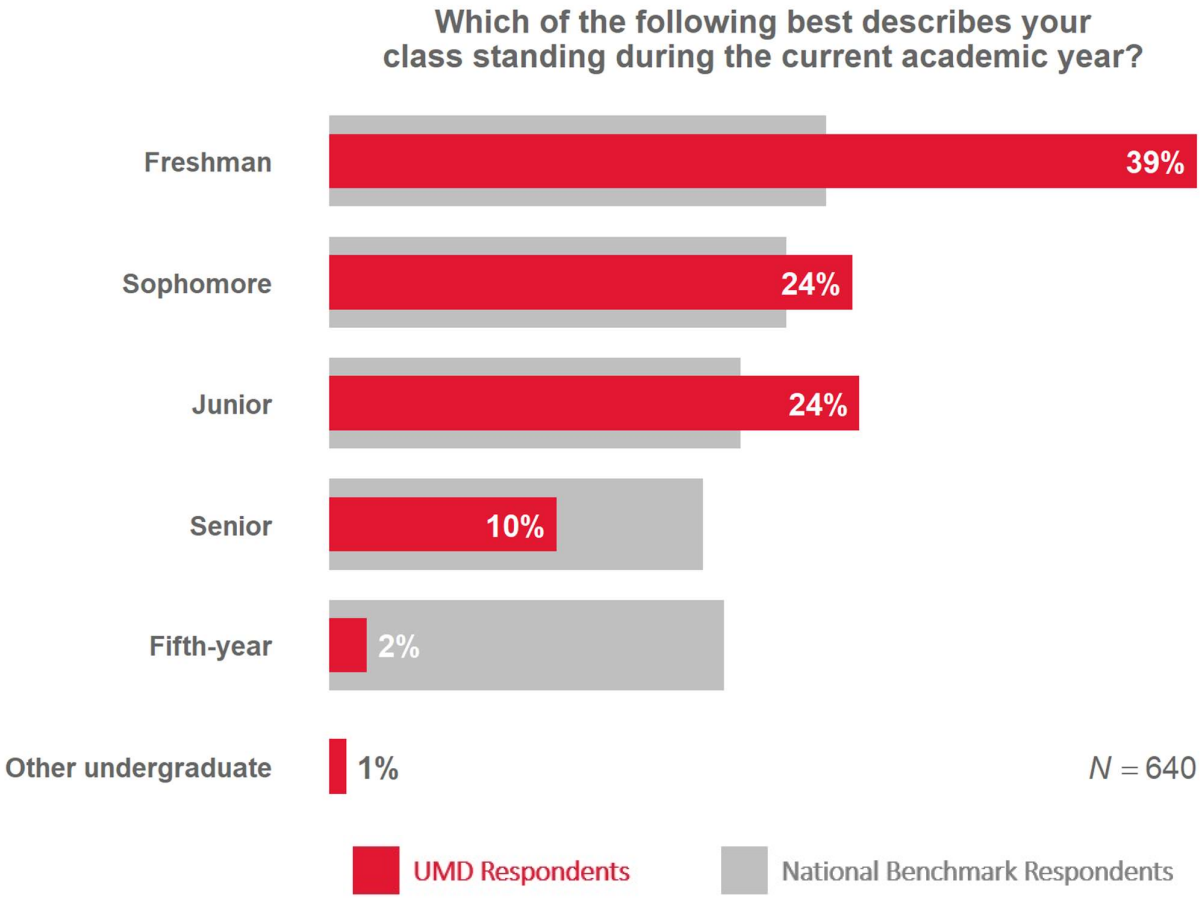


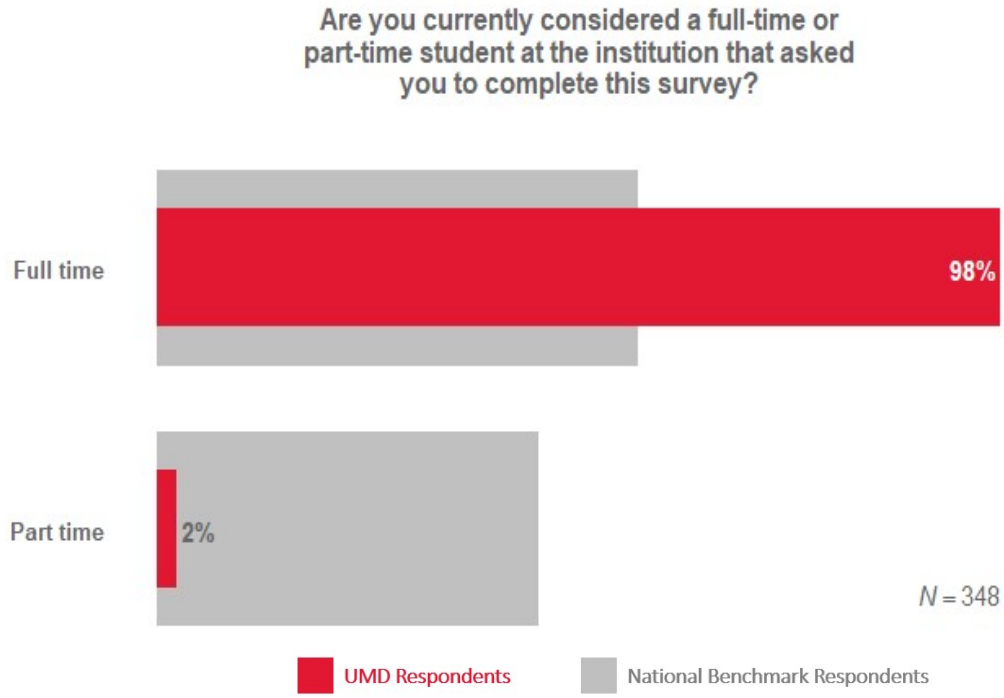
Students who selected a "Don't know" response option (*n* = 20-68) are not depicted in the following figure. Of note, the most common uses of this option were in response to "I benefit from my institution's privacy and security policies" (*n* = 68); "I benefit from my institution's collection and use of my personal data" (*n* = 64); and "My institution's privacy and security policies impeded my productivity" (*n* = 61).



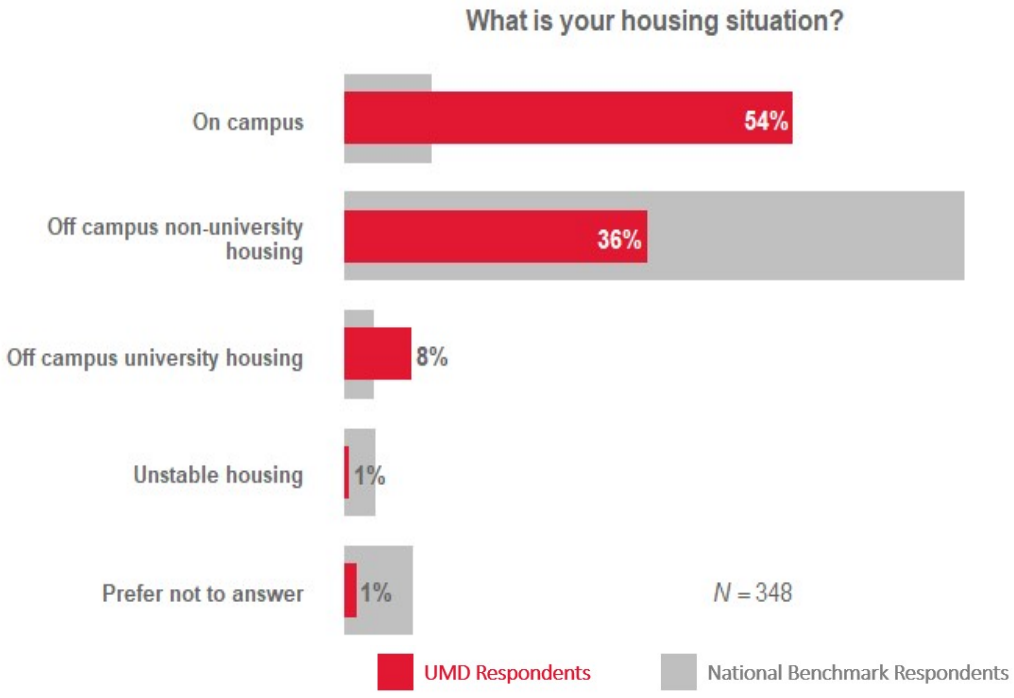
2.4. Demographic Questions

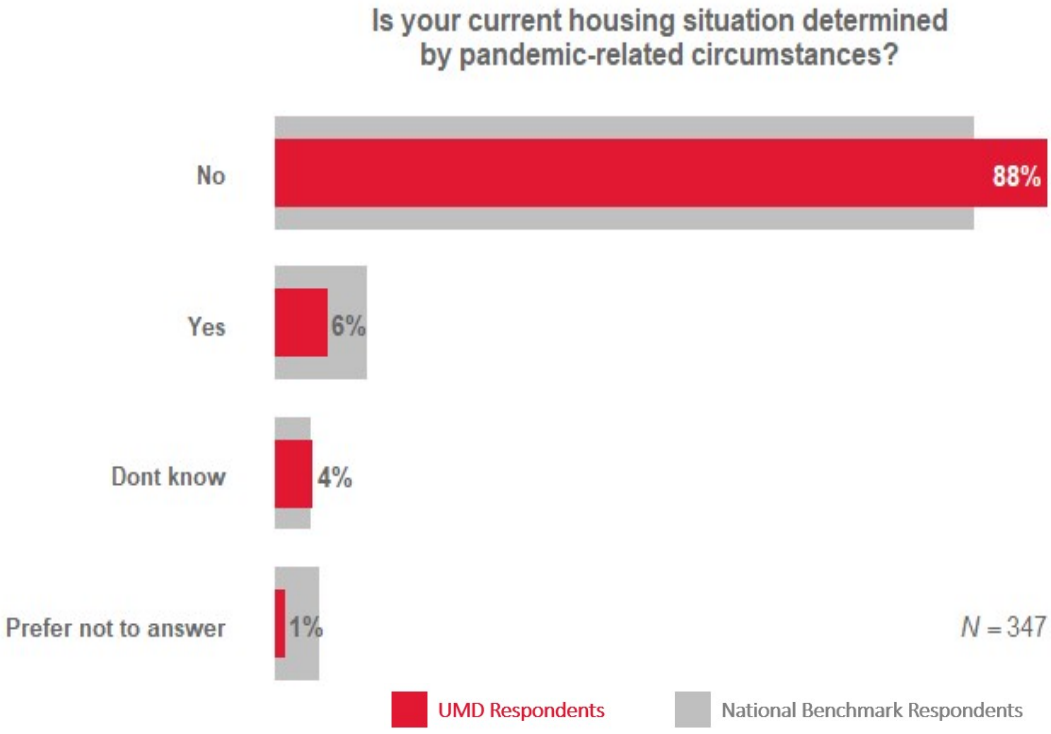
Class standing



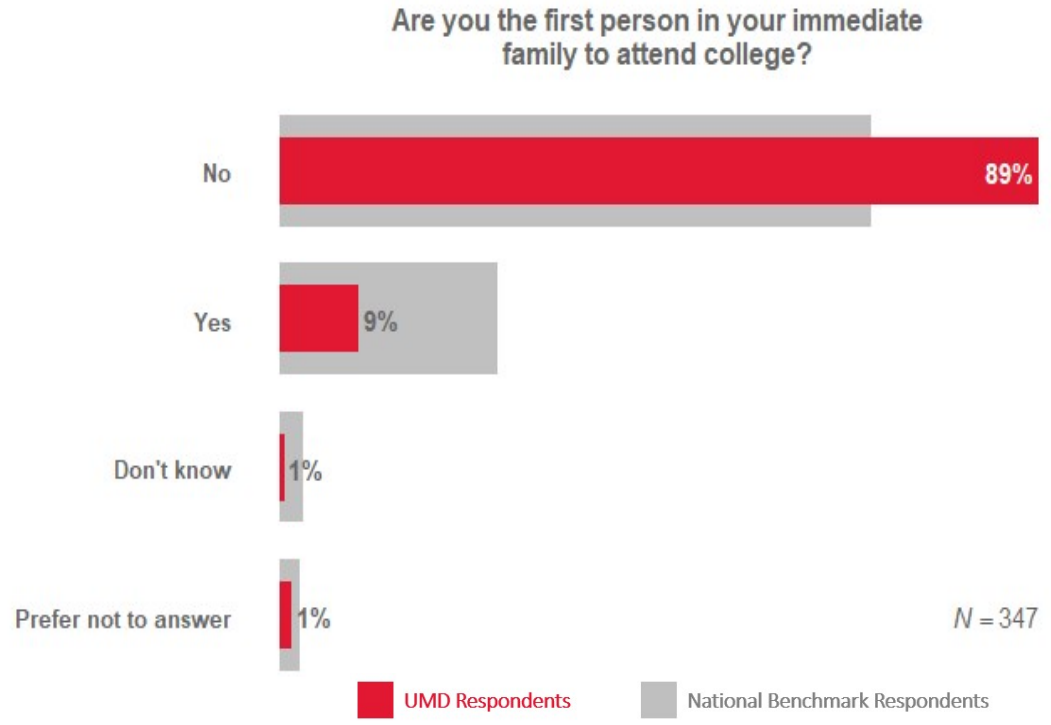

Are you currently considered a full-time or part-time student at the institution that asked you to complete this survey?
Full time
98%
Part time
2%
N = 348
UMD Respondents
National Benchmark Respondents

Housing

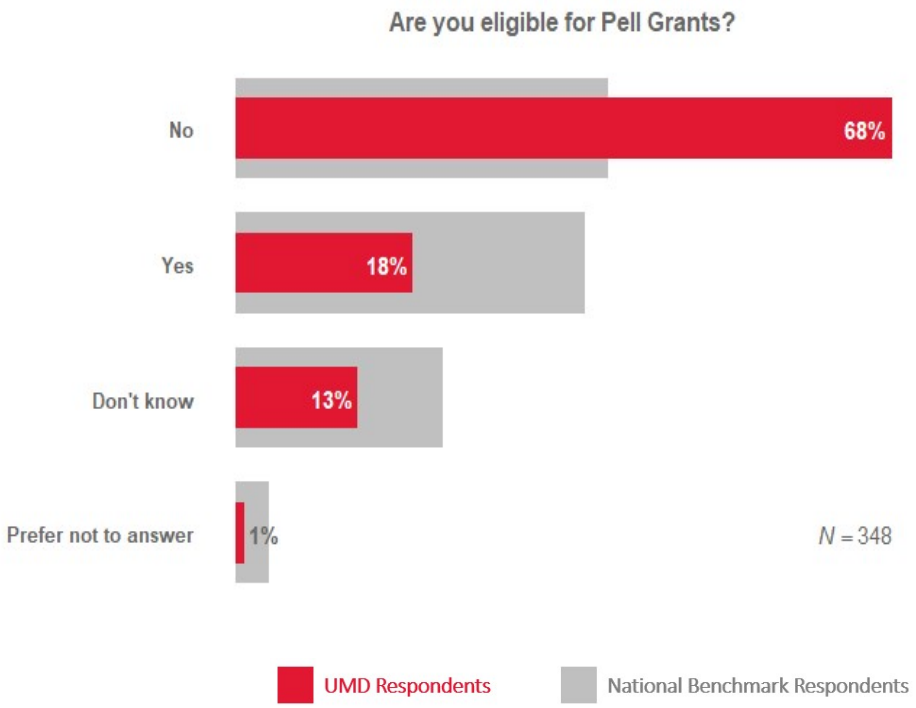

What is your housing situation?
On campus
54%
Off campus non-university housing
36%
Off campus university housing
8%
Unstable housing
1%
Prefer not to answer
1%
N = 348
UMD Respondents
National Benchmark Respondents



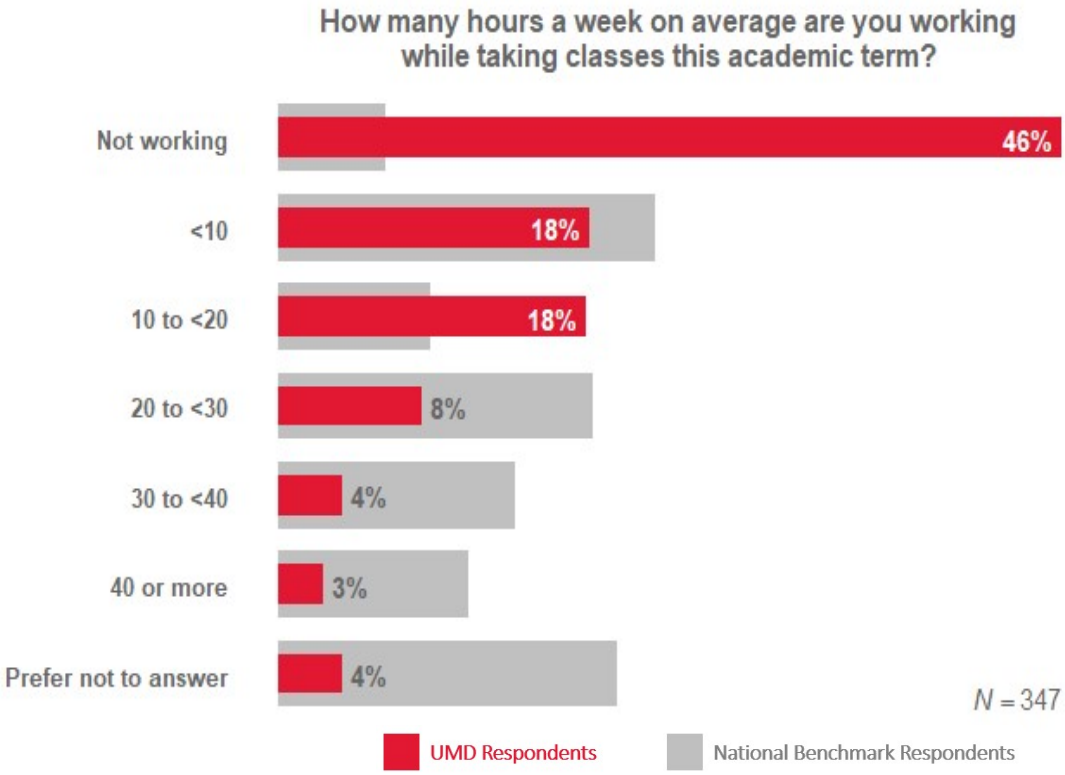
First generation status



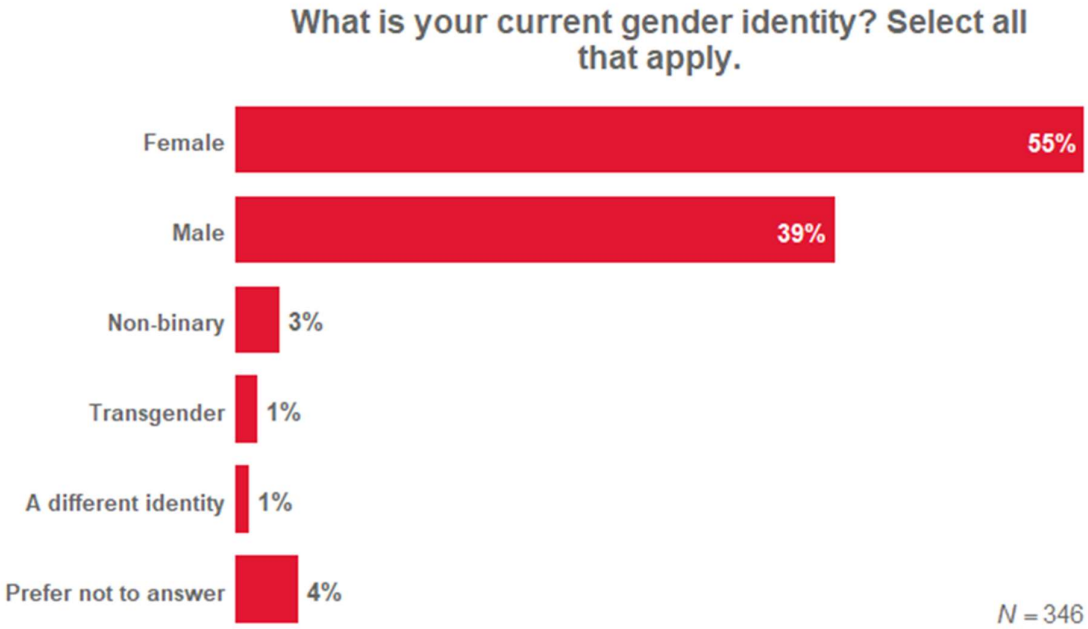
Eligibility for Pell Grants



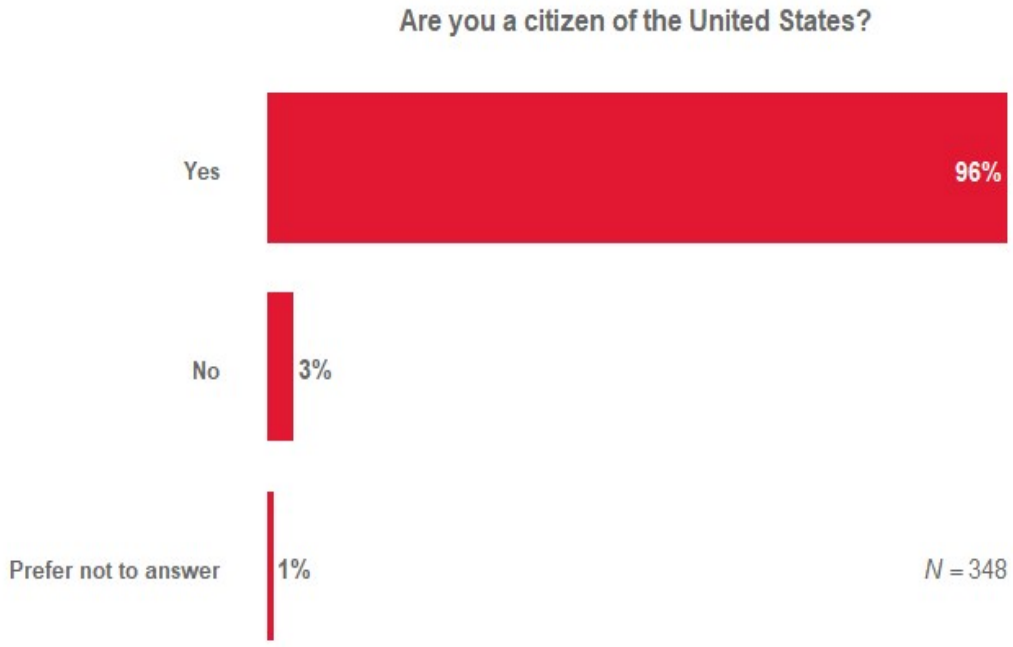
Working load



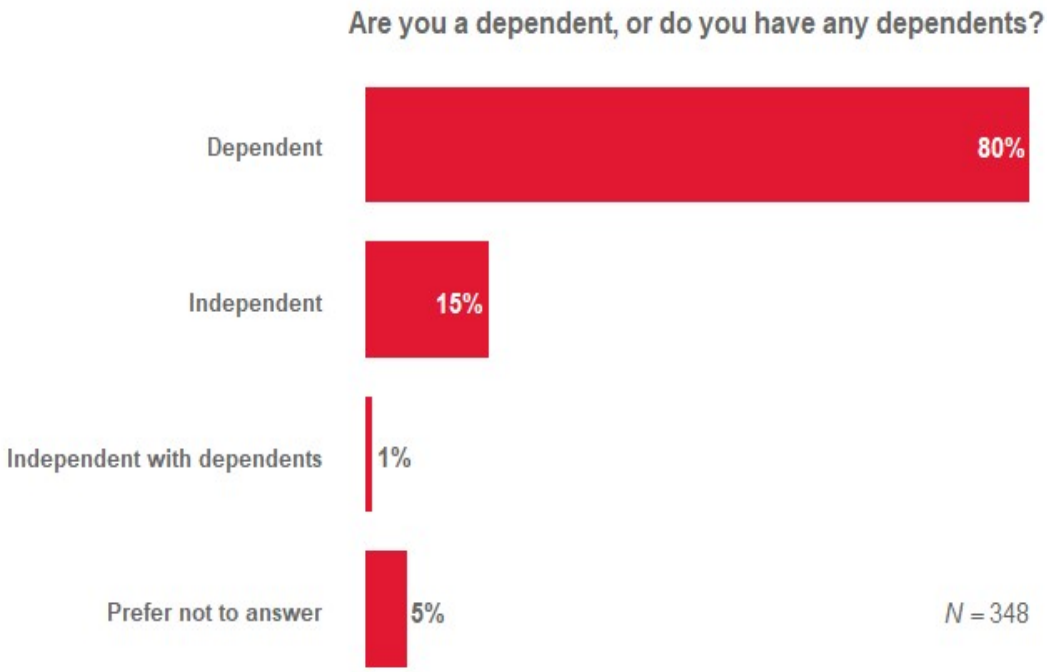
Gender identity



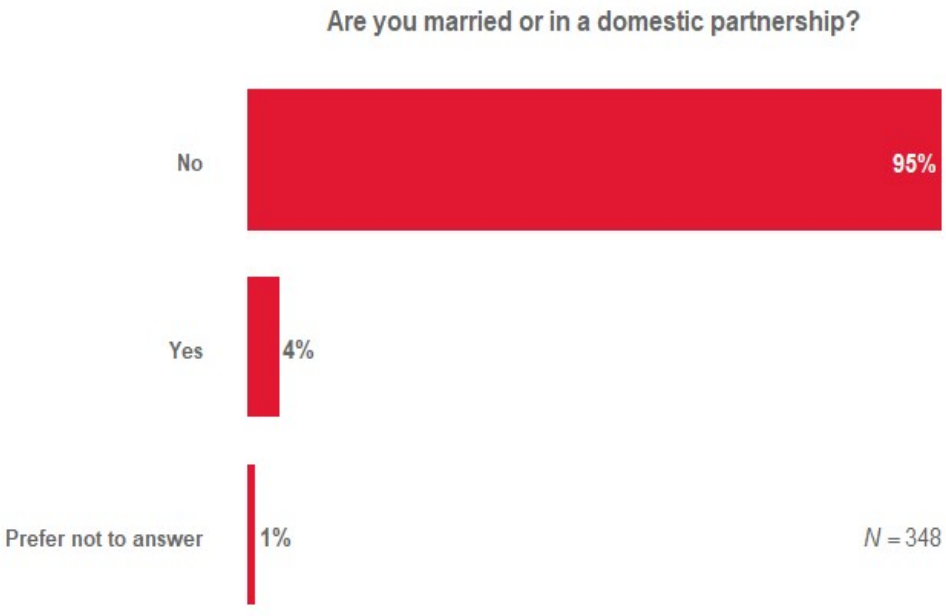
U.S. citizen status



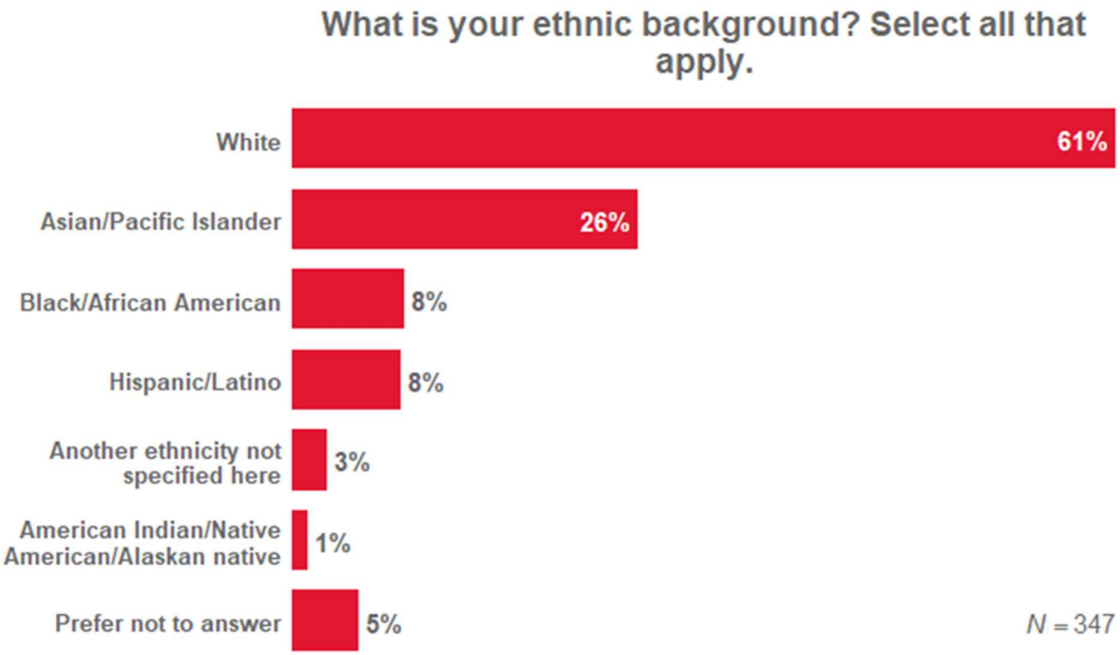
Dependent status



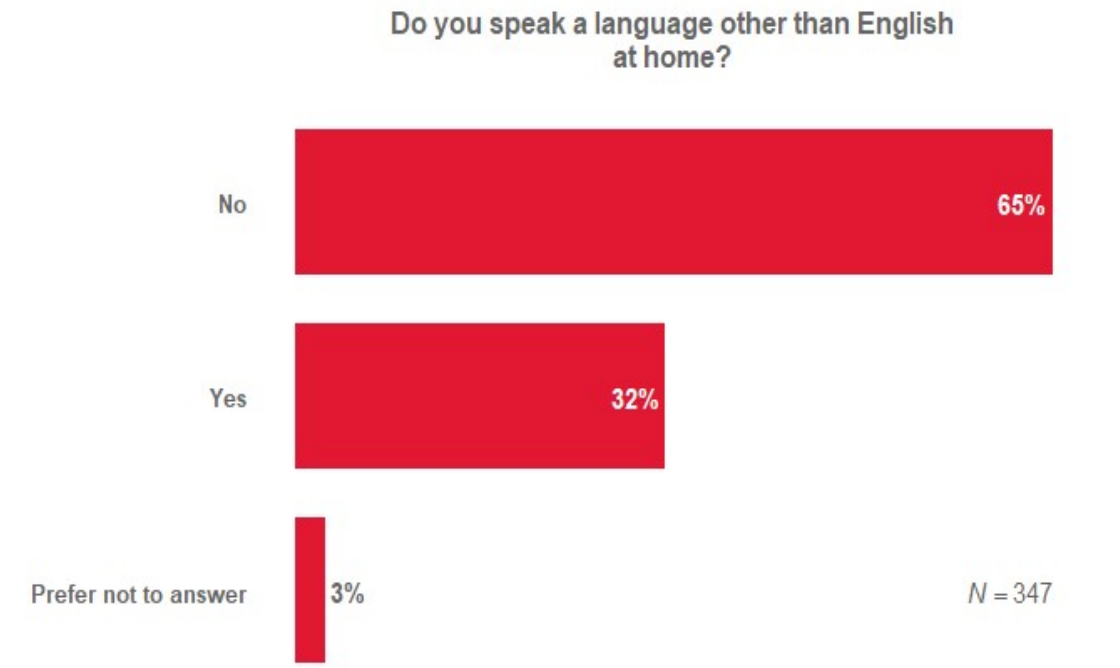
Marriage status



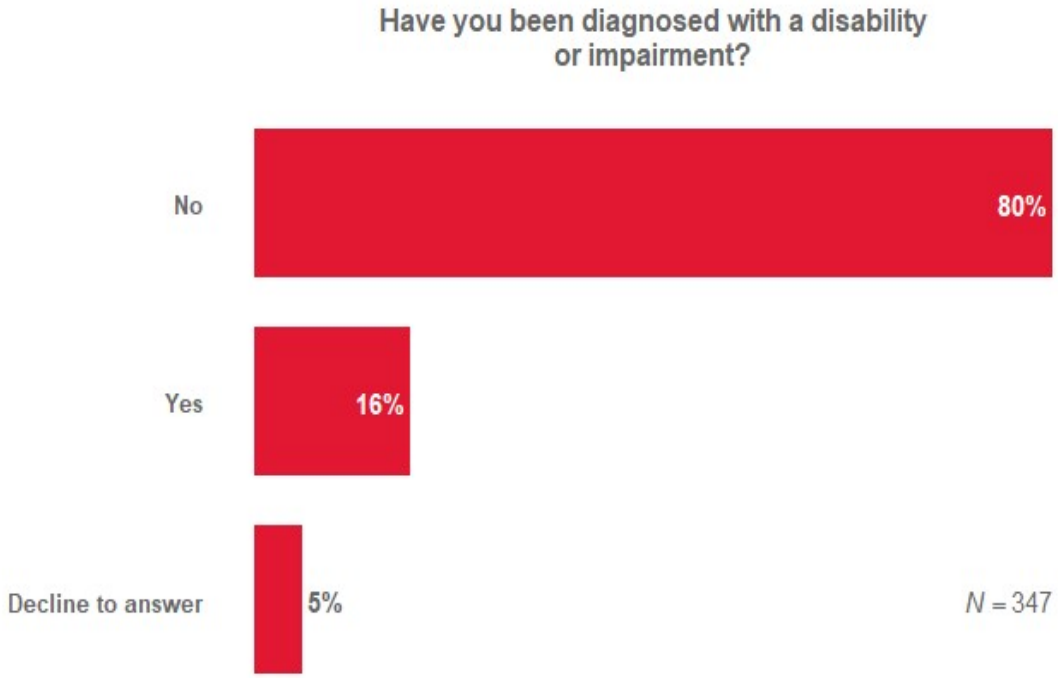
Ethnic background



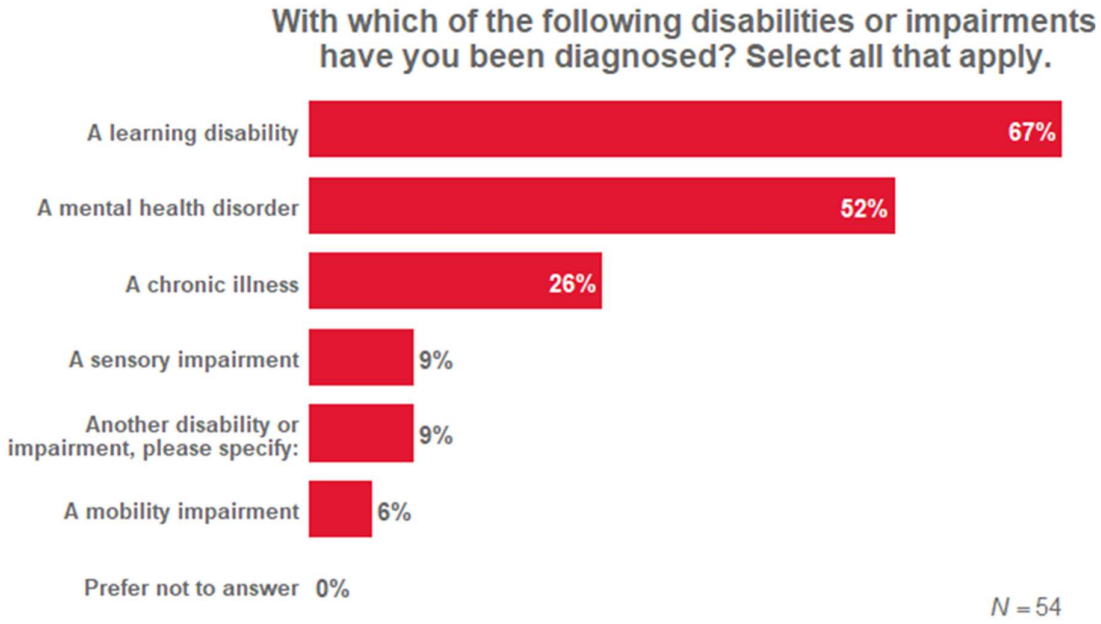
Other languages



Disability status



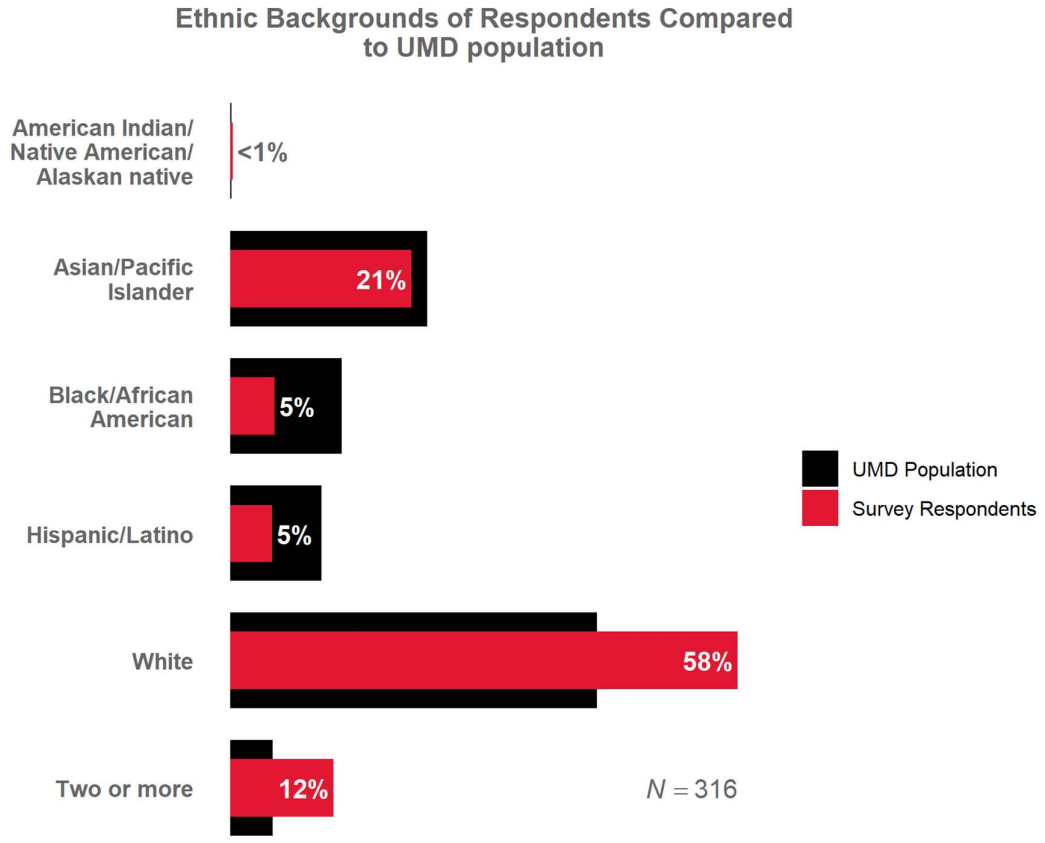
The following question was only answered by students who indicated that they have been diagnosed with a disability or impairment in the prior question.

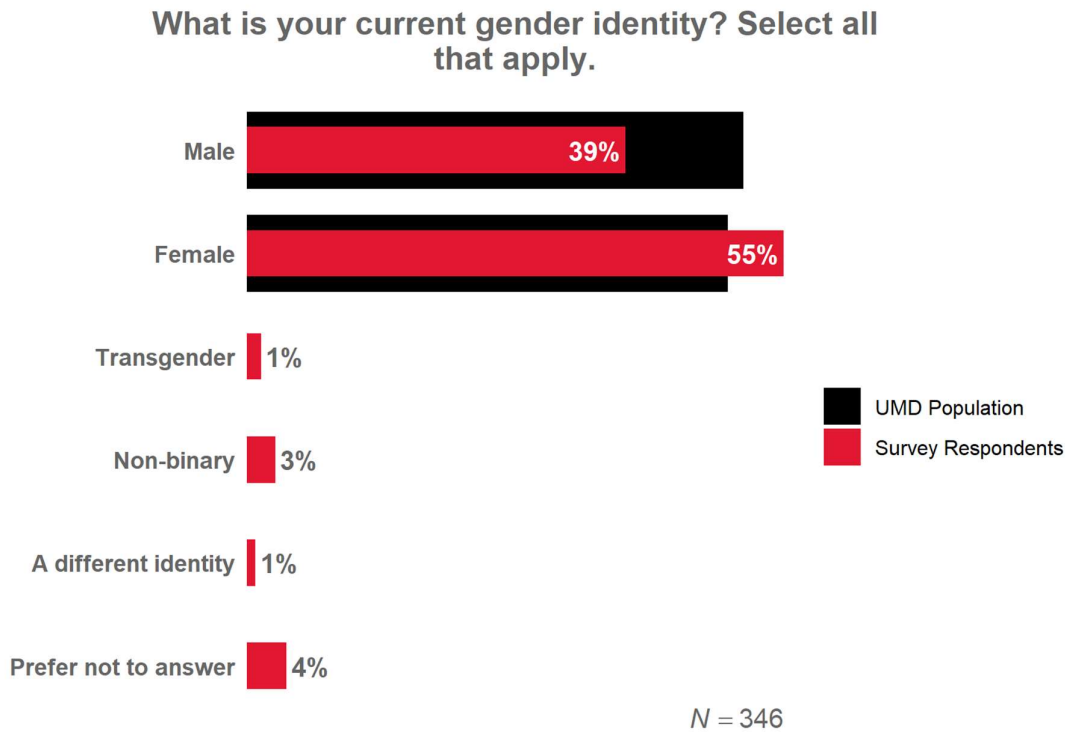


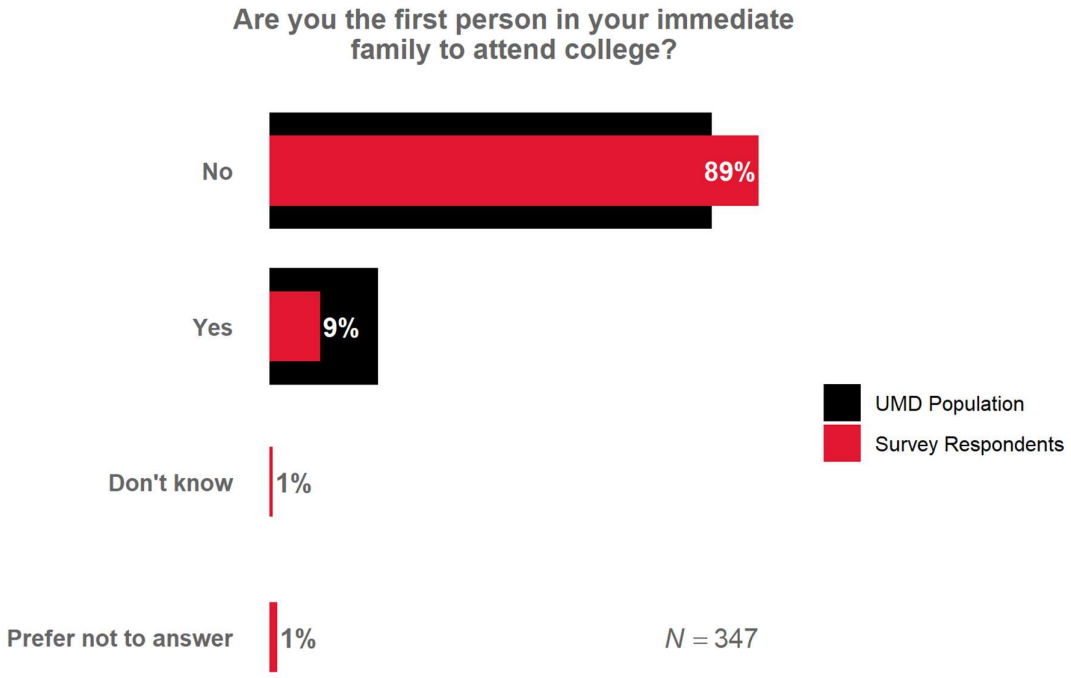
Comparisons to UMD population

The following graphs show survey respondents' demographic background in **red** relative to the demographic breakdown of UMD undergraduates in **black**, pulled from UMD's Office of Institutional Reporting, Planning, and Assessment at reports.umd.edu. These comparisons can provide insights regarding the extent to which survey respondents are representative of the greater UMD population. A category for which the relative percentage of respondents exceeds its percentage of the overall population, such as White among ethnic backgrounds, is *overrepresented* in the survey. A category for which the relative percentage of respondents is less than its percentage of the overall population, such as Black/African American, is *underrepresented*.

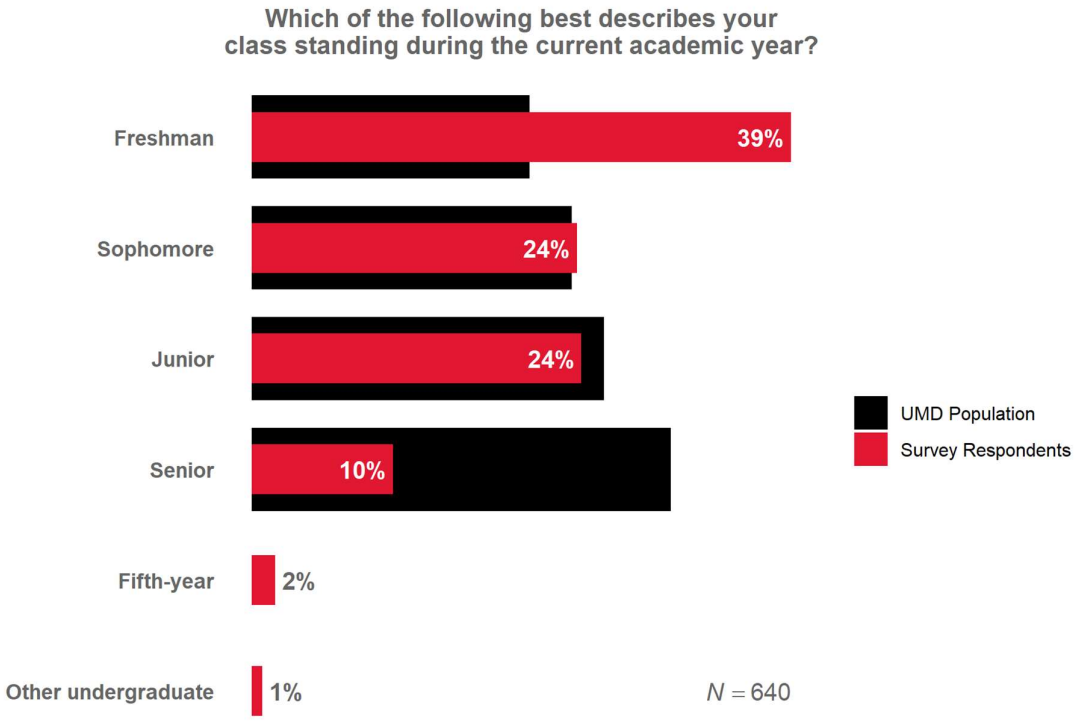
Note that UMD's demographic reporting includes information on ethnic backgrounds only for students who are U.S. citizens. The survey data in the first figure below therefore filters to respondents who indicated that they are U.S. citizens. Note also that UMD's reporting does not include some categories that survey respondents were able to select, including gender identities other than male or female. These categories will appear without the black bar representing population data.




What is your current gender identity? Select all that apply.
Male
39%
Female
55%
Transgender
1%
Non-binary
3%
A different identity
1%
Prefer not to answer
4%
UMD Population
Survey Respondents
N = 346


Are you the first person in your immediate family to attend college?
No
89%
Yes
9%
Don't know
1%
Prefer not to answer
1%
UMD Population
Survey Respondents
N = 347

UMD's demographic reporting on class standing included categories for Freshman Connection, Applied Agriculture, Special Undergraduate, and Post-baccalaureate. For the population data in the figure below, the Freshman Connection category was combined with Freshman. The remaining additional categories were not included because it was uncertain how individual students might map their class status onto the available survey responses.



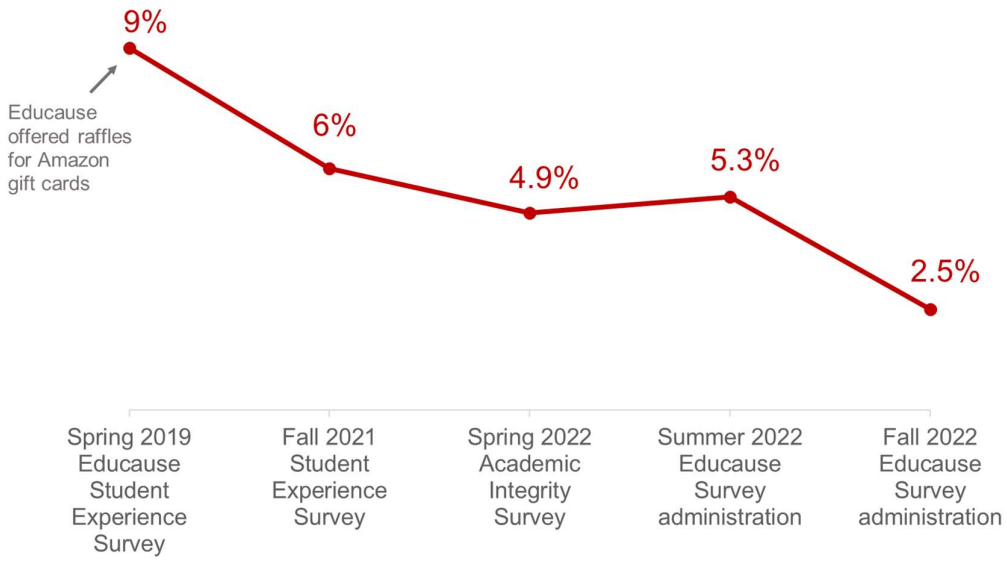
2022 EDUCAUSE Survey – Appendix

A. Investigation into low response rates

In an attempt to understand why the response rate from the Fall 2022 EDUCAUSE Student Experience with Technology survey was much lower than expected (4% vs. 9% in 2019), we collated information from UMD-wide surveys in AY 2021-2022 and AY 2022-2023 (please see information from each survey below) as well as the most recent EDUCAUSE survey (Spring 2019).

EDUCAUSE also only provided a national sample as a benchmark this year (i.e., no ability to filter to 4-year public institutions or BTAA schools as in previous years). This is possibly because they had 820 respondents nationwide, so that is the only reliable benchmark they could provide (i.e., any smaller group would be too small a sample to be generalizable or might not have that many schools included). This, along with the fact that EDUCAUSE did not offer an incentive this year (a raffle for Amazon gift cards), suggests that UMD's lower response rate is part of a national trend and/or of a lack of investment from EDUCAUSE on this survey effort.

The figure below depicts the *undergraduate response rate* for several surveys administered by the Academic Technology Experience group since 2019, including the summer and fall administrations of the present survey. These data support the notion that the offering of tangible incentives (such as raffles for a gift card) might increase the undergraduate response rates by 3% or more.



From our investigation, we developed the following take-aways:

1. Including partial survey responses (i.e., people who answered some but not all questions) increased the response rate by approximately 50% and therefore the generalizability of the sample. Including partial responses is a standard survey practice in our team (e.g., we include the sample size of questions in each visualization) and in other survey groups at UMD (e.g., IRPA).
2. Combining the summer and fall datasets from the current survey additionally increased the sample size by rough 50%, further enhancing its generalizability. However, doing so

introduced a higher possibility of repeat respondents, requiring special efforts towards identifying and handling potential duplicate cases (see Appendix section 3b).

3. It is possible that after the initial success of the Spring and Fall 2020 COVID-19 surveys on campus, no other survey we have administered has had the same sense of urgency. Most surveys since that time have had around a 5-6% response rate among undergraduate students.
4. Moving forward, including an incentive (e.g., a raffle for an ipad or headphones provided by the Terrapin Tech store) may increase response rates to those we saw in 2019 and before (i.e., closer to 10%). **In prior years, including 2019, EDUCAUSE offered the opportunity for respondents to enter raffles for Amazon gift cards**. This fact was advertised in communications to students and may have contributed to higher response rates.

B. Duplicate detection methodology and findings

The decision to readminister this survey necessitated greater attention towards the possibility that some respondents might complete the survey more than once. This report summarizes the methodology and findings of an investigation into potential repeat respondents. We concluded that repeat respondents were rare if present at all in this dataset, supporting our decision to retain all respondents in the sample.

Duplicate detection procedure

1. **Process the data**
   - **Combine questions [A] 1.16 and [B] 1.16 into one question.** These questions were mutually exclusive, oppositely-coded versions of each other, used for A/B testing by Educause. For duplicate identification, it is necessary to combine these because otherwise, if a repeat respondent received [A] in one survey and [B] in the other, a duplicate detection algorithm would treat these as separate questions and fail to treat the answers as similar.
   - **Trim unneeded columns.** Non-survey question columns (e.g., ResponseID, Timestamp) were removed.
   - **Remove incomplete responses.** Respondents who answered less than 60% of the survey were removed. Without this step, duplicate detection would artificially treat all of their non-answers as matches.

2. **Identify potential duplicates using key anchor questions**
   - **The following questions were identified as *key anchors*, extremely likely to generate identical answers by repeat respondents:**
     - 1.13: Disability requiring assistive technology
     - 2.1a - c: Online class taken prior March 2020, during spring 2020, and during 2020-21
     - 4.4: First generation
     - 4.5: Eligible for pell grants
     - 4.7: Gender identity
     - 4.8: Citizenship
     - 4.11: Ethnic background
     - 4.12: Other language spoken at home
     - 4.13a - b: Disability or impairment

- **Flag 100% match pairs for key anchors.** A list of potentially duplicate respondent pairs were identified for which answers were 100% identical on all key anchor questions.
- **Class standing filter.** Potential duplicate pairs were filtered to those in which the class standing of the more recent response matched that of the older response, or (class standing of older response + 1 year). (The possibility of either a match OR a systematically predictable non-match is why class standing is used as a filter here and not as a key anchor question.)

3. **Identify potential duplicates using moderate anchor questions**
    - **The following questions were identified as *moderate anchors*, very likely to generate identical answers by repeat respondents, but with some potential to change over the short survey timeframe:**
        - 1.1: Primary device
        - 1.6: Secondary device
        - 2.2: How prior experience has affected preferences towards online/blended courses
        - 2.4: Preferred course modality
        - 2.10: Most important measure of academic success
        - 2.13: Preferred meeting modality
        - 3.1: Familiarity with personal data privacy
        - 3.3: Familiarity with institution's data policies
        - 4.1: Part-time/full-time status
        - 4.2a: Housing status
        - 4.3: Current housing status determined by pandemic
        - 4.9: Dependent status
        - 4.10: Marital status
    - **Flag match pairs for moderate anchors.** A list of potentially duplicate respondent pairs were identified for which answers were 80% identical (allowing for differences on 2 out of 13 of the questions).
        - A more conservative 85% criterion was tested (allowing different answers on 1/13 moderate anchors) as well as a more liberal 75% (allowing different answers on 3/13). See findings presented below.
    - **Class standing filter.** The same class standing filter described above was applied to these potential duplicates.

4. **Develop final list of potential duplicate pairs based on all anchors.**
    - Respondent pairs were considered potential duplicates if they were flagged using both the key anchor questions (100% matches) and the moderate anchor questions. In other words, the final list of potential duplicates is the intersection of the lists developed in steps 3 and 4.

5. **Validation**
    - **Calculate percentage similarity for all potential duplicate pairs.** For validation, percentage similarity was calculated across the set of survey questions that were *not* used as anchors in steps 3 and 4.
    - **Calculate percentage similarity across non-duplicate pairs.** This process was completed as follows:
        - A random subset of non-duplicate pairs were selected, equaling the number of potential duplicate pairs. For example, if 6 potential duplicate

pairs were identified, then 6 non-duplicate pairs were randomly selected for validation, enhancing comparability between the sets.
    - Percentage similarity (across validation questions) was calculated for these pairs.
    - This process was repeated 100 times to arrive at an average percentage similarity on non-duplicate pairs.
- **Compare percentage similarity across duplicate pairs compared to non-duplicate pairs.** Percentage similarity should be higher for potential duplicate pairs.

Findings

The duplicate detection procedure was repeated three times using three different match criteria, varying from more liberal to more conservative: 75%, 80%, and 85%. Table 1 summarizes the findings from this process. In general, increasing the percent match criterion for moderate anchor questions increased the percent similarity on validation questions, which in itself validates the process: the more strict we are in our duplicate detection, the more similar responses are overall. However, an overly strict criterion increases the likelihood of missing potential duplicates (whereas an overly liberal criterion increases the likelihood of false alarms).

Percent match criterion	Number of potential duplicate pairs identified	Average validation similarity of potential duplicates
75% (most liberal)	42	62%
80%	17	65%
85% (most conservative)	4	69%

Note. The average validation similarity of the remaining set, i.e., the pairs not identified as potential duplicates, ranged from 58-59%.

It is highly unlikely that there are 42 duplicate pairs (as flagged using a 75% match criterion on moderate anchors) or even 17 duplicate pairs (flagged using a 80% criterion) out of 357 respondents. The 4 duplicate pairs identified using an 85% criterion seems more likely. However, even these include multiple flags with the same respondents: 124 with 234 and 329; 235 with 124 and 274. It is possible that these respondents simply answered most questions in the most prototypical ways, leading to more flags. Moreover, their percent similarity on validation questions, while on average higher than non-flagged pairs, does not seem alarmingly high.

Given these findings and the fact that it seems overall unlikely that respondents would complete this survey twice (as it is a time investment with no concrete incentive/opportunity for reward), the decision was made to consolidate the fall and summer datasets while removing no pairs.

2022 EDUCAUSE Student Survey

Welcome and Informed Consent

Study Description

This survey asks questions about your experiences with and attitudes toward technology as a college student. Your responses will help staff and faculty at your institution and others understand how to use technology more effectively to benefit students. There are no right or wrong answers. We would just like you to answer as honestly as you can. Participation in the survey is completely voluntary. You can choose to exit the survey at any point. Your responses are confidential. Required questions are indicated with an asterisk (*).

This survey is expected to take approximately 20 minutes to complete. The survey can be completed on a mobile device, but you may have the best survey response experience using a desktop or laptop computer.

Please use the survey's navigation buttons below to go backward or forward within the survey. Using your device or browser’s navigation buttons might result in lost answers.

Conditions and Stipulations

1. This online survey is being conducted for research purposes. The data resulting from this confidential survey will be made available to researchers at EDUCAUSE. You cannot be identified by your non-written survey responses. Data will be available as individual responses and in aggregate formats. Data

will be available to the general public in the form of public presentations, reports, journal or newspaper articles, and/or in books.

2. You cannot be identified by your non-written survey responses. There are several open-ended questions in this survey. It is best not to include personally identifiable information in these responses.
3. The online survey involves questions about your technology experiences and expectations in higher education. Beyond demographics, all questions will only address IT-related issues.
4. This survey is expected to take approximately 20 minutes to complete. Taking the research survey is voluntary. If you do not participate, it will not affect your college/university status in any way. If you choose, you may stop your participation at any time. If you choose to participate, you may skip any question you do not wish to answer, with the exception of the required screening question at the beginning of the survey.
5. If you have any questions about the research survey and your rights as a participant, you can contact the research team through benchmarking@educause.edu. Your responses will provide data to inform higher education institutions on how to best improve IT experiences for students and faculty at colleges and universities.
6. EDUCAUSE owns and maintains the data collected for the project. De-identified individual response data are stored on EDUCAUSE computers and/or in cloud-based storage systems. The data are stored indefinitely for use in analysis and benchmarking. Data are password-protected and accessible only by authorized individuals.
7. By selecting "I agree" below, you are agreeing to participate in the research study, according to your

rights as a voluntary research participant, as outlined above, and you provide consent to EDUCAUSE to use your survey responses as outlined above. (If you are viewing this on a mobile device, this option will appear on the next page. Please use the arrow to advance.)

You must be an adult (at least 18 years old, in most jurisdictions) and a full-time or part-time undergraduate student to participate in this survey. Indicate your agreement with the informed consent statement below.*

( ) I agree.

( ) I do not agree.

If you choose this option, you will exit the survey.

Screening Questions

What is your age?*

_____

Which of the following best describes your class standing during the current academic year?*

( ) Freshman or first-year student

( ) Sophomore or second-year student

( ) Junior or third-year student

( ) Senior or fourth-year student

( ) Fifth-year student or beyond

( ) Not an undergraduate student (Please note, only undergraduate students are eligible to take this survey.)

( ) Other undergraduate standing, please specify:
_____

Section 1: Equitable Student Access

1.1 Which of the following do you use as your primary device for your academic work (i.e., the device you use to complete most of your coursework)?

( ) Desktop

( ) Laptop

( ) Hybrid or 2-in-1 device (e.g., Microsoft Surface)

( ) Chromebook

( ) Tablet

( ) Smartphone

( ) Other, please specify: _____

1.2 How do you access your primary device?

( ) I own it.

( ) I borrow it from friends or family.

( ) I borrow it from my institution.

( ) I go to a computer lab at my institution.

( ) Other, please specify: _____

1.3 Can you access your primary device anytime you want to?

( ) No

( ) Yes

( ) Other, please specify: _____

1.4 Please tell us more about why you can't access your primary device anytime you want to.

_____

_____

_____

_____

1.5 Select the top three factors that influenced the selection of your primary device.

[ ] Availability (e.g., I would own or have access to this device anyway.)

[ ] Supply chain issues (e.g., The device I want was back-ordered.)

[ ] Financial (e.g., I can't afford to buy the device I really want.)

[ ] Academic needs (e.g., I have to use this device because it supports software or functions I need for school.)

[ ] Work/life balance (e.g., This is the best device to meet my academic, personal, and work needs.)

[ ] Personal preference (e.g., I like this device more than other options available to me.)

[ ] Security (e.g., I chose the most secure device available to me.)

[ ] Social (e.g., I am sharing this device and needed to consider others' needs as well as my own.)

[ ] Institutional requirements (e.g., This is the device my university, college, or degree program requires for all students.)

[ ] Other, please specify: _____

1.6 Which of the following do you use as your secondary device (i.e., the device you use most frequently aside from your primary device) for your academic work?

( ) Desktop

( ) Laptop

( ) Hybrid or 2-in-1 device (e.g., Microsoft Surface)

( ) Chromebook

( ) Tablet

( ) Smartphone

( ) Other, please specify: _____

( ) I do not have a secondary device.

1.7 How do you access your secondary device?

( ) I own it.

( ) I borrow it from friends or family.

( ) I borrow it from my institution.

( ) I go to a computer lab at my institution.

( ) Other, please specify: _____

1.8 Can you access your secondary device anytime you want to?

( ) No

( ) Yes

( ) Other, please specify: _____

1.9 What is the main reason you use a secondary device to complete your schoolwork (as opposed to using just one device for all of your schoolwork)?

( ) I use my secondary device when my primary device or Wi-Fi doesn't work.

( ) My secondary device has features/functions (e.g., camera, better processing) that my primary device doesn't have.

( ) I use my secondary device when I need to multitask or use multiple screens.

( ) My secondary device is more convenient to carry around.

( ) My secondary device is more convenient for quick tasks.

( ) Other, please specify:
_____

1.10 Since the beginning of the academic year, have you experienced stress during any of the following situations?

	I have not experienced this situation.	I have experienced this, but it did not cause me stress.	I have experien this, and caused n stress.
Not being able to access my primary device when I needed it	( )	( )	( )
Not having my device properly configured to perform a task	( )	( )	( )
Not having the appropriate applications or software to perform a task	( )	( )	( )
Having my device malfunction (e.g., software/operating system issues) when I needed it	( )	( )	( )
Having my device break (e.g., physical damage rendering the device unusable) when I needed it	( )	( )	( )
Not being able to run required applications or software	( )	( )	( )
Unstable internet	( )	( )	( )

connections			

1.11 How important is it to your learning to be able to have access to each of the following things online?

	Not at all	Slightly	Moderately	V
E-textbooks or required readings	( )	( )	( )	( )
Class/lecture notes	( )	( )	( )	( )
Presentation slides (e.g., PowerPoint, Google)	( )	( )	( )	( )
Class handouts	( )	( )	( )	( )
Recorded lectures	( )	( )	( )	( )
Homework assignments	( )	( )	( )	( )
Quizzes	( )	( )	( )	( )
Exams	( )	( )	( )	( )
Discussions	( )	( )	( )	( )
Group activities	( )	( )	( )	( )
Video (e.g., YouTube videos, movies)	( )	( )	( )	( )
Audio (e.g., podcasts, music, recorded books)	( )	( )	( )	( )
Hands-on engagement with	( )	( )	( )	( )

content (e.g., VR, virtual labs)				
Study guides	( )	( )	( )	( )
Collaborative/shared documents	( )	( )	( )	( )
Peer teachers/tutors	( )	( )	( )	( )
Office hours/meetings with my instructor	( )	( )	( )	( )

1.12 What other types of institutional services or resources do you want to be able to access online?

_____

_____

_____

_____

1.13 Do you have a disability for which you need assistive technologies?

( ) No

( ) Yes

( ) Don’t know

( ) Prefer not to answer

1.14 Which of the following technologies do you need for your academic work, and do you have access to them?

	I need it and have	I need it but don’t have	I don’t need it.

	access to it.	access to it.	
Speech-to-text software	( )	( )	( )
Text-to-speech software	( )	( )	( )
Word prediction software	( )	( )	( )
Screen reader	( )	( )	( )
Digital magnifier	( )	( )	( )
Digital player/recorder	( )	( )	( )
Pentop computer (e.g., smartpen)	( )	( )	( )
Digital highlighter	( )	( )	( )
Closed captions on videos	( )	( )	( )

1.15 Since the beginning of the academic year, which of the following have you personally experienced? Select all that apply.

[ ] I couldn't access my primary device when I needed it because I had to share it with a family member or friend.

[ ] My primary device wasn't equipped to perform a task I needed it to perform for a course.

[ ] I missed a project or assignment deadline because I couldn't access my primary device or because it wouldn't work.

[ ] I missed attending a remote class session because I couldn't access my primary device or because it wouldn't work.

[ ] I missed an exam because I couldn't access my primary device or because it wouldn't work.

[ ] My primary device malfunctioned or was broken and required repair, support, or replacement.

[ ] I missed, lost time on, or failed an exam because my primary device did not support the required proctoring software.

[ ] My primary device was not able to run the required software due to compatibility, operating system, and/or memory issues.

[ ] My primary device lost connectivity to the internet during a class session, exam, and/or other synchronous activity.

[ ] I was required to purchase hardware or software for a course, but I rarely or never used it.

[ ] I was required to purchase hardware or software that I could not afford.

[ ] An app or tool my instructor wanted to use was not compatible with my assistive technology (e.g., screen reader).

[ ] Other device issue, please specify::
_____

[ ] I haven't experienced any device issues since the beginning of the academic year.

[A] 1.16 How frequently do you struggle to find an internet connection that is adequate to meet all of your needs as a student?

( ) Never

( ) Rarely

( ) Sometimes

( ) Very often

( ) Always

[B] 1.16 How frequently do you have an internet connection that is adequate to meet all of your needs as a student?

( ) Never

( ) Rarely

( ) Sometimes

( ) Very often

( ) Always

1.17 Which of the following services provided by your institution are you using during the current academic term? Select all that apply.

[ ] Borrowing a laptop from my institution

[ ] Borrowing a tablet from my institution

[ ] Borrowing a hotspot from my institution

[ ] Receiving financial support from my institution to subsidize internet access

[ ] Receiving financial support from my institution to purchase hardware or software

[ ] Visiting a special campus location (e.g., a parking lot) for Wi-Fi access

[ ] Visiting a physical campus location (e.g., a computer lab) for hardware (e.g., computer, printer) access

[ ] Receiving help from my institution's IT support for technology issues

[ ] Other, please specify:
_____

[ ] None of the above

1.18 Which of the following services or solutions have you sought out on your own, from somewhere other than your institution? Select all that apply.

[ ] Bought a new digital device (e.g., laptop, desktop, tablet)

[ ] Borrowed or shared a digital device

[ ] Bought a new mobile hotspot

[ ] Subscribed to home internet service

[ ] Upgraded home internet service

[ ] Subscribed to cell phone service

[ ] Upgraded cell phone service (i.e., increased data plan, added hotspot capability)

[ ] Traveled to places other than my primary site of internet access for an important event such as an exam or presentation

[ ] Received help from friends or family for IT issues

[ ] Received help from an external IT support service (e.g., Apple Genius Bar, Best Buy Geek Squad)

[ ] Solved IT issues with my own knowledge or personal troubleshooting abilities (e.g., searching the internet for solutions)

[ ] Other, please specify:
_____

[ ] None of the above

Section 2: The New Normal

2.1 Please tell us about your experience(s) with online and blended (i.e., partially online) courses in college. Select all that apply.

[ ] I took at least one online or blended college course prior to the onset of the pandemic (i.e., before March 2020).

[ ] I took at least one online or blended college course during the emergency move to remote learning in spring 2020.

[ ] I took at least one online or blended college course during the 2020–21 academic year.

[ ] I am currently taking at least one online or blended college course (i.e., 2021–22 academic year).

[ ] I have not taken any online or blended college courses.

2.2 How have your previous experiences with online and blended college courses influenced the likelihood that you will take online or blended courses again in the future?

( ) I am less likely to take online or blended college courses in the future.

( ) I am just as likely to take online or blended college courses in the future.

( ) I am more likely to take online or blended college courses in the future.

( ) I don't know.

2.3a Please describe your reasons for being less likely to take online or blended college courses in the future.

_____

_____

_____

_____

2.3b Please describe your reasons for being more likely to take online or blended college courses in the future.

_____

_____

_____

_____

2.4 Considering a typical course, which one of the following course modes do you prefer?

( ) A course that is completely face-to-face

( ) A course that is mostly but not completely face-to-face

( ) A course that is about half online and half face-to-face (i.e., blended)

( ) A course that is mostly but not completely online

( ) A course that is completely online

( ) No preference

( ) Other, please specify:
_____

2.5 Are you currently taking all of your courses in your preferred mode(s) (i.e., online, blended, face-to-face)?

( ) No

( ) Yes

( ) I have no preferred mode(s).

( ) Other, please specify:
_____

2.6 Can you please tell us more about why you are not taking all of your classes in your preferred mode(s)?

_____

_____

_____

_____

2.7 When you take courses that are not delivered in your preferred mode, how does that impact your learning experience (if at all)?

_____

_____

_____

_____

2.8 Please provide an example of the most effective use of technology you have experienced in your courses since the beginning of the academic year.

_____

_____

_____

_____

2.9 Please provide an example of the least effective use of technology you have experienced in your courses since the beginning of the academic year.

_____

_____

_____

_____

2.10 Which one of the following measures of success is most important to you in your undergraduate experience?

( ) Completing a degree

( ) Achieving a high GPA

( ) Securing a job

( ) Securing a promotion or advancing my career

( ) Securing a high salary

( ) Gaining independence

( ) Gaining general knowledge

( ) Gaining specific skills

( ) Achieving personal growth

( ) Other, please specify:

_____

2.11 What has your institution done to help you in achieving success in this area during your undergraduate experience?

_____

_____

_____

_____

2.12 What are the greatest barriers to you achieving success in this area?

_____

_____

_____

_____

2.13 In what mode(s) do you prefer to meet with other students for academic work?

( ) Always face-to-face

( ) Mostly face-to-face, sometimes online

( ) About half face-to-face and half online

( ) Mostly online, sometimes face-to-face

( ) Always online

( ) Don’t know

2.14 In what mode(s) have you been meeting with other students for academic work since the beginning of the academic year?

( ) Always face-to-face

( ) Mostly face-to-face, sometimes online

( ) About half face-to-face and half online

( ) Mostly online, sometimes face-to-face

( ) Always online

Section 3: Data Privacy and Security

3.1 How do you rate your level of familiarity with personal data privacy and security?

( ) Very low

( ) Below average

( ) Average

( ) Above average

( ) Very high

( ) Don't know

3.2 How have you primarily learned about personal data privacy and security? Select all that apply.

[ ] Parents

[ ] Friends or acquaintances

[ ] Colleagues from work

[ ] Social media

[ ] News

[ ] Teachers

[ ] Information or training provided by my institution

[ ] Searching online (e.g., Google searches)

[ ] Other, please specify:
_____

[ ] I have not learned about my personal data privacy and security.

3.3 How do you rate your level of familiarity with your institution's personal data privacy and security policies?

( ) Very low

( ) Below average

( ) Average

( ) Above average

( ) Very high

( ) Don't know

3.4 How have you primarily learned about your institution's personal data privacy and security policies? Select all that apply.

[ ] Parents

[ ] Friends or acquaintances

[ ] Colleagues from work

[ ] Social media

[ ] News

[ ] Teachers

[ ] Information or training provided by my institution

[ ] Searching online (e.g., Google searches)

[ ] Other, please specify:
_____

[ ] I have not learned about my institution's personal data privacy and security policies.

3.5 When using a new application for school, to what extent are you concerned about the following?

	Not at all	Slightly	Moderately	Very
The software company's ability to store and protect my personal data	( )	( )	( )	( )
The software company's interest in using my personal data for research (to create a more compelling product, improve the product, etc.)	( )	( )	( )	( )
The software company's interest in using my personal data for marketing	( )	( )	( )	( )
The software company's interest in using my personal data purely for its own profit (e.g., selling my data	( )	( )	( )	( )
Receiving advertisements	( )	( )	( )	( )

from the software company (e.g., embedded in coursework, sent via email)				

3.6 How much do you agree or disagree with the following statements about data/information privacy and security?

	Strongly disagree	Disagree	Neutral	Agre
I have confidence in my institution's information security practices.	( )	( )	( )	( )
I understand relevant college/university policies about data use, storage, and protection.	( )	( )	( )	( )
I understand my rights and responsibilities in regards to college/university policies about data use, storage, and protection.	( )	( )	( )	( )
I have confidence in my ability to follow my institution's	( )	( )	( )	( )

information security policies and procedures.				
My institution's privacy and security policies impede my productivity.	( )	( )	( )	( )
I benefit from my institution's privacy and security policies.	( )	( )	( )	( )
I have confidence in my institution's ability to safeguard my personal digital information (e.g., logins; card-swipe data; use of the library, health center, or fitness center; event attendance).	( )	( )	( )	( )
I have confidence in my institution's ability to safeguard my personal data (e.g., financial information, transcripts, test scores).	( )	( )	( )	( )
I understand how my institution uses the personal data they collect about me (e.g.,	( )	( )	( )	( )

personal digital data, financial data, academic data).				
I benefit from my institution's collection and use of my personal data (e.g., through improved services, advising).	( )	( )	( )	( )
I trust my institution to use my personal data ethically and responsibly.	( )	( )	( )	( )

3.7 Please share more about why you do not have confidence in your institution's ability to safeguard your personal data.

_____

_____

_____

_____

3.8 Please share more about why you do not trust your institution to use your personal data ethically and responsibly.

_____

_____

_____

_____

3.9 How do you think your institution uses the personal data they collect about you?

_____

_____

_____

_____

Open-Ended Response Sharing

May we share the open-ended, written responses you provided throughout this survey with your institution?

If you have included information in your written responses that could identify you, we suggest choosing "No."

( ) No

( ) Yes

Section 4: Demographic Questions

4.1 Are you currently considered a full-time or part-time student at the institution that asked you to complete this survey? (Part time is typically fewer than 12 credit hours per quarter/semester or their equivalent.)

( ) Part time

( ) Full time

4.2a What is your housing situation?

( ) I live on campus.

( ) I live off campus in housing sponsored or owned by my college/university.

( ) I live off campus in housing not sponsored or owned by my college/university.

( ) My housing situation is unstable.

( ) Prefer not to answer

4.2b In what way(s) is your housing situation unstable? *Select all that apply.*

[ ] Campus housing might close.

[ ] There is uncertainty in rental housing.

[ ] There is uncertainty in my roommate situation.

[ ] I am experiencing transience (i.e., I have a place to stay, but it is only temporary).

[ ] I am experiencing homelessness.

[ ] Other, please specify:
_____

[ ] Prefer not to answer

4.3 Is your current housing situation determined by pandemic-related circumstances?

( ) No

( ) Yes

( ) Don't know

( ) Prefer not to answer

4.4 Are you the first person in your immediate family to attend college?
Immediate family refers to the family with whom you grew up.

( ) No

( ) Yes

( ) Don't know

( ) Prefer not to answer

4.5 Are you eligible for Pell Grants? (Pell Grants provide grant assistance to eligible undergraduate postsecondary students with demonstrated financial need to help meet education expenses.)

( ) No

( ) Yes

( ) Don't know

( ) Prefer not to answer

4.6 How many hours a week on average are you working while taking classes this academic term?

( ) Zero (not currently working)

( ) Fewer than 10

( ) At least 10 but fewer than 20

( ) At least 20 but fewer than 30

( ) At least 30 but fewer than 40

( ) 40 or more

( ) Prefer not to answer

4.7 What is your current gender identity? Select all that apply.

[ ] Male

[ ] Female

[ ] Transgender

[ ] Nonbinary

[ ] A different identity

[ ] Prefer not to answer

4.8 Are you a citizen of the United States?

( ) No

( ) Yes

( ) Prefer not to answer

4.9 Are you a dependent, or do you have any dependents?

( ) Dependent

( ) Independent, no dependents

( ) Independent, with dependents

( ) Prefer not to answer

4.10 Are you married or in a domestic partnership?

( ) No

( ) Yes

( ) Prefer not to answer

4.11 What is your ethnic background? ***Select all that apply.***

[ ] American Indian/Native American/Alaskan native

[ ] Asian/Pacific Islander

[ ] Black/African American

[ ] Hispanic/Latino

[ ] White

[ ] Another ethnicity not specified here

[ ] Prefer not to answer

4.12 Do you speak a language other than English at home?

( ) No

( ) Yes

( ) Prefer not to answer

4.13a Have you been diagnosed with a disability or impairment?

( ) No

( ) Yes

( ) Prefer not to answer

4.13b With which of the following disabilities or impairments have you been diagnosed? *Select all that apply.*

[ ] A learning disability (e.g., ADHD, dyslexia)

[ ] A mental health disorder

[ ] A mobility impairment

[ ] A sensory impairment (vision or hearing)

[ ] A chronic illness

[ ] Another disability or impairment, please specify:
_____

[ ] Prefer not to answer

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