

Higher education: What we should have learned from 2020

Patricia Neely¹, Jan Tucker²

¹ EDD, Dean, Distance Education, Bluefield College, Virginia, United States

² PhD, DBA Faculty, Columbia Southern University, Alabama, United States

Abstract

2020 was a year of crises. Wildfires, earthquakes, hurricanes, flooding, humanitarian issues, civil unrest, and of course COVID-19 encased the news cycle. These crises affected people and businesses in all industries in all locations. This article focuses specifically on higher education institutions and their students. These challenges in 2020 prompted a radical change in the delivery mode for higher education and disrupted our educational systems. The current issues plaguing higher education institutions, what can be done to address them, and how we can use technology to implement practices and policies to move the higher education sector forward will be addressed?

Keywords: higher education challenges, technology, policies, best practices

Introduction

The issues of declining enrollment, sub-par retention rates, and competing stakeholder objectives are not new to the higher education industry. There is a constant struggle between balancing the need to increase recruitment in programs, improving retention, increasing revenue, and decreasing costs. 2020 was no exception, and in fact, the COVID pandemic seems to exacerbate these issues. It often felt like we were in a Darwinism survival of the fittest battle with others who share the higher education space. As with most challenges, hindsight brings some clarity and provides us with the opportunity to reflect on what occurred, the factors (some controllable and some not) that affected higher education, and how we might use technology to bridge the gaps moving forward. In examining what we learned during the pandemic, we revisited the 21st Century Higher Education framework developed originally by Anthony D'Angelo (D'Angelo, 2006) [3]. We use D'Angelo's framework as a springboard for our discussion on how the main concepts presented in his work may have changed since he originally introduced them in 2006. In light of the incredible amount of systemic change experienced during the pandemic, it seemed appropriate to consider the concepts of recruitment, retention, revenue generation, research, risk mitigation, return on investment, and reinvention, and what we learned about these issues in 2020.

Recruitment

Today's higher education landscape is more competitive than ever. In addition to global competition for student enrollment, we are also experiencing declining overall enrollment during a time of political, economic, and health uncertainty. These factors have stressed the education sector and drained resources. Decision-makers and strategic leaders are tasked with addressing tough questions such as: How do you find and recruit students when admissions counselors can no longer visit high schools or participate in fall recruitment tours? How do you recruit working adults for online programs when they have taken on the new task

of homeschooling their children and cannot find the time to focus on taking classes themselves? Systems that we have used in the past did not have the flexibility needed to reach these students. Due to the pandemic, college students today find themselves worrying about their family's physical safety and health while also facing concerns about their job safety and security. Many of these students are parents navigating homeschooling and competing for computer time with their children while working full or part-time jobs from home. Procedures are not in place that target and address these working adults caring for families while facing work struggles. Many of these students may find themselves in a situation of working overtime to fill in for co-workers who were isolating due to Covid-19 or who lost their jobs due to shutdowns. Overall, higher education lost 400,000 students in the fall of 2020, and enrollment of adults (those over 24 years of age) dropped by 30 percent (National Student Clearing House, 2020) [15]. During the pandemic, we learned that the systems we have relied upon in the past are not flexible and adaptable to changes in the higher education environment. This lack of flexibility was reflected in the 16 percent decline in new freshman enrollment in the fall of 2020.

There were some positive gains in the recruitment process. Adapting to limited campus visits for students and travel options for admissions counselors resulted in adopting a few new recruitment strategies that did work. Providing virtual campus visits where students viewed the campus via a drone, a smart device and video conferencing helped bridge the gap for students unable to visit the physical campus. Videoconferencing through Zoom with breakout rooms worked well for students who attended academic orientation sessions. After attending an extensive group orientation session, students met one-on-one with faculty advisors via virtual breakout rooms. Students were also given more flexibility in some of the more stringent institution policies. Allowing late drops, waiving late penalties, and taking courses on a pass/fail basis were strategies implemented that calmed the fears of working adult students and allowed them to continue their studies.

Retention

Retention challenges continue to plague most higher education institutions. Recruitment of students is costly, and if we cannot retain these recruits, our efforts are in vain. The average cost of recruiting an undergraduate student is estimated to be \$2,115 for private institutions and \$470 for public institutions (Ruffalo Noel Levitz, 2020) ^[16]. Losing students is costly. There has been increasing attention from regional accreditors and the public on retention and graduation rates. This forces colleges to focus attention and resources beyond recruitment efforts to retain and graduate students. It is not enough to get students in the classroom; we have to find a way to keep them there. Overall, we do not know what the long term effect of the pandemic will have on retention. It will be a year or two before the full impact of the upheaval experienced this year is analyzed and we know how it affected student persistence. However, we have learned that course design and faculty preparation can present obstacles to student success.

As faculty, we have learned that 50-minute lectures do not work for most students in face-to-face classrooms, live-streamed, or even online courses with recorded lectures. Chunking content, gamification, engaging students through polls, quizzes, or knowledge checks, and encouraging students to lead discussions and other classroom activities improve student learning and participation (Minero, 2020) ^[14]. While many classes moved to an online only format during the pandemic that did not remove the social and connection aspect that many college students desire. A sage on the stage approach does not work with today's technologically immersed students. While students are not necessarily looking for a FaceBook or SnapChat experience in the online classroom, they want to feel connected, heard, and involved in their learning process. The challenge is encouraging students to come up with new ideas and think critically while also building rapport. The need to promote and facilitate student to student and student to faculty connections is still there, but we have to find more creative ways to approach it using technology. There has been some success in adapting a think-pair-share approach to video collaboration (Minero, 2020) ^[14]. For example, the instructor can give students a prompt for discussion, break students into group chat rooms (using something like Zoom or Google hangouts) and allow students to collaborate without the instructor's presence. Once the group has a consensus, they can go back into the main chat room, where each group can present their findings to the instructor and the other groups. These virtual chat rooms cannot completely recreate the college classroom, but it gives us a window into the students' personal lives without meeting face to face.

During the 2020 pandemic, we learned that teaching with technology exposes the weaknesses of poorly designed courses, and a lack of preparation by the faculty. While faculty may be able to navigate face-to-face classes based on their knowledge of the content area, a lack of organization and focus on student learning strategies dooms the instructor teaching remotely regardless of the delivery modality. Clear course outcomes and a tight connection between learning content and assessments are crucial to quality courses (Gray, 2020) ^[8]. Using a universal design for learning (UDL) approach can help students learn regardless of the delivery modality. UDL provides a framework for faculty to incorporate "flexible materials, techniques, and strategies for delivery instruction" while also allowing

students multiple ways to demonstrate their knowledge of a topic (McLaughlin, West, & Anderson, 2016, p.1) ^[12]. Technology makes it easier to provide alternative methods for students to engage in learning content and motivates students to demonstrate mastery of the content in multiple ways. For example, instead of requiring all students to create a three page APA formatted paper comparing macro and microeconomics, students can be given the option to create a podcast or an animated video to demonstrate what they know about the economic topics. UDL, by its very nature, promotes flexible learning and accessibility.

Revenue and ROI - The business of education

As of January 2021, higher education has lost thousands of jobs and millions in revenue from tuition and housing. No college is unaffected by the financial risks created by Covid-19. Whether it meant investing in new technologies to support remote learning, closing dorms, paying for services to care for students in isolation, or buying Covid-19 tests, these added expenditures were not included in the annual budgets created at the beginning of 2020. The declining fall enrollment numbers experienced by many colleges and universities added to financial shortfalls.

The financial issues from the pandemic aggravated the changes happening with the business side of education. Colleges' lack of flexibility and inability to conform to changes in the higher education environment have doomed many higher education institutions. Private, liberal arts institutions, already struggling with multiple years of deficits, survived 2020 with CARES Act monies but they cannot survive the pandemic's long-term financial impact. Over the past year, colleges steeped in history and tradition, such as MacMurray College in Illinois, closed its doors after almost 175 years of instruction (Hobson & Hagan, 2020) ^[9]. Smaller liberal arts colleges such as Green Mountain College, Mount Ida, and Southern Vermont college joined a long list of small liberal arts colleges shutting their doors permanently due to declining enrollments, limited funding, and pressures of the pandemic (Messinger, 2020). Liberal arts colleges are often dependent on tuition dollars instead of endowments to fund their programs. They also typically lack high-tech majors such as engineering and computer programming, which drive higher enrollment numbers.

Revenue generation and managing cash flow are creating ongoing crises for small, liberal arts institutions. Relying heavily on federal funding is risky, and state funding depends on budgets developed based on enrollment. Already facing a decline in high school graduates who would enroll in college, institutions are forced to seek alternative means of financing higher education. Research institutions, especially those focusing on technology research, may attract businesses to fund their research projects, but this is not an option for institutions focused on teaching. Fundraising campaigns may be effective if the targeted alumni include high tech billionaires but do not help those institutions without deep-pocket donors. Lean budgets will result in cuts of low enrollment programs that do not have clear connections with jobs. The higher education press is full of examples of colleges such as the University of Alaska, Elmira College, the University of Akron, and Hiram College cutting liberal arts programs to meet budget constraints (Dickler, 2020) ^[4]. Faculty salaries will likely stay stagnant or even decrease (especially in the non-tech sector) as there are fewer teaching jobs both on-

campus and online. Average salaries at both Associate level and Master's level institutions decreased 1% over the past year, and that was before the fallout from the pandemic could be considered (Flaherty, 2020) [7]. We see an increase in college mergers that blur the line between for-profit and nonprofit institutions. Deals such as the University of Arizona's acquisition of the for-profit Ashford University and Purdue University's merger with Kaplan University are examples of these new tuition revenue-sharing deals (McKenzie, 2020) [10, 11]. It seems apparent that this tuition sharing process may be the new norm as education institutions look for creative ways of extending their educational offerings while looking to make up for revenue shortfalls.

Reinvention - Changing Expectations

Expectations for faculty, administrators, and students are changing while the tenure, demographics, and expectations of college leadership are evolving at the same time. We may see a more diverse administrative field in the near future. Faculty will be expected to be flexible in their course design and delivery method. Administrators are expected to be more open to developing flexible policies around course withdrawals, late enrollments, and student drops. Students will need to be flexible in their course options, delivery modalities, and extra-curricular opportunities. Cafeteria models where students are offered a plethora of course/program choices with very little guidance are floundering while more structured and targeted programs are gaining in popularity (Spear, 2020) [17]. The number of competency-based education programs is showing steady but measured growth (Fain, 2019) [6]. Certificate or micro-programs that put together a collection of courses from various universities are trending as a way for students to gain employable skills quickly and less expensively than earning a college degree (McKenzie, 2020) [10, 11]. Technology can be used to bridge the gap between current business practices in the education sector and future expectations. Innovative business models such as Arizona State University's "pay when you complete a course program" and Northeastern University's "experiential learning coding and analytics boot camp", are examples of how technology can be used to forge an innovative forward path in an industry steeped in tradition (Dunagan, 2017) [5].

Reinvention - Fluid Delivery Modalities

As higher education faculty, we learned during the pandemic that students expect fluidity in educational services delivery modalities. Students expect faculty to offer flexible options for study when students are ill or injured, have family emergencies, or are traveling for sporting events or their jobs. Many institutions were caught off guard when they had to quickly move all classes to remote learning without a plan in place to do so. Those who already had a reliable online learning program established may have been able to complete this transition quicker and with less impact on faculty, staff, administration, and students, but it was not without its strain on resources. Accessibility, bandwidth, remote access, and technology training have become top priorities for many institutions as they try to navigate the remote learning environment. Faculty use of technology tools like Zoom, Microsoft Teams, remote proctoring, SMART boards, and learning management systems are now the norm and are expected in college

classes both on-campus and online. Virtual reality (VR) has the potential to disrupt education in the very near future. VR can mimic real-world scenarios and give both educators and their students' new insights, the ability to self-regulate their learning, and allow data gathering on classroom activity without disrupting learning (Bailenson, 2018) [2]. The use of VR in the classroom is still in its infancy stage, but the potential of VR to transform the education space appears to be imminent.

Reinvention – Flexibility

Overall, flexibility is the key to college survival post-pandemic. Students will expect flexible policies and procedures. Flexible technology systems that allow for movement between campus-based study and online study will be needed to further address student expectations for technology-rich learning experiences. Flexible student information systems that are not wed to the traditional semester-based enrollment cycle and allow enrollment based on the student's needs must be adapted to the changing higher education landscape. The ability of faculty to be flexible in how they deliver their courses and the ability to move seamlessly between delivery modalities, are critical success factors for higher education institutions looking for a forward trajectory for their institution. Finally, flexible budgets will be vital to ensuring that resources can be allocated to areas that best support student success. The 2020 pandemic exposed how rigid college structures impede colleges' responsiveness to crises, and we need to examine how we can be more flexible to a changing higher education environment.

New student recruitment will continue to be the fundamental monetary driver that keeps higher education institutions in business and allows them to serve their mission. Finding a balance between offering a diverse set of programs and services while providing a sustainable return on investment for stakeholders is challenging. It will require a multi-faceted approach to succeed in the education space post-pandemic. More colleges and universities will find themselves in the position of teaching out programs, entertaining merger/acquisition offers, and possibly permanently shutting their doors over the next few years. While higher education is not the only sector at a crossroads during these challenging times, they are a segment that is typically slow to implement sustainable change, which will make it challenging to adapt to the challenges of 21st-century education. Policy decisions within higher education have been focused on private versus public good in the United States (Baer, 2020) [1]. It will take reforming the political, economic, and social economies of higher education to recover from the pandemic challenges and provide an opportunity for real changes in an industry that is not very open to change.

Conclusion

For higher education systems that are notoriously slow to change and adapt, 2020 has posed significant hurdles. Surprisingly, quick solutions were found and implemented using technology to support remote learning. Whether faculty and administrators will be able to build on this adaptability to address critical issues like recruitment, retention, revenue generation, research, risk mitigation, return on investment, and reinvention going forward remains to be seen. Those colleges who fall back into old

teaching and learning patterns may doom their institutions to failure.

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