

Digital Learning Pulse Survey:

The Digital Transformation of the Community College

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The Digital Transformation of the Community College

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Primary project support from:



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We'd like to thank the thousands of students, faculty, and academic administrators who took the time to respond to our questions and share their hopes and concerns. Many respondents also generously provided detailed explanations of their responses.

Our partner organizations helped design the project and were instrumental in getting the word out to their members. We thank the Association of Community College Trustees (ACCT), Achieving the Dream, Phi Theta Kappa, the Higher Education Research and Development Institute (HERDI), Online Learning Consortium (OLC), and College Pulse for their assistance. Their input and outreach efforts were critical for the project's success.

Finally, we wish to thank Cengage. They initiated the project, provided the funding, brought the partners together, and provided overall coordination. They created a project framework where the partners set the research agenda. They also gave Bay View Analytics complete control over the research and report writing process.

Jeff Seaman, PhD Julia Seaman, PhD



PARTNERS

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Phi Theta Kappa is the premier honor society recognizing the academic achievement of students at associate degree–granting colleges and helping them to grow as scholars and leaders. The Society is made up of more than 3.8 million members and nearly 1,300 chapters in 10 countries, with approximately 240,000 active members in the nation's colleges. Learn more at ptk.org.

The Association of Community College Trustees (ACCT) is a non-profit educational organization of governing boards, representing more than 6,500 elected and appointed trustees who govern over 1,200 community, technical, and junior colleges in the United States and beyond. For more information, go to www.acct.org. Follow ACCT on Twitter aCCTrustees.

HERDI was established to provide a forum for meaningful dialogue between business leaders and presidents and chancellors of key community colleges across the country. Now expanded to include independent college leaders, HERDI and its branches HERDI South, HERDI Innovate and HERDI Independent, provide clients within person and virtual focus groups. These conversations, based on the client's agenda, allow a company to learn the challenges and opportunities facing the community and independent college markets today. Learn more at herdi.org.

Achieving the Dream (ATD) is a partner and champion of more than 300 community colleges across the country. Drawing on our expert coaches, groundbreaking programs, and national peer network, we provide institutions with integrated, tailored support for every aspect of their work — from foundational capacities such as leadership, data, and equity to intentional strategies for supporting students holistically, building K-12 partnerships, and more. We call this Whole College Transformation. Our vision is for every college to be a catalyst for equitable, antiracist, and economically vibrant communities. We know that with the right partner and the right approach, colleges can drive access, completion rates, and employment outcomes — so that all students can access life-changing learning that propels them into community-changing careers.

The **Online Learning Consortium** (OLC) is a collaborative community of education leaders and innovators, dedicated to advancing quality digital teaching and learning experiences designed to reach and engage the modern learner – anyone, anywhere, anytime. OLC inspires innovation and quality through an extensive set of resources, including, best-practice publications, quality benchmarking, leading-edge instruction, community-driven conferences, practitioner-based and empirical research and expert guidance. Visit http://onlinelearningconsortium.org for more information.

College Pulse is a survey research and analytics company dedicated to understanding the attitudes, preferences, and behaviors of today's college students. College Pulse delivers custom data-driven marketing and research solutions, utilizing its unique American College Student Panel™ that includes over 650,000 college students and recent alumni from more than 1,500 two- and four-year colleges and universities in all 50 states. For more information, visit collegepulse.com or @CollegeInsights on Twitter.

Bay View Analytics is a statistical research firm focusing on survey design, implementation, and analysis. The scope of Bay View Analytics' consulting engagements includes scientific statistical analyses, clinical trial statistics, and survey designs for a range of topics, with a particular focus on online education. Bay View Analytics has been conducting research and publishing annual reports on the state of online education in U.S. higher education for thirteen years. Visit www.bayviewanalytics.com for more information.



INTRODUCTION

Higher education in the U.S. has been undergoing a digital transformation for over a decade. During this time, institutions have increased the proportions of their instruction delivered in online and blended formats. They have also made greater use of digital technologies in the classroom and increased the adoption of digital materials, replacing print. This study examines the nature and extent of this transformation in two-year community colleges, using responses to the Digital Learning Pulse Survey (DLPS).

The DLPS project began in the spring of 2020 and has completed seven data collection rounds. Designed to document the impact of the global COVID-19 pandemic on U.S. higher education, the project has investigated the massive changes that forced faculty, administrators, and students to adjust to new ways of conducting their day-to-day operations.

This report examines four aspects of the digital transformation process: the use of technology in classes, moving from print to digital course materials, offering courses as a mix of online and in-person (blended or hybrid), and delivering fully online courses.

The specific questions that this report addresses are:

- What were the pandemic experiences of community college faculty, staff, and students using technology in classes, digital materials, hybrid (blended) courses, and fully online courses?
- How did these experiences influence their attitudes? What do faculty, staff, and students think about the increased use of technology in courses, the movement to online and blended education, and the switch from print to digital course materials?
- How have faculty, administrator, and student preferences changed?
 What impact will these changes have on the future of digital transformation?
- Do faculty and administrators believe that the recent changes will continue post-pandemic?



OVERVIEW

This study focuses on two-year institutions that grant Associates degrees. According to the most recent pre-pandemic figures from NCES IPEDS data, two-year institutions comprised 35.6% of all degree-granting higher education institutions. They enrolled 31.9% of all higher education students.

Most two-year institutions are public (64.2%), with smaller numbers of private for-profit (27.7%) and private non-profit (8.0%) institutions. On average, public two-year institutions are far larger than their private counterparts, and enroll 96.1% of all students attending two-year institutions.

Information for this report comes from the Digital Learning Pulse Survey. This project has conducted multiple national surveys of higher education students, academic administrators, and teaching faculty. The project has undertaken a total of seven rounds of data collection to date, with the first in April 2020 and the most recent being in September 2022.

Technology in the Classroom

The results show that community colleges are continuing to increase their use of digital tools and technology in their courses. This is driven by a belief among students, faculty, and administrators that these tools have been effective for student learning. Faculty and administrators are calling for more technology use in the future, including in fully in-person courses. Students, faculty, and academic administrators agree that the current use of technology for teaching is effective.

Improving Student Attitudes Towards Technology

Students report that their attitudes toward technology are improving. For example, the overall trend was more positive than negative when asked how their opinion of online homework systems and online exam proctoring.

Increasing Technology Use Going Forward

Over two-thirds of faculty members report that their teaching preference for in-person courses is to incorporate more technology.



Digital Course Materials

Pandemic-driven changes to teaching and learning exposed many students, faculty, and administrators to digital course materials for the first time. These experiences were mostly positive, resulting in a growing optimistic view towards digital materials among all three groups. As a result, faculty and administrators plan to include even more digital materials.

The Transition from Emergency Remote Instruction

The initial pandemic impact in April 2020 triggered a massive transition to emergency remote instruction for millions of students to allow them to finish the academic term during a period of isolation and lockdown. By the following Fall, faculty reported they were ready to teach online. Ninety-seven percent of faculty respondents across all types of institutions said they had access to the support and training they desired, and, for the most part, they found that training and support were effective.

Students Find Online Learning to be Effective

Students are generally pleased with how effectively their classes meet their educational needs. When asked for a grade, a majority gave a grade of "A," with only a small percentage reporting a failing grade of "D" or "F."

Continued Positive Experience

Students, faculty, and administrators are adapting to the changes brought about by the pandemic. For example, the proportion of students who gave an "A" grade for the effectiveness of their courses showed a slight rise from 48% to 51% between Spring 2021 and Fall 2022.

Growing Optimism Towards Online and Blended Learning

Most community college students reported being more optimistic about online learning (56%) and blended learning (50%) than before the pandemic. In addition, fifty-two percent of faculty reported being more optimistic about online learning than pre-pandemic; only 17% said they were now more pessimistic.

Growing Desire for More Online and Blended Courses

Student satisfaction with their online learning experience, coupled with a more optimistic attitude, has resulted in a growing desire among community college students to take more online courses in the future. Students also report that they want the option to take more blended courses. Faculty preferences for teaching online and blended courses closely match student desire to take such courses.

Sustaining Change

The substantial changes in attitudes and future teaching desires indicate that a return to the pre-pandemic "normal" is not likely. Faculty report that, for the most part, their teaching practices have changed, and that these changes will continue without a wholesale return to the pre-pandemic approaches.

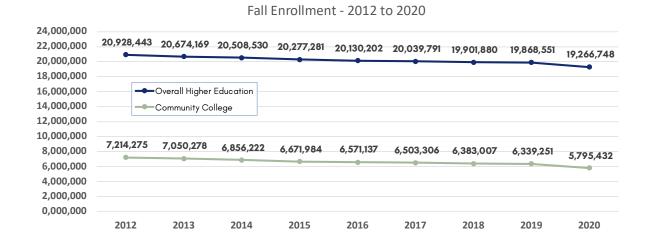
SETTING THE STAGE

It's tempting to attribute the current changes in two-year community colleges to the massive upheaval in higher education caused by teaching during a global pandemic. But while the pandemic-induced changes are substantial, they build on decade-long trends in higher education. It's necessary to consider these trends and the pandemic's impact to truly understand community colleges' current and potential future state. Two factors provide the overall context for the most recent changes.

- Declining enrollments the number of students enrolled at U.S. higher education institutions, especially community colleges, has been declining for some time.¹
- The growing importance of distance education the proportion of students taking one or more distance education courses has increased yearly since 2003.

Declining Community College Enrollments

Higher education enrollments have declined for years prior to the COVID-19 pandemic. Over a million fewer higher education students were studying in the Fall of 2019 than in the Fall of 2012, a 5.1% decline in seven years. The reduction among community colleges was even more significant, declining by 12.1% between 2012 and 2019.



¹ NCES data reference

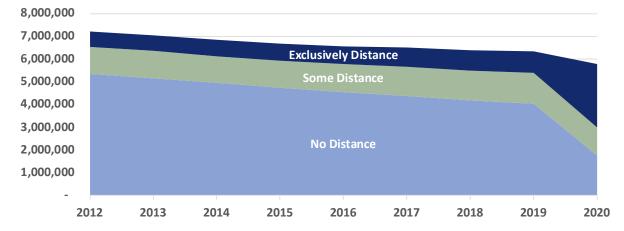


The pandemic exacerbated the trend; between the Fall of 2019 and the Fall of 2020, the number of students enrolled in U.S. higher education decreased by 600,000 or 3%. Almost all of that decrease (540,000 students) came from community colleges, where the year-to-year drop was 8.6%

Growing Importance of Distance Education

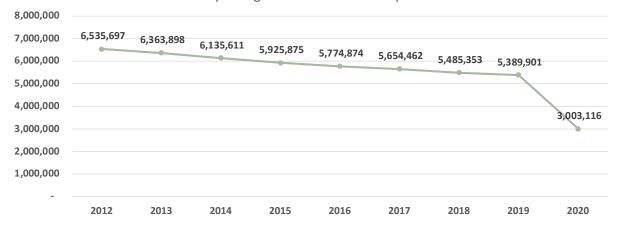
The decline in enrollment was not uniform across all teaching modes – the number and proportion of students taking at least one distance course and taking only distance courses grew yearly at community colleges. Students taking only distance courses made up 9.4% of students in 2012; by 2019 (the last pre-pandemic year), this had increased to 14.1%. Even before the pandemic, those taking a mix of distance and in-person courses grew from 16.6% to 20.4% between 2012 and 2019. In 2020, the first year of the pandemic, the switch to fully online is evident, with a majority of students taking one or more distance courses (21.6% taking both distance and non-distance courses and 30.2% taking only distance courses).





Obviously, the need to provide so much education at a distance in Fall 2020, during the first full term during the pandemic, resulted in a large decrease in the number of on-campus students. However, it is crucial to understand that declining enrollments and a move to distance education had already produced a substantial drop in the number of students studying on campus. There were 1,145,796 fewer community college students on campus in the Fall of 2019 than in the Fall of 2012.

Community College - Number of On-Campus Students



TECHNOLOGY IN THE CLASSROOM

Community colleges are continuing to increase their use of digital tools and technology in their courses. This is driven by a belief among students, faculty, and administrators that these tools have been effective for student learning. Faculty and administrators are calling for more technology use in the future, including in fully in-person courses.

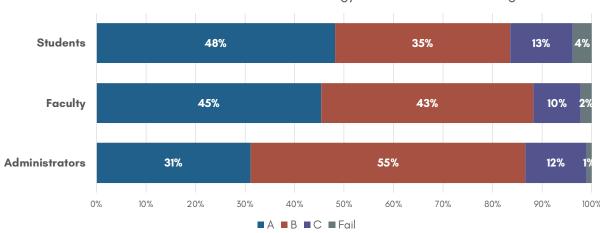
The use of Learning Management Systems (LMS) as a part of higher education instruction is not new; they have existed in some form at many institutions for more than two decades. But the adoption rate of new technologies has accelerated across all higher education. In addition to more extensive use of the campus LMS, many faculty now employ integrated online homework systems and have increased the use of online exam proctoring tools.

Delivery of a fully online course or one combining online with in-person instruction relies on technology to bring materials to students, and to support student-teacher interactions. An entirely in-person course does not have the same need for technology, but faculty and administrators also see the value of technology here.

Technology Seen as Effective for Teaching

Students, faculty, and academic administrators agree that the current use of technology for teaching is effective. Each group was asked to grade the effectiveness of the technology used in current courses on a letter grade ranging from "A" to "F" for their Fall 2022 courses. Over 80% gave a grade of an "A" or "B" for their technology's effectiveness as a teaching tool.

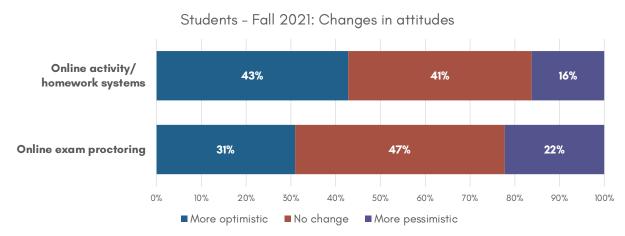
Students have the most favorable view of the role of technology (with 48% giving a grade of "A"), followed by faculty and administrators. Only a small minority of each group provided a grade of "C" (ranging from 13% to only 10%), and almost no one gave a failing grade (4% or less reported a "D" or "F").



Fall 2022: How effective the technology was for student learning

Improving Student Attitudes Towards Technology

Students also reported that their attitudes toward technology were improving. When asked how their opinion about online homework systems and online exam proctoring have changed, the overall trend was more positive than negative. A sizeable portion of students reported no change in their attitudes (41% for online homework systems and 47% for online exam proctoring). However, among those with a change in attitude, that change was more optimistic than pessimistic. This was most evident for online homework systems, where students were 2.6 times more likely to be optimistic than pessimistic. The results about online exam proctoring were similar, with students 1.4 times more optimistic than more pessimistic.

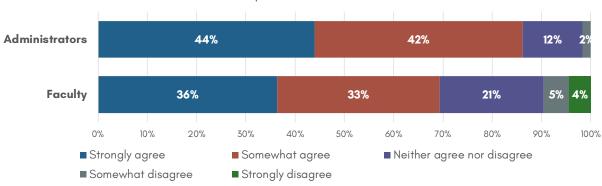


Student feedback on technology use in teaching is one factor that faculty and academic administrators at community colleges consider as they plan their future offerings.

Increasing Technology Use Going Forward

The desire for more technology is not limited to online and hybrid courses. Over two-thirds of faculty members report that their preference is to incorporate more technology in their in-person courses. Administrators agree: an even greater proportion say they plan to incorporate more technology in future in-person course offerings.



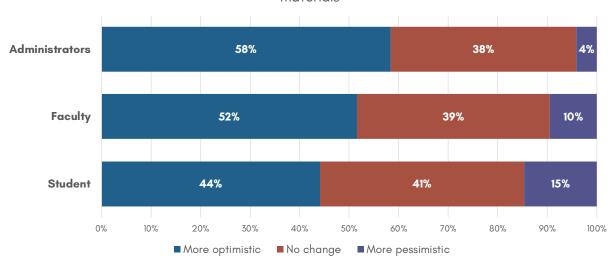


DIGITAL COURSE MATERIALS

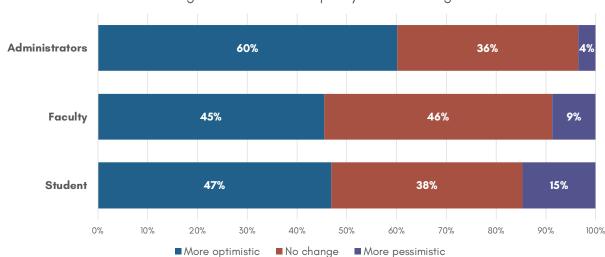
Pandemic-driven changes to teaching and learning exposed many students, faculty, and administrators to using digital course materials for the first time. These experiences were mostly positive, resulting in a growing optimistic view among all three groups toward digital materials. As a result, faculty and administrators' future plans include even more digital materials.

Students, faculty, and academic administrators were asked in Fall 2021 how their opinion about using digital materials had changed compared to prior to the pandemic. Overall, the three groups were more optimistic about digital materials now than before the pandemic. Students were the least positive, but even they were three times more likely to report being more optimistic than more pessimistic. A majority of faculty and administrators reported being more optimistic about using digital materials, with very few saying they were more pessimistic.

Fall 2021: Changes in attitudes since pre-pandemic: Use of digital materials



Attitudes toward digital materials have continued to improve. In Fall 2022, students, faculty, and academic administrators were asked how their opinion about using digital materials had changed compared to Fall 2021. Overall, the three groups were more optimistic about digital materials now than during the previous Fall term. Slightly less than half of students and faculty reported being more optimistic, with 60% of administrators saying they were more optimistic about digital materials than a year previous. Only 15% of students reported being more pessimistic now than a year ago, with even fewer faculty (9%) and administrators (4%) saying they were now more pessimistic.



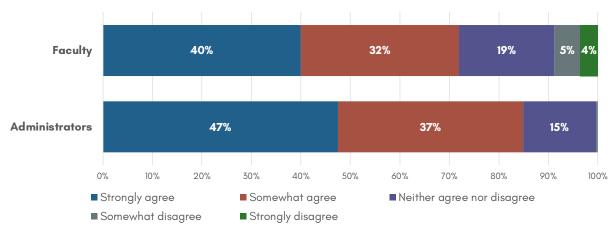
Fall 2022: Changes in attitudes over past year: Use of digital materials

Future Digital Material Use

Faculty want to include more digital materials in their future courses, and community college administrators are aligned. Community college faculty report that they prefer more digital materials in their classes, with 72% saying that they "Somewhat agree" or "Strongly agree." This compares to only 9% who reported any level of disagreement.

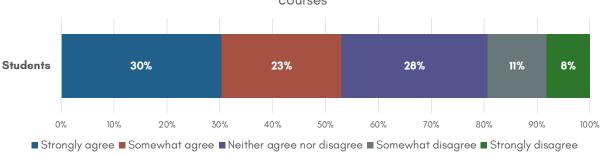
Community college administrators are even more positive about the future use of digital materials, with 84% saying that they "Somewhat agree" or "Strongly agree" that they will include more digital materials and digital resources in their future course offerings.





Community college students also desire more use of digital materials for their courses, but their level of agreement is somewhat lower than those of faculty and administrators. A majority of students want to include more digital materials in their future courses, with 53% saying that they "Somewhat agree" or "Strongly agree." A larger group of students report being neutral (28%) than faculty (19%) or administrators (15%). More students reported some level of disagreement (20%) than faculty or administrators.





ONLINE AND BLENDED COURSES

The pandemic began with an emergency transition to online instruction to finish the Spring 2020 term. Considerable effort was then required to prepare for a primarily online Fall 2020 term. The experience of designing and teaching online was transformative for faculty, making them much more optimistic about both online and blended instruction. Students found online and blended courses to be effective in meeting their needs, and they also became much more optimistic.

Emergency Remote Instruction

The initial pandemic impact in April 2020 triggered a massive movement to emergency remote instruction for millions of students, allowing them to finish the academic term during isolation and lockdown. Unlike a course designed and planned for online delivery, this emergency transition needed to be completed quickly, with little time for planning or revision. The result was that virtually all students, faculty, and academic administrators were exposed to a transitional experience that did not show online learning in the best light.

Online learning advocates feared this experience would sour faculty, staff, and students toward all online instruction. While many faculty had already taught online, many others were entirely new to the experience and needed training and support. The April 2020 survey showed most faculty were asking their institutions for professional development they now understood they needed to successfully teach in a modality that was new to them.

The Planned Transition

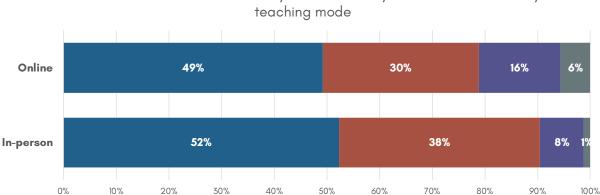
Higher education institutions understood this need and responded. The second round of the DLPS project was conducted four months later, in August 2020. Ninety-seven percent of faculty respondents across all institutions reported having access to the support and training they desired. Most importantly, they found that training and support was effective. Institutions also reported substantial investments in the tools and materials needed to support online course delivery. As a result, the faculty and administrative attitudes going into the Fall 2020 academic term could be best summarized as cautiously optimistic.



The fall of 2020 represented the first term with nearly pervasive delivery of courses planned for online delivery. Understandably, the results weren't perfect, but the third round of the DLPS in December 2020 found faculty and administrators reasonably satisfied with the results of the term. The majority of faculty (54%) in December 2020 reported that they had everything they needed to support their teaching for the term, while an additional 31% said they had most of what they needed but that there were "a few gaps."

Students Find Online Learning to be Effective

Students are generally pleased with how effectively their classes met their educational needs. When asked for a grade, a large proportion gave a grade of "A" with only a small percentage reporting a failing grade of "D" or "F." Critically, it is not just those taking in-person courses that are giving high grades for the effectiveness of their classes. Students taking only online courses give only slightly lower responses - 90% of those taking inperson courses gave a grade of "B" or higher, compared to 79% of those taking online courses.



■A ■B ■C ■Fail

Students - Fall 2022: How well my courses met my educational needs - by

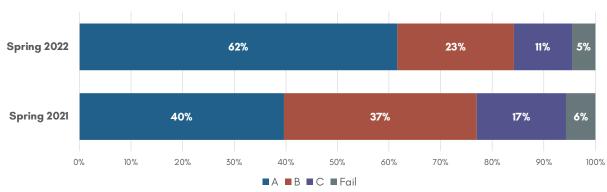
Continuing Positive Experience with Online Learning

Recent student results display continuing satisfaction with all course modes. Students, along with faculty and administrators, are adapting to the changes brought about by the pandemic. In addition, professional development for faculty and institutional investments in supportive teaching technologies have allowed teachers to optimize their courses for this new environment.

The growing stability in their educational experiences and personal lives has removed a considerable amount of the distractions that students were experiencing early in the pandemic. The combination of changes in teaching, in institutional support, and in students' lives has resulted in students finding their education more effective than earlier in the pandemic. This is true for students enrolled in all modes of instruction. For example, the proportion of students who gave an "A" grade for course effectiveness rose from 48% in Spring 2021 to 51% in Fall 2022.

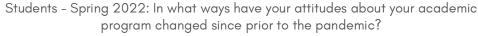
Likewise, students enrolled exclusively in online courses reported a similar increase in the proportion giving the highest grade for effectiveness, growing from 40% in Spring 2021 to 62% in Spring 2022. Student views of the effectiveness of fully online courses for Spring 2022 closely match their views of in-person courses.

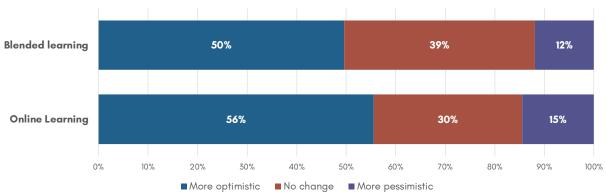




Growing Optimism Towards Online and Blended Learning

In Spring 2022, students were asked how their opinions changed due to their pandemic learning experiences for both fully online courses and blended courses (courses that combine in-person and online instruction, partially online/hybrid model). A majority reported that they are more optimistic about online learning (56%) and blended learning (50%) than before the pandemic. Only a small number reported that they are now more pessimistic (15% for online learning and 12% for blended learning).





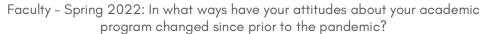
Student attitudes toward online and hybrid learning continue to improve. Students were again asked about their attitudes in Fall 2022, this time comparing changes over the past year, not those prior to the pandemic. Very few students said they were more pessimistic than in Fall 2021, with

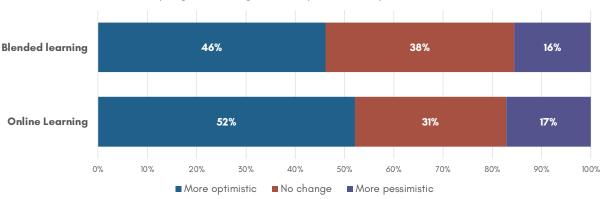
Fall 2022: Changes in student attitudes over the past year **Blended Learning** 45% 45% 10% **Online Learning** 49% 36% 15% 40% 60% 80% 90% 10.0% ■ No change ■ More pessimistic ■ More optimistic

close to one-half saying they were more optimistic.



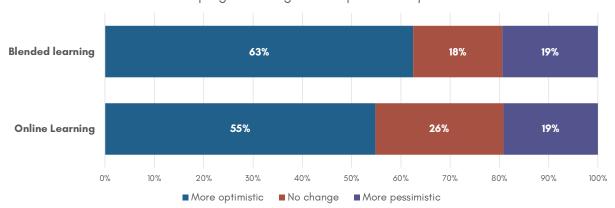
The pandemic teaching experience was also a generally positive one for faculty. Fifty-two percent reported that they were more optimistic about online learning than they were pre-pandemic; only 17% said they were more pessimistic. The numbers for blended learning were also a good match to the student results, with 46% saying they were more optimistic and 16% more pessimistic now than pre-pandemic about teaching blended courses.





Academic administrators at community colleges report an even greater improvement in their attitudes toward online and blended teaching. Unlike the results for students and faculty, administrator attitudes towards blended courses show the greatest change, with 63% saying that they were now more optimistic than before the pandemic. The results for online courses were much closer to the student and faculty responses, with 55% reporting a more optimistic attitude.

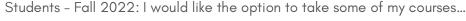
Administrators - Spring 2022: In what ways have your attitudes about your academic program changed since prior to the pandemic?

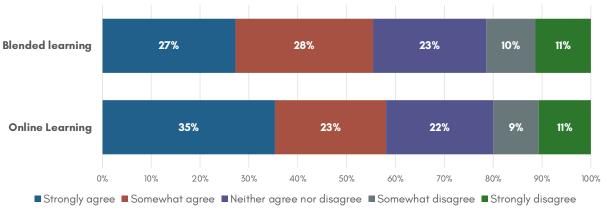




Growing Desire for More Online and Blended Courses

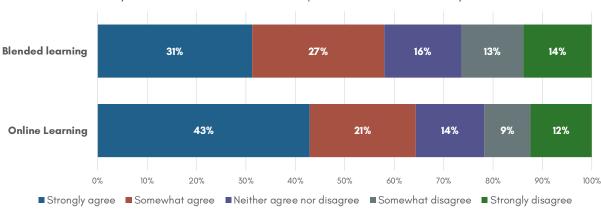
Student satisfaction with their online learning experience, coupled with a more optimistic attitude, has resulted in a growing desire among community college students to take more online courses in the future. A majority (58%) of all students expressed a desire for more online courses, and only 20% disagreed. Students also report that they want the option to take more blended courses, with 55% expressing agreement and 21% disagreeing.



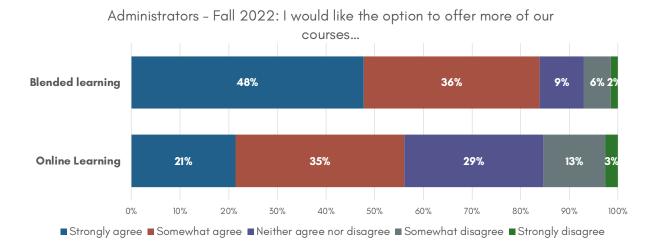


Faculty preferences for teaching online courses closely match student desires to take such courses. Faculty are somewhat more positive than students, but the overall percentage of agreement is very close between the two groups.

Faculty - Fall 2022: I would like the option to teach some of my courses...



A majority of community college administrators also agree that they would like the option to offer more online and blended courses. However, unlike students and faculty, they are more positive about blended courses than fully online courses. Only 21% of administrators say that they strongly agree with offering more fully online courses, compared to 35% of students who strongly agree that they would like the option to take these courses and 43% of faculty who strongly agree that they would like the opportunity to teach fully online courses.

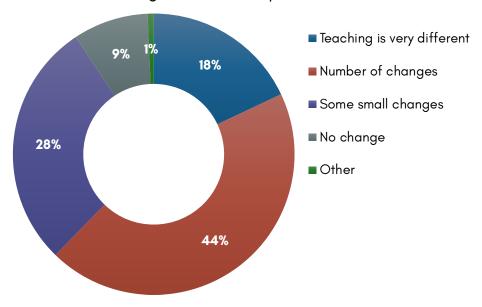


SUSTAINING CHANGE

The substantial changes in attitudes and future teaching desires indicate that a return to the pre-pandemic "normal" is not likely. Faculty report that, for the most part, their teaching is now different than previously. Faculty and administrators expect these teaching changes to continue and will not be a wholesale return to the pre-pandemic approaches.

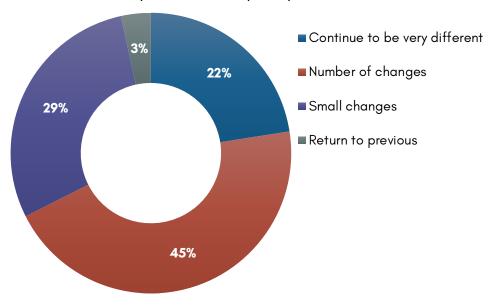
Community college faculty were asked to evaluate how much their teaching had changed due to the pandemic. Almost all faculty report some level of change, with 18% saying that their teaching was now very different than it was previously and an additional 44% reporting that they had made a "number of changes" to their teaching.

Faculty - Fall 2022: Extent teaching techniques changed due to the pandemic?



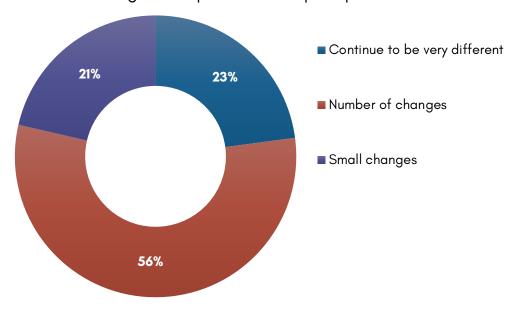
The majority of community college faculty expect that the changes they have made to their teaching will continue, with 67% saying they expect their future teaching to be either considerably different or feature many changes from what it was pre-pandemic. Only 3% think there will be no changes from their previous teaching techniques, with slightly less than a third (29%) expecting only minor changes.

Faculty - Fall 2022: Will changes to teaching techniques continue post-pandemic?



Administrators at community colleges also expect the changes in teaching brought about by the pandemic to continue. A majority believe future teaching will be considerably different (23%) from pre-pandemic or have a number of changes (56%). Less than one-quarter said that they expect only small changes to continue and no administrators reported that they believe that teaching will revert to its pre-pandemic status.

Administrators - Spring 2022: Will changes to teaching techniques continue post-pandemic?



METHODOLOGY

Information for this report comes from the Digital Learning Pulse Survey. This project has conducted multiple national surveys of higher education students, academic administrators, and teaching faculty.

The primary survey outreach for faculty and administrators was via direct email using mailing lists from Market Data Retrieval. The list included a representative sample of all U.S. higher education teaching faculty (defined as faculty teaching at least one course during the current academic year) and a representative sample of relevant academic administrators (e.g., provosts, deans, and department heads).

Outreach efforts by the various partner organizations supplemented the primary faculty and administrator sample. These organizations publicized the project to build overall response rates and directed survey invitations to their members and those on their mailing lists.

A student sample was added beginning in the fourth round of the project (April 2021). The April 2021 survey round used a student panel maintained by LUCID, an external survey organization. College Pulse joined the project as a partner and provided student panels for the October 2021, April 2022, and September 2022 rounds of data collection.

All the student data panels were designed to be nationally representative of all students enrolled in a higher education institution at the time of data collection. Information about the institution where the student was enrolled allowed the student data to be compared to that of faculty and administrators for subgroups of higher education institutions (e.g., two-year versus four-year institutions).

Participants

The project has conducted a total of seven rounds of data collection to date, with the first in April 2020 and the most recent being in September 2022. Participant institutional affiliation was matched to the federal Integrated Postsecondary Education Data System (IPEDS) to retrieve institutional data, allowing for analyses by institution characteristics.

The number of respondents for each survey round:

- April 2020: 897 faculty and administrators, 672 institutions from 47 states and the District of Columbia.
- August 2020: 887 faculty and administrators, 597 institutions from 45 states and the District of Columbia.
- December 2020: 1,702 faculty and administrators, 1,204 institutions from all 50 states and the District of Columbia.
- April 2021: 1,286 faculty and administrators, 1,469 students, 856 institutions from 48 states and the District of Columbia.
- October 2021: 2,080 faculty and administrators, 2,266 students, 1,386 institutions from all 50 states and the District of Columbia.
- April 2022: 1,283 faculty and administrators, 2,285 students, 1,181 institutions from all 50 states and the District of Columbia.
- September 2022: 1,206 faculty and administrators, 2,358 students, 1,252 institutions from all 50 states and the District of Columbia.

Materials

With a few exceptions, the questions in the survey were common across faculty, administrators, and students. Where appropriate, questions included an 'other' response, where the respondent could provide a detailed answer.

Every project wave included a common core of questions to support trend analysis. Each wave also had a small number of additional questions specific to that wave.

Procedures

All data were checked for completeness, missing values, or incorrect codes. All responses entered as 'other' were reviewed to determine if they should also be coded as one of the fixed responses. Respondents could skip any question. Very few respondents skipped questions (less than 2%), and any survey where respondents completed less than three-quarters of the eligible questions were excluded from the analysis.

Potential participants had the option to receive a copy of a final summary report. Names and email addresses were removed from the data before analyses. To ensure confidentiality and anonymity, results were presented in aggregate and summary statistics.