Contents

Introduction 3
Key Findings 4
Who Are Community College Faculty? 5
Technology Support Services Can Benefit Faculty and Students 7
Faculty Prefer Face-to-Face but Lean toward Blended and Online Environments 9
Community College Faculty Want Students to Use Laptops but Not Smartphones 12
Faculty Who Use Online Student Success Tools Value Them 13
Recommendations 15
Methodology 16
Acknowledgments 17
Appendix: Participating Institutions 18

Author

Joseph D. Galanek, EDUCAUSE
Dana C. Gierdowski, EDUCAUSE

Citation


©2020 EDUCAUSE. This work is licensed under a Creative Commons BY-NC-ND 4.0 International License.
Introduction

In 2014, the EDUCAUSE Center for Analysis and Research (ECAR) began conducting research on higher education faculty and their technology experiences. Studying faculty in the aggregate across different types of colleges and universities offers a landscape view of how they experience IT resources. However, varying institutional characteristics can have an impact on how faculty think about and use technology in their roles as teachers and/or researchers. In 2019, ECAR published *ECAR Study of Community College Students and Information Technology, 2019* (the first such investigation since 2007) to shed light on the technology experiences of students at community colleges, which serve a large proportion of minority, first-generation, lower-income, and adult learners. In this report, we now turn our attention to the faculty who teach the more than 5 million students enrolled in two-year and AA institutions. Community college (CC) faculty have situational contexts that differ from those of their peers at four-year institutions: they work with more students who are from underrepresented groups, have families of their own, and are often underprepared for college. In addition, many two-year and AA faculty spend more time teaching than conducting research, and more work part-time and on non-tenure-track contracts than their counterparts at other types of institutions. This report highlights findings related to community college faculty use of and attitudes about technology with regard to:

- Key demographics of the faculty members in this study
- Campus technology use and support
- Overall technology experiences
- Learning environment preferences
- Student success tools

Of the 9,521 US responses included in *ECAR Study of Faculty and Information Technology, 2019*, 1,828 responses (19%) were from faculty from 44 community colleges. Responses were analyzed to better understand their technology experiences in terms of the student populations they serve and how some of those experiences compared with those of their peers at other institution types. The results summarized in this report can be used to identify and examine ways higher education IT, teaching and learning centers, and other campus units might use technology to address the unique needs of community college faculty. Recognizing and attending to the varying circumstances of two-year and AA faculty can reveal opportunities to support them further in their teaching and related work, which also benefits students. Readers who apply these results should address the specific context of each institution on the basis of its population, structure, vision, and culture.
Key Findings

- Community college faculty rated technology-related professional development and individualized consultations highly, but many faculty did not use support for services that could benefit students. Fewer faculty used technology support for finding and using open educational resources (OER) and web conferencing than they did other support services available at their institutions. Although community college faculty used support more than their four-year colleagues to make courses accessible to students with disabilities, around a quarter of faculty in this research had not used this service in the past year.

- Relative to four-year faculty, a larger proportion of community college faculty prefer teaching fully online or mostly online courses. This preference might reflect community colleges’ continued emphasis on online and blended courses, as well as students’ desire for online instruction. Overall, however, a majority of community college faculty still prefer to teach in face-to-face learning environments.

- A majority of community college faculty prefer to conduct nearly all teaching and learning activities in environments that are mostly or completely face-to-face. The top assignments or activities that these faculty preferred to do face-to-face or mostly face-to-face were student presentations, labs/demonstrations, student conferences, and lectures. Faculty prefer to issue assignments and distribute syllabi and course materials online or mostly online.

- Community college faculty encourage or require laptops and tablets in the classroom more than other devices but tend to ban or discourage smartphones. Faculty technology bans are strongly and positively associated with faculty’s perception of whether they could be better instructors if they integrated mobile technologies into their teaching. Faculty who didn’t think that leveraging a device in the classroom would make them better instructors more often banned that device. Training faculty in integrating technology in their teaching results in fewer bans of student devices in the classroom.

- A majority of faculty found online student success tools useful...when they used them. Most faculty reported that they had used these tools when they were available. The exception is tools that offer guidance about courses students might consider taking—38% of faculty had not used these tools when available. Suggestions about new or different academic resources for students (e.g., tutoring, skills-building opportunities) were rated highest in terms of usefulness.
Who Are Community College Faculty?

Among the 1,828 community college faculty who responded to our survey, a large majority (84%) are tenured or on the tenure track, with only 16% reporting they have ongoing or temporary/fixed-term appointments; 63% work full time. However, it’s important to note that in this area our sample is not representative of the general community college faculty population. An analysis of federal data by the American Association of University Professors found that fewer than 20% of faculty jobs in AA institutions overall are tenure track and that more than 65% are part-time positions (15 percentage points higher than at other types of institutions). Among those who have full-time positions, the majority work on contracts. Part-time and fixed-term positions, as the analysis notes, are often the “least secure and worst remunerated teaching positions in higher education.”

All of these factors should be taken into account when considering our findings, as many of those who participated likely have more job security, benefits, and higher salaries than their non-tenure-track peers. For example, many contingent and part-time instructors are not supplied with a personal computer to do their work. Accessing support services and attending IT workshops and professional development can also be a challenge for those who must take on more courses and/or work multiple jobs to make ends meet. And at some institutions, part-time and fixed-term instructors are not eligible for the release time or stipends that can be granted for designing courses and learning new technologies.

When we examined the data by key demographic factors (figure 1), we found that most of our respondents were Baby Boomers (44%) and Gen Xers (43%); only 12% were Millennials. More than half of respondents identified as female (60%), which is only slightly higher than at other institution types. The majority of faculty in our sample identified as white (87%), followed by Hispanic/Latinx (3%), black (3%), and Asian (2%). Five percent identified as “other” or multiple ethnicities. Other national research also suggests that the proportion of white faculty members at community colleges is disproportionately high. In our research, white faculty were even more overrepresented, which might in part be explained by the fact that Midwestern community colleges have greater representation in our sample than those in US regions that are more ethnically diverse.
Figure 1. Community college faculty demographics
Technology Support Services Can Benefit Faculty and Students

If community college faculty increase their technology skills through professional development and training, it not only benefits them but can also benefit their students. For example, videoconferencing has been shown to be an effective means of engaging students in online environments.\textsuperscript{9} Similarly, faculty skill in finding and using open educational resources (OER) can help offset the costs of course materials for students. These expenses come into sharp relief when we consider that more than a third (37\%) of all community college students come from households that make less than $20,000 annually and that the average cost of course materials was $415 in the 2018–19 academic year.\textsuperscript{10} Moreover, because about 20\% of community college students have a disability, faculty knowledge of accessible technologies and the ability to implement them successfully are crucial for equitable access for these students.\textsuperscript{11} But are faculty taking advantage of these technologies and accessing support for them when needed (see figure 2)?

![Figure 2. Community college faculty usage of campus technology and support](image-url)
We do know that faculty who use the support that is available for these services find it valuable. For example, a majority (65%) rated their institution’s support for making courses accessible to students with disabilities good or excellent. However, around a quarter of CC faculty did not use this support when it was available on their campus. Although two-year faculty take advantage of support for making courses accessible to students with disabilities at higher rates than their colleagues at four-year institutions, leaders of community colleges should nevertheless increase communication about the availability of these support services and assist faculty in implementing these services for their students. Research suggests that there are gaps in institutional staff’s knowledge of how information and communication technologies can be used for students with disabilities. Increasing training opportunities and faculty satisfaction with that training are key to expanding support to aid these students.

Additionally, we found that a little more than half (54%) of faculty valued support for finding and using OER, but a third (31%) did not use these services when available. However, faculty who reported they were satisfied with OER training reported they would not return to using traditional course materials. Institutions should increase efforts to communicate that support for OER is available and improve the quality of these services, since one of the largest obstacles to adopting OER is lack of faculty awareness of these resources. Finally, 38% hadn’t used support for web conferencing technology when available, but the 60% who had used it rated it good or excellent. Web conferencing can be particularly valuable for students in online classes because students value interaction with faculty in virtual classrooms. Video technology can facilitate engagement in collaborative activities—for example, providing immediate feedback on presentations. Institutional leaders should increase faculty awareness of available training and support for these services. And increasing participation in and satisfaction with these services will empower faculty to engage with community college students who need the most support to meet their educational goals.
Faculty Prefer Face-to-Face but Lean toward Blended and Online Environments

Online learning environments have been identified as the catalyst for nearly all increases in community college enrollment, and two-year institutions have increased online degree and certification programs over the past several years. Like their four-year peers, two-year students prefer blended learning overall, but two-year students are twice as likely to prefer environments that are completely online. Work topped the list of challenges community college students face in studying and obtaining their degree, and asynchronous courses can assist two-year students in balancing their competing priorities. But the number of students registering for online classes has begun to plateau. Although these trends suggest a slowing of online enrollment, a strong preference among community college students for online learning remains, and institutions continue to emphasize these course offerings. In light of these trends, it’s important for us to understand community college faculty support for students’ preferences for online environments, as well as faculty support for their institutions’ continued emphasis on online learning.

More community college faculty than four-year faculty prefer teaching environments that are online or have some online component. Given the bias of our sample toward tenured or tenure-track faculty, this preference might mostly reflect this group. Nevertheless, a majority of community college faculty still prefer to teach in a face-to-face or mostly face-to-face environment (65%), though this preference is not as strong as that of their four-year colleagues (75%) (figure 3). Two-year faculty also prefer half face-to-face/half online courses (23%) more than four-year faculty do (17%). And they prefer to teach online slightly more than do instructors at four-year institutions. So it appears that two-year faculty are responding to the needs of their students by demonstrating slightly higher preferences for blended and online instruction as compared to their four-year colleagues.
Overall, a majority of two-year faculty prefer face-to-face or mostly face-to-face environments for most of their course tasks (figure 4). However, when it comes to assessments (exams, quizzes, and tests), assignments, and distribution of course materials/syllabi, a majority of two-year faculty prefer to use mostly or completely online components as compared to their other class activities.
Research suggests that institutional barriers, such as lack of technical support and lack of release time to teach online, influence faculty's preference for face-to-face courses over online environments. A 2016 study found that 18% of community college faculty surveyed had not received training in online instruction. This same study found that the number-one faculty-related challenge that distance education administrators face is engaging faculty in developing online pedagogy, along with addressing the workloads for online instruction. These issues might also be affecting community college faculty learning-environment preferences: they might not be receiving enough training, and this could be impacting their development of teaching strategies specific to online instruction. Online instruction has been identified as a means to expand access to higher education to the increasing numbers of nontraditional students. Higher education is implementing new models—in areas such as assessment (competency) and crediting (microcredentials and digital badging)—in online learning, indicating an expanded need for faculty teaching skills in blended and online environments. To address these trends, community colleges might need to provide more support for engaging in online or blended learning environments so that faculty can respond to current and future needs of their institution and their students.
Community College Faculty Want Students to Use Laptops but Not Smartphones

Smartphones are significantly more important for academic success to non-white, first-generation college students, students whose families have lower incomes, and those with disabilities—populations that make up a good portion of community college students—than they are to other groups of students. So when it comes to using technology in the classroom, it makes sense to allow students to use the devices they own and are the most reliable for them. However, faculty still frequently ban students from using their devices (figure 5), though there is scarce research to support such classroom policies. Is there anything that institutions can do to increase faculty acceptance of the devices that are important to these students?

Not unlike their four-year colleagues, community college faculty generally promote the use of laptops and tablets, but nearly half ban or discourage smartphones in their classrooms. However, two-year faculty who believe they could be better instructors by increasing skills in integrating these devices in the classroom were less likely to ban them. Importantly, training does appear to mitigate bans. Faculty who received training were more likely to encourage their students to use their phones and laptops in class; faculty who had not received this training banned or discouraged these devices more often.

Faculty need support and training to use technology in their classrooms for learning, particularly in working with students who rely solely on their smartphones. But receiving this support does not guarantee that faculty will encourage students to use their personal technologies during class. Institutions must not only offer faculty training on how to integrate these devices into their classrooms but also ensure that training impacts faculty attitudes and adoption of these practices. Harnessing the technology that a majority of students have at their disposal can serve to quash the debate on devices in the classroom and diminish the digital divide for low-income students.
Faculty Who Use Online Student Success Tools Value Them

Academic goal-setting and planning has been identified as a high-impact practice to increase community college student engagement, so it makes sense that faculty should have the support and opportunity to use all strategies available to engage with their students regarding their academic plans. And for many two-year institutions, the adoption of online student success tools has become an important part of that engagement plan. When we asked faculty what they thought of online student success tools (e.g., those that suggest new academic resources, and early alerts for declining student performance), the majority among those who had used each of them said they were at least moderately useful (between 77% and 87%) (figure 6). Tools that provide suggestions about new or different academic resources for students (e.g., tutoring, skills-building opportunities) came in at the top, with 87% of respondents rating these at least moderately useful.

![Figure 6: Usefulness ratings of online student success tools](image)

The resources that were used the least include those that offer guidance about courses students might consider taking in the future (38% of faculty did not use) and those that provide suggestions for how a student can improve performance (25% did not use). The large percentage of faculty who haven’t used tools that offer guidance about courses students might consider taking is concerning for faculty who serve in advising roles. While some faculty might not have these responsibilities, others might lack the skills to implement these resources, or they might not have access to them at all. Tools that guide students in their course planning can be especially important to community college students, who take,
on average, about four years to get a degree and, in many cases, earn considerably more credits than needed for their degree.31 Our findings are particularly encouraging when we consider the students who find these kinds of resources the most helpful. In our 2019 study of community college students, significantly more minority than white students rated tools such as early-alert systems and tools that suggest how to improve their performance in a course as very or extremely useful.32 Since two-year and AA degree-granting colleges serve more underrepresented students, faculty who use these systems have the opportunity to support these groups in meeting their goals, whether that is to complete a two-year degree or a professional credential or transfer to a four-year institution. To maximize these benefits, IT departments can partner with student services and other instructional units to increase awareness of these online advising resources and train faculty on best practices.
Recommendations

- **Increase professional development and training opportunities for online instruction for both full-time and adjunct faculty.** Community colleges continue to provide and expand online offerings and degrees in areas such as assessment (competency) and crediting (microcredentials and digital badging). To address the needs of their communities and an expanding population of nontraditional students, two-year institutions will need to increase faculty skills and interest in online instruction.

- **Encourage faculty (including part-time and adjunct) to use services that could also benefit their students.** Increase faculty access to support for using OER and web conferencing, and for making courses accessible to students with disabilities. These services in particular align with the needs of community college students. Communicate to faculty that these services and supports are available so that faculty can assess how to use them to meet their students’ needs. Incentivizing the use of these services could increase use among faculty.

- **Increase training and professional development for faculty to use students’ smartphones as a learning tool in their classrooms.** Underrepresented students, who make up large numbers of the community college population, view smartphones as critical to their academic success. Given that these students are more likely to access resources, textbooks, or assignments via their phones, faculty need increased understanding of the degree to which these students value such devices and of how best to leverage them for learning.

- **Make online student success tools available to faculty who serve in advising roles, and encourage their effective use.** Faculty use of the online tools at their disposal gives students, particularly those in underrepresented groups, a roadmap that offers concrete guidance and direction on how to obtain their degree or transfer to a four-year institution. Tools that offer guidance on courses students should take can be especially useful to faculty who have advising or mentoring roles, as these tools can save community college students time and money by reducing the time it takes to complete a credential.
Methodology

The ECAR faculty technology study is conducted in the same manner as the annual ECAR student technology study. Both rely on respondents recruited from institutions that volunteer to partner with ECAR to conduct technology research in the academic community. ECAR works with an institutional stakeholder (the survey administrator) to secure local approval to participate in the research. Once the institutional review board process is successfully navigated and a sampling plan is submitted, ECAR provides each survey administrator with the survey link for the current year’s research project. The survey administrator then uses the survey link to invite participants from that institution to respond to the survey. Data were collected between January 15 and April 5, 2019, and 10,078 faculty from 127 institutional sites responded to the survey. ECAR issued $100 or $200 Amazon.com gift cards to 20 randomly selected faculty respondents who opted into a drawing offered as an incentive to participate in the survey. Colleges and universities use data from the ETRAC student and faculty surveys to develop and support their strategic objectives for educational technology. With ETRAC data, institutions can understand and benchmark what students and faculty need and expect from technology. There is no cost to participate. Campuses will have access to all research publications, the aggregate-level summary/benchmarking report, and the institution’s raw (anonymous) response data.

For the purposes of this study, community colleges were defined as institutions that (1) have the Carnegie class of AA and (2) are two-year institutions. In this study, two institutions met one or the other but not both of those criteria; they were included after verifying their community college status. Forty-four ETRAC-participating institutions were classified as community colleges, providing 1,828 community college faculty (19% of US respondents) for our sample.
Acknowledgments

The EDUCAUSE Center for Analysis and Research would like to first thank the community college faculty who took time from their schedules to participate in the 2019 ETRAC faculty survey, from which these data were derived. Thanks are also in order to the survey administrators at the participating two-year and AA institutions, who planned and deployed the survey to the faculty on their campuses. We also thank our community college subject-matter experts—Stephanie Bulger, Vice Chancellor of Instructional Services, San Diego Community College District; and Richard A. Sebastian, Director, OER Degree Initiative at Achieving the Dream Inc.—who offered their time and expertise in reviewing this study. Their thoughtful feedback and suggestions have greatly improved the quality of the report.

Many thanks go out to the team of EDUCAUSE staff who made significant contributions to this report. Thank you to D. Christopher Brooks for his guidance, leadership, and support of this project from start to finish. A note of appreciation goes to Ben Shulman for his thorough statistical review that ensured the data analysis was accurate and the explanations fitting. Thanks also go to Kate Roesch for designing the engaging figures that helped bring the data to life. We are grateful for Gregory Dobbin and the publications team for their attention to detail and editorial guidance, and for Lisa Gesner for her skilled content management and marketing of this project. Finally, thank you to Susan Grajek and Mark McCormack for their review of the manuscript and suggestions for making it stronger, as well as their enthusiasm and encouragement along the way.
Appendix: Participating Institutions

Alexandria Technical & Community College
Anoka Technical College
Anoka-Ramsey Community College
Broward College
Central Lakes College
Century College
Cleveland State Community College
Collin County Community College District
Dakota County Technical College
Evergreen Valley College
Fond du Lac Tribal and Community College
GateWay Community College
Hennepin Technical College
Hibbing Community College
Inver Hills Community College
Itasca Community College
Lake Superior College
Madison Area Technical College
Mesabi Range College
Minneapolis Community and Technical College
Minnesota State College Southeast
Minnesota State Community and Technical College
Minnesota West Community and Technical College
Montgomery County Community College
Normandale Community College
North Hennepin Community College
Northland Community and Technical College–Thief River Falls
Northwest Technical College
Palm Beach State College
Pellissippi State Community College
Pine Technical and Community College
Rainy River Community College
Ridgewater College
Riverland Community College
Rochester Community and Technical College
Saint Cloud Technical and Community College
Saint Paul College, A Community & Technical College
Salt Lake Community College
San Jose City College
Sauk Valley Community College
Scottsdale Community College
South Central College
SUNY Broome Community College
Vermilion Community College
Notes


3. These contracts include multiyear, indefinite, and/or less than one-year terms. See “Data Snapshot: Contingent Faculty in US Higher Ed,” American Association of University Professors, October 11, 2018.

4. For the purposes of this study, community colleges were defined as institutions that (1) have the Carnegie class of AA and (2) are two-year institutions. In this study, two institutions met one or the other but not both of those criteria; they were included after verifying their community college status.

5. American Association of University Professors, Data Snapshot.

6. At institutions other than community colleges, 53% of faculty identified as female and 47% identified as male.


8. Forty-seven percent of community college faculty participants came from institutions in Minnesota. Other US regions represented include the Southeast at 19%, Rocky Mountains at 14%, Great Lakes at 6%, Mid-East at 6%, Far West at 4%, and the Southwest at 4%. There was no participation from community colleges in the New England states or in outlying areas/US territories.


20. This plateau is attributed to an improving economy, so prospective students might not be enrolling in classes. See, for example, Lokken, *Trends in eLearning*.


23. Ibid.


25. Ibid.


28. Galanek and Gierdowski, *ECAR Study of Faculty and Information Technology, 2019*.


32. Gierdowski, *ECAR Study of Community College Students and Information Technology, 2019*. 