

Public & Social Sector Practice

Setting a new bar for online higher education

Colleges and universities that learn from online education pioneers could improve operations and students' experiences—and ensure their long-term viability.

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The education sector was among the hardest hit by the COVID-19 pandemic. Schools across the globe were forced to shutter their campuses in the spring of 2020 and rapidly shift to online instruction. For many higher education institutions, this meant delivering standard courses and the “traditional” classroom experience through videoconferencing and various connectivity tools.

The approach worked to support students through a period of acute crisis but stands in contrast to the offerings of online education pioneers. These institutions use AI and advanced analytics to provide personalized learning and on-demand student support, and to accommodate student preferences for varying digital formats.

Colleges and universities can take a cue from the early adopters of online education, those companies and institutions that have been refining their online teaching models for more than a decade, as well as the edtechs that have entered the sector more recently. The latter organizations use educational technology to deliver online education services.

To better understand what these institutions are doing well, we surveyed academic research as well as the reported practices of more than 30 institutions, including both regulated degree-granting universities and nonregulated lifelong education providers. We also conducted ethnographic market research, during which we followed the learning journeys of 29 students in the United States and in Brazil, two of the largest online higher education markets in the world, with more than 3.3 million¹ and 2.3 million² online higher education students, respectively.

We found that, to engage most effectively with students, the leading online higher education institutions focus on eight dimensions of the learning experience. We have organized these into three overarching principles: create a seamless

journey for students, adopt an engaging approach to teaching, and build a caring network (exhibit). In this article, we talk about these principles in the context of programs that are fully online, but they may be just as effective within hybrid programs in which students complete some courses online and some in person.

Create a seamless journey for students

The performance of the early adopters of online education points to the importance of a seamless journey for students, easily navigable learning platforms accessible from any device, and content that is engaging, and whenever possible, personalized. Some early adopters have even integrated their learning platforms with their institution’s other services and resources, such as libraries and financial-aid offices.

1. Build the education road map

In our conversations with students and experts, we learned that students in online programs—precisely because they are physically disconnected from traditional classroom settings—may need more direction, motivation, and discipline than students in in-person programs. The online higher education programs that we looked at help students build their own education road map using standardized tests, digital alerts, and time-management tools to regularly reinforce students’ progress and remind them of their goals.

Brazil’s Cogna Educação, for instance, encourages students to assess their baseline knowledge at the start of the course.³ Such up-front diagnostics could be helpful in highlighting knowledge gaps and pointing students to relevant tools and resources, and may be especially helpful to students who have had unequal educational opportunities. A web-based knowledge assessment allows Cogna students to confirm their mastery of certain parts of a course, which, according to our research, can

¹ Integrated Postsecondary Education Data System, 2018, nces.ed.gov.

² School Census, Censo Escolar-INEP, 2019, ensobasico.inep.gov.br.

³ *Digital transformation: A new culture to shape our future*, Kroton 2018 Sustainability Report, Kroton Educacional, cogna.com.br.

Exhibit

Leading online higher education institutions focus on eight key dimensions of the learning experience across three overarching principles.

Mapping an exceptional online student journey

Seamless journey



Clear education road map

"My online program provides a road map to achieve my life goals and helps me structure my day to day to achieve steady progress."



Seamless connections

"I have one-click access to classes and learning resources in the virtual learning platform through my laptop or my phone."

Engaging teaching approach



Range of learning formats

"My program offers a menu of engaging courses with both self-guided and real-time classes, and lots of interaction with instructors and peers."



Captivating experiences

"I learn from the best professors and experts. My classes are high quality, with up-to-date content."



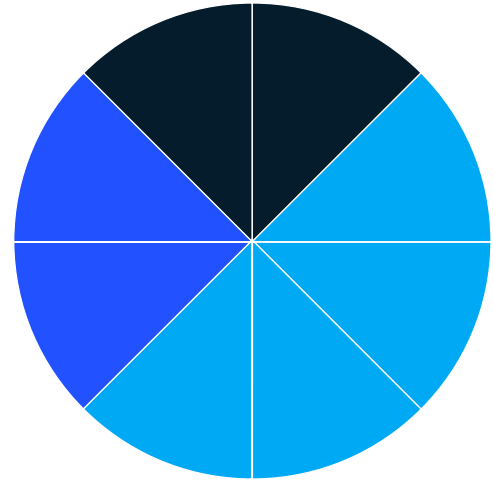
Adaptive learning

"I access a personalized platform that helps me practice exercises and exams and gives immediate feedback without having to wait for the course teacher."



Real-world skills application

"My online program helps me get hands-on practice using exciting virtual tools to solve real-world problems."



Caring network



Timely support

"I am not alone in my learning journey and have adequate 24/7 support for academic and nonacademic issues."



Strong community

"I feel part of an academic community and I'm able to make friends online."

potentially boost their confidence and allow them to move faster through the course material.

At the outset of a course, leaders in online higher education can help students clearly understand the format and content, how they will use what they learn, how much time and effort is required, and how prepared they are for its demands.

The University of Michigan's online Atlas platform, for instance, gives students detailed information about courses and curricula, including profiles of past students, sample reports and evaluations, and

grade distributions, so they can make informed decisions about their studies.⁴ Another provider, Pluralsight, shares movie-trailer-style overviews of its course content and offers trial options so students can get a sense of what to expect before making financial commitments.

Meanwhile, some of the online doctoral students we interviewed have access to an interactive timeline and graduation calculator for each course, which help students understand each of the milestones and requirements for completing their dissertations. Breaking up the education process into manageable

⁴Atlas, Center for Academic Innovation, University of Michigan, umich.edu.

tasks this way can potentially ease anxiety, according to our interviews with education experts.

2. Enable seamless connections

Students may struggle to learn if they aren't able to connect to learning platforms. Online higher education pioneers provide a single sign-on through which students can interact with professors and classmates and gain access to critical support services. Traditional institutions considering a similar model should remember that because high-speed and reliable internet are not always available, courses and program content should be structured so they can be accessed even in low-bandwidth situations or downloaded for offline use.

The technology is just one element of creating seamless connections. Since remote students may face a range of distractions, online-course content could benefit them by being more engaging than in-person courses. Online higher education pioneers allow students to study at their own pace through a range of channels and media, anytime and anywhere—including during otherwise unproductive periods, such as while in the waiting room at the doctor's office. Coursera, for example, invites students to log into a personalized home page where they can review the status of their coursework, complete unfinished lessons, and access recommended "next content to learn" units. Brazilian online university Ampli Pitagoras offers content optimized for mobile devices that allows students to listen to lessons, contact tutors for help, or do quizzes from wherever they happen to be.

Adopt an engaging approach to teaching

The pioneers in online higher education we researched pair the "right" course content with the "right" formats to capture students' attention. They incorporate real-world applications into their lesson plans, use adaptive learning tools to personalize their courses, and offer easily accessible platforms for group learning.

3. Offer a range of learning formats

The online higher education programs we reviewed incorporate group activities and collaboration with classmates—important hallmarks of the higher education experience—into their mix of course formats, offering both live classes and self-guided, on-demand lessons.

The Georgia Institute of Technology, for example, augments live lessons from faculty members in its online graduate program in data analytics with a collaboration platform where students can interact outside of class, according to a student we interviewed. Instructors can provide immediate answers to students' questions via the platform or endorse students' responses to questions from their peers. Instructors at Zhejiang University in China use live videoconferencing and chat rooms to communicate with more than 300 participants, assign and collect homework assignments, and set goals.⁵

The element of personalization is another area in which online programs can consider upping their ante, even in large student groups. Institutions could offer customized ways of learning online, whether via digital textbook, podcast, or video, ensuring that these materials are high quality and that the cost of their production is spread among large student populations.

Some institutions have invested in bespoke tools to facilitate various learning modes. The University of Michigan's Center for Academic Innovation embeds custom-designed software into its courses to enhance the experience for both students and professors.⁶ The school's ECoach platform helps students in large classes navigate content when one-on-one interaction with instructors is difficult because of the sheer number of students. It also sends students reminders, motivational tips, performance reviews, and exam-preparation materials.⁷ Meanwhile, Minerva University focuses on a real-time online-class model that supports higher student participation and feedback and

⁵Wu Zhaohui, "How a top Chinese university is responding to coronavirus," World Economic Forum, March 16, 2020, [weforum.org](https://www.weforum.org).

⁶"Our mission & principles," University of Michigan Center for Academic Innovation, ai.umich.edu.

⁷University of Michigan, umich.edu.

has built a platform with a “talk time” feature that lets instructors balance class participation and engage “back-row students” who may be inclined to participate less.⁸

4. Ensure captivating experiences

Delivering education on digital platforms opens the potential to turn curricula into engaging and interactive journeys, and online education leaders are investing in content whose quality is on a par with high-end entertainment. Strayer University, for example, has recruited Emmy Award–winning film producers and established an in-house production unit to create multimedia lessons. The university’s initial findings show that this investment is paying off in increased student engagement, with 85 percent of learners reporting that they watch lessons from beginning to end, and also shows a 10 percent reduction in the student dropout rate.⁹

Other educators are attracting students not only with high-production values but influential personalities. Outlier provides courses in the form of high-quality videos that feature charismatic Ivy League professors and are shot in a format that reduces eye strain.¹⁰ The course content follows a storyline, and each course is presented as a crucial piece in an overall learning journey.

5. Utilize adaptive learning tools

Online higher education pioneers deliver adaptive learning using AI and analytics to detect and address individual students’ needs and offer real-time feedback and support. They can also predict students’ requirements, based on individuals’ past searches and questions, and respond with relevant content. This should be conducted according to the applicable personal data privacy regulations of the country where the institution is operating.

Cogna Educação, for example, developed a system that delivers real-time, personalized tutoring

to more than 500,000 online students, paired with exercises customized to address specific knowledge gaps.¹¹ Minerva University used analytics to devise a highly personalized feedback model, which allows instructors to comment and provide feedback on students’ online learning assignments and provide access to test scores during one-on-one feedback sessions.¹² According to our research, instructors can also access recorded lessons during one-on-one sessions and provide feedback on student participation during class.

6. Include real-world application of skills

The online higher education pioneers use virtual reality (VR) laboratories, simulations, and games for students to practice skills in real-world scenarios within controlled virtual environments. This type of hands-on instruction, our research shows, has traditionally been a challenge for online institutions.

Arizona State University, for example, has partnered with several companies to develop a biology degree that can be obtained completely online. The program leverages VR technology that gives online students in its biological-sciences program access to a state-of-the-art lab. Students can zoom in to molecules and repeat experiments as many times as needed—all from the comfort of wherever they happen to be.¹³ Meanwhile, students at Universidad Peruana de Ciencias Aplicadas are using 3-D games to find innovative solutions to real-world problems—for instance, designing the post-COVID-19 campus experience.¹⁴

Some institutions have expanded the real-world experience by introducing online internships. Columbia University’s Virtual Internship Program, for example, was developed in partnership with employers across the United States and offers skills workshops and resources, as well as one-on-one career counseling.¹⁵

⁸Samad Twemlow-Carter, “Talk Time,” Minerva University, minervaproject.com.

⁹*Increased student engagement and success through captivating content*, Strayer Studios outcomes report, Strayer University, studios.strategiced.com.

¹⁰Outlier online course registration for Calculus I, outlier.org.

¹¹*Digital transformation*, 2018.

¹²“Maybe we need to rethink our assumptions about ‘online’ learning,” Minerva University, minervaproject.com.

¹³“ASU online biology course is first to offer virtual-reality lab in Google partnership,” Arizona State University, August 23, 2018, news.asu.edu.

¹⁴Cleofé Vergara, “Learn by playing with Minecraft Education,” *Innovación Educativa*, July 13, 2021, innovacioneducativa.upc.edu.pe.

¹⁵Virtual Internship Program, Columbia University Center for Career Education, columbia.edu.

Create a caring network

Establishing interpersonal connections may be more difficult in online settings. Leading online education programs provide dedicated channels to help students with academic, personal, technological, administrative, and financial challenges and to provide a means for students to connect with each other for peer-to-peer support. Such programs are also using technologies to recognize signs of student distress and to extend just-in-time support.

7. Provide academic and nonacademic support

Online education pioneers combine automation and analytics with one-on-one personal interactions to give students the support they need.

Southern New Hampshire University (SNHU), for example, uses a system of alerts and communication nudges when its digital platform detects low student engagement. Meanwhile, AI-powered chatbots provide quick responses to common student requests and questions.¹⁶ Strayer University has a virtual assistant named Irving that is accessible from every page of the university's online campus website and offers 24/7 administrative support to students, from recommending courses to making personalized graduation projections.¹⁷

Many of these pioneer institutions augment that digital assistance with human support. SNHU, for example, matches students in distress with personal coaches and tutors who can follow the students' progress and provide regular check-ins. In this way, they can help students navigate the program and help cultivate a sense of belonging.¹⁸ Similarly, Arizona State University pairs students with "success coaches" who give personalized guidance and counseling.¹⁹

8. Foster a strong community

The majority of students we interviewed have a strong sense of belonging to their academic community. Building a strong network of peers and professors, however, may be challenging in online settings.

To alleviate this challenge, leading online programs often combine virtual social events with optional in-person gatherings. Minerva University, for example, hosts exclusive online events that promote school rituals and traditions for online students, and encourages online students to visit its various locations for in-person gatherings where they can meet members of its diverse, dispersed student population.²⁰ SNHU's Connect social gateway gives online-activity access to more than 15,000 members, and helps them interact within an exclusive university social network. Students can also join student organizations and affinity clubs virtually.²¹

Getting started: Designing the online journey

Building a distinctive online student experience requires significant time, effort, and investment. Most institutions whose practices we reviewed in this article took several years to understand student needs and refine their approaches to online education.

For those institutions in the early stages of rethinking their online offerings, the following three steps may be useful. Each will typically involve various functions within the institution, including but not necessarily limited to, academic management, IT, and marketing.

¹⁶ "SNHU turns student data into student success," Southern New Hampshire University, May 2019, d2l.com.
¹⁷ "Meet Irving, the Strayer chatbot that saves students time," Strayer University, October 31, 2019, strayer.edu.
¹⁸ Academic advising, Southern New Hampshire University, 2021, snhu.edu.
¹⁹ "Accessing your success coach," Arizona State University, asu.edu.
²⁰ "Join your extended family," Minerva University, minerva.edu.
²¹ SNHU Connect, Southern New Hampshire University, snhuconnect.com.

1. Assess your current online offerings. An initial diagnosis could provide an understanding of how satisfied students are with the existing online experience, their expectations and preferences, and the competitive landscape.

The diagnosis could be performed through a combination of focus groups and quantitative surveys, for example. It's important that participants represent various student segments, which are likely to have different expectations, including young-adult full-time undergraduate students, working-adult part-time undergraduate students, and graduate students. The eight key dimensions outlined above may be helpful for structuring groups and surveys, in addition to self-evaluation of institution performance and potential benchmarks.

2. Set a strategic vision for your online learning experience. The vision should be student-centric and link tightly to the institution's overarching manifesto. The function leaders could evaluate the costs/benefits of each part of the online experience to ensure that the costs are realistic. The online model may vary depending on each school's market, target audience, and tuition price point. An institution with high tuition, for example, is more likely to afford and provide one-on-one live coaching and student support, while an institution with lower tuition may need to rely more on automated tools and asynchronous interactions with students.

3. Design the transformation journey. Institutions should expect a multiyear journey. Some may opt

to outsource the program design and delivery to dedicated program-management companies. But in our experience, an increasing number of institutions are developing these capabilities internally, especially as online learning moves further into the mainstream and becomes a source of long-term strategic advantage.

We have found that leading organizations often begin with quick wins that significantly raise student experiences, such as stronger student support, integrated technology platforms, and structured course road maps. In parallel, they begin the incremental redesign of courses and delivery models, often focusing on key programs with the largest enrollments and tapping into advanced analytics for insights to refine these experiences.

Finally, institutions tackle key enabling factors, such as instructor onboarding and online-teaching training, robust technology infrastructure, and advanced-analytics programs that enable the institutions to understand which features of online education are performing well and generating exceptional learning experiences for their students.

The question is no longer whether the move to online will outlive the COVID-19 lockdowns but when online learning will become the dominant means for delivering higher education. As digital transformation accelerates across all industries, higher education institutions will need to consider how to develop their own online strategies.

References to specific products, companies, or organizations are solely for information purposes and do not constitute any endorsement or recommendation.

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