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Colleges of the Fenway during COVID:
Best Practices from the Classroom

November 2021

Executive summary

COVID-19 upended higher education in 2020, exposing challenges across institutional structures while, at the same time, providing opportunity for experimentation that may forever alter higher education operating models and student experiences. Perhaps the most radical change on college and university campuses happened in teaching and learning. Face-to-face, on-campus learning experiences moved to hybrid and remote learning overnight, forcing students and faculty to immediately adjust to new ways of delivering and receiving course content.

With one full academic year behind us, how did COVID-19-instigated modalities, platforms, and learning tools affect student experiences and learning outcomes? What have we learned about best practices for experiential learning delivered in hybrid or fully remote formats? What type of pandemic-era teaching and learning methods should higher education institutions adopt post pandemic?

> While a significant undertaking, faculty felt supported through the pivot to online and hybrid teaching and learning due to the robust instructional technology resources that were made available.
>
> **Caroline Zeind, Vice President for Academic Affairs/Provost Massachusetts College of Pharmacy and Health Sciences**

These are some of the questions Deloitte sought to answer with the Colleges of the Fenway, a consortium of five diverse higher education institutions located in the Fenway neighborhood of Boston. Through analyzing course completion and grade data, leading focus groups, conducting interviews, and deploying surveys to students and faculty, Deloitte uncovered insights not only to help shape Colleges of the Fenway's post pandemic planning, but also to provide **broader lessons learned to colleges and universities across the country as they grapple with responding to the new and evolving teaching and learning landscape, including:**

- **Untangle pandemic trauma from attitudes about learning in remote modalities.** In measuring student and faculty sentiment, generalized pandemic reactions should be separated from pure sentiments about teaching and learning in remote modalities.

- **Prepare for a hybrid teaching and learning future.** While faculty and students largely voiced a desire to return to face-to-face classes, many will seek out hybrid options and virtual elements in the future.

- **Consider different learning needs and preferences by student population.** Remote and hybrid learning preferences differ by student population and course discipline, a critical point when designing the classroom of the future.

- **Monitor teaching and learning effectiveness through strong definitions and data tracking.** Monitoring teaching and learning effectiveness will allow institutions to respond with aligned investments, faculty training, and university policies as campus community attitudes about modality and technology platforms evolve.

This historic moment of upheaval offers higher education institutions tremendous opportunity to reinvent and innovate to meet changing student needs.

> The assessment of how pandemic-era changes in our teaching and learning modalities affected student learning outcomes will help us refine our educational practices. By identifying what worked, we are better positioned to offer a wide range of teaching and learning modalities that support a more student-centered and inclusive learning environment. The opportunity to reimagine ways in promoting student engagement and experiential learning is very exciting.
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> **Caroline Zeind, Vice President for Academic Affairs/Provost Massachusetts College of Pharmacy and Health Sciences**

About the Colleges of the Fenway

The Colleges of the Fenway is a consortium of five Boston-based universities that was created to add value to student academic and social life across the campuses. The five schools in the Colleges of the Fenway enroll 22,309 students and 12,000 undergraduates, approximately 16 percent of the total Boston population of undergraduates attending four-year colleges.[1] The five institutions focus on a wide array of disciplines, including art and design, engineering, health sciences, and the liberal arts.

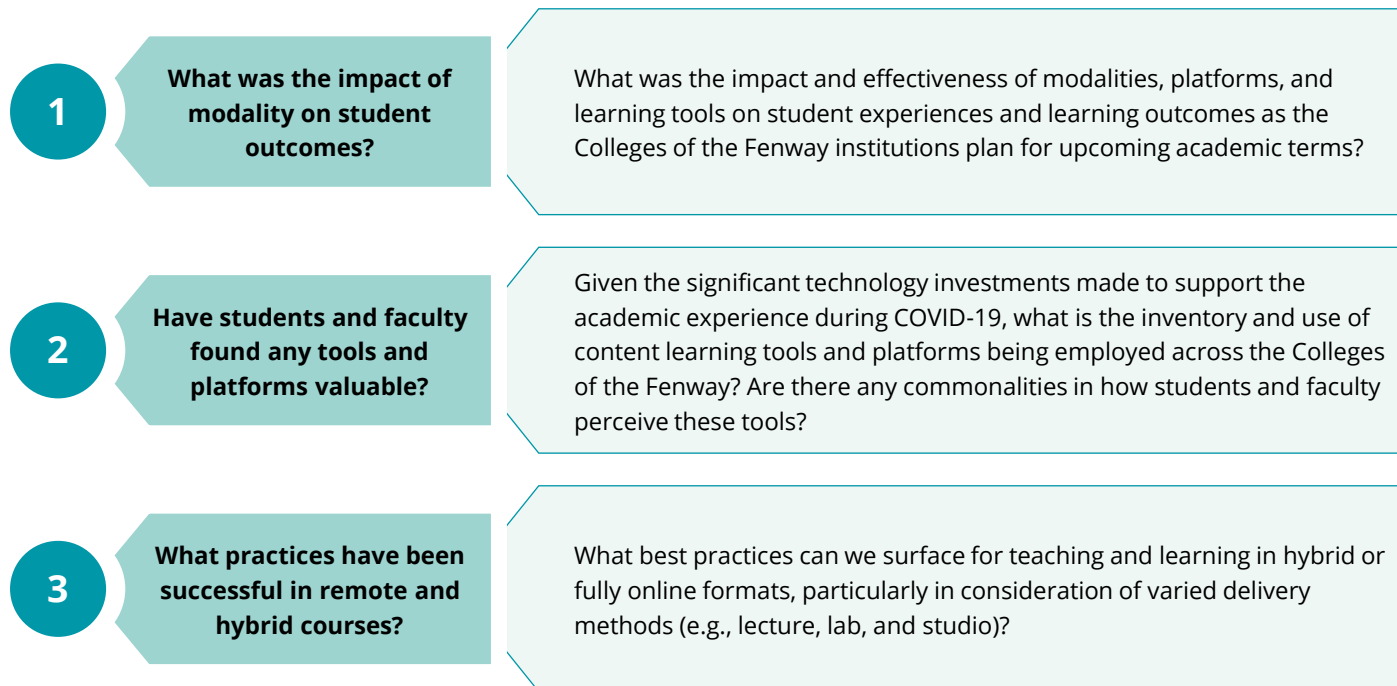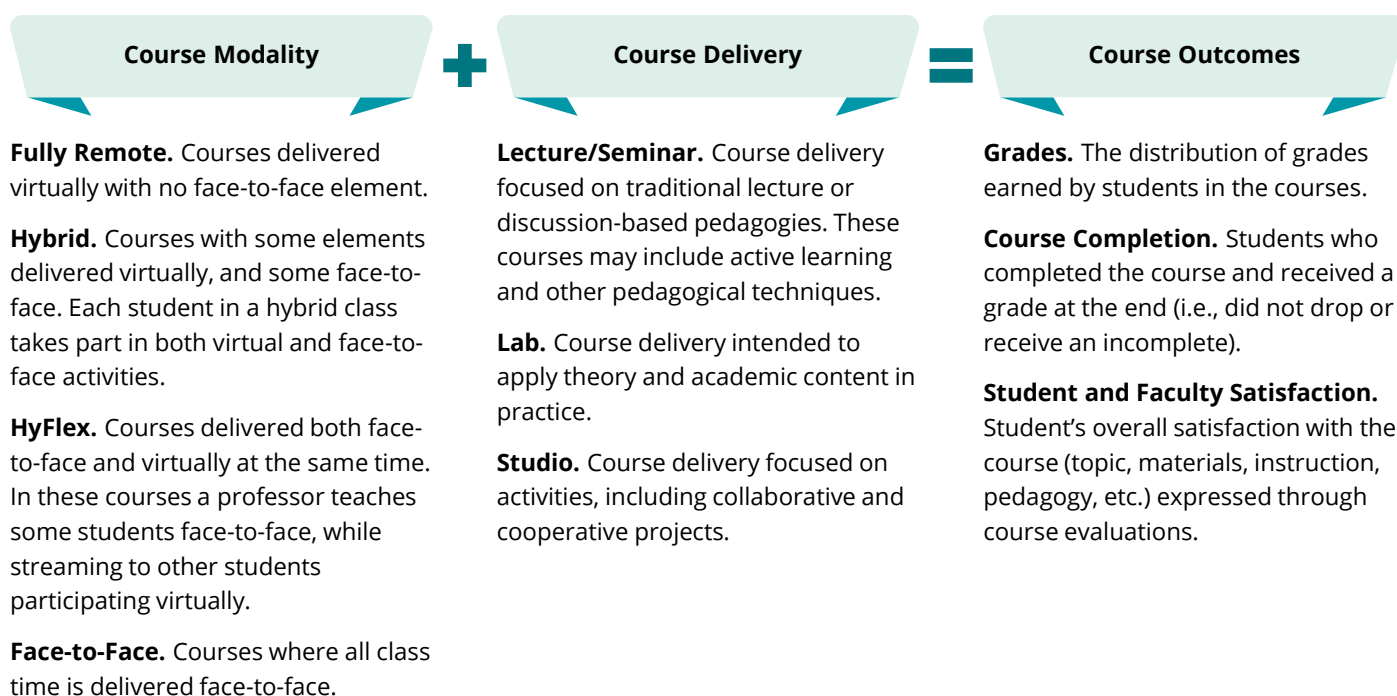|	Emmanuel College	MassArt	MCPHS University	Simmons University	Wentworth Institute of Technology
School Overview	Catholic liberal arts college	College of art and design	College of pharmacy and health sciences	Private university with women's undergraduate and co-ed graduate programs	Technical design and engineering school with co-op emphasis
2021 Enrollment	2,200 Students	1,894 Students	7,064 Students	6,635 Students	4,516 Students
Year Founded	1919	1873	1823	1899	1904

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[1] http://www.colleges-fenway.org/about/

Approach and methodology

Deloitte and the Colleges of the Fenway worked together to **assess how pandemic-era changes in teaching and learning modalities affected student learning outcomes and perceptions.** The project centered on determining which COVID-19 adjustments should be institutionalized post pandemic so that Colleges of the Fenway institutions move forward utilizing best practices, instead of simply returning to pre pandemic methods.

Deloitte designed a study to answer three fundamental research questions:

1	**What was the impact of modality on student outcomes?**	What was the impact and effectiveness of modalities, platforms, and learning tools on student experiences and learning outcomes as the Colleges of the Fenway institutions plan for upcoming academic terms?
2	**Have students and faculty found any tools and platforms valuable?**	Given the significant technology investments made to support the academic experience during COVID-19, what is the inventory and use of content learning tools and platforms being employed across the Colleges of the Fenway? Are there any commonalities in how students and faculty perceive these tools?
3	**What practices have been successful in remote and hybrid courses?**	What best practices can we surface for teaching and learning in hybrid or fully online formats, particularly in consideration of varied delivery methods (e.g., lecture, lab, and studio)?

An integral piece of the work involved working with Colleges of the Fenway institutions to **develop common definitions for course modality, course delivery, and course outcomes** to help ensure that institutions' internal data were translated into a common language, making possible comparisons across the five schools and numerous disciplines. A summary of this framework is shown here:

Course Modality **+** **Course Delivery** **=** **Course Outcomes**

Fully Remote. Courses delivered virtually with no face-to-face element.

Hybrid. Courses with some elements delivered virtually, and some face-to-face. Each student in a hybrid class takes part in both virtual and face-to-face activities.

HyFlex. Courses delivered both face-to-face and virtually at the same time. In these courses a professor teaches some students face-to-face, while streaming to other students participating virtually.

Face-to-Face. Courses where all class time is delivered face-to-face.

Lecture/Seminar. Course delivery focused on traditional lecture or discussion-based pedagogies. These courses may include active learning and other pedagogical techniques.

Lab. Course delivery intended to apply theory and academic content in practice.

Studio. Course delivery focused on activities, including collaborative and cooperative projects.

Grades. The distribution of grades earned by students in the courses.

Course Completion. Students who completed the course and received a grade at the end (i.e., did not drop or receive an incomplete).

Student and Faculty Satisfaction. Student's overall satisfaction with the course (topic, materials, instruction, pedagogy, etc.) expressed through course evaluations.
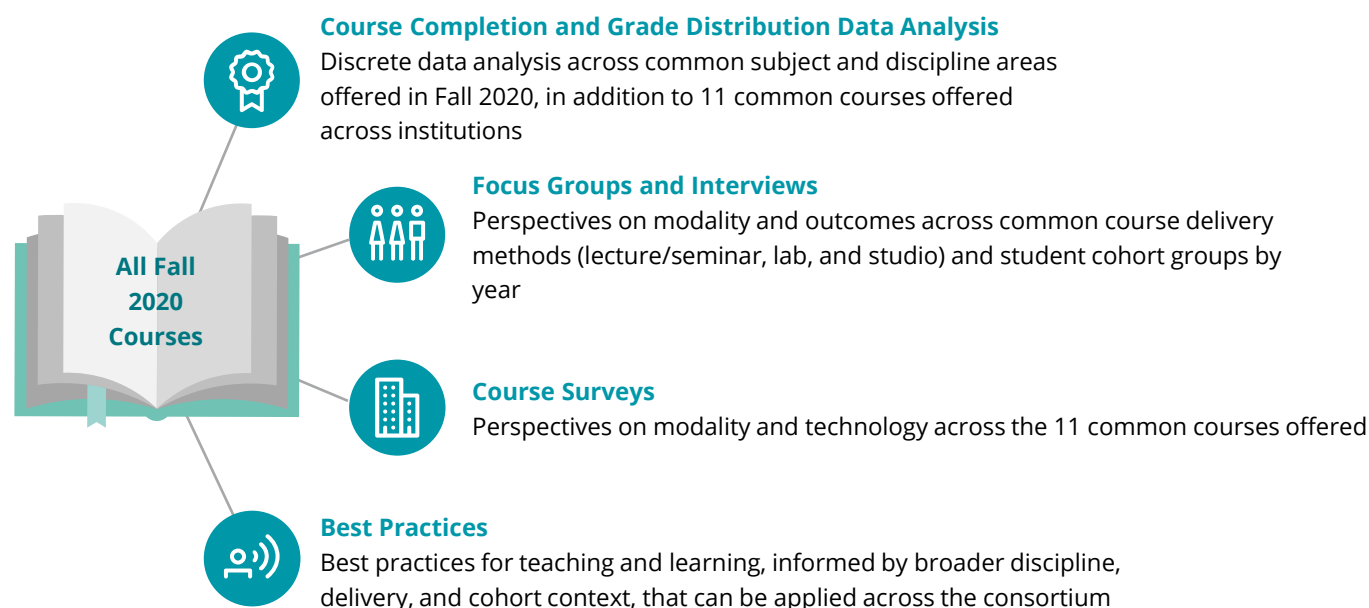
Approach and methodology (cont'd)

In order to answer the three original research questions, Deloitte and the Colleges of the Fenway took an engaged and holistic approach, incorporating both quantitative and qualitative input. The study considered multiple layers of analysis, beginning with a broad landscape view of course completion and grade data, followed by focus groups and interviews, and concluding with detailed, course-specific surveys.
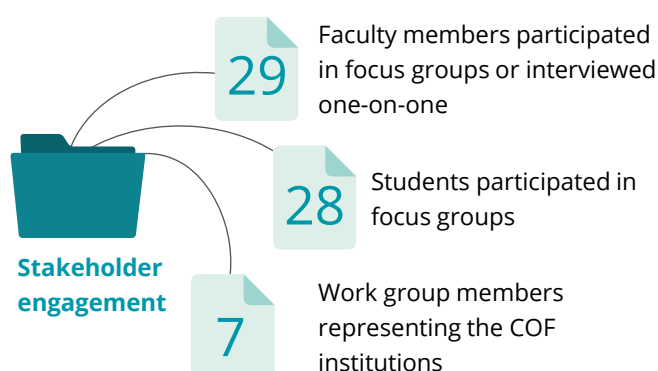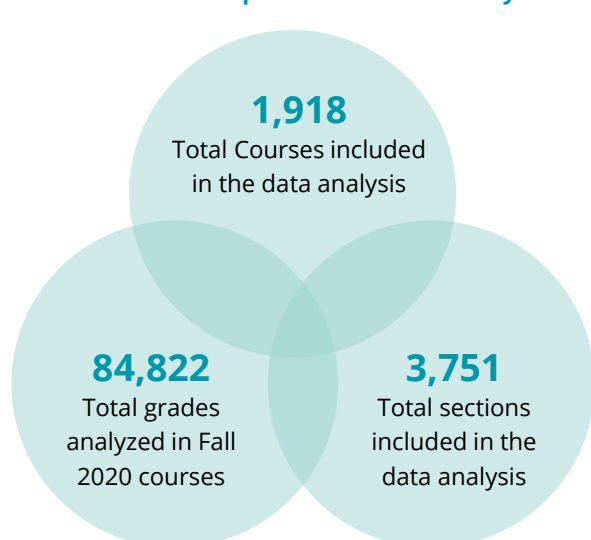
Engagement Approach

We structed the assessment to consider multiple layers of data, beginning with a broad landscape view of course completion and grades, and narrowing the analysis to identify course-specific best practices.

All Fall 2020 Courses

Course Completion and Grade Distribution Data Analysis
Discrete data analysis across common subject and discipline areas offered in Fall 2020, in addition to 11 common courses offered across institutions

Focus Groups and Interviews
Perspectives on modality and outcomes across common course delivery methods (lecture/seminar, lab, and studio) and student cohort groups by year

Course Surveys
Perspectives on modality and technology across the 11 common courses offered

Best Practices
Best practices for teaching and learning, informed by broader discipline, delivery, and cohort context, that can be applied across the consortium

Overall, the broad grade and course analysis included 1,918 courses, 3,751 sections, and 84,422 grades. Additionally, more than 60 students and faculty members were engaged in interviews and focus groups. Finally, when analyzing 11 specific common courses offered across institutions, Deloitte surveyed both enrolled students and faculty of record, achieving a 13 percent response rate among students and 27 percent response rate among faculty.

Grade and Completion rate data analysis

1,918
Total Courses included in the data analysis

84,822
Total grades analyzed in Fall 2020 courses

3,751
Total sections included in the data analysis

Stakeholder engagement

29 Faculty members participated in focus groups or interviewed one-on-one

28 Students participated in focus groups

7 Work group members representing the COF institutions

Course-Level Surveys

11
"Common" courses surveyed

13%
Student survey response rate

27%
Faculty survey response rate

By using a variety of data sources, primarily centered on the Fall 2020 semester, Deloitte identified key insights at the consortium, institution, and course level to aid future academic planning.
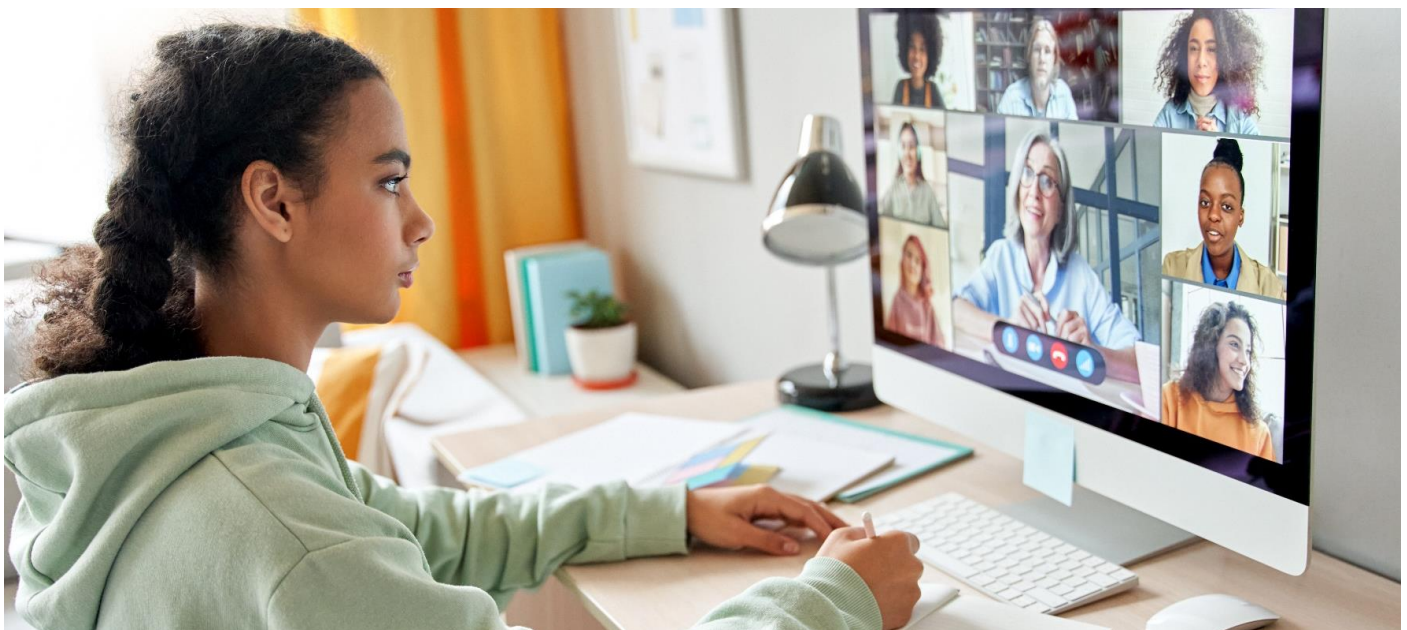
Key findings by research question

Research Question 1: What was the impact of modality on student outcomes?

Using course inventory data, Deloitte identified similar, or "common" courses, spanning a range of delivery methods, offered at multiple institutions during the Fall 2020 semester as the basis for the detailed analysis.

Common courses analyzed across the consortium:

	Lecture	Lab	Studio	Emmanuel College	MassArt	MCPHS University	Simmons University	Wentworth Institute of Technology
Anatomy and Physiology	●	●		●		●	●	●
History of Architecture	●				●			●
Introduction to Architecture	●	●	●		●			●
Introduction to Calculus	●	●		●			●	●
Introduction to Drawing			●	●	●		●	●
Introduction to Photography			●	●	●		●	
Introduction to Psychology	●			●	●	●	●	
Introduction to Writing/English	●	●	●	●	●	●	●	●
Macroeconomics	●			●		●	●	●
Microeconomics	●			●			●	●
Organic Chemistry	●	●		●		●	●	●

Comparing reflections on overall modality effectiveness, both students and faculty across the 11 common courses found **face-to-face to be the most effective modality**. However, **two-thirds of both groups rated fully remote classes as effective** and roughly half of all students felt they were "successful learning in a remote environment." **HyFlex was identified by both faculty and students through surveys and focus groups as the most challenging and onerous learning modality.**
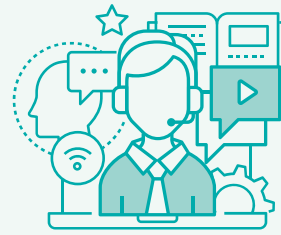
These overall findings varied by course discipline and course delivery type. Among the 11 common courses analyzed, Psychology and Writing lectures were highly rated as effective remote courses and stood out as potential opportunities to continue in fully remote modality. By comparison, Calculus was considered far less effective in a remote delivery format, within only 54 percent of students rating the fully remote modality as effective. By course delivery type (lecture/seminar, lab, and studio), students and faculty were **most favorable toward delivering lecture/seminar courses in remote format, while 78 percent of faculty reported negative opinions toward teaching labs and studios in a remote format.** Faculty struggled to replicate real-time experiments and develop student understanding of the theories within these lab and studio delivery types. But certain virtual practices, such as conducting online assessments and deploying pre lab software were helpful.

Student perspectives on the effectiveness of non-face-to-face modalities also varied by experience level. When analyzing student sentiment by stage, **second-year students voiced the lowest level of agreement that non-face-to-face modalities were effective** at 59 percent, compared to 69 percent of third-year students and above. Student focus groups supported this same second-year sentiment. One possible explanation is that second-year students may have become comfortable with the university rhythm in their first year and then had to readjust quickly to meet the demands of a largely remote second year. Another explanation offered by Colleges of the Fenway is the fact that second-year classes are often more rigorous, with students diving into their majors and more advanced topics for the first time in their college career. This increased rigor may have been more challenging for second-years to adjust to in remote modalities.

Key findings by research question (Question 1 cont'd)

Despite student and faculty survey responses indicating that students learned more effectively in a face-to-face environment, **grade and course completion data across all courses and modalities remained high**. For courses offered in Fall 2020 by all institutions, 52 percent of all grades were an A or A- and 91 percent of all grades were a C- or higher (including Pass grades). Although prior-year comparisons are made challenging by the dynamic nature of course offerings and the lack of variety in modality in previous terms (few courses were offered in non-face-to-face modalities in prior years), Colleges of the Fenway has the opportunity to continue to track these outcome measures to further provide context for this grade data. Regardless of the availability of longitudinal data, these positive grade outcomes were perhaps a reflection of faculty leniency during the pandemic. Related to the Fall 2020 term, **45 percent of all faculty agreed that they covered less material and 65 percent of all faculty agreed that they relaxed deadlines within their courses,** mostly stemming from concern over student wellness.

Beyond the findings of surveys, students and faculty cited reasons for struggling in the remote teaching and learning environment beyond the pure academic environment, such as social isolation, fatigue, and pandemic stress. These external factors likely contributed to overall concern with enrolling in non-face-to-face modalities in the future. Nevertheless, **close to 40 percent of students and 32 percent of faculty voiced a willingness to utilize non-face-to-face modalities in the future.** Fall 2021 registration and beyond will provide a helpful benchmark of what students truly value in future course offerings.

Key findings by research question (cont'd)

Research Question 2: Have students and faculty found any tools and platforms valuable?

COVID-19 caused most institutions of higher education to adopt and implement new technology platforms quickly to meet student and faculty needs in evolving hybrid and remote environments. Higher education leaders broadly agree that there is work to be done to better understand what technology platforms should be used post pandemic to improve the user experience with those platforms. In an EDUCAUSE Fall 2020 survey, for example, 83 percent of higher education IT leaders reported "improving the use of instructional tools" as a top priority for their institution in planning for the 2020-21 academic year.[2]

In Deloitte's study, students and faculty in Colleges of the Fenway institutions rated the effectiveness of many technology platforms across each institution's full academic technology portfolio. Most of the platforms were rated highly in supporting teaching and learning in a remote environment, with Zoom outperforming most platforms in both student and faculty responses. However, students and faculty didn't always agree, showing differing views of platform effectiveness, particularly in assessment tools and academic integrity platforms.

	Percentage of Students Rating Favorably	Percentage of Faculty Rating Favorably
Adobe Creative Suite	54%	50%
Blackboard Learn	63%	53%
Brightspace	78%	73%
Canvas	70%	88%
Google Classroom	59%	88%
Gradescope	53%	100%
Matlab	62%	N/A
Panopto	53%	61%
Turnitin	53%	66%
Zoom	**82%**	**82%**

◀ **Zoom was among the highest rated by both survey groups**

As colleges and universities plan for future teaching and learning innovation, it is important that they analyze technology and make specific decisions according to student and faculty feedback. While student and faculty sentiment is the first source in assessing which technology platforms align to institutional needs, colleges and universities must also dig deeper to understand the nuances of technology effectiveness through focus groups and other in-depth quantitative and qualitative data collection. These broader insights can help ensure that institutions plan for targeted technology investments that will enhance student and faculty experiences.

In addition to assessing the effectiveness of each individual tool for faculty and students, **institutions should also assess, and possibly streamline, the entire portfolio of technology platforms to minimize complexity for users.** By prioritizing platforms and organizing them into a single Learning Management System (LMS), institutions can help ensure high levels of adoption, learning effectiveness, and user experience.

[2] https://er.educause.edu/blogs/2020/9/educause-quickpoll-results-fall-readiness-for-teaching-and-learning

Key findings by research question (cont'd)

Research Question 3: What practices have been successful in remote and hybrid courses?

Both students and faculty identified several practices to bring to future academic experiences, particularly in non-face-to-face modalities. In particular, students and faculty expressed that practices used during the pandemic could be carried over to post pandemic academic life in three major areas, including engagement with classmates and instructors, pedagogical approaches, and student mental health and wellness.

Best Practices in Remote Courses

Engagement with Classmates and Instructors	Pedagogical Approaches	Student Mental Health and Wellness
• Facilitate breakout rooms for students to discuss course content with peers during class • Create discussion boards or other technology-enabled chat channels for students to use outside of the classroom or for discussion breaks during lecture • Conduct virtual office hours that can be held at more flexible and spontaneous times • Enable students to use the chat feature during live discussions so they can discuss with peers for a better understanding • Invite guest speakers not co-located with the class to participate	• Record lectures and use class time for activities, synthesizing content, and providing one-on-one assistance • Leverage a variety of materials, including videos, screen-share while taking notes, and practical (off-screen) learning scenarios • Use a LMS or other platform to store all course content in an organized manner (e.g., syllabus, assignments, handouts, study guides) • Use online tools to perform assessments, but be mindful of the technology hurdles and anxiety brought by this modality	• Faculty conduct one-on-one consultations, check-ins, or other personalized outreach. Though this may be beyond the traditional faculty role, institutions should consider if and how faculty can help to augment support for struggling students in the future, particularly those at risk

Key overarching takeaways by research category

This study offered numerous strategic takeaways to aid Colleges of the Fenway institutions in planning for the future. Below are some of the takeaways by key research categories.

Modality	• **Students and faculty held a preference to commit to a single teaching and learning modality.** Students and faculty felt that they were able to teach and learn most effectively in a face-to-face modality, yet nearly three-quarters of both constituencies expressed that the fully remote modality was effective. Students and faculty expressed challenges in navigating more hybrid and HyFlex modalities. • **HyFlex was the least desirable modality of all.** Students and faculty found HyFlex to be particularly complex with too many technology hurdles that made it difficult for faculty to teach cohesively to online and in-person students and students found it difficult to engage in different, yet simultaneous settings. • **Select elements of remote technology may be beneficial post pandemic.** Though students expressed desire to return to in-person learning, they saw opportunities to leverage technology for elements, such as virtual office hours and guest speakers.
Student Cohort	• **Students' experiences with remote learning varied by student stage.** In remote modalities, upper-division students felt more successful with a greater sense of connection and confidence than lower-division students, especially second-year students who felt the least successful among those surveyed.
Course Content and Pedagogy	• **Asynchronous courses were reviewed poorly, but flipped classrooms were viewed positively.** Students poorly reviewed asynchronous classes, citing that they did not see value in paying for classes that they had to "teach themselves." Meanwhile faculty felt that flipped classroom practices could be beneficial in a post pandemic world. • **Remote classes caused more busy work.** Compared to pre pandemic classes, students felt that more busy work was assigned in remote courses while interactive projects and activities were removed, leading to lowered satisfaction. • **Remote assessments were frustrating.** Although faculty found value in the ease of administering remote assessments, the overall remote assessment experience challenged students on two dimensions: technology and overall rigor. Students voiced concerns that online assessment software led to stress and anxiety and were disappointed that the online assessments were, overall, too easy due to the predominance of open-book format.
Delivery Method	• **Experiential courses are more effective in the face-to-face modality.** Students and faculty felt that labs and studios were less effective when remote as compared to lecture courses, while recognizing that prework performed virtually has the potential to enhance learning outcomes. In particular, lab software was found to be ineffective at recreating a lab experience, but faculty and students would like to continue using it as pre work. • **Remote lectures/seminars felt longer to students than previous classroom experiences.** Students attributed this feeling to a lack of break time, classes running long, and a lack of physical movement between classes.
Student and Faculty Engagement	• **Students and faculty struggled to recreate a collegial atmosphere.** In remote environments, both constituencies found it difficult to create an environment similar to a face-to-face environment. They missed time before and after class, which was often used to ask questions or talk. However, they did find new ways to connect during remote courses, including impromptu virtual office hours. • **Students and faculty felt it was more difficult to create engagement and hold discussions in remote classes.** They did, however, find new ways to do so using a mix of interaction tools like chat to bridge the gap. • **Students and faculty empathized with each other.** Both groups expressed strong empathy toward each other and pandemic-era struggles. This may have caused faculty to grade students easier and be more lenient with deadlines.

Considerations for institutions of higher education

This project offers a glimpse into how a diverse set of colleges and universities experienced teaching and learning through an array of modalities and technologies during COVID-19 and what they learned about how to move forward post pandemic. What, exactly, college and university campuses will look like after COVID-19 is unclear, but it is unlikely that institutions will return to "business as usual." As institutions of higher education determine which pandemic-instigated teaching and learning modalities and technologies to continue using or adopting in the future, they should consider the following insights:

Untangle pandemic trauma from attitudes about learning in remote modalities.	• Faculty and students experienced emotional trauma during the pandemic, including general social isolation, workspace distractions, and technology hurdles that may not persist in the post pandemic future. In measuring student and faculty sentiment, these generalized pandemic reactions should be separated from pure sentiments about learning in remote modalities.
Prepare for a hybrid teaching and learning future.	• While faculty and students largely voiced a desire to return to face-to-face classes, many have been awakened to the powerful learning and logistical tools that virtual elements provide, such as virtual office hours, virtual guest speakers, and virtual breakout rooms. Empowering faculty to continue to experiment to meet learning objectives and student preferences should be a key priority.
Consider different learning needs and preferences by student population.	• While the Colleges of the Fenway project illuminated important differences in remote learning sentiments across student stages (with second-year students having the least openness to remote and hybrid modalities), other institutions may serve predominantly adult learners with wholly different learning and scheduling preferences. Institutions should thoughtfully deploy technology when it matches both the course content and student needs.
Monitor teaching and learning effectiveness through strong definitions and data tracking.	• To understand which modalities and technology offerings students and faculty prefer, colleges and universities need to develop a plan to track the data. The first step is setting standard definitions for teaching and learning modalities and outcomes. Creating common definitions allows for accurate data collection and analysis throughout data systems. • Colleges and universities should also determine which outcomes reflect institutional goals and develop a plan to track against those outcomes. Student grades and completion data, for example, may be important, but these data may not provide the full student outcomes picture, especially during COVID when so much was influx. Monitoring teaching and learning effectiveness will allow institutions to respond with aligned investments, faculty training, and university policies as campus community attitudes about modality and technology platforms evolve.

Conclusion

Deloitte's engagement with the Colleges of the Fenway took place while students and faculty were in the throes of the pandemic, grappling with teaching and learning obstacles. This timing offered valuable insight into the real-time challenges of teaching and learning across various modalities and technology platforms that were instituted quickly in response to a restricted and rapidly changing environment. At the same time, however, it underscored the need for institutions of higher education to untangle the emotional trauma of the pandemic from the important pursuit of analyzing the best methods for teaching and learning, recognizing that student and faculty attitudes toward remote and hybrid learning will likely evolve over time.

In collaboration with faculty, staff, and students, MassArt learned that remote and hybrid course formats offer opportunities to enhance certain areas of our programs. Some examples include increasing visiting artists and designers from around the world, growing our summer youth programs to include remote learners, and determining the general education courses that benefit students in these formats. The data and analysis greatly helped us determine these and other areas of opportunity.

Dan Serig, Interim Provost / Vice President of Academic Affairs Massachusetts College of Art and Design

The hybrid campus

This work is part of a series connected to Deloitte's Hybrid Campus initiative. Read more here:

https://www2.deloitte.com/content/dam/insights/articles/6756_CGI-Higher-ed-COVID/DI_CGI-Higher-ed-COVID.pdf

Moving forward in a post pandemic environment, leaders at institutions of higher education should step outside of the day-to-day chaos of responding to changing student needs and pandemic-related operational challenges to analyze data about what is best for teaching and learning. This moment in time offers an extraordinary opportunity to take stock of COVID-era teaching and learning and its effect on student outcomes to influence the future of higher education and ensure institutions fulfill their missions.

Amy Wittmayer
Specialist Leader
Higher Education Consulting
+1 512 619 4376
awittmayer@deloitte.com

Kaitlin Pennington McVey
Senior Consultant
Higher Education Consulting
+1 202 878 9047
kmcvey@deloitte.com

Irene Kan
Manager
Higher Education Consulting
+1 703 258 8701
irkan@deloitte.com

Deloitte.