HMC Architects

HIGHER EDUCATION

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ADAPTABILITY AND FLEXIBILITY

What does the shift to virtual learning mean for the future of higher education?

COVID-19 has changed lives around the world, from the way people work, learn, teach, and deliver or receive education. At HMC Architects, we are exploring the pandemic as an opportunity to learn, reinvent, and most importantly help our clients amid this crisis.

As part of this ongoing research effort, we are committed to sharing our findings with the industry on five main areas of Technology, Adaptability and Flexibility, Regulatory/ Budgetary/Institutional Impacts, Space Needs Restructuring, and Impact to Wellness/Mental Health. In this article, we cover our findings on adaptability and flexibility as it relates to the higher education sector.

METHOD

A group of representatives including higher education clients, students, contractors, and consultants were invited to participate in individual phone interviews to share their insight and understanding of the short-and long-term impacts of COVID-19 on facility design and operation for college campuses and universities. The interview discussions focused on distance learning and its relationship to adaptability and flexibility.

TRANSITION TO DISTANCE LEARNING

Today's advancements in technology are enabling educators and students to engage using online tools in group and individual settings. Most higher education institutions had a pretty swift transition to online instruction. On an average, 30 percent of the student body was already taking online courses prior to COVID-19. It is anticipated that 60 percent of the total student body will take online classes permanently in the future. COVID-19 is only accelerating the conversion to the online instruction.

DISTANCE LEARNING BENEFITS

Due to COVID-19, universities and colleges are re-assessing their curriculums and exploring an increased need for online classes. While COVID-19 necessitated transition to an online environment, many higher education institutions expect to see permanent transition of lecture and general education classes to the online environment (general education classes include history, languages, business, etc.). The main driver to an online environment is flexibility. When, how, and where the instruction is delivered is completely independent of the physical space and classroom scheduling. There are two ways online instruction is currently being delivered:

1. **Asynchronous Learning** – occurs through online channels without real-time interaction. It is also called Location Independent

Las Positas College Academic Classroom Building 1000, HMC Architects

Learning because the student can stream and engage educational content anytime and anywhere.

2. **Synchronous Learning** – distance education that happens in real-time where teacher and students are interacting at the same time using online tools and platforms.

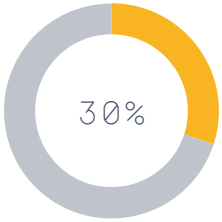
Due to closures of most campuses, many higher education institutions are investing in online education by developing online content and providing training to faculty and professors. As the demand for online education increases, many faculty are signing up to get certified in distance education.

Another benefit of the online environment is greater class capacity. Online classes are not limited by the size of the classroom space and can accommodate a greater number of students. Increased online class capacity allows higher-ed institutions to accommodate an increase in student enrollment without investing into new buildings and instructional spaces. One of the administrators interviewed noted that the cost of maintaining buildings is ten times more expensive than the costs of the online environment. In theory, reduced costs of online education could lead to a more affordable education. However, that is yet to be proven and none of the interviewees were able to know if that would truly be the case.

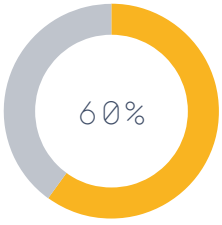
CHALLENGES WITH DISTANCE LEARNING

It is important to remember that higher education serves very diverse backgrounds and socio-economic needs. Hence, a campus environment is a place where students can access varied resources, feel safe, socially engage, and learn from each other. Learning educational content is only one part of the educational process. Social-emotional development through in-person instruction, group work, social support, and peer engagement is another very important part of education. The extensive scientific research conducted by various organizations over the years shows that students learn from each other as much as during class instruction, and even more in some cases. Informal social environments on campus that bolster student interactions cannot be easily replaced using an online environment. In addition, courses requiring hands-on training or operation of specific technical and laboratory equipment are difficult to replicate through online instruction.

Social distancing requirements due to COVID-19 are impacting social environments on campus, as well as vocational, technical, and laboratory instruction. Higher education institutions are forced to re-think class sizes and the availability of courses. To address this challenge and adapt to new circumstances, some higher education institutions are implementing campus-wide safety protocols, providing COVID-19 training, and looking at hybrid instructional models. Hybrid instruction is a model where online instruction is supplemented with traditional on-campus instruction or vice versa. Furthermore, universities and colleges are considering offset scheduling where smaller groups will be allowed to meet and work together on campus.



Percentage of the student body already taking online courses prior to COVID-19



Percentage of the total student body who will take online classes permanently in the future.

> With the continued growth of online and hybrid instruction, we will also see a need for flexible and adaptable spaces that accommodate a variety of uses.

Cal Poly Pomona Collins College of Management, HMC Architects

UNINTENDED EFFECTS OF ONLINE INSTRUCTION

While online education offers many benefits, it also has its drawbacks. Many professors lack the experience to teach online and feel less effective in delivering the content through online platforms. Online instruction and learning engage predominantly audible and visual modalities of learning. Therefore, tactile and kinesthetic learning modalities are limited in this capacity.

Professors' "office hours" are inundated with student requests to meet online, which blurs the line between work and personal time. The pressure to accommodate student requests and provide quality instruction results in extended online meetings and conversations that can lead to exhaustion and fatigue.

Many students reported limited attention span while taking online classes. Sitting in front of the computer screen for hours can be mentally challenging and physically taxing. Many students and professors also do not have a home environment that is conducive for online learning or teaching. Many cite the need for dedicated study spaces, safe and social environments, ergonomics, access to Wi-Fi and technology as the main drawbacks of teaching and taking classes from home.

FUTURE OF HIGHER EDUCATION

Migration to online instruction is taking place and will continue in the foreseeable future due to COVID-19 and current educational trends. We expect to see universities and community colleges continue to expand their technological resources and infrastructure to accommodate online instruction and student needs beyond COVID-19. With the shift to online instruction, we see a reduced need for faculty offices and traditional classroom spaces. With the continued growth of online and hybrid instruction, we will also see a need for flexible and adaptable spaces that accommodate a variety of uses. Campuses will continue to invest in flexible learning environments, expand ergonomic solutions for short- and long-term use, and grow social and student owned spaces that support different modalities of learning and teaching. Vocational and technical training as well as laboratory instruction will continue to evolve using digital tools but will remain tied to the physical environment due to the tactile and kinesthetic needs of their programs. COVID-19 is accelerating transformation of higher education and is forcing our society to rethink its educational models, their value, and delivery. For better or worse, online instruction is here to stay. Higher education will need to continue to evolve and reinvent educational models and the future of instruction.

For additional questions, contact:

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