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The Myth of the Digital Native

How colleges are dealing with
student digital-literacy gaps

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The Myth of the Digital Native

How colleges are dealing with student digital-literacy gaps

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Contact CI@chronicle.com with questions or comments.

The Myth of the Digital Native: How Colleges Are Dealing With Student Digital-Literacy Gaps was written by Alina Tugend and is underwritten by Adobe. Chronicle cover image from iStock. *The Chronicle* is fully responsible for the report's editorial content. ©2023 by The Chronicle of Higher Education, Inc. All rights reserved. This material may not be reproduced without prior written permission of *The Chronicle*. For permission requests, contact us at copyright@chronicle.com.



Digital literacy — the ability to learn and use technology applications and programs, both basic and more advanced, and to critically assess online information — is a crucial component of thriving in today’s workplaces. Understanding students’ needs and the capability of faculty and staff members to meet those needs is a vital part of higher education’s role in the 2020s.

Many colleges realize that assumptions about students’ digital abilities have been wrong; that often students need help learning fundamental skills, such as using learning-management systems or setting up Word documents. And these knowledge gaps are exacerbated by economic inequity.

The question now is, what is the best way to help students? How prepared are faculty members to teach them? How does a college assess the baseline skills students will need? And once that baseline is determined — a feat in itself — how should those skills be taught?



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To better understand these issues, *The Chronicle of Higher Education* surveyed 433 faculty members, 421 academic and administrative leaders, and 432 students in early January 2023. The survey was underwritten with support from Adobe. The student respondents ranged in age from 18 to 24, and 80 percent of them were attending college full time. The respondents were from a mix of large and small, private and public colleges; the majority were from four-year institutions, although two-year colleges are represented. In addition, *The Chronicle* conducted about 20 interviews for this report.

In the survey and in interviews, faculty members and administrators overall thought their institutions were doing as good a job as most in teaching digital skills, but they expressed frustration at many students' lack of such skills. They also said they understand the growing need to respond to the issue on an individual and institutionwide basis. Students were split on whether they thought instructors' expectations of their digital skills were too high or too low, but a few also acknowledged they had an inflated sense of their own skills. As one student put it, "You don't know what you don't know."

At the beginning of the 21st century, the idea took hold that young people — who hadn't known a world without computers, cell phones, and the internet — could effortlessly learn digital skills, seamlessly absorbing them as technology evolved.

But there is a growing realization that it's time to jettison this notion — along with the idea that students arrive at college with a full complement of digital skills and literacy.

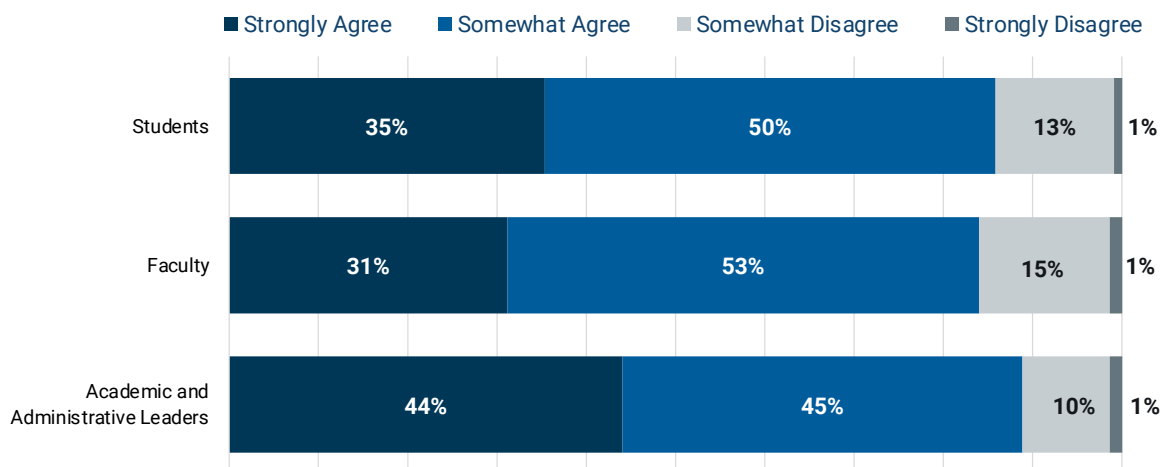
“Digital skills are not binary. It's not that you have them or you don't,” says Amanda Bergson-Shilcock, a senior fellow at the National Skills Coalition, a nonprofit research and advocacy organization that seeks to improve skills-training. “There's a huge spectrum. We say, ‘Oh, well, they have a smartphone, they must have skills.’ But that's really not the reality of how skills are acquired. We would not say that, because a 16-year-old had had a couple of driving lessons, they would be capable of driving in a NASCAR race.”

Such assumptions also mean that, while colleges alone can't meet the challenge of teaching digital competence, they have an important role to play to ensure their students can succeed both in class and in the working world.

Many institutions now realize this. According to the *Chronicle* survey, more than 80 percent of the survey's respondents in all three categories — students, faculty members, and academic and administrative leaders — agreed that teaching digital skills should be a bigger part of their institution's curriculum.

“Digital skills are not binary. It's not that you have them or you don't. There's a huge spectrum. We say, ‘Oh, well, they have a smartphone, they must have skills.’ But that's really not the reality of how skills are acquired.”

To what extent do you agree with the following statement:
“Teaching digital skills should be a bigger part of my institution's curriculum.”



Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
Note: Percentages may not total 100% due to rounding.

Figuring out the best way to incorporate such teaching is daunting, especially at colleges where faculty members already feel overburdened — or may not feel that comfortable with the digital world themselves. But it's crucial, says Clay Shirky, vice provost for educational technologies at New York University.

“Kids have complete fluidity on their phones, and we unconsciously think they must really know how a computer works, but they don't,” Shirky says. “By treating kids of that age as inherently digital native, we actually make it harder for the students who most need to ask for help to ask for it.”



The Myth of the Digital Native

It was a little more than two decades ago that the term “digital native” was first popularized.

But over those years, college faculty members and administrators began to wonder why these so-called natives — who flick through their smartphones at lightning speed, upload and download social-media posts with ease, and fire off texts in the blink of an eye — seemed to be stumped by what educators viewed as basic computer skills.

Tara McKenna, director of the PGA Golf Management Program at Florida Gulf Coast University, sees this all the time. Most of her students are straight out of high school, many come from affluent families, and, she says, “If you give them some kind of digital media to alter and put on their Instagram, they’re freaking rock stars.” But their knowledge of spreadsheets, PDF readers, and word-processing tools, “all things outside of the direct function of their phone is nonexistent. They’re on the struggle bus.”

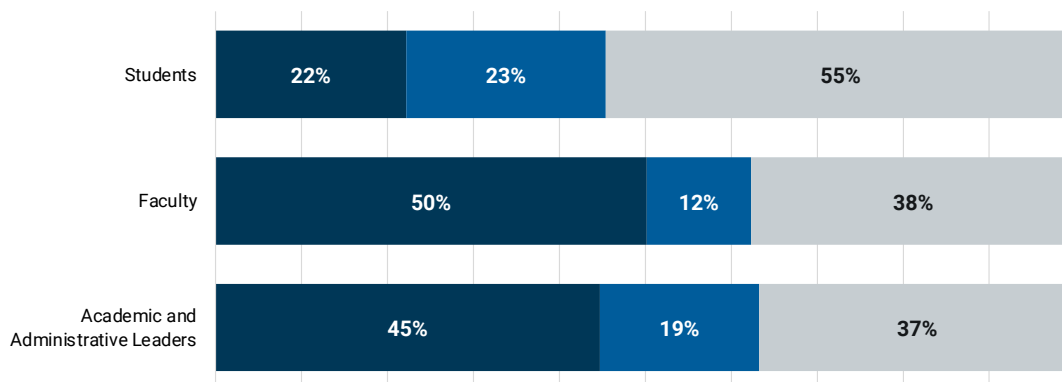
Students are often more confident in their own digital skills and understanding than their instructors and administrative leaders are. In the *Chronicle* survey, while 22 percent of students said they thought their college overestimated their digital skills, half of faculty respondents and 45 percent of ac-

says Bergson-Shilcock. “Consumption is, can I watch a video or receive texts and photos on my phone? Skills associated with production are, can I create and edit the video? Can I download and install a new app on my phone and then use that app to do a task like register for a conference or sign up for a class?”

How well do you think your college and faculty members' expectations of students' digital skills align with the actual digital skills students have?

Please select the statement that best applies.

- My college overestimates students' digital skills
- My college underestimates students' digital skills
- My college accurately estimates students' digital skills



Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
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ademic and administrative leaders responded that same way. Nearly a quarter of student respondents said their college underestimated students' technological abilities, compared with 12 percent of faculty and 19 percent of academic and administrative leaders.

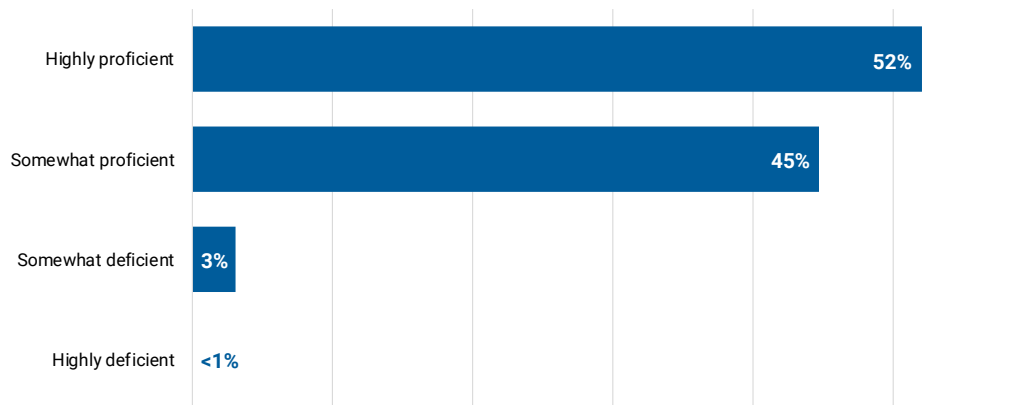
“People often confuse being comfortable with digital tools for consumption with being comfortable with digital tools for production,”

It's the production tools that colleges and workplaces are looking for. Nonetheless, in the *Chronicle* survey, 52 percent of students responding said they considered themselves highly proficient with digital technology and skills; 45 percent said they were somewhat proficient. Only 3 percent considered themselves somewhat deficient.

Valentina Arismendi, who graduated from University of North

STUDENTS

Thinking about your overall digital proficiency in terms of awareness, comprehension, and user experience, how proficient do you feel with digital technology and your digital skills?



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Note: Percentages may not total 100% due to rounding.

Carolina at Chapel Hill in 2021, understands some students' inflated sense of their digital abilities, because she was one of them.

"I definitely came into college thinking I was a digital pro. I worked on my high-school yearbook and felt I knew a lot about design programs online. And in my head that just translated into knowing absolutely every program that there ever was," Arismendi says. "I remember thinking that it was so silly that people wrote they were Microsoft proficient on their resumes — who doesn't know how to type into a Word document? It wasn't until I took a data-journalism class and we were using Excel in ways that were more than just typing into a cell that I realized, 'Oh, this is what people mean when they say that they're proficient.'"

Low-income students, many of whom are first-generation and students of color, face greater challenges both connecting to the internet and accessing appropriate devices. More than one professor mentioned students who attempted to write entire term papers on their phones.

"It wasn't until I took a data-journalism class and we were using Excel in ways that were more than just typing into a cell that I realized, 'Oh, this is what people mean when they say that they're proficient.'"

And it's not just hardware. Better-resourced K-12 schools, while not perfect, are more likely to offer classes and electives that promote technological abilities. And even time is at a premium — time to tinker with hardware and software to better understand the options and tools available — for those who have to work or support their families while attending college classes.

But faculty members and admin-

tion is coming from and its veracity is equally or more important, particularly as an increasing number of people use social media to stay informed. According to the [Pew Research Center](#), 10 percent of adults — and a quarter of those under 30 years old — now regularly get their news on TikTok.

“We need to parse the term ‘digital native,’” says Sam Wineburg, a professor emeritus of education

“We make the inappropriate assumption that because kids can manipulate technology for their own free-time purposes, they also have the sophistication to make choices about what information to believe.”

istrators at institutions large and small, public and private, say the problems are by no means limited to certain socioeconomic groups. Over and over, instructors and officials expressed frustration that so many students arrive on campus with very little knowledge of Microsoft tools, even though, according to the *Chronicle* survey, the most popular technology provider used on campuses was Microsoft — with more than 90 percent of respondents saying they use it.

But skills are only one part of the digital-literacy equation; being able to critically assess where informa-

tion is coming from and its veracity is equally or more important, particularly as an increasing number of people use social media to stay informed. But we make the inappropriate assumption that because kids can manipulate technology for their own free-time purposes, they also have the sophistication to make choices about what information to believe.”

In [a study](#) Wineburg helped author as part of the Stanford History Education Group, 263 college sophomores, juniors, and seniors at a large public university on the East Coast were asked to do two tasks: evaluate the trustworthiness of a “news story” that came from a sa-



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tirical online publication and evaluate the website of a group claiming to sponsor nonpartisan research. The website was actually created by a public-relations firm.

Over two-thirds of the students did not identify the news story as satirical, and 95 percent did not realize that a public-relations firm had set up the website.

What data can administrators show, asks Wineburg, that demonstrates that their first-year and second-year students “are making thoughtful decisions about what is reliable?”

While many colleges have for years been aware of the need to teach students more about the on-

line world — both skills and critical thinking — the pandemic and the rapid move to emergency remote learning really brought the issue to the forefront.

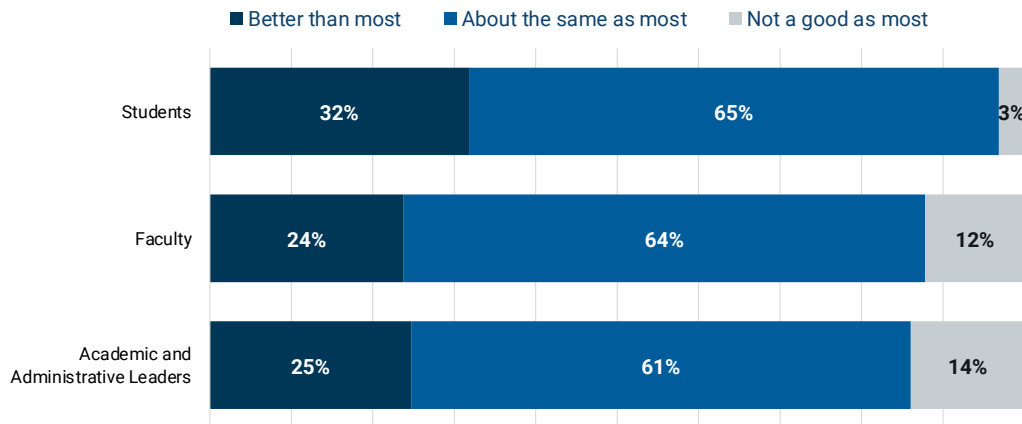
“It highlighted the inequities, but also the lack of digital-literacy skills,” says Helen Heinrich, associate vice president for academic technology at the California State University at Northridge. Before the pandemic, “most of our classes were in-person classes. The lack of skills might have gone unnoticed, and probably did, for years. And as an institution we are grappling with, ‘How do we deliver those skills, and who will be delivering them?’”

Obstacles to Digital-Skills Development

According to the *Chronicle* survey, about a quarter of faculty and administration respondents believed that their own college was better than most institutions at teaching digital skills, with approximately 60 percent saying they were about the same as most. About one-third of students thought their own institution was better than others.

But most colleges understand that far more needs to be done, even while acknowledging the difficulties. In the *Chronicle* survey, slightly more than half of faculty respondents said the major obstacles to improving use of technology in campus classrooms were budget constraints and not having a complete picture of the digital skills students need. Sixty-two percent of administrative and academic leaders, on the other hand, said the biggest challenge was the reluctance among faculty members to change the curriculum.

To the best of your knowledge, how would you compare your institution's capabilities to teach digital skills?



Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
 Note: Percentages may not total 100% due to rounding.

Other hurdles, both faculty members and leaders say, include lack of digital skills and literacy among faculty members, and their college's own failure to have a strategy to deal with the problem.

And unlike with course subject matter, where it is assumed the instructor is the expert, faculty members may not feel comfortable with the technology they are requiring students to use. In fact, only six percent of faculty and eight percent of academic and administrative officials surveyed by *The Chronicle* believed their institution's instructors were "very well" prepared to teach digital skills. That compares with 26 percent of students responding in the affirmative. About half of each category's respondents said their instructors were "somewhat prepared."

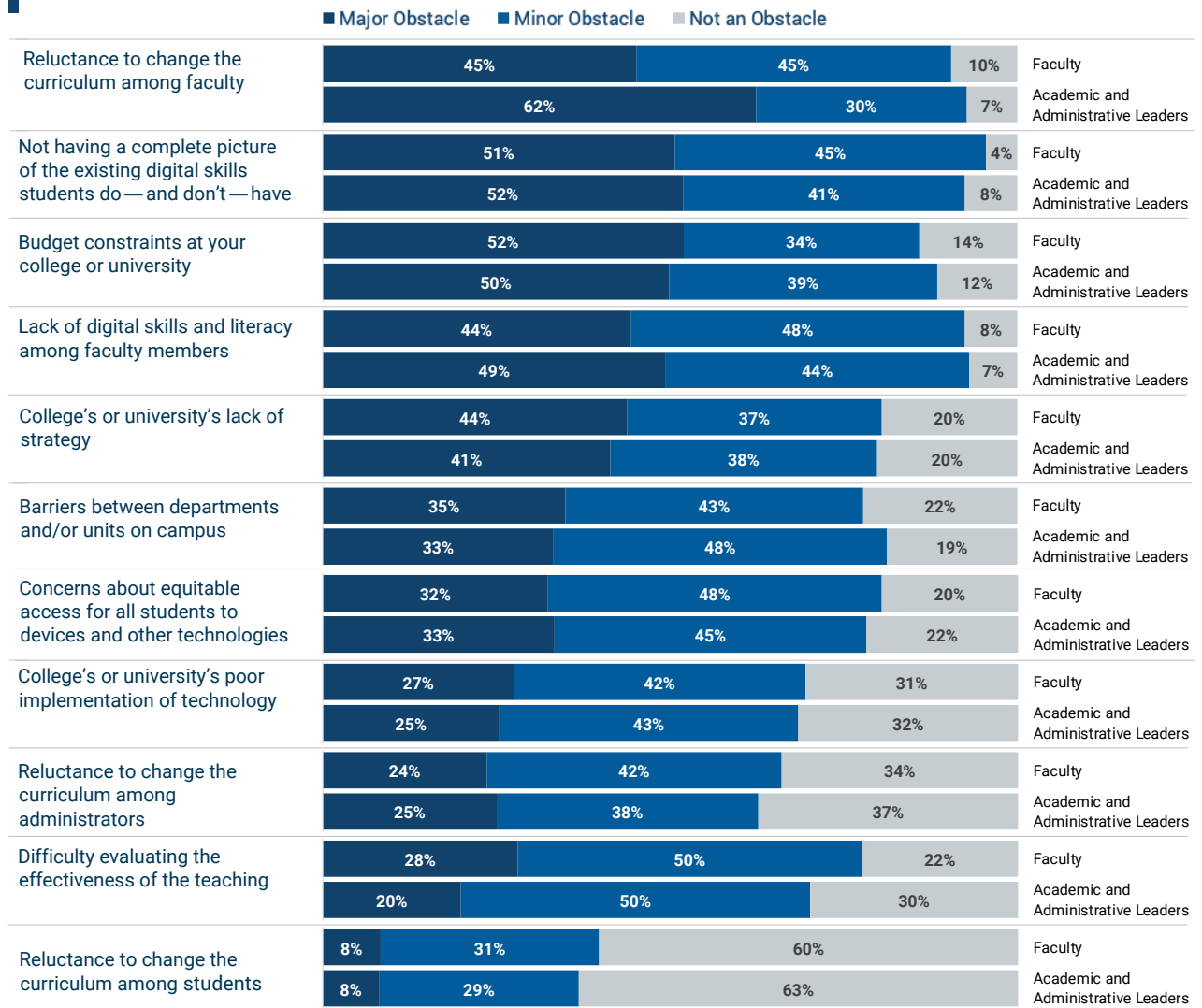
Bergson-Shilcock, of the National

Skills Coalition, says a cornerstone of her organization's new report, "[Closing the Digital Skills Divide](#)," is to provide more professional development for instructors and professors to improve their own digital skills. Otherwise, she says, "they're not going to be in a good position to be able to turn around and help students acquire them."

Todd Joseph, an associate professor of psychology and division chair of public, social and behavioral science at Hillsborough Community College in Tampa, Fla., says he sees this frequently. "A lot of faculty struggle themselves to handle the technology burden. We do have professional development for our own uses and to be capable of using it in our teaching, but not necessarily to a level of expertise where we could teach it ourselves."

Utah Tech University decided

Rate the following obstacles to improving use of technology in your campus classrooms



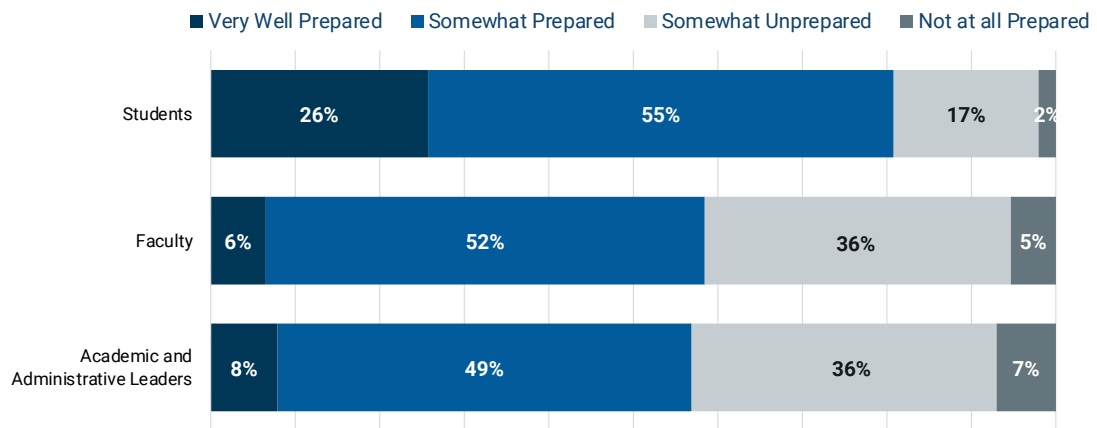
Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
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in 2022 that one way to help both faculty members and students was to offer instructional videos available from a technology company. The videos teach a variety of digital skills and literacy; students, administrators, and faculty members could learn independently from the videos, and instructors could also

offer them in class instead of creating their own lesson plans.

But fewer than expected have used the videos — and it's not clear why, says Wendy Schatzberg, an associate professor of chemistry and director of the university's Center for Teaching & Learning. Figuring that out and finding other ways to

How well prepared do you think your college instructors are to teach digital skills?



Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
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promote digital skills are among the goals of the university’s digital literacy task force, also formed in 2022, with representatives from departments across campus.

One of its major undertakings is to determine what the baseline should be for digital literacy; for example, should there be a core competency checklist for all students and faculty members, and then additional and different skills for those majoring in physics as opposed to those majoring in music?

To create such a list of skills, it’s important to separate “needs versus wants,” Schatzberg says, noting that in her College of Science, some people believe that every student should learn computer coding, not just those in computer science. “But as a chemistry professor, while it might be nice that my students have coding skills, I don’t necessarily

agree that it is absolutely needed.”

A year on, the task force is still hammering out the issues — and once a list is approved, it’s not the end. “How do we communicate that baseline? How do we make sure they’re getting the skills? They might be embedded in the courses they’re taking, or they might be an outside requirement,” Schatzberg says. “We also want to make sure this isn’t a burden on anybody. The last thing we want to do is overload students and faculty. How do we communicate that this could make their lives easier? How do we sell the baseline?”

While time-consuming, it’s crucial that colleges understand their own students’ needs before putting in place a digital-literacy program and reallocating resources, says Jenay Robert, a researcher at Educause, a nonprofit that focuses on higher edu-

cation and information technology.

Colleges need to “investigate how educational technology at their institution is both supporting students and creating stress or other barriers for them,” Robert says.

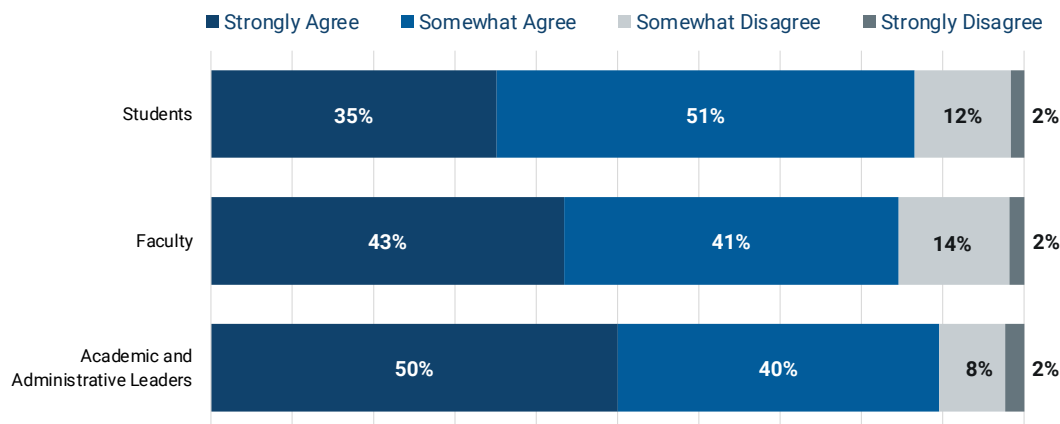
And those needs often involve inequity: Low-income, disabled, and international students may struggle more than others in learning and applying skills and accessing reliable internet and devices. In the *Chronicle* survey, 90 percent of academic and administrative leaders, 84 percent of faculty members, and 86 percent of students agreed that their college was concerned about equity, including ensuring access to devices and digital-skills lessons.

Certainly the pandemic shone a bright light on the country’s digital divide, but that divide isn’t

static. Amy Gonzales, an associate professor of communications and information technologies at the University of California at Santa Barbara, says the components of digital literacy — internet, devices, and skills — are often referred to as three legs of a stool, with each one equally important. But, increasingly, she notes, it’s not that people don’t have access to the internet or own a laptop or tablet, but rather have problems with poorly functioning devices, Wi-Fi, or other necessities.

A 2018 [study](#) Gonzales helped author found that of 748 college students surveyed, nearly all had use of cellphones and laptops. But almost 20 percent of respondents had difficulty maintaining access to technology, because of issues such

To what extent do you agree with the following statement:
“My college is concerned about the questions of equity, including ensuring access to devices and lessons for all students, in the teaching of digital skills.”



Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
Note: Percentages may not total 100% due to rounding.

as broken hardware, data limits, and connectivity problems. These hardships were associated with lower grade-point averages, the research found, and were disproportionately experienced by students of color and lower-income students.

“If I don’t have a power cord or the cat eats it, I can buy another, but people can’t always afford to reconnect,” she says.

Phoung Vy Tran, a senior in communications at UC Santa Barbara, grew up in a poorer part of San Jose, Calif.; in high school she went to the library to use a computer.

She worked during her senior year in high school to buy a laptop, but when the pandemic hit, she returned to her family of seven living in a mobile home. At Tran’s urging, they signed up for a service that provided inexpensive Wi-Fi, but she had to work from a couch or dining-room table and vie with her siblings for the few outlets available.

When she couldn’t get her assignments in on time because of these obstacles, some instructors were less than understanding. “I felt some of my professors thought these were just excuses,” Tran says. “I thought everyone had similar problems and just dealt with it myself.”

How students feel about their own ability and comfort in using technology also impacts how they learn. A 2021 [survey](#) of 684 college students and their online-learning experience across a variety of

higher-education institutions found that those who struggled more with technology found learning more difficult, felt less connected to their peers online, and were less likely to enroll in the following semester if

“I felt some of my professors thought these were just excuses. I thought everyone had similar problems and just dealt with it myself.”

the classes were completely remote. The survey was conducted by the College Innovation Network at WGU Labs, a nonprofit affiliate of Western Governors University.

“How comfortable you are using technology can be independent of how comfortable you are with the learning content,” says Omid Fotuhi, director of learning innovation at WGU Labs. “This is a powerful element in thinking about the digital divide. It’s exacerbated by folks who have the experience and the support structures that give them the confidence to stay engaged with technology and to learn those technologies, compared to those who don’t have those same kinds of privileges.”

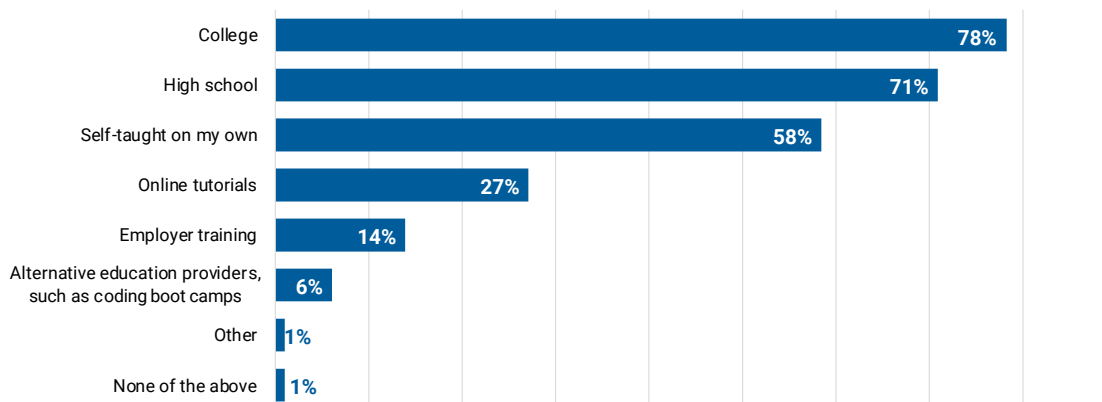


Efforts to Improve Digital Proficiency

STUDENTS

Thinking about your current comfort and skill level with digital technology, which of the following resources/experiences would you say have strongly contributed to your proficiency?

Please select all that apply.



Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
Note: Percentages may not total 100% due to rounding.

In the *Chronicle* survey, students said college — more than high school or teaching themselves, or using online tutorials — has strongly contributed to their digital proficiency.

But 85 percent of students — and 84 and 89 percent of faculty and college leaders, respectively — also said that their institution needed to make teaching digital technology a bigger part of their college curriculum.

Some colleges have tackled this on a campuswide basis. Take Bryn Mawr College, a private women’s college outside of Philadelphia, which started looking at digital competencies relatively early on and rolled out its [Digital Competencies Framework](#) in 2016. It was part of a yearslong effort supported by the president’s office,

which involved alumnae, current students, and faculty and staff members “thinking together about how we make sure we remake the liberal-arts environment for the 21st century,” says Gina Siesing, the college’s chief information officer and director of libraries.

The five umbrella competencies include digital survival skills; digital communication; data management and presentation; data analysis and presentation; and critical making (coding, digital research or other projects), design, and development.

Students are introduced to these competencies during a mandatory first-year program called Thrive. The digital skills are reinforced and expanded throughout all four years in classrooms, through internships and community-engagement programs, Siesing says.

“By design, we tried to build it in such a way that it would have staying power, and that’s why we stayed away from specific tools,” she adds.

Every two years, Bryn Mawr surveys its graduates about which competencies were most useful in their working life and which ones they wished they’d had more opportunity to develop.

“One thing we learned very quickly is that people do use the full spectrum of these categories,” Seising says. The college has also offered intensive courses, which typically run for several days, to provide more in-depth learning on particular digital skills. The college is in the process of reviewing the competencies through an equity and inclusion lens.

Graceland University, with campuses in rural Iowa and Kansas City, Mo., recently added a three-unit required course, Digital Fluency and Citizenship, as part of a new transformational leadership major that every student must take.

The class, which began in the fall of 2022, focuses on nine elements of digital literacy, including digital etiquette, security, and privacy, and is taught by a rotating team of instructors.

Ashton Gregg, a freshman at Graceland, says the international students in his class seemed to find the class particularly helpful. Gregg says he learned a fair amount as well, even as a computer-science

major who is already ahead of many of his peers in terms of digital skills — especially about digital etiquette, such as the proper way to send emails to professors, or, in the future, employers.

“Don’t use crazy fonts or color, use the proper salutation and introduce yourself,” he says. “Be formal. It’s not like talking to a friend.”

California State University at Northridge decided to go to where the students hang out to inform them about technology resources available — and that meant posting on Instagram.

The university’s academic-technology team hired students to develop dozens of posts for the team’s Instagram account. These included basic skills, but also information to help ensure that students were aware of the resources available to them and how to get them. The university has long had a loaner program for tablets, laptops, headsets, and webcams, but it wasn’t used as widely as it could be, says Heinrich, the university’s associate vice president for academic technology. But after posting an Instagram video about how and where to check out the free loaner devices, there was a 196-percent increase in tablet checkouts and a 47-percent increase in hotspot checkouts in one month, Heinrich says.

“The program has been successful, but it’s not enough to really move the needle,” Heinrich says. So other

initiatives include partnering with an early-start university program that provides help to entering students the summer before they begin their freshman year; creating a module in the learning-management system to allow faculty members to easily share technology resources with students; and offering, for the first time, a one-unit class this spring called Information Ecosystem, which will include the members of the academic-technology team guest-lecturing on digital literacy.

These are all efforts to “make these skills a necessary part of their learning in a way that ensures academic success, as well as future career success,” Heinrich says.

Students’ access and understanding of technology can no longer be assumed — or considered optional. “We need to recognize technology as a basic need,” Gonzales, of UC Santa Barbara, says. “Most campuses like ours have a basic-needs office, which typically has dealt with housing insecurity and food insecurity. We have also created an entire arm for emergency tech needs or laptop loaners.”

For example, she says, before the pandemic began, the campus library had laptops available for loan for just a few hours; now students can check them out for days.

It’s also vital for faculty and staff members to let students know they shouldn’t have to deal with a lack

of skills and access on their own. Tran, the student at UC Santa Barbara who found herself struggling with technology challenges during the pandemic, but was afraid to

Students’ access and understanding of technology can no longer be assumed — or considered optional. “We need to recognize technology as a basic need.”

tell her professors, said she asked for help only after she understood that “there’s an inequity of resources — that not having a functional workplace is not a normal thing for everybody. That’s when I was able to advocate for myself, and tell the professor I needed more time.”

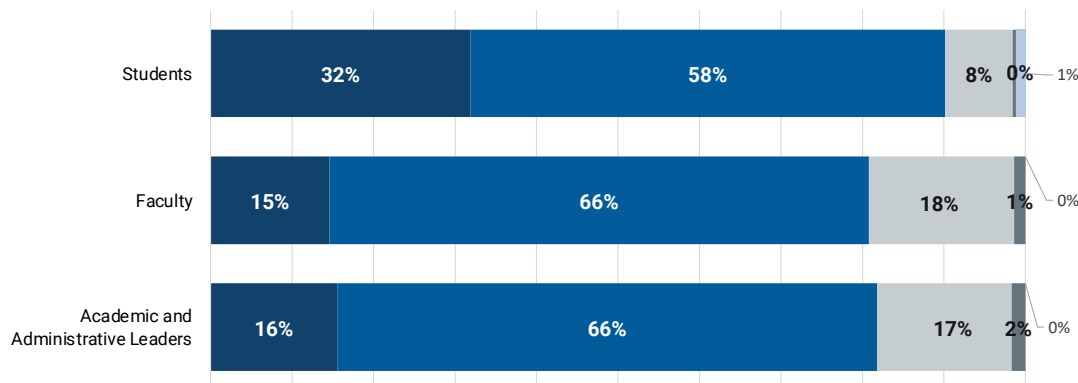
Even as many colleges are trying to establish institutionwide initiatives to bridge the digital divide, individual faculty members find they often must attack the problem on their own.

And for many of these professors, it’s not just about what students need to learn in order to perform in class, but what they need to learn for their careers — most of which will require them to be digitally fluent.

In the *Chronicle* survey, only 15 percent of faculty and 16 percent of

Based on the digital skills your students have today and the skills you expect them to acquire at college, if any, how well prepared do you think they will be to use digital technology in their future work environment?

■ Very Well Prepared ■ Somewhat Prepared ■ Somewhat Unprepared ■ Not at all Prepared ■ Do Not Expect to Use Much Technology



Source: *Chronicle* survey of 433 faculty members, 421 academic and administrative leaders, and 432 students.
 Note: Percentages may not total 100% due to rounding.

leaders believed students were very well prepared to use digital technology in their future work environment — about the same percentage that thought students would be somewhat unprepared.

Srinath Ekkad, a professor of mechanical and aerospace engineering at North Carolina State University, sees this issue firsthand. The companies that hire his students “are already moving on to the next technology, and they want their employees better trained. We do a pretty good job, but we’re not as current as the world needs us to be.”

That is one of the reasons Ekkad decided to do away with in-class exams last fall for his course on jet propulsion. Such exams don’t reflect what students really know, he believes, or how they will need to use their skills in the working world.

Instead, he provided his class of

seniors six open-ended questions over the semester. “As the skill and their knowledge increased, I made the problems more and more complex. So by the end of the semester, they were actually doing a full design of a jet engine.” He asked for a digital analysis of the data, and then students had to write a report and explain and justify their choices.

Ekkad has used such a project-based approach with his graduate students before, but never with

Companies ... “are already moving on to the next technology, and they want their employees better trained. We do a pretty good job, but we’re not as current as the world needs us to be.”

undergraduates. He plans to teach the class the same way in the future. “I think the students really liked the idea of searching for answers and coming up with their own solutions, and also using the tools that they are comfortable with,” he says.

But Ekkad points out that his relatively small class size — 40 students — allowed him to teach using this method. While his colleagues would like to do the same, a more typical class size is about 85 students — and the resources needed, especially in grading such projects, makes it highly difficult, he adds.

Binyomin Abrams, a research associate professor and director of general chemistry at Boston University, also adjusted his class once he realized many students were not proficient in basic digital skills. Abrams offers a four-hour lab as part of his introductory chemistry course. “I say, ‘Here are some things you’re going to need to be able to do in order to do well in chemistry. Let’s explore if we can find ways to

do it with Word and Excel.’ We don’t tell students what buttons to push as much as we say, ‘Excel has the ability to do this, and we’re going to give you a lab period, a whole four hours here with an instructor. We want you to try to discover a way to solve this problem.’”

In addition, he asks students to look up something else that a word-processing or spreadsheet program can do that they previously didn’t know about. “And tell us what it is, and why you think it’d be useful.”

Because as Abrams and others say, the real goal of digital literacy is not just so students can understand specific skills, but so they can learn *how* to learn — in order to master technology that hasn’t been created yet.

“This is a multipronged problem that needs a multipronged solution,” Bergson-Shilcock says. “But the higher-education field has a responsibility to meet students where they are and to help them figure out where they need to go.”



CONCLUSION

Several decades back, says Clay Shirky, the vice provost for educational technologies at New York University, there was a general assumption that students entering college knew how to write. Then that changed, as it became clear that many students needed college-level introductory writing courses. Some colleges set up writing centers, others required entering first-year students to take a writing class. Education is now at the same place with digital skills and literacy, Shirky says.

“We need more than a tech center that tells people how to connect to the Wi-Fi — we need drop-in centers where people who do need help don’t feel bad asking for it,” he says. Required courses are another option, he says, but it’s time to move to “a more organized approach to helping students understand the kinds of tools that they’re not familiar with but are now necessary for their classes.”

Just as important is teaching students — which in many cases means also teaching faculty — proven strategies for analyzing the accuracy of the vast amount of information the online world throws out every day.

In the *Chronicle* survey, when asked what should be the primary source for learning the digital skills students need for employment — college, high school, employers, online tutorials or themselves — students, faculty members, and academic and administrative leaders all ranked college highest.

“We need more than a tech center that tells people how to connect to the WiFi — we need drop-in centers where people who do need help don’t feel bad asking for it.”

That doesn’t mean post-secondary education should bear the burden alone; teaching digital skills and critical thinking about online sources has to include the K-12 pipeline, industry, and government — in fact every part of society. But there is no doubt colleges play a major role in assessing what students need to achieve digital literacy and how to deliver it to them, to help make them more successful students, more skilled employees, and, perhaps most importantly, better-informed citizens.

METHODOLOGY

The Chronicle conducted an online survey on digital literacy from January 3, 2023 to January 17, 2023, of students, faculty members, and academic and administrative leaders.

The goal of the survey, which was underwritten by Adobe, was to help higher education understand its role in teaching traditional-age students (18-24 years old) the skills to use digital technologies.

Four hundred thirty-two students, ages 18-24, responded to the survey. Four hundred thirty-three faculty members and 421 academic and administrative leaders also responded. Survey respondents were from large and small, private and public colleges; the majority were from four-year institutions, although two-year colleges are represented.



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