CHEPP

The Center for Higher Education Policy and Practice

ONLINE BY DESIGN: DELIVERING ROBUST AND RELEVANT ACADEMICS TO SUPPORT LEARNER SUCCESS

APRIL 2025

Executive Summary

- **Online learning is growing steadily and is becoming ubiquitous in higher education — a trend largely driven by learners' need for flexibility so they can work, fulfill caregiving, and carry out other responsibilities while they attend college.**
    - In 2022, over half of all students were enrolled in at least one online course (National Center for Education Statistics, 2023), and two-thirds of colleges reported increasing online programs to meet demand (Schwartz, 2023).
    - The percentage of students who prefer mostly or completely online courses more than tripled, from 9% in 2020 to 29% in 2022 (Robert, 2022).
- **Online learning provides a critical pathway to the majority of good jobs in the United States at least through 2031.**
    - Bachelor's degrees are projected to offer a pathway to the majority share of good jobs through 2031 (Strohl et al., 2024). Given learners' need for flexibility, the option to attend college online is becoming more important for the future world of work and economic mobility.
- **Online learning offerings are increasingly offered at public and non-profit colleges and universities with robust wraparound supports.**
    - In 2012, over half of all students attending exclusively online were at a for-profit college (Hamilton et al., 2022). In more recent years, the for-profit sector has seen its share of online enrollment cut in half, due in large part to enforcement actions and closures. At the same time, public and non-profit institutions started expanding online offerings and include robust wraparound supports, intentional learner-centered design of courses and programs, high levels of interaction and engagement (class sizes are typically 1:25, with some variance depending on level or requirements, as an example), and career transition supports and services.
    - Data drives a culture of continuous improvement and personalized outreach.
    - Program decision-making (i.e., what new programs to offer and which ones to discontinue) centers learners' return on investment and is informed by labor market data.
- **As policymakers and institutions adapt to the online learning environment, this paper offers insights into the required resources and supports necessary for online learner success.**
    - Based on a thorough review of available academic literature, this paper identifies the elements of a robust and relevant academic experience, regardless of modality, that supports learner success.
    - It then details each element and provides case studies of three institutions with significant online learning operations to demonstrate each element in practice.

Key Elements of a Robust and Relevant Education

Quality Assurance: Quality assurance is the regular evaluation of courses, programs, or credentials to ensure they meet the established quality requirements for the academic field, online instruction, and design, and that they are relevant for today's workforce.

Faculty Contribution to Design: Faculty contribution to design represents the role of instructors in curriculum or course development and design, through subject matter expertise, course content, and learning tools.

Class Structure: Class structure describes how content is organized and presented to learners. Structure can refer to the modality of the course, course sequencing, class size, and content organization.

Engagement Tools: Engagement tools encompass the digital platforms, software, technology, and channels used to promote interaction among learners and faculty.

Alignment with Universal Design for Learning (UDL): UDL is a CAST-developed framework to guide the design of learning environments that are accessible, inclusive, equitable, and challenging for every learner.

Faculty Training: Faculty training constitutes the onboarding of new faculty, ongoing support and training for faculty, and professional development related to online course design and instruction.

Scaffolding with Academic Supports: Scaffolding with academic supports refers to services and resources that assist learners with their assignments, facilitate their learning, guide them in finding study resources, and help them develop new skills. Examples include academic advising, tutoring, coaching/mentoring, and library services.

Using Data to Drive Outcomes: Using data to drive outcomes includes measuring student progress and outcomes through course-level data, student-level data, and institution-level data, and then applying that data to inform instructional, programmatic, institutional, or policy changes to improve programs and learner outcomes.

Decision-Making of Program Offerings: Decision-making of program offerings represents the process and information an institution uses to determine which courses and credentials it will offer, including the addition, expansion, or closing of courses or programs.

Sense of Belonging: Sense of belonging depicts the learners' academic and social connectedness to the college community, including peers, faculty, and staff.

Providing Experiential Learning Opportunities: Providing experiential learning opportunities constitutes the use of real-world application and experiences to teach skills or knowledge, or to enhance skills and knowledge acquired in the classroom. Examples include internships, externships, shadowing, apprenticeships, service learning, simulated workplace experiences, virtual science labs and experiments, and practicum.

Introduction

In 2022, over half of all college students were enrolled in at least one online course (National Center for Education Statistics, 2023), and two-thirds of colleges reported increasing online programs to meet demand (Schwartz, 2023). The growth in online enrollment highlights the need for more flexible higher education models that make a college degree accessible and attainable for today's learners: those who work, serve as caregivers, have a disability, serve in the military, or have other life circumstances that make in-person learning more difficult. Learners need flexibility in their schedules, and multimodal learning, including online delivery, is critical. With a bachelor's degree projected to offer the majority share of good jobs through 2031 (Strohl et al., 2024), the option to attend college online is becoming more important for the future world of work and economic mobility.

As policymakers and practitioners strive to deliver on the promise of higher education as a driver of economic safety and social mobility, it is critical that higher education responds to the evolving needs of learners and their ability to access and succeed in postsecondary education, regardless of modality. However, policies that apply requirements based solely on modality do not reflect the rapid change in the sector. More institutions across higher education are now offering online programs. Many of them are putting significant intentionality, supports, and resources into how online learning is designed and delivered.

To support a more nuanced understanding of the variation within online education, the field needs new research that considers the quality and design of instruction and accompanying student supports when examining learner outcomes, not just whether a program is offered online or in-person. This evaluation will be easier under a new U.S. Department of Education rule[1] that expands data collection to include student-level information on enrollment by modality to enable more fine-tuned analysis.

With greater understanding of the offerings and impact of online education, policymakers can create policies that recognize the significant changes in online education over the past two decades and the current diversity in offerings. In the past, for-profit colleges dominated the online sector. In 2012, over half of all students attending exclusively online were at a for-profit college (Hamilton et al., 2022). In more recent years, the for-profit sector has seen its share of online enrollment cut in half, due in large part to enforcement actions and closures. At the same time, public and non-profit institutions started expanding online offerings, including Western Governors University (WGU), Southern New Hampshire University (SNHU), University of Maryland Global Campus (UMGC), and Arizona State University (ASU) (Howarth & Stifler, 2019). Together, the nonprofit and public four-year sectors increased their online enrollment by over 90% between 2012 and 2019 (Hamilton et al., 2022).

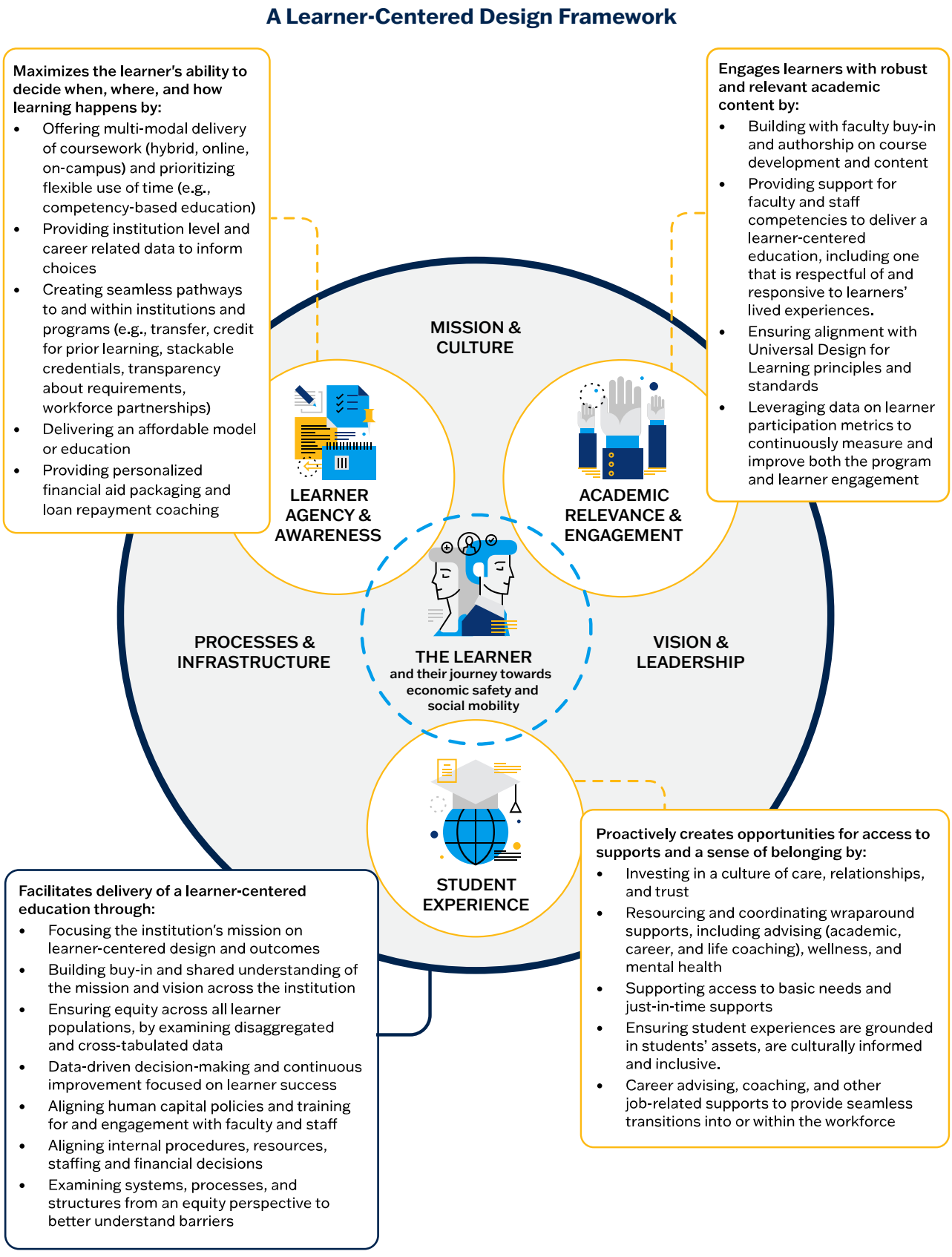
[1] Read the regulation here: https://www.federalregister.gov/documents/2025/01/03/2024-31031/program-integrity-and-institutional-quality-distance-education-and-return-of-title-iv-hea-funds

Then, everyone went online. The COVID-19 pandemic forced all institutions to figure out how to deliver education virtually. Some were prepared or adapted; others struggled. The types of online education experiences during the pandemic ranged widely from emergency remote learning courses to intentionally designed online experiences with wraparound supports and digital resources designed to meet a range of learner needs. Importantly, the experience of widespread online delivery during the pandemic created a culture shift, particularly among learners. The percentage of students who prefer mostly or completely online courses more than tripled, from 9% in 2020 to 29% in 2022 (Robert, 2022).

Institutions and policymakers have to adapt to the shifting online education landscape. Intentionally designed online programs and courses result in higher quality learner experiences than emergency remote education (Cavanaugh, 2020). Many institutions offer well-designed, quality academic experiences that deliver career-relevant skills through online education, and are aligned with learner-centered design. More institutions need to learn and adopt these best practices. Policymakers need to understand and account for the diversity in quality as they consider laws and regulations governing online education. A better balance is needed between quality assurance and access, such that more learners can benefit from a robust and relevant academic experience through the modality that best suits them.

This paper is the fourth in a series about the importance of learner-centered design in higher education. The first paper presented a framework for learner-centered design (see Figure 1 on page 6). The second and third papers addressed specific elements of the framework, specifically the importance of accessibility for learners with disabilities across modalities and the importance of belonging. This fourth paper in the series addresses another element: robust and relevant academics. The paper details the key components of a robust and relevant academic experience and uses case studies of three institutions that have applied the principles of the framework to their online offerings (Ivy Tech, UMGC, and SNHU). The objective of the case studies is to highlight the application of learner-centered design elements to the academic experience delivered in an online environment.

Figure 1. A Learner-Centered Framework



***Note:** More details on the framework can be found in CHEPP's paper: *Online by Design: How Learner-Centered Higher Education Design and Delivery Accelerates Equitable Access and Outcomes* (CHEPP, 2024).

Elements of a Robust and Relevant Academic Experience

This paper provides a framework for the key elements of a robust and relevant academic experience, drawing on a literature review of existing academic research, resources from leading online education associations and organizations, and interviews with practitioners at the three case study institutions. These elements largely apply to higher education programs across modalities, but their application can differ between in-person and online environments.

Rubrics for assessing online course quality, like those developed by Quality Matters, emphasize standards like clear and measurable learning objectives; assessment; quality of materials; activities, interaction, and supports that support learning and engagement; accessibility; and effective technology (Quality Matters, n.d.-a). Smith Jaggars and Xu's summary of the literature identified four areas that define quality: organization and presentation; learning objectives and assessments; interpersonal interaction; and use of technology (Smith Jaggers & Xu, 2013). Lockman and Schirmer's review of the online learning research identified five themes used to assess quality: course design factors, student support, faculty pedagogy, learner engagement, and student success factors (Lockman & Schirmer, 2020). From the learner perspective, online learners value a caring network (strong community, timely support), a seamless journey (clear road map, easy digital experience), and engaging pedagogy (adaptive learning, practical learning, balanced learning formats) (Child et al., 2023).

To inform our list of the key elements of a robust and relevant education and present examples of how these elements are delivered, we conducted case studies on three institutions offering multi-modal programs: Southern New Hampshire University (SNHU), Ivy Tech Community College (Ivy Tech), and the University of Maryland Global Campus (UMGC), part of the University System of Maryland. These institutions provide diverse contexts for understanding how to apply the elements of robust and relevant academics in online learning, representing 2-year and 4-year and public and nonprofit institutions. Each institution has a different history of its online operations, as well. UMGC and SNHU both expanded into online learning in the mid-1990s, but UMGC has already had a global presence educating servicemembers since World War II (UMGC, n.d.), while SNHU started as a brick-and-mortar university. Ivy Tech's campuses have offered online courses for many years, but the college centralized its offerings and operations under IvyOnline starting in 2019. Today, SNHU and UMGC still have brick-and-mortar campuses, but the vast majority of SNHU and UMGC learners are entirely online. At Ivy Tech, on the other hand, only 24% of learners take classes fully online, and 34% take a mix of online and in-person classes.

Based on the research and these case studies, we developed the following list of elements that are critical to delivering a robust and relevant academic experience. As research grows around online learning, it is expected that these elements will continue to be improved and developed. We also provide examples of how they are applied at one or more of the case study institutions. Similarities and differences show up across the three institutions in their approaches to implementing the elements, but all three institutions apply practices across these elements and are engaged in continuous improvement processes throughout their models. The examples shared in each element section are not meant to be exhaustive, and it should not be assumed an institution does not demonstrate an element if they are not featured in a particular section of this paper.

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Quality Assurance

The accreditation process helps provide a set of standards and regular self-review and peer-review processes for institutions, which sets a foundation for quality assurance. To elevate the impact of that foundation, stakeholders at institutions should agree upon a set of expectations and standards that represent quality at the program and course level (Quality Matters, n.d.-b). Institutions must also use regular evaluation and feedback processes to ensure that every course or program is meeting those quality standards. Evaluations should assess whether content and examinations align with the learning objectives and goals of the course (Uteach, 2024). Common metrics include learners' quantitative and qualitative feedback, course completion rates, assignment scores, student progress in a course, and interaction and engagement levels.

Organized policies and procedures regarding course design and delivery support a more robust education (Quality Matters, n.d.-c). Quality course design makes navigation easier for learners, reduces barriers, and results in better outcomes (Quality Matters, n.d.-d). Some standardization can help ensure quality, though it is important to maintain some flexibility and faculty autonomy (Nehrbass et al., 2022).

Element in Practice: SNHU's program review process is collaborative and data-driven, bringing together stakeholders from online and campus-based modalities to ensure the quality and approach are consistent. Because SNHU offers programs online, on-campus, and through competency-based education (CBE), the process examines variations in learner experience and outcomes between these modalities. In addition, SNHU uses term-by-term evaluations to make iterative improvements to courses and programs based on student and instructor data. This process is critical to continuous improvement and the implementation of essential changes in the interim between full program reviews, such as a rapid iteration course improvement process that can involve textbook updates, technology changes, and responses to new accrediting or licensure requirements.

UMGC also has a rigorous annual assessment process that uses a juried assessment approach to ensure program learning goals are met. Groups of faculty experts across the university, as well as from other institutions, review learner submissions of course assignments and projects to determine if they meet the established criteria of the program learning goals. Based on these results, evaluators follow a data-driven process to understand why learning goals are not being met and how courses can be improved to meet those goals more frequently. UMGC uses data from the juried assessment process, as well as external labor market data, student feedback, and other data from the continuous monitoring of program health, to create an annual plan for continuous improvement.

Faculty Contribution to Design

In a learner-centered design, faculty buy-in and contributions to course design can help create the most robust content for learners [Center for Higher Education Policy and Practice (CHEPP), 2024a]. Faculty can help identify learning outcomes and construct lessons and assessments that lead to those outcomes. Although some level of standardization helps optimize the learner experience, it is essential to engage faculty in the process of developing online courses and programs (Cavanaugh, 2020). Generally, course content and design are developed by faculty, either individually or in collaboration with an instructional designer. However, online courses provide more practical and effective opportunities for multi-faculty collaboration, which can be a more efficient use of time and resources (Mandernach, 2019). Further, courses designed with diverse input leverage collective faculty expertise, enhance instructional quality, and ensure quality across all online sections of a course (Ithaka S+R, n.d.).

Element in Practice: SNHU brings faculty into the course design process as subject matter experts. SNHU's Learning Sciences and Assessment team builds courses that map backwards from the program's learning objectives and competencies framework and then brings instructional designers together with deans and two faculty subject matter experts. SNHU also brings faculty into the program review process. From the design to completion of a program review, SNHU staff estimated that approximately 5 faculty are involved in the design and review of the average course.

SNHU courses follow a standard format in terms of resources, assignments, assessment, and grading rubrics, which promotes standardization of the quality of course delivery and students' academic experiences. Faculty teach from the same "playbook," so they put their personal stamp on the content through their communication, feedback to learners, and connections to their own professional experience in the field. SNHU is intentional in hiring scholar-practitioners as faculty who bring context and experiences into the classroom. SNHU's Academic Leadership team sees faculty experience as a major contribution to curriculum and finds this to be a driver of persistence for learners.

At Ivy Tech, the Office of Educational Technology and Instructional Design uses faculty-led curriculum committees, supported by instructional designers, to develop and maintain their courses. The office uses Quality Matters and the Backwards Design Framework to map content to institutionally approved course-level objectives. A course review committee evaluates full course development projects at two separate stages. To ensure that a diverse group of faculty and staff is providing feedback on the course design, this committee consists of curriculum committee representation, IvyOnline leadership, and faculty teaching the courses.

Class Structure

Clear course structure and organization, both within a course and across courses, can increase learner motivation and enhance opportunities for effective learning. A study of 17 institutions found that clear and organized classroom instruction was positively associated with increased use of all three deep approaches to learning (higher-order, reflective, and integrative learning) among students (Wang et al., 2015). Additionally, research has found that learners who experience more clear and organized instruction are more engaged and academically motivated (Roksa et al., 2017).

In addition to the organization of courses, class size is also an important factor in student learning. Research indicates that large classes are more appropriate for foundation-level learning, while smaller classes are more appropriate for learning that requires higher order thinking and mastery of complex knowledge (Taft et al., 2019). This research does not imply that any number of learners can be enrolled in a course based on its foundational content and online environment. There is no "one size fits all," and regardless of the course level, class size should be driven by course learning objectives (Thomas, 2021; Taft et al., 2019). The number of learners in a course should not compromise the course's structure, organization, or ability for effective instruction.

Element in Practice: Through testing and evaluation of customer experience measures and learner outcomes, SNHU has found that foundational courses need higher instructor-learner interaction, making the case for smaller classes that allow faculty to reach more learners. Each of the three case study institutions reported similar class sizes. At SNHU, typical class sizes are approximately 25 learners for online courses, but the size can vary based on the level of the course and area of study. Ivy Tech Community College also enforces strict class size limits for online courses, capping most courses at 30 students and 25 for writing-intensive courses. Similarly, UMGC has a course cap policy based on A/B testing that has analyzed the impact of class size on learner experience. While course caps vary by program and course requirements, First Year Experience courses are capped at 24, and undergraduate and graduate courses are capped at a maximum of 35 and 30, respectively. All three institutions emphasized strongly that larger class sizes would not provide the needed support and attention for their learners.

Engagement Tools

Research shows strong correlation between student engagement and learning outcomes (Xu et al., 2023; McClenney et al., 2012) regardless of modality. Online learning environments, particularly when asynchronous, inherently lack face-to-face social interaction, so course designers must find the right balance of interaction between learners, instructors, and content to optimize learner engagement. Building a blend between the three interaction types (learner-learner, learner-content, and learner-instructor) has been shown to improve motivation, satisfaction, and achievement in online courses (Dailey-Hebert, 2018; Lockman & Schirmer, 2020).

Engagement tools and user-friendly technology are integral to promoting these interactions. It is recommended that instructors use multiple modes of communication in the online environment (Dailey-Hebert, 2018), making sure that learners receive pertinent information and that communication is flexible enough to keep learners engaged. A slew of tools and technologies are available for faculty to communicate with learners, supplement or customize content, and facilitate peer-to-peer collaboration, all of which can be seamlessly integrated into an institution's Learning Management System (LMS). These systems are integral to bringing these engagement tools and functions to life and ensuring learner engagement is not compromised in the online learning environment.

Although technology has made online learning more interactive and convenient, institutions must also provide learners with the necessary technology, orientation, and training to ensure equal access and ability to all the system's capabilities (Lockman & Schirmer, 2020).

Element in Practice: Because of the importance of learner engagement, institutions like Ivy Tech use data such as students' last login, assignment completion, and midterm grades. While some of these metrics are necessary to comply with federal financial aid requirements, institutions also use them to identify learners who may be disconnecting from their course with the goal of intervening to re-engage the learner.

SNHU faculty and advisors have a dashboard to monitor their learners' activity — who has not logged in or participated in the discussion boards recently, for example — and their own faculty and staff's activity, such as whether they are meeting their learner engagement requirements. Deans monitor these dashboards to identify trends and needs, as do a dedicated team of academic advisors who provide regular and personalized support to learners.

JESSE'S STORY

Jesse received his bachelor's degree in public health and is currently pursuing his master's degree from SNHU. Jesse finds that SNHU courses challenge him and are focused on mastery of the content so that learners can apply what they have learned. In addition to the material, faculty engagement and support has contributed to his growth. Jesse describes one professor's feedback as "instrumental in getting my reports to where they needed to be." Learner engagement tools like discussion boards and facilitated mini-groups also stood out to Jesse as a driver of engagement and development for him and his peers. Jesse finds the discussion boards as a way to engage with peers who may not have many interactions on their posts or who have been less engaged in the course, and he appreciates that faculty have done the same for him. Mini feedback groups have provided additional input on his papers and have also established connections with his peers that have continued throughout his program.

"I didn't think I was going to be as engaged with the other students...But I actually did form a relationship with these people."

Similarly, UMGC instructors monitor student logins, assignment completion, and interim grades so that faculty and success coaches know when to reach out to students who need extra support. UMGC is also developing a faculty data dashboard to serve as a "one-stop shop" for tracking learner engagement and progress. The data dashboard will help encourage faculty behaviors that support learner needs by prompting them with suggested emails or the number of days since they responded to a student email.

Alignment with Universal Design for Learning (UDL)

A robust education reflects the universal design for learning (UDL) framework, an essential learner-centered approach that differentiates the learning and assessment experiences by providing learners with the options that work best for them (CHEPP, 2024b). Instructors, curriculum developers, and course designers can use UDL guidelines in their work to ensure every learner can access and participate in meaningful learning opportunities (CAST, n.d.).

UDL aims to make learning accessible for all learners, but it is especially important for students with disabilities, who account for 1 in 5 students in postsecondary education (Dwyer-Kuntz, 2022). Learners with disabilities are significantly less satisfied with their technology supports and experiences at their institutions, and their learning modality preferences in particular may be influenced by needs related to specific types of disability (McCormack, 2023). Accommodation and accessibility offices enable institutions to provide the appropriate accommodations for learners with disabilities to succeed in the classroom, regardless of modality.

Element in Practice: At SNHU, the Accommodation Services team works across departments to ensure accessibility[2] options are widely available and disseminated. For example, SNHU incorporates UDL principles into faculty training, including a full self-paced training on UDL. Faculty at SNHU noted that these trainings help them identify any inaccessible elements in their course design, which they can flag for the course designers.

The SNHU Accommodation Services team's proactive efforts help identify the necessary accommodations and implement supports before learners begin their courses. As accessibility needs arise during a course, the team steps in to mitigate the barrier, determine where that need may occur in future courses, and communicate and coordinate with course development teams. However, due to SNHU's course design alignment with UDL, staff noted that it is rare for barriers to appear.

Ivy Tech develops courses using a custom course template intentionally designed to focus on the learner experience. Ivy Tech designed the template to be digitally accessible, and the College's User Experience team reviewed it to ensure the best possible experience across all types of devices. Further, instructional designers and course developers review courses at all stages of development to align with Web Content Accessibility Guidelines.[3]

Faculty Training

Faculty training supports many of the elements of a well-designed academic experience, equipping instructors with the skills and knowledge to deliver the other key elements in a consistent and high-quality manner. As technologies and learning modalities evolve, proper training will position instructors to succeed (Malvik, 2020). Faculty development for online instruction is shown to enhance student success and retention (Freitas & Gold, 2015). A critical area of faculty training is assessment, identifying areas where faculty need to improve and providing related development. This ongoing quality assurance is essential to the learner experience and continuous improvement efforts (Cavanaugh, 2020).

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[2] Read about the importance of accessibility in higher education in CHEPP's second report in its online by design series released in July 2024, *Online by Design: How Accessibility Is Fundamental to Learner-Centered Design*. Access the report at chepp.org.

[3] Please visit https://www.w3.org/WAI/ for more information.

Element in Practice: The faculty development and training program at SNHU is grounded in the importance of understanding SNHU's population and learners' diverse needs. New faculty are required to take a three-week training course, ending with an assessment. To help faculty understand how learners experience the online environment, the course mirrors the learner experience. It is asynchronous, uses a cohort model, and requires peer-to-peer exchanges. The training covers topics like expectations related to providing feedback, outreach, and communication, technological proficiency in using online tools and applications, and strategies for creating an inclusive learning environment. Although this is the only training faculty are required to take, SNHU provides self-paced training, webinars, and tutorials with continual updates based on faculty evaluations, ongoing professional development, and learner needs. Providing Substantive Feedback, Beyond the Bulletin Board, and Cultivating Conversations have been the most popular trainings, which share a common theme of creating deeper engagement with learners.

At Ivy Tech, IvyOnline has a robust professional development program that is continuously improving. Faculty who teach online must take an online faculty certification course. Starting in 2025, a mandatory professional development program will go into effect for faculty who teach online, requiring them to participate in four hours of professional development every two years. IvyOnline plans to have a video library of training available to faculty, as well as IvyTech's existing annual conference and synchronous professional development sessions that can count toward the four-hour requirement. Some of the topics covered in the trainings include adding video to supplement content, writing substantial announcements, and providing effective grade feedback. IvyOnline staff view the latter topic as particularly essential to robust online instruction. Additionally, the Office of Educational Technology and Instructional Design is rolling out required professional development specifically for online course developers (subject matter experts), consisting of five modules focusing on: Course Alignment Mapping, Sourcing Course Materials, Assessment Types and Equity in Grading, Engagement in Learning, and Course Development Expectations and Technology.

Scaffolding with Academic Supports and Resources

All higher education programs should have academic supports and resources to supplement instruction to ensure all learners reach their potential. A study on making these supports comparable to an in-person learning environment showed academic support as the most crucial need for student success (Netanda et al., 2017). Institutions have a host of evidence-based academic supports to draw from, including first-year experience courses, learning communities, summer bridge programs, advising, and mentoring (Bettinger et al., 2013), as well as holistic programs that include intensive advising, academic planning, and access to tutors and career service counseling (Scrivener et al., 2015). To provide support services online, institutions can use active communication tools, technological support like quality course management systems, tutoring centers, and counseling and advising services (Muljana & Luo, 2019).

Element in Practice: SNHU combines robust data with personal connection to design and deliver its set of learner supports. The institution captures and analyzes learner data and feedback to identify trends, gaps, and improvements. This evaluation includes time spent on each part of an assignment or on a website, course attendance and performance, and learner feedback on courses, as well as interactions with other SNHU offices and, most recently, transcripts with "Penny," an AI chatbot. SNHU rolled out Penny as a means for two-way communication between learners and their advisors and instantaneous support that fosters a sense of belonging (CHEPP, 2024c). Advisors can send out intentional, formalized messages through the chatbot and receive daily reports on which learners responded and how. Advisors can then follow up with learners accordingly. SNHU's data indicate that Penny improved term-over-term retention by more than two percentage points (EdSights, 2024).

A significant portion of SNHU's annual budget is reinvested into student supports, allowing SNHU to offer a wide range of academic supports and services to online learners, spanning academic advising (including personalized communication, coaching, and support with flexible office hours), transfer credit advising and assistance, 24/7 drop-in tutoring, faculty office hours, written feedback, peer tutoring, live workshops, and resource library. In addition to academic supports and services, SNHU offers online learners access to a wide range of career and financial support services, including career coaching and transition preparation, Career 360 (SNHU's online student virtual career center), employer engagement opportunities, financial aid award counseling, and student financial services. Additionally, online students have 24/7 technical support and online access to the wellness center, the office of student involvement, student clubs, SNHUconnect (a peer-to-peer platform for students to communicate and engage), honors societies, student engagement council, accessibility center and services, and dispute and resolution services.

IvyOnline relies heavily on the 19 Ivy Tech campuses to provide student services. Each campus has different resources, which can make it difficult for IvyOnline faculty and staff to quickly point learners to the right supports. To better streamline student services, Ivy Tech created IvyCares, a website that connects learners with resources specific to their campus. The institution has also incorporated more professional development for faculty on fielding questions about supports and connecting them with the right resources.

Using Data to Drive Outcomes

A 2018 study noted that only 31% of institutions systematically collect, integrate, and use data from their student information systems (Howells, 2021). However, it is crucial for institutions to leverage data for continuous improvement purposes, to learn about the learner experience, and to improve engagement. Robust academics require programs and courses to be frequently evaluated to ensure quality standards are met and areas of improvement are identified and addressed. Georgia State University is a well-recognized case study of how intentional data analysis and data-driven interventions helped increase graduation rates among African American and Hispanic students from 18 to 55% (Bannan, 2019).

Within a course, institutions can use data to measure learner engagement in online courses through key indicators such as attendance, completion of assignments and quizzes, and involvement in both verbal and chat-based discussions (Felker MacCabe, 2024). At a student level, data use may assess risk factors, target interventions and outreach, inform academic advising and supports, and design communication. At a school level, data use may inform design and implementation of pathways and support services.

Element in Practice: For UMGC, data and testing are critical pieces to ensuring that learners succeed and that their offerings align with the current labor market. UMGC's Center for Institutional Effectiveness conducts an annual assessment process to review internal data around what is successful in their courses and which types of learners are successful. The data are filtered down to the assignment level, flagging those that may need further review. UMGC also uses labor market data to ensure courses and competencies equip learners with in-demand skills. The Center for Institutional Effectiveness also continually pilots new tools and adjustments to programs, courses, and the learner experience. They use these testing phases to analyze impacts on student success and retention and use the results to determine if new tools and improvements should be operationalized.

In interviews, SNHU staff frequently emphasized the importance of bringing in the learner voice and understanding the learner experience. These data have informed individual-level support efforts, such as automated communications to learners exhibiting behaviors linked to non-completion (e.g., not logging in regularly). They have also informed larger strategic efforts. For example, using disaggregated data to identify disparities in student outcomes at SNHU and tasking leadership to focus on how to deliver the supports necessary to improve graduation rates and success for learners.

Decision-Making of Program Offerings

Perhaps the most important indication of whether an academic program has been robust and relevant is whether it adequately prepares learners for economic self-sufficiency after college. A college's choice of which programs to offer significantly impacts this outcome. Earnings vary widely across programs of the same degree level (Itzkowitz, 2023; Carnevale et al., 2015). Meanwhile, graduates of the fastest growing programs at colleges are among the most likely to be underemployed (Hatton et al., 2024). Therefore, program offerings — both opening new ones and teaching out current ones — should be an intentional and data-driven process.

Organizations like New America and the Aspen Institute's College Excellence Program have outlined criteria for institutions for evaluating a program (Jyotishi & Palmer, 2022; Jenkins et al., 2024). Credentials should create high-value post-completion, lead to quality jobs, connect to advanced credentials, be affordable, and have strong completion rates. Focusing on these criteria helps institutions identify the programs that are relevant to students as lifelong learners and contributors to the workforce. These processes also inform decisions to discontinue programs that are not competitive based on student and workforce demand.

Element in Practice: SNHU is planning to use a new investment framework to help make decisions on creating new programs or discontinuing existing ones. The framework will assess program outcomes, return on investment, mission alignment, and impact on other programs in the portfolio. They currently use labor market data to analyze hiring trends from specific industries and companies to help determine offerings. The Academic Leadership team approaches decision-making of program offerings in terms of value to the learner. For new programs, they assess whether it has the potential to be transformative for learners in regard to the job market and potential earnings. The team may also consider discontinuing programs that have no financial value to the institution, but it will choose to continue the program if it is serving the needs of specific learner populations.

Sidebox 1. Academic Program Decision-Making at SNHU

A range of factors and inputs are considered when reviewing the value of SNHU's portfolio of over 200 programs for learners, including program outcomes, employment outcomes (where available), labor market data, mission alignment, and return on investment for the institution. Given SNHU's large portfolio of offerings, the institution can quickly transition learners to a comparable degree program if it discontinues an existing program, and it makes every effort to ensure smooth transitions for learners. This process is set up in case the students choose to switch programs. If the students choose to finish the program that is being discontinued, a teach-out plan is in place, giving every student a pathway to do that.

For example, SNHU's culinary arts and hospitality programs were discontinued when labor market data and financial data indicated that the return on investment for learners and for the institution did not support continuing these programs. SNHU conducted a teach-out, phasing the program out over time to ensure that it supported learners' best interests in the process of closing the program.

Sense of Belonging

Online courses, programs, and colleges must make a particularly concerted effort to address the issue of belonging among their learners. Learners who take the majority of their courses online generally have a lower sense of belonging (Swanson & Worsham, 2023). A proactive approach to fostering a sense of belonging is critical, and institutions should begin creating an environment of belonging before a learner even applies (CHEPP, 2024b). Research has identified both online and in-person belonging interventions that have successfully improved GPAs, health, and retention (Eckerson Peters et al., 2024).

Effective strategies for building a sense of belonging in online environments include creating multiple spaces for engagement and relationship-building, immediacy in responsiveness to student outreach, the use of peer mentors, and promoting collaboration (Kappler, 2023; Beauchamp et al., 2020). Wraparound supports also foster a sense of belonging. Access to personalized academic advising, career and life coaching, basic needs supports, and wellness and mental health services ensures a whole-learner approach in which learners feel valued, respected, and connected (CHEPP, 2024c).

Element in Practice: SNHU advisors describe their most important role as providing a humanistic connection and building a sense of belonging, especially for online learners. Advisors at SNHU are wholly dedicated to learner support (faculty are a separate team, organized within a separate academic management structure) and define their roles as working alongside learners, making sure they are there to support them and that learners do not feel alone. A 250:1 learner-to-advisor ratio supports these deep relationships. Advisors are expected to call every learner at least once per term, but in a number of circumstances, advisors may also be automatically notified to reach out, such as if a student has a low GPA or missing assignments, or they may be notified to call particular learners much more frequently depending on their needs and preferences.

UMGC seeks to build community regardless of location. Deployment and relocation can shift the learning environments and physical locations of their large military learner population. However, UMGC ensures that these transitions minimally effect the learning experience and sense of belonging for their military learners. With close to 200 locations across the globe, UMGC offers on-site services such as coaching, advising, and specialized tutoring programs. Also at these locations, UMGC has developed regional communities where learners can connect to others based in the same region, in addition to opportunities to connect with the global segment of learners.

ASHANTI'S STORY

Ashanti is a two-time graduate of SNHU, receiving her bachelor's degree in Information Technology in 2023 and her master's degree in Data Analytics in 2024. Throughout her programs, Ashanti valued the high faculty engagement and the experience her instructors brought to the classroom as they worked in their fields alongside teaching. An instructor invited her to a robotics event in her city to see the instructor work with robotics first-hand. Her courses also included hands-on learning, such as an assignment where she built a robot with materials that were sent to her home. During times when Ashanti needed extra encouragement, she credits her advisors as being her "cheerleaders" and "best friends" to get her through. In the last two weeks of her bachelor's program, Ashanti dealt with the passing of a loved one. Her advisor reached out to her and provided invaluable support, as well as offering extension options to stay on track while taking time to grieve.

"I was able to move fast through my career due to SNHU opening the doors for me."

Providing Experiential Learning Opportunities

It can be more challenging to provide experiential learning opportunities in online courses, but it is a critical component of learning and delivering a robust and relevant educational experience. Work-based learning experiences, such as internships, are linked to learners attaining better quality jobs and higher job satisfaction (Strada Education Foundation, 2024).

TREVI'S STORY

Trevi graduated from SNHU with a bachelor's degree in marketing in 2024 and is currently pursuing a master's degree at SNHU. From the beginning, Trevi was impressed by the level of care, empathy, and support she received from advisors and faculty alike. Her advisor helped with course sequencing and planning, and she felt well prepared for each following course. SNHU also prepared Trevi for success outside of the classroom as well. While pursuing her degree, Trevi worked full-time at a finance company. In a case study for her business class, Trevi developed a pitch for a new program for the assigned company. She then applied what she learned and used the same pitch at her job, resulting in a promotion. Case studies are now a part of her responsibilities at work, and she is grateful for the experience she gained at SNHU

"[SNHU's] programs are designed to help you succeed."

However, there are racial and gender disparities in access to experiential learning opportunities (Carnevale et al., 2024). And a lack of these opportunities can exacerbate feelings of disengagement for online learners. A 2022 survey found that students wanted more material and experiences connected to their desired careers, and that not having these contributed to a feeling of disengagement (Wiley, 2022). Learners are also workers. A total of 40% of full-time students work, and 78% of part-time students work while enrolled, and over half of those learners work more than 20 hours a week (NCES, 2022). Effective experiential learning must adapt to these conditions and not force learners to choose between their livelihood and learning opportunities.

Researchers have identified strategies for transitioning experiential learning to an online format. First, an institution must identify the aims of each experiential learning opportunity that would have normally been available in an in-person context. After clearly defining the goals of the experiential learning opportunity, the institution should seek out well-aligned partnerships that have online or alternative opportunities to help ensure that learners can access work-based learning (Taylor Institute, n.d.). Innovative strategies to engage learners in experiential learning are integral to a high-quality education and eliminate any trade-off between flexibility and experiential learning opportunities.

Element in Practice: SNHU offers experiential learning opportunities to its learners across modalities, including its recently launched Career 360 platform. In addition to standard career services like resume help, interview preparation, and career advising, the platform provides learners with robust career-focused content. It also provides opportunities for learners to build career skills and gain real-life work experiences through virtual job simulations that relate to certain industry skills and experiences. Learners can access a catalog of open-access, self-paced simulations that are organized by industry. Real employers design a selection of these simulations and outline the objectives and skills learned from the program. For example, in one such experience offered through the platform, Forage, CitiBank offers a Personal Banking job simulation that takes learners through the process of launching and tracking the success of a new personal credit card product with the bank's Personal Banking team. The Career Services team also partners with SNHU's Academics department to develop meaningful experiential learning opportunities that allow learners to practice valuable skills in real-world simulations.

Case Study Summary and Conclusion

The three case study institutions highlighted the notion that online learning is not a monolith. The approach to each element varies, as does the relative prioritization across the elements. As one example, the institutions differ in the level of faculty input and autonomy for designing and implementing courses. For instance, SNHU brings faculty into the course design process as subject matter experts, but it highly standardizes the delivery of a course and requires faculty training before teaching a course. Ivy Tech's policies for its online course development mirror that of its in-person courses, which allow faculty to adapt standard courses. Ivy Tech also encourages the sharing of practices and experience among faculty to improve overall course design and delivery.

Each institution also tackles the challenge of maintaining learner engagement and creating a sense of belonging with different solutions. SNHU uses a high-touch strategy to create a culture of care through their staff, from advisors to faculty, providing learners with quick and frequent communication that helps them feel connected to SNHU. Ivy Tech faces the unique challenge of providing student services at the learner's "home" campus, rather than online. The institution must build the bridge between online learners and those services by increasing awareness among faculty and staff and connecting learners to online resources and on-campus student supports. For UMGC's military students in particular, it focuses on community building by developing regional communities to allow learners to have a sense of connectedness no matter where they are around the world.

These leading online institutions share many similarities in their approach to delivering the elements of a robust and relevant education. They all harness the immense amount of information that can be captured online to create a culture of continuous improvement. Frequent student surveys, A/B user experience testing, and tracking learner engagement through the LMS all help identify pain points and promising strategies that lead to ongoing improvements to instruction, course design, and the learner experience. All institutions use labor market analysis to inform their program offerings and start the program design process by backwards mapping from the competencies they want their learners to take into the workforce.

All case study interviews also emphasized that fostering learner success involves meeting the learner where they are. This learner-centered foundation pushes each of the institutions to provide a quality education through all modalities, even in the face of some challenges. Institutions noted it was difficult to provide intensive work-based or experiential learning in an online environment, but they adapt these experiences based on the needs of individual programs and the workforce requirements. Institutions can also create systems, processes, or services aimed at supporting student learning, but it is far more difficult to guarantee students will use them.

Institutions, whether online or brick-and-mortar, can deliver the elements of robust and relevant academics in a multitude of ways. These case study examples are not held up here as best practices, but rather as evidence that many online institutions approach these elements thoughtfully and with a significant amount of supports and resources. This diversity of approaches is also found with in-person learning, as is presumably the variation in quality of implementation. The field would benefit greatly from more research that could identify evidence-based practices that advance these elements, online and regardless of modality. Policymakers should pursue laws and regulations to ensure learners are receiving quality education, but they should do so while recognizing the capacity for both online and in-person learning to deliver a robust and relevant academic experience.

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