The 2022 EDUCAUSE Horizon Report®
Teaching and Learning Edition

Thank you to EDUCAUSE Platinum Partners, AT&T and Microsoft Corporation, for their sponsorship of the Horizon Report.

AT&T  Microsoft
By the Numbers:
The 2022 Horizon Report Panel

<table>
<thead>
<tr>
<th>Institution Size (Student FTE)</th>
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<tr>
<td>15,000+</td>
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<tr>
<td>2,000-3,999</td>
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<tr>
<td>4,000-7,999</td>
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<tr>
<td>8,000-14,999</td>
<td>13.95%</td>
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<tr>
<td>Less than 2,000</td>
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63% first time

46% international

(US) Carnegie Rollup

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<tr>
<th>Degree Level</th>
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<td>Specialized</td>
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Panelist Titles
- Assoc Vice Chancellor
- Assistant Dean
- Asst Vice Provost
- Asst/Assoc Director
- Chief Data Officer
- Chief Information Officer
- Consultant
- Deputy Director
- Director
- Exec Director
- Instructional Designer
- Innovation Project Manager
- Project Manager
- Professor
- Scholar
- Vice President

2022 EDUCAUSE Horizon Report®
Teaching and Learning Edition
The Horizons Report methodology is grounded in the perspectives and knowledge of an expert panel of practitioners and thought leaders from around the world who represent the higher education, teaching and learning, and technology industries. This year’s group included returning and first-time Horizon panelists, all sought out for their unique viewpoints, as well as for their contributions and leadership within their respective domains. The panel represents a balance of global contexts, with members contributing from North America, South America, Europe, Asia, Australia, and Africa. We also sought balances in gender, ethnicity, and institutional size and type. Dependent on the Horizons Report is on the voices of its panel, every effort was made to ensure those voices were diverse and that each could uniquely enrich the group’s work.

Expert panel research followed a modified Delphi process, in addition to adapting important elements from the Institute for the Future (IFTF) foresight methodology. Following the Delphi process, our expert panelists were tasked with responding to and discussing a series of open-ended prompts, as well as participating in subsequent rounds of consensus voting (see sidebar “Panel Questions”), all aimed at identifying the trends, technologies, and practices that will be most important for shaping the future of postsecondary teaching and learning. Ideas for important trends, technologies, and practices emerged directly from the expert panelists and were vetted on by the panel. EDUCAUSE staff provided group facilitation and technical support but minimal influence on the content of the panel’s inputs and discussions. This was done to protect the core intent of the Delphi process—that an organized group of experts themselves discuss and converge on a set of forecasts for the future, on the basis of their own expertise and knowledge.

The framing of the questions and voting across each round of panel input was adapted from IFTF’s foresight methodology and drew upon the IFTF “STEPP” trends framework to enable our panel to focus on Social, Technological, Economic, Environmental, and Political trends. This effectively broadened the panel’s input and discussions beyond the walls of higher education to more explicitly call attention to the larger contexts within which teaching and learning takes place. These larger trends—and the current evidence and anticipated impacts of these trends—served as the grounds on which the panel built its discussions on the emerging technologies and practices influencing postsecondary teaching and learning.

As they provided their inputs and engaged one another in discussion, panelists were encouraged to share news articles, research, and other materials that would help reinforce their inputs and provide evidence for their particular viewpoints on current and future trends. In addition to enriching the panel’s discussions and supporting the panel’s voting and consensus processes, these materials were collected by EDUCAUSE staff for use as evidence and further reading in the writing of this report. In the Delphi and IFTF methodologies, these collected materials also serve the purpose of ensuring that the panel’s future forecasts are sufficiently grounded in “real” data and
Renee Pfeifer-Luckett
Director, Teaching and Learning Technology
University of Wisconsin System

Camille Dickson-Deane
Senior Lecturer, Higher Education Learning Design
University of Technology, Sydney

Carlos Guevara
Director, Educational Technology / Co-Director, Center for Teaching and Learning
Hostos Community College/CUNY
Poll Time!

Which of the five broad categories of trends do you think is having the biggest impact on your institution’s planning and thinking?

- Social trends
- Technological trends
- Economic trends
- Environmental trends
- Political trends

Please explain your choice in the chat.
TRENDS: SCANNING THE HORIZON

**Social**
- Hybrid and Online Learning
- Skills-Based Learning
- Remote Work

**Technological**
- Learning Analytics and Big Data
- (Re)Defining Instructional Modalities
- Cybersecurity

**Economic**
- Cost and Value of College Degrees
- Digital Economy
- Financial Deficits

**Environmental**
- Physical Campus Structures
- Increase in Sustainable Development Goals
- Planetary Health

**Political**
- Political Instability Driving Uncertainty in Higher Education
- Political Ideology Impacting Pedagogy
- Decrease in Public Funding
Poll Time!

Which of the following technologies and practices do you think will have the greatest impact on higher education in the next few years?

- AI for Learning Analytics
- AI for Learning Tools
- Hybrid Learning Spaces
- Mainstreaming Hybrid/Remote Learning Modes
- Microcredentials
- Professional Development for Hybrid/Remote Teaching

Please explain your choice in the chat.
While this year’s technologies and practices may seem remarkably similar to last year’s—particularly with their focus on hybrid learning, microcredentials, and analytics—a year’s distance between reports has provided panelists with additional experiences and insights that build on and evolve our previous discussions. In some areas, our panelists’ focus has narrowed in on specific aspects of a technology or practice they discussed only in general terms last year. In other areas, the significance of a technology or practice may have shifted to address an emerging demand or need that may not have been present last year.

In their discussions and ratings of online and hybrid learning this year, for example, panelists brought “faculty development” and “learning spaces” much more to the fore as leading technologies and practices in their own right, rather than as subsets of a broader interest in hybrid learning. With two years of accelerated digital transformation under their belts, and an evolving understanding of what our students need in these new types of learning environments, institutional leaders and decision makers are perhaps better positioned now than even just a year ago to identify the specific areas where development and investment will be needed to help “mainstream” hybrid learning and ensure long-term sustainability and success.

As in previous years, we also provide a dimensional analysis of these six technologies and practices. We asked panelists to assess the challenges and benefits institutions might encounter if they move forward with any of these six. Panelists evaluated each technology or practice across several dimensions using a five-point scale (1 = none, 4 = high). The dimensions for this year’s report are:

- Will it require new kinds of literacies on the part of learners and instructors?
- What level of institutional funding will be needed to adopt it?
- How receptive will learners and instructors be to adopting it?
- What is its risk of failure?
- What is its potential to have a significant and positive impact on learning outcomes?
- How useful will it be in addressing issues of equity and inclusion?

In this way, we asked the panelists not simply to identify what might be impactful but to anticipate just what that impact might be. These results are presented in the charts that accompany the discussions of each technology and practice.
Mainstreaming Hybrid/Remote Learning Modes

Overview

Of the three technologies and practices related to hybrid/remote learning identified by the Horizon panelists this year, the practice of “mainstreaming” these learning modes at the institution is arguably the most complex and challenging for institutions to undertake. While the development of hybrid spaces and the offering of professional training in hybrid education both comprise relatively concrete actions and defined outcomes, mainstreaming deals with the more nebulous challenges of changing hearts and minds, shifting the institution’s culture, and rethinking the practice of education itself.

In the early days of the COVID-19 pandemic, higher education and technology leaders shifted online modes of teaching and learning that many came to describe as “emergency remote teaching” as opposed to a thoughtfully planned online education program. Faculty were teaching online as they would in an in-person classroom, out of necessity rather than as an effort to venture into a new educational paradigm. It soon became evident that educators and students—and administrators, for that matter—would need to get more comfortable with online modes of learning as a longer-term capability. Over the summer of 2020, most colleges and universities invested in online-instructional design and faculty development and created a more robust online education program in the fall than they had been able to offer in the spring. In 2021, new questions emerged around the long-term sustainability of online learning and whether faculty and students would eventually revert to the traditional educational models they were accustomed to pre-pandemic. The cost and equity of the challenges of fully committing to online and hybrid modes of education were clear, and the appetite for a “new normal” of online and hybrid education seemed to wane. In some respects, we’re still in this uncertain place in 2022. The pandemic is still very much with us as of this writing, and the jury is still out on whether institutions will adopt sustainable, effective, meaningful online and hybrid programs and pedagogies.

Relevance for Teaching and Learning

As they reflected on the road ahead of us, Horizon panelists identified several key areas of focus for practitioners seeking to mainstream online and hybrid education at their institutions for the long term.

Student and Faculty Buy-In. Students and faculty must believe in and commit to online and hybrid modalities for them to effectively take hold as a mainstream practice. Our panelists posited that students would be more amenable to these long-term changes and

Mainstreaming Hybrid/Remote Learning Modes in Practice

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
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<tbody>
<tr>
<td>Requires new literacies</td>
<td>0.9</td>
<td>1.2</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Cost</td>
<td>2.8</td>
<td>3.1</td>
<td>3.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Instructor/student receptiveness</td>
<td>2.6</td>
<td>2.8</td>
<td>3.1</td>
<td>3.4</td>
</tr>
<tr>
<td>Risk</td>
<td>1.7</td>
<td>1.9</td>
<td>2.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Impact on learning outcomes</td>
<td>2.9</td>
<td>3.2</td>
<td>3.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Addresses equity and inclusion</td>
<td>3.1</td>
<td>3.3</td>
<td>3.5</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Tech Tutors and Tech Teaching Assistants

Adapting from its launch to support faculty, staff, and students through transitions to online teaching and learning, Penn State’s Tech Tutors and Tech Teaching Assistants program has expanded to offer online office hours and scheduled appointments. This branched programs is also expanding to Tech Coaches, where students will support Penn State campus libraries and specialize in pedagogical best practices for using technology tools in teaching.

Key Technologies & Practices
### MICROCREDENTIALS

**Overview**

The concept underlying microcredentials—obtaining nondegree certification or competency in a specific area of skill or knowledge, often in smaller and shorter segments than the typical college degree—is certainly nothing new or groundbreaking. As Arthur Levine and Scott Van Pelt observed in *The Great Uphill: Higher Education’s Past, Present, and Uncertain Future*, “Non-degree certifications aren’t new to higher education...” Yale established the first certificate program more than two centuries ago in 1779. What is new, however, and becoming increasingly more plausible with the expansion of online and hybrid learning capabilities and emerging shifts in the workforce, is that microcredentials and other forms of skills-based certifications may be positioned to overtake the traditional college degree as the most common and even most preferred form of postsecondary education and training.

In some respects, the value of the traditional college degree has been on the decline for a number of years. Public opinion of the value of higher education has been trending downward, with more and more students and adults questioning both the inherent value of a degree and its importance for getting good jobs. Major corporations, including Google, Apple, and Tesla, have grabbed headlines over the past several years announcing that they will no longer require college degrees in their hiring. And with the rising costs of attending college, and with students and industries increasingly placing more value on skills attainment and competency than on degree attainment, it isn’t hard to see why many potential students are making the choice to forgo the traditional postsecondary pathway in favor of other increasingly more attractive options.

As we observe these declines in the value of the traditional degree, we can also observe trends that suggest a rise in the value and appeal of microcredentials and other more bite-sized certification and competency-based education and training models. Consumers in our online economy increasingly expect easy access to services and content at their fingertips whenever and wherever they need it, and popular just-in-time and as-needed education platforms such as Masterclass have demonstrated learners’ appetite for purchasing smaller and even noninstitutional learning experiences tailored to their interests and needs. And with the tectonic shifts in the workforce spurred by the COVID-19 pandemic—especially the “great resignation” signaling workers’ desire to rethink and alter their professional journeys—the demand for certifications and training to help workers reskill and upskill may only expand from here.

<table>
<thead>
<tr>
<th>Microcredentials</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Requires new literacies</td>
<td>0.7</td>
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<tr>
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<td>Instructor/student reception</td>
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<td>Impact on learning outcomes</td>
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<td>2.8</td>
</tr>
</tbody>
</table>

### KEY TECHNOLOGIES & PRACTICES

**Microcredentials in Practice**

- **Innovation, Design, and Entrepreneurship Academy (i.d.e.a.) Badge Pathways**
  - i.d.e.a. embeds the innovation process into the student experience through experiential learning pathways organized around research, design, and entrepreneurship. The pilot will allow students to stack experiences with badge pathways, developing innovation-specific skill sets.
  - Badge criteria will include student reflections connecting their learning to doing as thinkers and learners. Rutgers University’s evaluation of microcredentials enables i.d.e.a. to innovate ways to increase visibility of experiential learning opportunities during the student’s college journey.

- **iHeARt**
  - Higher Education and Real-World Training (iHeARt) is a free experiential learning opportunity for Southern New Hampshire University online learners to develop 21st-century workforce skills. Global learners work in diverse teams to address real-world issues presented by employer partners and industry leaders. Successful participants earn a digital badge after each challenge completion and mastery of competencies. There are six challenges within the stackable credential, with the ability to earn prior learning assessment credit.
PROFESSIONAL DEVELOPMENT FOR HYBRID/REMOTE TEACHING

Overview

In the early days of the COVID-19 pandemic, faculty were suddenly and without much preparation thrust into new hybrid and remote learning environments, asked to teach using new tools and abandon the familiar spaces and habits that had defined their previous teaching practices. These were early days not just for faculty but for many other professionals, learning new Zoom features in real time, accidentally applying cat filters to our faces in the middle of meetings, and committing any number of other egregious mistakes that under normal circumstances would be considered unprofessional and even unforgivable. We all had to learn more patience, with ourselves and with one another, and faculty were no different.

As the pandemic has worn on, though, and as colleges and universities have settled into longer-term planning for their hybrid and remote teaching and learning programs, expectations for faculty have evolved. Students who have grown more comfortable learning in remote environments have developed greater expectations of their faculty in delivering hybrid and remote learning experiences thoughtfully and effectively. Accreditation bodies and funding agencies have taken steps to standardize and develop guidelines for remote teaching practices. The demand for and longer-term importance of faculty development for hybrid teaching, in other words, have become more evident as institutions invest more time and resources into those learning modalities.

Relevance for Teaching and Learning

As the Horizon panel discussed this area of practice for the institution, several key areas emerged that may warrant focused attention at the institution.

Faculty Enthusiasm for Learning. Characterizing all faculty as resistant to change and/or technologically illiterate would be unfair. Indeed, in QuickPoll surveys over the past several years, EDUCAUSE has consistently heard stories from technology professionals and teaching and learning leaders about faculty who are enthusiastically embracing the use of new tools and pedagogical approaches and who are partnering more closely with instructional designers and learning technology staff than ever before. There are stories of light bulbs going off, faculty eyes being opened for the first time to the possibilities of new tools and models for education, real change in faculty practices that could far outweigh the pandemic era, and faculty championing the adoption of new technology.

Professional Development for Hybrid/Remote Teaching in Practice

Walking the Talk of Inclusive Learning: Leveraging UDL to Teach UDL

Universal design for learning (UDL) in a neuroscience-based framework for providing learners with multiple means of engagement, representation, and action and expression. As part of Landmark College’s professional learning certificate program, UDL serves as both message and medium. Through a variety of UDL-based flexible synchronous, asynchronous, and learning object-based instructional techniques and technologies, educators are provided an immersive opportunity to learn how to create inclusive learning opportunities for their students.

Teach Digi

Teach Digi is a series of digital educational training supports delivered in conjunction with the Irish Universities Association’s (IUA) Enhancing Digital Teaching & Learning project. Informed by the project’s pillar of Students as Partners and the project strand to Conversation, this program offers...
Poll Time!
What is your general orientation to the future with respect toward higher education?

- Optimistic
- Neutral
- Realistic
- Pessimistic

Please explain your choice in the chat.
Given the trends we’re observing, and the technologies and practices we see taking shape, where might higher education and teaching and learning wind up in 10 years’ time? How might the people and institutions and practices of tomorrow look different from those of today? And how might the circumstances we find ourselves in today have evolved, expanded, or vanished altogether?

In this section we use a forecasting framework from the Institute for the Future (IFTF) to envision not just one definitive future but a collection of alternative futures that each take different angles on how today might lead into tomorrow. By envisioning several different types of futures, we can be expansive and flexible in our thinking and planning and be better prepared to anticipate and adjust to whatever future does eventually occur. This section of the Horizon Report is a creative exercise, then, that pushes us to imaginatively consider what might be possible. But it’s also a grounded exercise, rooted as it is in the concrete trends, technologies, and practices we’re observing around us today.

As we have in the past few years of Horizon Reports, we focus here on four scenarios for the future, each imagining the course of higher education through the decade beginning in 2023. The first scenario we consider is that of “growth,” a scenario that sees current trajectories continue to expand into a future in which higher education largely flourishes but leaves some of its issues inadequately addressed. The second is “constraint,” a scenario in which higher education is governed by a core guiding value that animates our important decisions and daily practices. Third is “collapse,” a scenario in which higher education is beset by rapid breakdowns and forces of change outside its control and that ultimately leave higher education decimated. Finally, in the “transformation” scenarios, a new paradigm is established for higher education that allows it to successfully evolve and thrive into the future.

This year’s Horizon Report finds our panelists continuing to reflect on the global impacts of COVID-19, social unrest, and climate instability, all of which are certain to transform higher education and teaching and learning for many years to come. Now two years into the pandemic, many “emergency remote teaching” programs are evolving into well-designed online and hybrid learning programs, as colleges and universities embrace and plan for online education, not just as a stopgap but as a long-term strategic capability. Beyond the walls of the institution, political divisions are intensifying and social unrest is...
IMPLICATIONS: WHAT DO WE DO NOW?

Having painted in very broad strokes several abstract portraits of what the future of higher education teaching and learning might look like, we turn our attention now to considering what this year’s trends and technologies and practices might mean more concretely for certain types of institutions and within certain types of institutional contexts.

For 2022, we solicited seven implications essays from our panelists to help us explore these more grounded perspectives. These essays focus on current higher education trends and issues in Australia (Dickson-Dean), Canada (Weister), Saudi Arabia (Ali-Freih), Mexico (Sánchez-Mendia), and several segments of U.S. higher education—associate’s colleges (Guevara), doctoral institutions (Sklarup Bessette), and industry solution providers (Esim). Each of these panelists was asked to consider the results of the 2022 panel’s work through their own unique lens and offer reflections on the following questions: What should we do now? What plans should we make?

The panelists approached these questions with their specific institution and industry contexts in mind, offering a view into the latest trends and current challenges and opportunities for higher education as observed from their particular vantage point. In the Kingdom of Saudi Arabia (KSA), for example, the transformation into a post-oil economy will demand a new vision for the types of education and training colleges and universities might provide for future generations of leaders. In Canada, meanwhile, a growing demand in the larger Canadian workforce for remote/hybrid workers will present colleges and universities with the opportunity to offer students valuable training and experience in new ways of working.

Though these and other institutional contexts certainly differ in some important ways, they also share foundational elements that may ultimately make them more similar than different. In most places and spaces of higher education around the world, there is a growing sense that online and hybrid modes of teaching and learning are going to be a “mainstream” part of the educational experience, requiring institutions to begin their planning now for how they’re going to make these modes effective and sustainable long-term practices. There also seems to be a globally shared awareness that the onus is on higher education now more than ever to demonstrate its value in providing students with the practical knowledge and skills they will need to be successful in the workforce of the future. The traditional college degree may eventually be broken down into “micro” learning and training experiences that directly relate to what students need to know as professionals, and institutions everywhere, regardless of context, must be prepared to provide that type of learning and training.
Questions?

Read the Horizon Report here!
https://tinyurl.com/TLHR2022
Thank you!

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