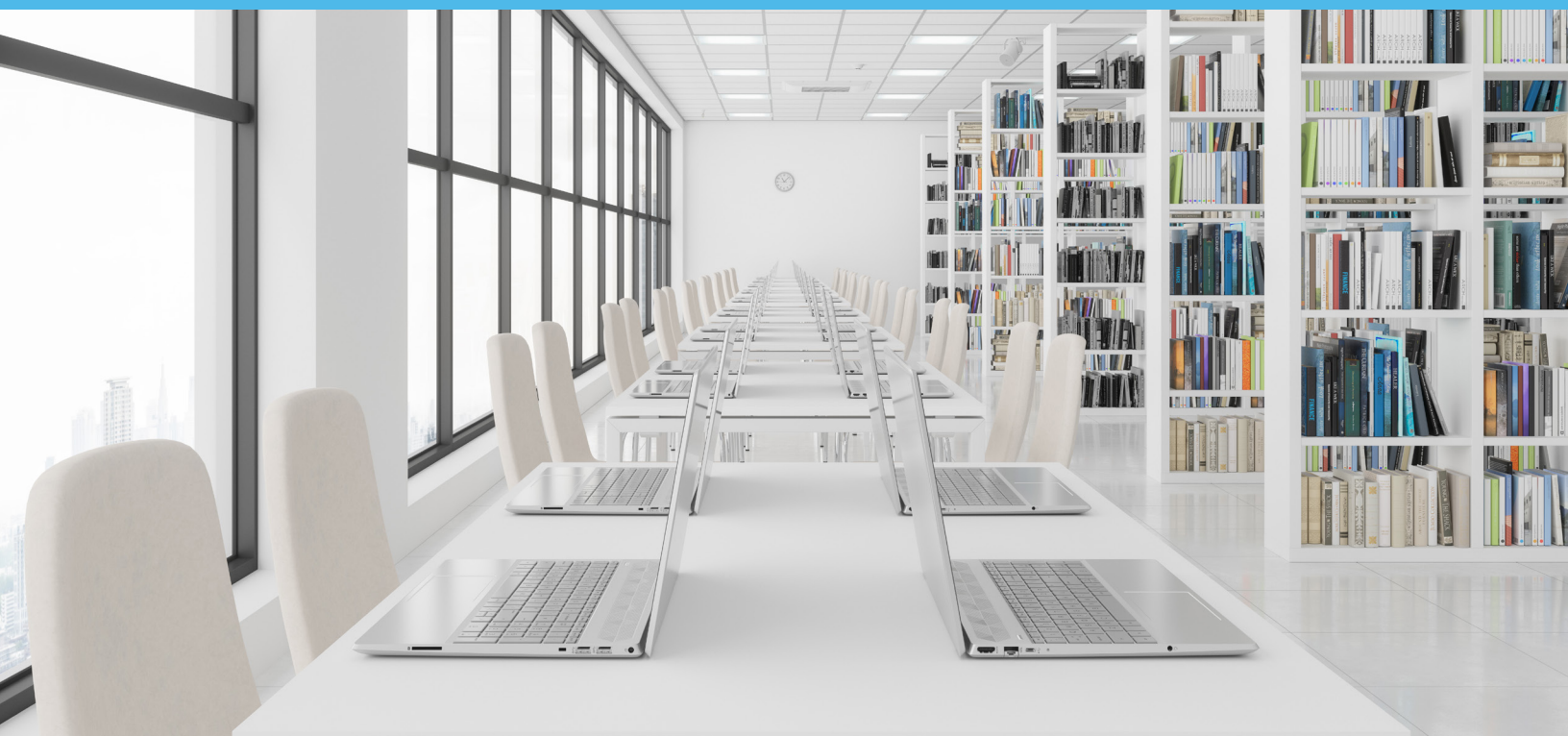


Presidential perspectives on building next-generation postsecondary digital learning enterprises: Survey report

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New England Board of Higher Education



About the NGDLI Project and Survey

All quotes in this report are actual responses provided by survey participants—college and university presidents.

This survey report is part of the Next-Gen Digital Learning Infrastructure (NGDLI) project, undertaken by the New England Board of Higher Education (NEBHE) with the support of the TIAA Institute.

The project’s overall goal is to build understanding of the digital future of the postsecondary learning enterprise and to strengthen strategic governance by institutional executives, governing boards and policy leaders in this realm.

This project and survey define “digital infrastructure” as the digital tools used in varied teaching and learning models, both synchronous and asynchronous. The term also encompasses the key data systems and technologies employed across the learner lifecycle in recruiting, enrolling, supporting, advising, credentialing and work placement of learners who are on-campus, at a distance or a combination thereof.

“Pandemic” refers generally to the period since March 2020 in which most postsecondary institutions have operated remotely, to varying extents, and delivered courses using digital technology.

NGDLI project goals

Primary goals of the NGDLI project include:

- Create a shared language and frameworks for understanding of NGDLI for higher education institutions (HEIs)
- Leverage recent events (including the global pandemic) to elevate the topic to greater prominence among senior HEI leaders nationally and motivate strategic action
- Gather expert perspectives on best-in-class examples, emerging technologies, and shifting trends and opportunities to inspire experimentation and innovation by HEIs
- Strengthen strategic HEI governance related to the digital future and the proactive pursuit of improved digital learning infrastructure
- Facilitate HEI collaborations and strategic alliances to support equitable and efficient development of NGLDI.

The survey

Our survey engaged college and university presidents to assess their awareness of—and collaborative investment in—future-oriented, learner-centered digital infrastructure to keep pace with the changing needs of learners globally. The survey was conducted online over a 10-week period from late April 2021 to late June 2021 and sought to assess:

- How presidents of postsecondary institutions think about the need to develop the next generation of digital learning infrastructure
- How the Covid-19 pandemic and other factors impacted their institution’s plans and strategies related to the future of their digital learning enterprise.

Benchmarking tool and conversation catalyst

The survey and its results can serve as valuable internal and external benchmarking tools. They are intended to catalyze strategic conversations at all levels of the institution and with key stakeholder groups regarding HEIs’ post-pandemic plans to address student needs and competitive and financial sustainability strategies.

The big reset?

American higher education stands at an important confluence of multiple events and forces, including: a global health pandemic, a major economic downturn, ongoing technological change, and persistent questions about the value of postsecondary education. The critical question is: Will these trends result in a “big reset,” with permanent changes to HEIs’ learning enterprises and the role of digital learning? Or, once the pandemic has sufficiently abated, will HEIs return to their previous state of affairs?

Digital transition or transformation?

The pandemic forced HEIs to quickly rethink the delivery of nearly all aspects of learning, teaching and student support. But simply combining a learning management system (LMS) with videoconferencing revealed limitations and raised questions about quality and value. For example, research indicates that while students valued flexibility of program delivery during the pandemic, those accustomed to in-person education expressed concerns about a decline in quality with the transition to online.¹

Thus, while HEIs rapidly managed such digital transitions to resume instruction and other services, questions remain about the extent and permanence of digital transformations that occurred. This survey seeks to understand the extent to which the pandemic increased awareness among senior HEI leaders of the need to more proactively anticipate future changes and improve digital learning infrastructure.

“The pandemic was a game changer...Most campuses moved further in two weeks than we anticipated in seven years. This is higher education’s moment to utilize the intellectual capacity every campus has to find effective ways to integrate digital infrastructure to improve student outcomes.”

¹ Gallup Inc. College Students Report Quality Experience Amid COVID-19. December 2020.

The digital divide: Growing or shrinking?

The pandemic provided further evidence of a digital divide among U.S. HEIs. Well-developed digital learning infrastructure exists at U.S. nonprofit HEIs, but is unevenly distributed; the majority of online enrollments, for example, are concentrated in relatively few institutions.² In some instances, where such digital infrastructure exists, it is siloed in specific divisions, schools and colleges. Will the pandemic expand or lessen the postsecondary digital divide or will it remain unchanged?

For institutions without deep digital learning capabilities, the problem is not lack of interest or aspiration. Resources, talent and patience are in short supply, and many HEIs outsource for solutions that can bring short-term benefits but may not result in sustained progress toward digital learning leadership. Developing next-generation digital learning infrastructure more equitably and efficiently will require new models, effective governance, resources and collaboration.

Additional information about the NGDLI Project

This survey is one in a series of resources being developed as part of the NGDLI project. Others include:

- Research Brief: *Fast Forward: Key Trends and Forces Defining the Future of Postsecondary Learning*
- Research Brief: *Expert Perspectives on the Future of the Postsecondary Learning Enterprise*
- Research Brief: *NGDLI and Strategic Governance: An Action Framework for Boards and Senior HEI Leaders*
- Virtual Roundtable Series: This includes a series of virtual discussions with experts and thought leaders on topics related to developing next-generation digital learning enterprises.

These and other resources will be available at www.nebhe.org/ngdli as they are released.

² Straut, T. and Boeke, M. NC-SARA Data Report: Fall 2019 Distance Education Enrollment and 2019 Out-of-State Learning Placements. December 2020.

About The New England Board of Higher Education (NEBHE)

Founded in 1955 by six visionary New England governors, NEBHE brings together leaders of K–12 education, higher education, government, business and labor to forge partnerships and advance ideas that enhance the economy and quality of life in the six-state region and around the world. NEBHE works to expand education opportunities and advance collaboration among the region’s colleges and universities to expand access, success, affordability, equity and the impact of higher education.

About the TIAA Institute

The TIAA Institute helps advance the ways individuals and institutions plan for financial security and organizational effectiveness. The Institute conducts in-depth research, provides access to a network of thought leaders, and enables those it serves to anticipate trends, plan future strategies, and maximize opportunities for success. To learn more about our research and initiatives for higher education leaders, please visit our website at www.tiaainstitute.org.

Acknowledgements

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Any opinions expressed herein are those of the authors, and do not necessarily represent the views of TIAA, the TIAA Institute or any other organization with which the authors are affiliated.

Executive summary

The Next-Gen Digital Learning Infrastructure (NGDLI) survey engaged college and university presidents to assess awareness of, and investment in, future-oriented, learner-centered digital infrastructure to keep pace with the changing needs of learners globally. Specifically, the survey inquired about:

- How the Covid-19 pandemic impacted their institutions
- Other factors driving digital transformation
- Perceptions of the adequacy of institutions' digital infrastructure to meet the needs of the students they seek to serve
- Plans and strategies related to the digital future of their postsecondary learning enterprises.

Primary findings of the NGDLI survey include:

- 82% of presidents surveyed indicated that their institutions intended to increase hybrid (both online and on-campus) learning and other support services as a consequence of the pandemic.
- 70% of presidents feel confident that their institution currently has adequate digital infrastructure to meet the needs of the learners their institutions seek to serve.
- Presidents ranked improving digital infrastructure as their highest priority for improvement, followed by academic buildings and on-campus housing facilities.
- Presidents see multiple opportunity areas for creating innovation through digital technologies: on an institution-wide basis, within specific undergraduate programs and non-degree offerings, and within student support services.
- Student-related objectives emerged as critical drivers for digital infrastructure improvement, including: the student learning experience, student retention, and the ability to offer flexible and hybrid learning and non-academic support. Reducing tuition costs, however, did not emerge as a primary objective.
- Presidents see increasing non-degree certificate and credential offerings as an important factor in improving digital infrastructure, but they do not see non-institutional providers (i.e., bootcamps, MOOC platforms, and corporate credential initiatives) as strong competitors.
- 70% of respondents believed their HEIs have adequate levels of support in key areas such as: access to consultants and outside experts, administrative and instructional technology expertise, and digital learning and pedagogy capabilities.
- The adequacy of financial resources to drive digital infrastructure improvement is a critical issue: 41% of respondents indicate having “inadequate” financial resources for undertaking digital infrastructure improvement, and a similar share (44%) perceive their HEIs to be inadequately resourced in terms of partnership opportunities.
- Only 53% report having adequate governing board expertise to support the transformation of digital infrastructure.
- Only 47% acknowledged the importance of regularly investing in research and development (R&D) to innovate their digital infrastructure and the learning enterprise.

Building next-generation postsecondary digital learning enterprises

The digital future of the postsecondary learning enterprise is on the minds of college and university presidents nationwide. Spurred by experiences related to the global pandemic, presidents see improving their respective HEI's digital infrastructure as a top priority while also expressing strong confidence in its current status.

Respondents expressed a strong belief in improved digital infrastructure to support both targeted and institution-wide innovation. To increase the hybridization of learning delivery models and student support, many HEIs have multiple improvement efforts concurrently underway. Student learning, support and retention are at the core of their vision, but variations in resource adequacy are important issues for consideration, as is the need for cohesive strategy development.

The detailed analysis of our survey findings is organized into four primary sections:

- Post-pandemic priorities for digital infrastructure
- Non-pandemic factors driving digital infrastructure improvements
- Resources, success factors and barriers
- Partnerships and collaboration

Post-pandemic priorities for digital infrastructure

Planned growth of hybrid models

A primary goal of the research was to understand the extent to which the global pandemic impacted HEIs' future plans for the delivery of academic programs and related support services—and the implications that would have for digital infrastructure.

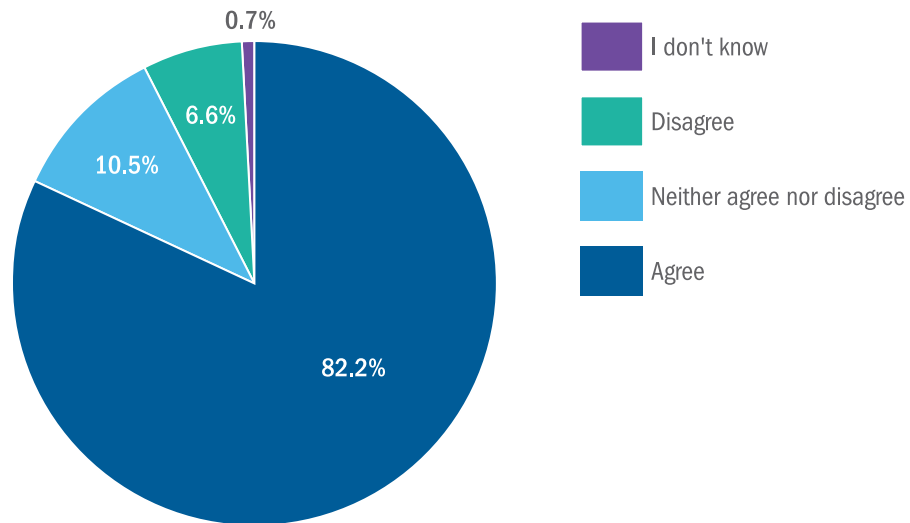
Specifically, the survey asked presidents to indicate their level of agreement with this statement:

As a consequence of the pandemic, our institution intends to increase hybrid (both online and on-campus) learning and support services.

The **vast majority of presidents (82%) indicated that their institutions intended to increase hybrid learning and support services**. Only a small percentage disagreed with the statement (7%) or did not have an opinion (11%). (Figure 1.)

“Digital infrastructure must change to reflect a model that allows students to decide if they want to be in a physical environment or not. For any given course, a student should be able to come to class—or stay at the office or home and participate.”

Figure 1. Intention to increase hybrid learning and support services



These findings indicate the strong likelihood of a fundamental shift in the delivery of postsecondary programs and services to hybrid formats. This view aligns closely with those expressed in our own 2021 interviews with postsecondary learning experts, which revealed a strong consensus that the future of postsecondary learning is very likely to be increasingly hybrid, fluid and flexible.³

This finding raises several issues for deeper consideration by HEIs, including:

- The determination of which hybrid model, or combination of models, they will adopt and how they will improve them beyond pandemic iterations
- The extent to which HEIs will seek student and other stakeholder input in developing such models
- The range of academic programs that might employ hybrid models
- The level of hybridization in traditional undergraduate degree programs
- How HEIs will ensure quality and what levels of investment will be
- How rapidly changes in “EdTech” will occur

Adequacy of digital infrastructure

The survey also raised the issue of whether HEIs currently have adequate digital infrastructure and expertise to drive the evolution to hybrid models and meet the needs of the learners they seek to serve.

³ NGDLI Research Brief. *Expert Perspectives on the Future of the Postsecondary Learning Enterprise*, New England Board of Higher Education. Forthcoming December 2021.

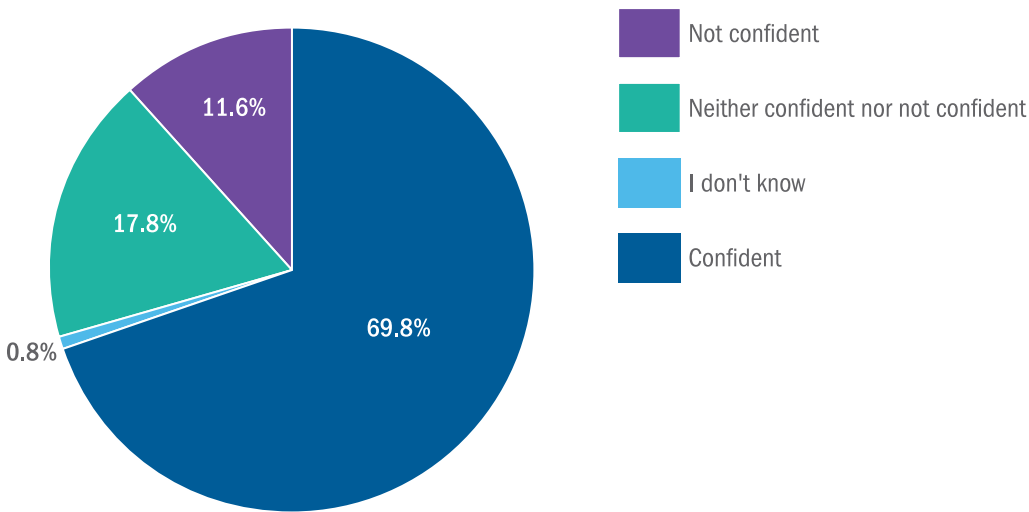
Our results indicated that **70% of presidents feel confident that their institution currently has adequate digital infrastructure**, while only 12% are not confident and 18% didn't have an opinion. (Figure 2.) This high level of confidence among presidents is encouraging for the prospect of sustaining change and raises interesting issues for consideration, including:

- The extent to which presidents' views are shared by other institutional leaders and stakeholders
- How to reconcile this optimistic view with students' negative perceptions of the pandemic instructional and support experience⁴
- The extent to which presidents' optimism will be supported by strategic governance and planning activities, as well as investments

The fact that 30% of respondents indicated being unclear if their HEIs have the needed digital infrastructure suggests a need and opportunity for supporting leaders and institutions in strategic planning and governance efforts to chart the future of their learning infrastructure.

“Technology is no longer ‘off to the side,’ but integrated into every part of our organization.”

Figure 2. Confidence in the adequacy of institution's current digital infrastructure



⁴ Gallup Inc. College Students Report Quality Experience Amid COVID-19.

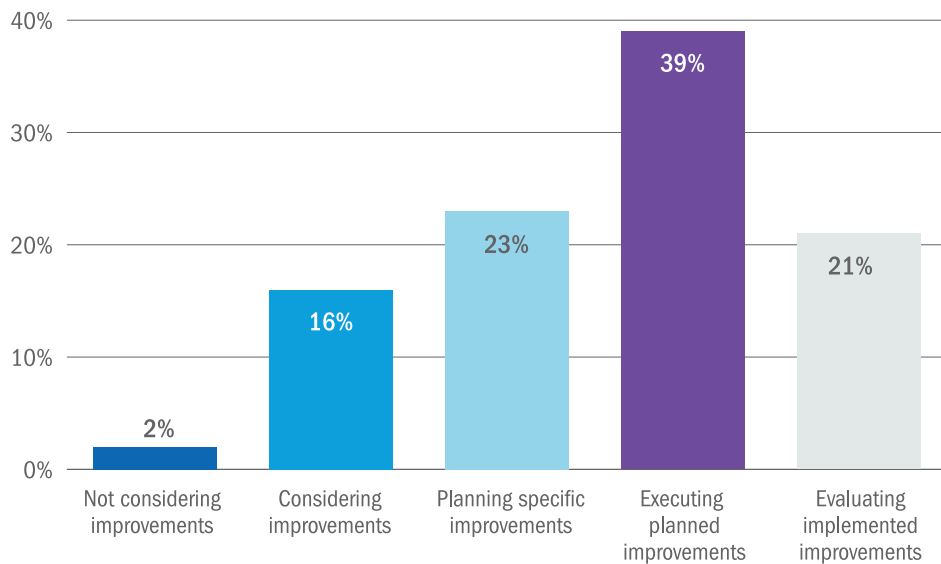
Evidence of current efforts related to digital infrastructure

Given their HEIs' pandemic experiences, presidents' attention to digital infrastructure is understandably heightened and has motivated considerable activity. We asked presidents about the **status of their institutions' current efforts** related to digital infrastructure, in which a majority of respondents indicated (Figure 3) that they:

- Were executing planned improvements (39%), planning specific improvements (23%), or evaluating implemented improvements (21%)
- 16% were considering improvements and only 2% were not considering improvements

“I hope we recall our successes and opportunities with virtual and online education and teleworking during the pandemic and continue to use adaptations of this experience as we move our institutions forward.”

Figure 3. Status of current efforts to improve digital infrastructure



These findings illustrate the continuous and multi-phase efforts that are needed to adequately address issues related to digital learning infrastructure. They also suggest considerable opportunities for thought leaders, consortia, associations and other capacity-building organizations to support HEIs in such processes and to provide:

- Peer support, networking, and best-practice exchange among HEI leaders
- Identification of best-in-class hybrid learning and student support models by HEI type and populations served
- Alliance and partnership opportunities to reduce cost, increase capacity and improve outcomes

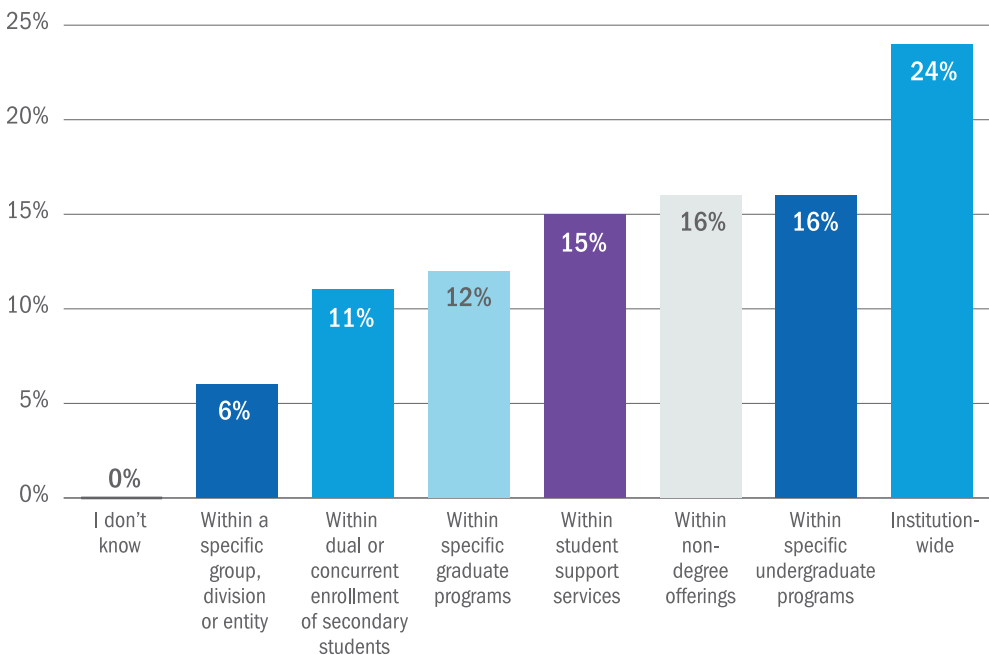
- Expanding HEI knowledge of digital transformation and digital competency frameworks⁵
- HEI learning and support models re-envisioned in light of multiple forces, changes and stakeholder needs
- Adequate professional development, training and support
- Strengthening strategic roles of governing boards and other key stakeholders

Perceived innovation opportunities

The survey asked presidents about where within their institutions they thought digital technologies had the greatest potential for creating innovation. Their responses were somewhat evenly divided across a range of options. Top opportunity areas to create innovation were institution-wide (24% of responses), within specific undergraduate programs (16% of responses), within non-degree offerings (16% of responses) and within student support services (15% of responses). (Figure 4.)

“We have seen improvements in not only how we serve learners at a distance but also those who are on campus through investments in our digital infrastructure.”

Figure 4. Institutional innovation opportunities using digital technologies



⁵ HolonIQ. Higher Education Digital Capability Framework, accessed September 16, 2021, <https://www.digitalcapability.org/>.

These data are consistent with our other survey findings in which leaders note the high relevance of digital infrastructure to their goals of improving the student experience, increasing student retention and expanding non-degree credential, certificate or other program offerings. (See “Institutional objectives,” page 13.)

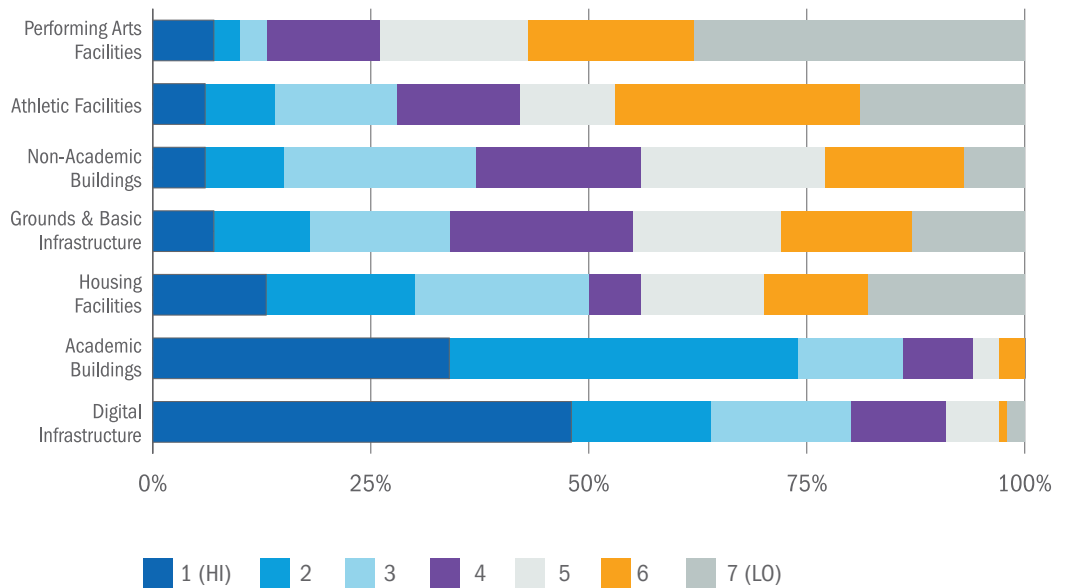
Digital infrastructure investments relative to other priorities

Recognizing the diversity of institutional priorities and competing investment needs, we sought to better understand the relative importance of digital learning infrastructure to HEIs. Specifically, we asked presidents to rank (from high to low) the priority of varied improvements needed at their institutions.

As shown in Figure 5, respondents ranked digital infrastructure as the most urgent item (48% of responses), followed by academic buildings (34%), and then on-campus housing facilities (13%). Approximately 80% of responses indicated digital infrastructure as the first, second or third most urgent priority, slightly less than the 87% of responses that ranked academic buildings as the first, second or third most urgent priority.

“The pandemic has reminded us of how valuable our face-to-face relationships are. People appreciate technology and the flexibility it brings, but they would like it to support and aid their relational environment, not be their relational environment.”

Figure 5. Urgency of digital infrastructure versus other investment priorities



These findings indicate both the growing importance—likely pandemic-influenced—of digital infrastructure as well as HEIs’ continued focus on academic facilities. They raise critical questions about institutional strategy and the role of “place” in learning, as well as questions about the relationship between digital infrastructure and academic buildings, the combination of “clicks” and “bricks.” Such issues will be critical to considering expanded hybrid learning models and the need for physical space. Additionally, while 70% of respondents express confidence in the adequacy of HEIs’ existing digital infrastructure (Figure 2), these additional findings clearly indicate that presidents feel that there is additional high-priority work and investment needed to advance digital infrastructure relative to other priorities.

Non-pandemic factors driving digital infrastructure improvements

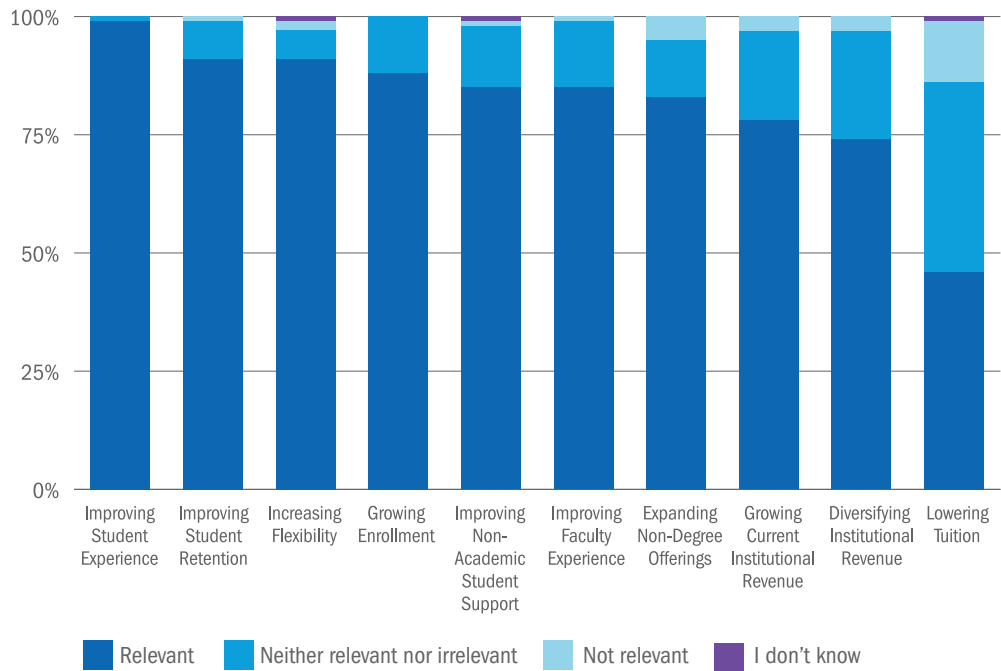
Beyond the obvious and significant impact of the pandemic, we sought presidents’ assessment of other relevant drivers of improvements to HEI digital infrastructure. This included both internal performance objectives, as well as factors responding to external forces and competition.

Institutional objectives

For example, we asked presidents to assess the relevance of key institutional objectives to the pursuit of improved digital learning infrastructure, including performance outcomes such as:

- Improving the student learning experience
- Improving student retention
- Increasing flexibility through hybrid learning models
- Improving non-academic student support
- Improving the faculty experience
- Enrollment growth
- Expanding non-degree program offerings
- Growing current sources of institutional revenue
- Diversifying institutional revenue
- Lowering program tuition costs

Figure 6. Objectives driving Improvement of digital infrastructure



As Figure 6 shows, presidents view student-related objectives as strong drivers of digital infrastructure improvements. Specifically:

The vast majority indicated that improvements to the student learning experience (99%), improved student retention (91%), increasing flexible and hybrid learning (91%) and improving non-academic support (85%) were the most relevant drivers.

Interestingly, while serving students clearly underlies the most prominent motivations, reducing program tuition costs was not a primary objective for most presidents, with 13% specifically indicating that it was “not relevant” and 40% indicating it was “neither relevant nor irrelevant.”

85% cited the relevance of improving the faculty experience. This is important in light of research suggesting that faculty can sometimes oppose increased adoption of digital technologies and that professional development and training are critical to supporting successful faculty adoption.⁶

The importance of revenue growth objectives was evident: 88% cited growing overall enrollment, followed by expanding non-degree credential and certificate offerings (83%) and both growing and diversifying revenues (79% and 75%, respectively).

⁶ NGDLI Research Brief. Expert Perspectives on the Future of the Postsecondary Learning Enterprise, New England Board of Higher Education. Forthcoming December 2021.

Competitive and future readiness factors

Additionally, we asked presidents to rate the relevance of varied competitive or external factors to improved digital learning infrastructure, such as:

- Changes in educational technology
- Readiness for catastrophic events
- Serving new student segments
- Growth in demand for non-degree credentials
- Competition from other HEIs and from non-HEI credential providers
- Availability of new financial resources (such as CARES Act funds, American Rescue Plan Act funds, etc.)

Figure 7. Relevance of other factors to improving digital infrastructure

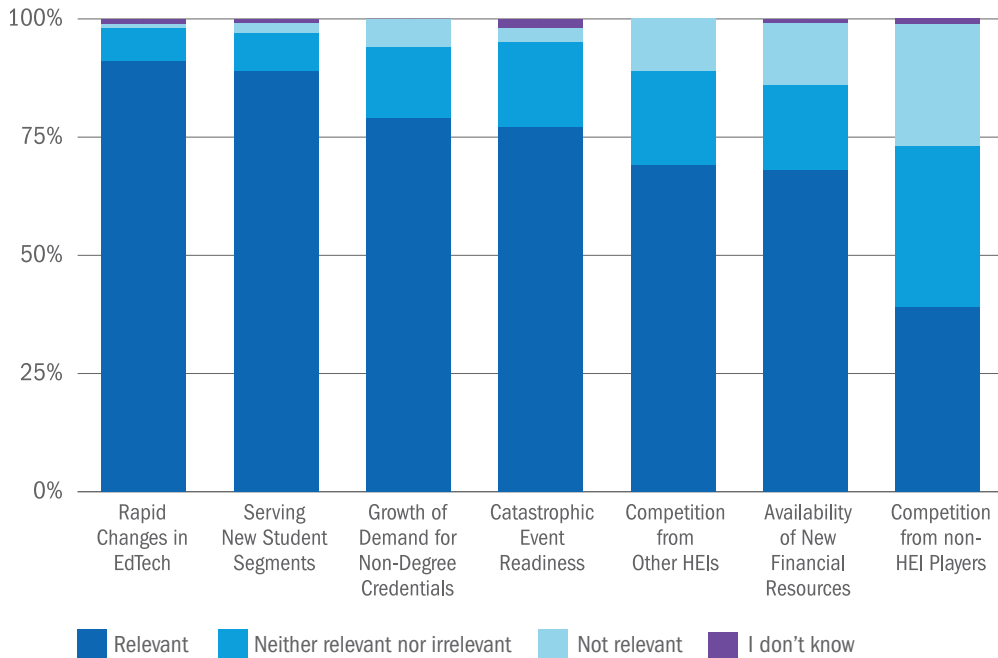


Figure 7 summarizes presidents' assessment of the relevance of these factors. Specifically:

- 91% cited the relevance of rapid education technology changes, followed by the importance of serving new student segments (89%), growth in demand for non-degree credentials such as microcredentials and certificates (79%) and readiness for catastrophic events such as pandemics and natural disasters (77%).

- Approximately 68% considered both competition from other postsecondary institutions and the availability of new financial resources to be relevant.
- The finding that 79% indicated that growth in the demand for non-degree credentials (such as microcredentials and certificates) was a relevant driver aligned with the similarly high percentage that cited the objective of “expanding non-degree credential and certificate offerings” (83%, Figure 6).
- Interestingly, competition from non-institutional credential providers is considered the least pertinent factor, with only 39% of respondents considering it “relevant,” and nearly 60% considering it either “not relevant” or “neither relevant nor irrelevant.” This is a striking disconnect given that non-institutional competitors are large producers of non-degree credentials and represent a growing competitive threat to traditional HEIs.

“The new normal, post-pandemic, is here. Students want the choice of distance learning as a means of balancing work, family and school demands.”

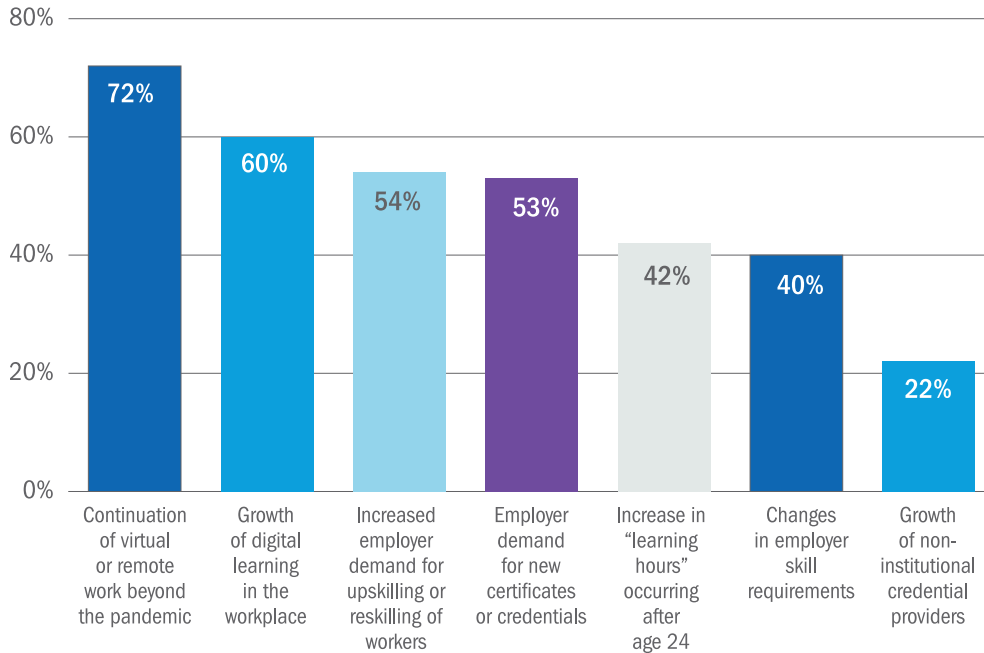
Workplace trends

The survey sought to understand the extent to which workplace trends are relevant to leaders’ desire to invest in digital infrastructure. Like postsecondary education, many workplaces were significantly impacted by the pandemic-related push to virtual operations and remote collaboration. Additionally, other issues directly connect HEIs to employers and the workplace, including high demand for the reskilling of employees, large numbers of working learners, the pipeline of graduates into jobs and their levels of workforce readiness.

Specific trends of interest to this research included:

- Continuation of virtual or remote work beyond the pandemic
- Changes in employer skill requirements
- Increased employer demand for upskilling or reskilling of workers
- Growth of digital learning in the workplace
- Employer demand for new certificates or credentials
- Growth of non-institutional credential providers
- Increase in “learning hours” occurring after age 24

Figure 8. Relevance of workplace trends to digital infrastructure investments



Survey results indicated the two most relevant workplace trends were continuation of remote work beyond the pandemic (72%) and the growth of digital learning in the workplace (60%). Both of these workplace drivers will likely increase demand for flexibly delivered, online and hybrid postsecondary programs, mirroring the mix of in-office and at-home activity to which workers are increasingly accustomed—and their need to access work-related and career-advancing learning via digital means that are aligned with dynamic work and personal lives. Interestingly, only 54% of respondents considered the increase in “learning hours occurring after age 24” as relevant.

These top trends were followed by two closely related ones: increased employer demand for worker upskilling or reskilling and employer demand for new certificates or credentials, noted by 54% and 53% of respondents, respectively.

While 40% of respondents acknowledged the relevance of changes in employer skill requirements, only 22% cited growth of non-institutional credential providers as relevant to their plans to invest in digital infrastructure. The latter is an interesting finding that seems at odds with actual growth in the number of non-institutional providers and their efforts to provide training to address changing skill requirements. It mirrors, however, respondents’ earlier views about the limited relevance of competition from non-institutional providers. (See “Competitive and future readiness factors,” page 15.)

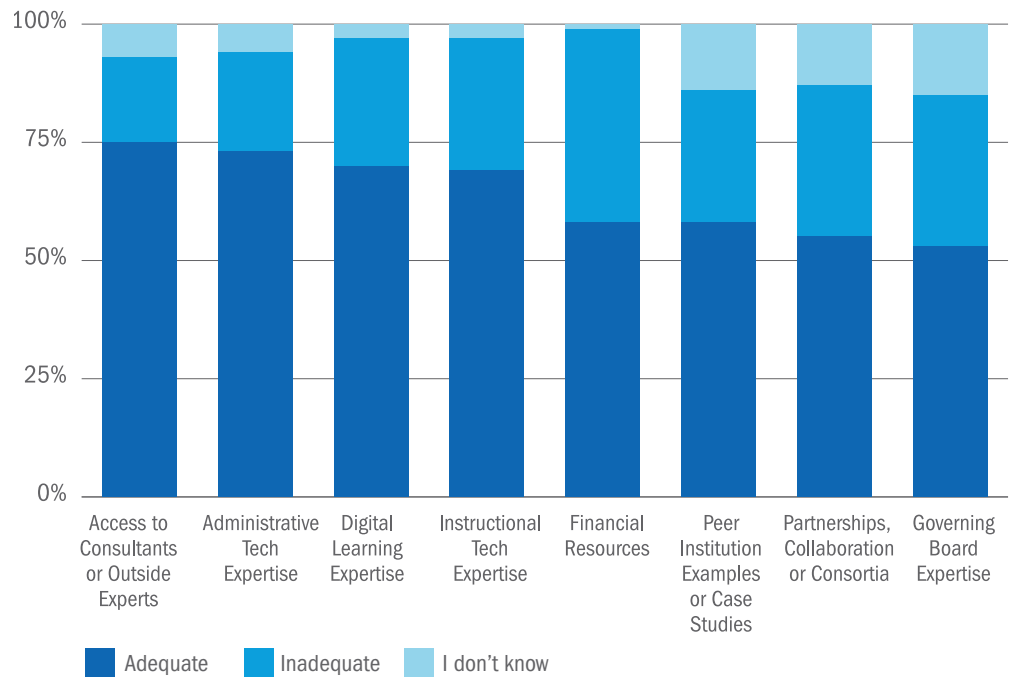
Resources, success factors and barriers

Adequacy of resources

Successful investments in digital infrastructure depend on other important resources. The survey sought to understand presidents' perceptions of the adequacy of key resource types at their institutions. These included:

- Financial resources
- Digital learning and pedagogy expertise
- Instructional and administrative technology expertise
- Governing board expertise
- Access to consultants or outside experts
- Peer institution examples, partnerships and collaborations

Figure 9. Adequacy of resources to support digital infrastructure transformation



As Figure 9 indicates, at least 70% of respondents indicated adequate levels of support in key areas such as: access to consultants and outside experts, administrative and instructional technology expertise, and digital learning and pedagogy capabilities. These insights are consistent with aforementioned findings of presidents' high levels

of confidence in the adequacy of their institutions' digital infrastructure and evidence that institutions are concurrently undertaking planning, execution and evaluation of digital infrastructure improvements.

A majority of respondents indicate that they have adequate financial resources (58%), access to peer institutions and case study examples (58%), partnership and collaboration options (55%) and governing board expertise (53%). Still, 41% indicated that they have “inadequate” financial resources for undertaking digital infrastructure improvement, consistent with respondents' identification of “limited financial resources” as a barrier to improving digital infrastructure (42%, Figure 11).

Similarly, many presidents are either unsure or perceive their HEIs as inadequately resourced in terms of both partnership opportunities (44%) and governing board expertise (47%). The combination of limited financial resources and partnership opportunities is problematic, as the latter (partnerships) are often viewed as an alternative to the former. Given the importance of strategic board-level leadership on issues such as the future readiness of an HEI's digital infrastructure, it is concerning that this is commonly perceived as a less-resourced area. Board expertise with digital technologies, competitive strategy and innovation can be critical assets to presidents and other leaders working to accelerate change.

Other resources

We asked presidents about the importance of other resources, both tangible and intangible, such as clarity of vision, faculty and staff involvement, incentives and governing board support.

Ninety-six percent of respondents indicated that a clear vision for the future of learning was important (Figure 10). Similarly, 93% noted that both faculty and staff involvement and training and professional development were important resources.

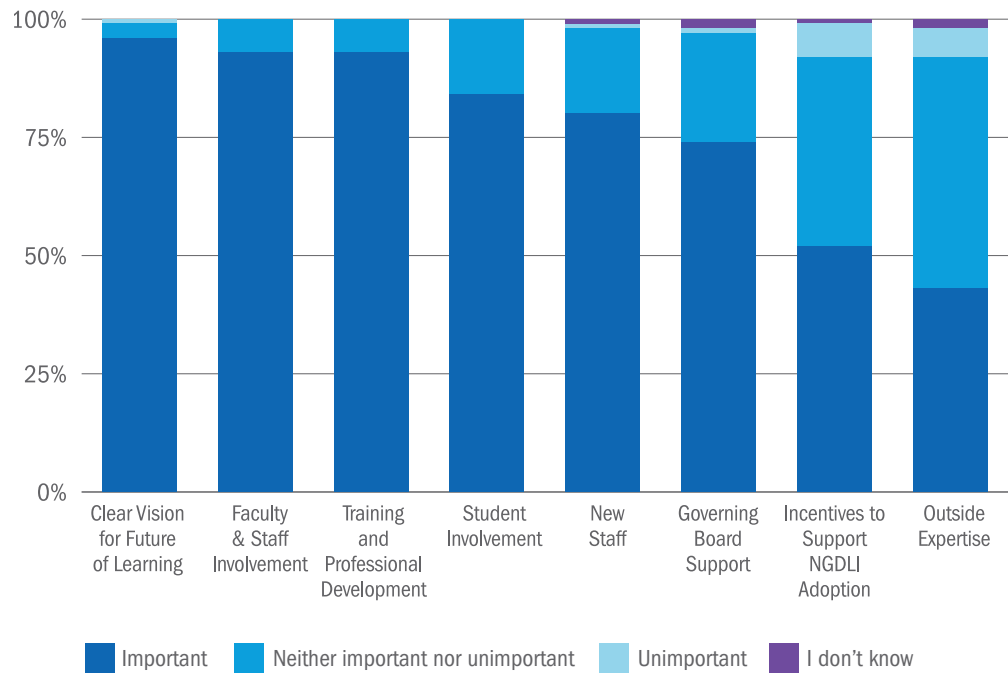
Strong majorities of respondents pointed to student involvement (84%), new staff expertise (80%) and governing board support (74%) as important. Governing board support—distinct from, but related to, the board expertise issue discussed above—is an important asset on which presidents and HEIs rely in developing strategy, driving change and investing in key priorities.

About half of respondents (52%) regarded incentives (grants, stipends, etc.) to support adoption of digital learning technologies and infrastructure as important, a factor identified in other research related to this project as very important.⁷

“We would all benefit from an assessment of the effectiveness of pandemic-forced digital learning to identifying new best practices for academic and non-academic support of students.”

⁷ NGDLI Research Brief. *Expert Perspectives on the Future of the Postsecondary Learning Enterprise*, New England Board of Higher Education. Forthcoming December 2021.

Figure 10. Additional factors supporting learning enterprise improvements



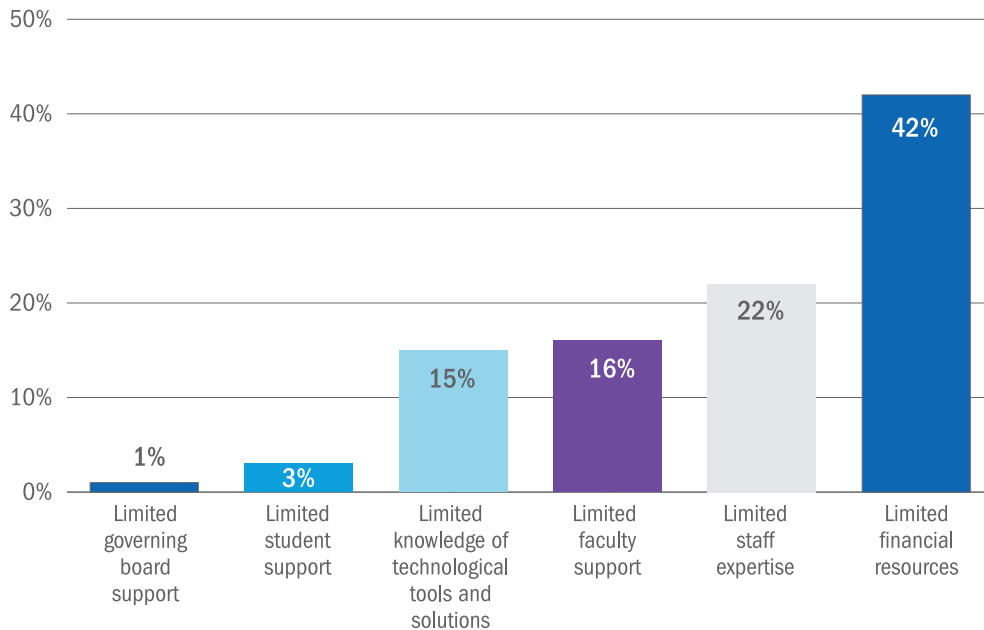
“Higher education needs to employ more IT, education technology, and instructional design experts to roll out all that is needed. Strategic plans and budgets need to be adjusted for these needs and staff with expertise.”

Presidents were asked about the importance of regularly investing in research and development (R&D) to innovate their digital infrastructure and the learning enterprise. Surprisingly, only 47% stated that they viewed such proactive, internal investments as “critical” or “very critical.”

In terms of **barriers** to improving institutions’ digital infrastructure, limited financial resources was the most prominent barrier (42%). Smaller percentages, however, indicated that limits on staff expertise and knowledge of technological solutions were an issue (22% and 15%, respectively, Figure 11). These findings appear to align with presidents’ strong statement of confidence that their institutions currently have both adequate digital infrastructure and “digital learning and pedagogy expertise.” (Figure 9.)

Sixteen percent viewed limited faculty support as a barrier, which appears consistent with presidents’ expressed interest in improving the faculty experience through improved digital infrastructure and viewing faculty involvement as important to achieving it. (Figures 6 and 10.)

Figure 11. Barriers to improving digital infrastructure



Partnerships and collaboration

In light of barriers and resource constraints, a critical question for most HEIs is the extent to which they can partner to develop the digital infrastructure needed to serve students. This includes important “build versus buy” decisions. Collaborative models include partnerships with other HEIs, as well as with for-profit vendors and technology-solution providers.

The survey sought presidents’ views on using outside vendors that assist postsecondary institutions with developing, marketing and/or delivering online programs, known as online program managers (OPMs). HEIs’ use of OPMs grew during the global pandemic.⁸ In terms of institutions that responded to our survey:

- Fewer than one quarter were utilizing OPMs at the time of response.
- Of those institutions using OPMs, there were overall high levels of satisfaction. Specifically, 61% indicated that they were “satisfied” with the OPMs’ performance; approximately 25% indicated that they didn’t have an opinion and only 14% indicated that they were unsatisfied.

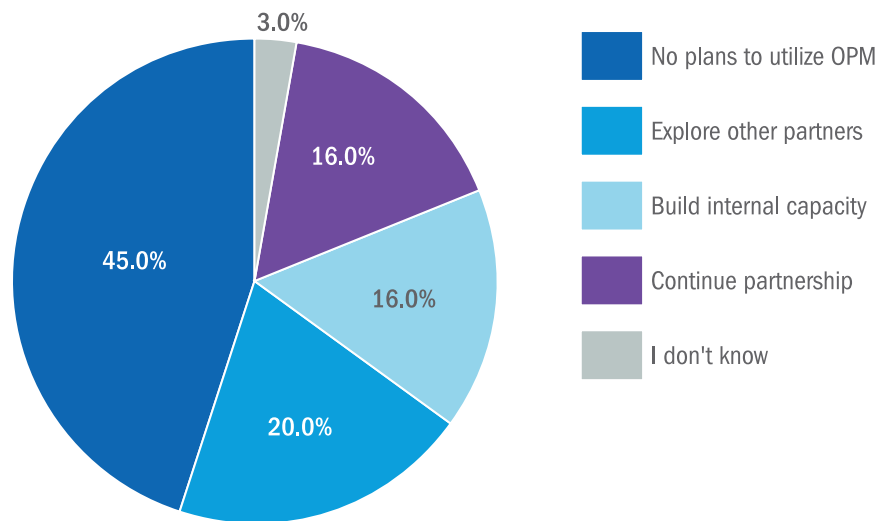
“The future of higher education is in digital infrastructure and collaborative efforts.”

⁸ HoloniQ. 109 new University Partnerships with OPMs, Bootcamps and Pathways in Q1 2021. <https://www.holoniq.com/notes/100-new-opm-bootcamp-and-pathway-partnerships-in-q1-2021/>, accessed July 10, 2021.

In terms of future plans for, or interest in, partnerships related to HEI digital infrastructure development, we found (Figure 12):

- 45% indicated that they had “no plans to use an OPM” and only 16% indicated that they had plans to “continue partnership with an OPM.”
- 16% indicated that they intended to “build internal capacity similar to what OPMs provide.”
- 20% indicated that they would explore other partnerships, including with other HEIs.

Figure 12. Future plans for digital infrastructure partnerships



In light of prevalent resource constraints, these findings suggest a need to cultivate greater capacity among presidents, governing boards and other HEI leaders for building high-impact, multi-institution partnerships. New alliances focused on developing collaborative investments in shared expertise and service provision of digital infrastructure, beyond OPM models, must be considered.

Summary and conclusions

Our survey work revealed a strong consensus among presidents regarding the importance of expanding HEI digital infrastructure. Further growth of increasingly digital, hybrid learning and support experiences is clearly acknowledged and accentuated by presidents' recognition of the need to actively develop the postsecondary digital learning enterprises of the future. While there is confidence in existing digital infrastructure, presidents place a high priority on continued improvement and investment.

Similarly, there is solid convergence on the “Why,” or objectives related to digital infrastructure, which focus on improving student experiences and outcomes. The limited priority placed on tuition cost reduction, however, raises an important issue for further research and discussion. Digital learning infrastructure is seen as a means for improving access and attainment—but how can it support affordability? Growth by expanding HEI reach to new student segments and the range of credential offerings is also a fundamental motivation for presidents, one that will also require critical considerations of pricing and affordability.

With largely optimistic assessments by presidents of the availability of several key resources, i.e., the “How” of improving digital infrastructure, it will be important to see if and how the primary resource constraint—financial capital—can be overcome. Presidents are somewhat evenly divided in their assessment of whether or not they have adequate partnership opportunities for building digital infrastructure. Thus, urgent consideration must be given to new forms of strategic alliances, which will be critical to reducing the digital divide among institutions and accelerating the development of digital learning enterprises.

The survey revealed a strong need for productively engaging HEI governing boards, as well as increasing board-level expertise for advising vision and strategy related to HEIs’ digital infrastructure. Strategic governance and leadership at the highest levels of the institution will be critical factors in achieving and sustaining the digital learning enterprises needed to respond to a pandemic-changed world and the dynamic needs of learners.

“Digital infrastructure will play a key role in assisting with reducing operating costs, increasing accessibility and, ultimately, affordability.”

Data and methodology

NEBHE surveyed college and university presidents at two- and four-year public, independent nonprofit and for-profit institutions across the U.S. 156 presidents completed the survey. Respondents represented 41 states and all regions of the U.S. The average institution size of respondents was 2,262. Additional details regarding respondents and their institutions are below.

Respondent summary		
Number of Survey Responses	156	
State-Related Information	41 states represented (82% of all states)	
	Most Represented Region	New England
	Least Represented Region	Northwest
Institutional Type	In order of representation	Private Nonprofit Public Private for-Profit
	Most Represented Carnegie Type	Masters Colleges & Universities
	Least Represented Carnegie Type	Tribal College
	Average Institutional Size	2,262

Respondents by region		
Region	Number of Responding Schools	% actual
Mid-Atlantic	25	16%
Mid-West	33	21%
New England	44	28%
North West	5	3%
South East	22	14%
South West	11	7%
West	13	8%
Multi-campus/region	3	2%
Total	156	100%

Respondents by institutional control

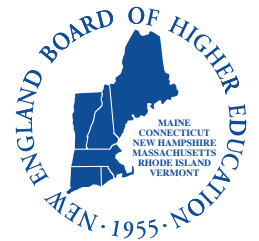
Institutional Control	Number of Responding Schools	As % of total
Public	72	46%
Private nonprofit	76	49%
Private for-profit	8	5%
Total	156	100%

Respondents by Carnegie classification

Carnegie Institutional Classification	Number of Responding Schools	As % of total
Doctoral-Granting Universities	15	10%
Master's Colleges & Univs	36	23%
Baccalaureate Colleges	24	15%
Associate's Colleges	40	26%
Special Focus Institutions	35	22%
Tribal Colleges	1	1%
Not Classified	5	3%
Total	156	100%

Respondents by enrollment size

Enrollment Size	Number of Responding Schools	As % of total
Very Small (<1,000)	40	26%
Small (1,001 - 4,999)	64	41%
Medium (5,000 - 9,999)	22	14%
Large (10,000+)	20	13%
Not Indicated/Unknown	10	6%
Total	156	100%



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