

The Future of Higher Education

March 2021



The present paper is the result of the conjunction of the following three inputs:

- **Critical analysis of the trends of the higher education sector**, covering the main issues of the actual higher education landscape;
- **Inputs from various studies and articles** conducted by Deloitte in this field, specially the ones related to the pandemic - New Markets, Business Models; New Student Experience, Technological and Physical Infrastructures;

- Subjects addressed on the **webinar devoted to the future of Higher Education in Portugal**, held on the 16th of November of 2020. The purpose of the session was to discuss the future of Higher Education, particularly in a Covid-19 context, sharing new models based on digital transformation and presenting several international practices to discuss the new challenges and opportunities for Portugal. This session hosted several relevant speakers of the sector:



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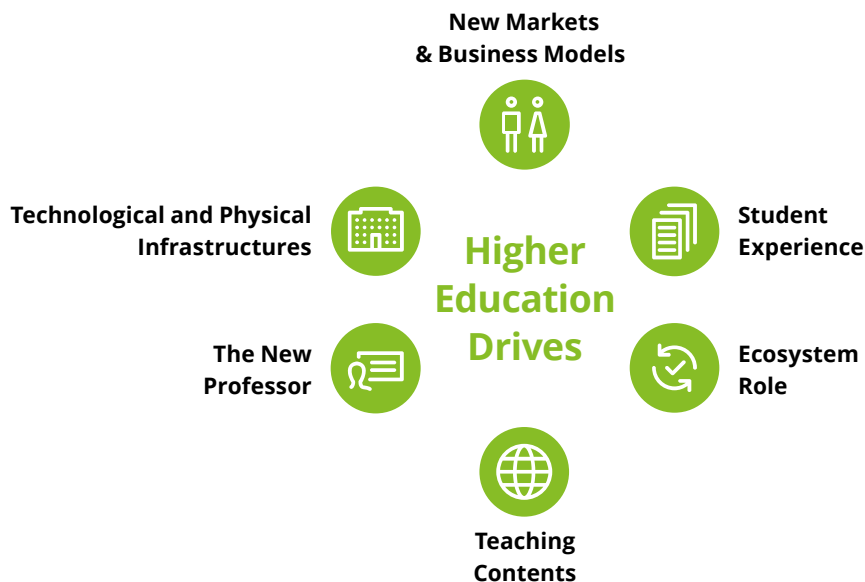


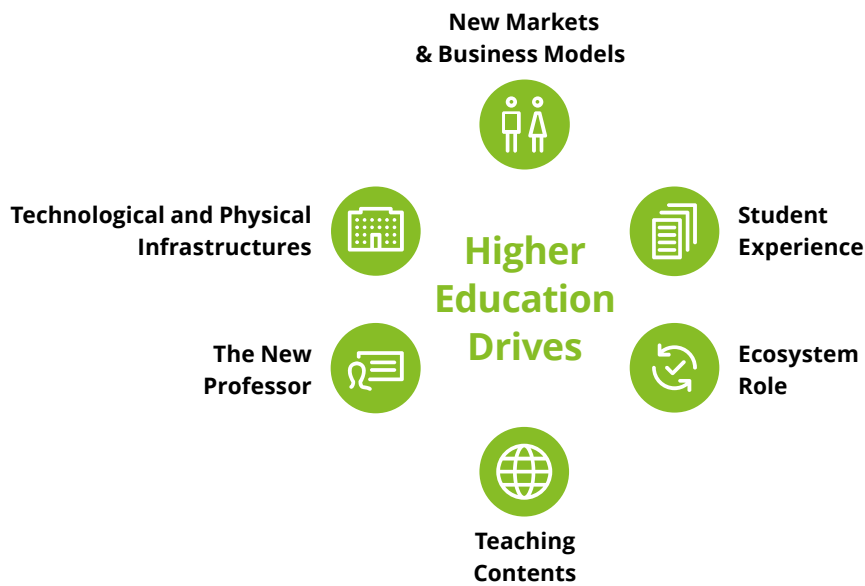
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These three inputs made it possible to categorize several drivers of higher education that we will cover throughout the paper, focusing on three subjects: Student Experience, Technological and Physical Infrastructures, and New Markets & Business Models.





New Markets & Business Models

The need to adjust teaching models, with the sudden generalization of distance learning, leads to a new reality and opens doors to new markets, as well as the consequent need to develop new business models associated with hybrid and / or fully digital models. The diversification of the means available to support the offer translates into one of the greatest opportunities to attract students in new markets for different levels of education and to promote specialized lifelong training.

Ecosystem role

The role of different partners within universities is now more extensive, especially in terms of connection with the business world. This fact not only leads to the better adaptation of training, making it more practical, but also increases future employability. It should also be mentioned that this fruitful relationship between partners and universities also allows for a significant increase in applied research by teachers and researchers, through the provision of services to the community.

The new professor

Teaching may be the most relevant challenge for the teacher of the 21st century. Attracting and maintaining the interest of students and combining the digital environment with face-to-face teaching is probably the largest disruption to the professor's role. More specifically: the professor's ability to use different teaching methods in a wholly proficient way, the need to develop and sustain increasing personalization in teaching, with the pressure to ensure remarkable outcomes in students results.

Student experience

The student experience is one of the major investment strands of top universities. They allocate significant resources to improve student experience, including to both physical and virtual campuses with the goal to provide personalized services to meet the needs of each student. Combining virtual experience with the actual integration on the physical campus currently requires intensified efforts in the digital experience.

Teaching Contents

The challenge inherent to new teaching methods also leads to a relevant adjustment of the teaching content, which is imperative to keep students motivated and interested in increasing their knowledge, increasing their technical skills, and strengthening their social skills. The permanent focus on the development of knowledge and the presentation of the latest scientific developments presents itself as a constant challenge to any university.

Technology and Physical Infrastructure - SMART CAMPUS

The impact of the COVID-19 pandemic meant that universities had to quickly adjust the available technology and increase their technological capacity, communications and digital security, to permit the sudden adjustment from the face-to-face model to the distance learning model. This topic will continue to be a priority for the foreseeable future, as the trend is to heavily focus on new technologies, which will translate into the need for evolved levels of service and cybersecurity.

Student Experience

A recent article, published by Deloitte - Student success by design: Five high-impact, low-cost ideas for college leaders - focuses on how colleges and universities can prioritize student success. It addresses some high-impact and low-cost strategies that academic leaders can use to improve student retention and graduation rates. The research came from several institutions of higher education, and they describe below some of the promising strategies being deployed on their university campus.

Open a campus dialogue on student success

Institution leaders can provide different users with a venue for communicating suggestions and concerns. One proven way is by asking students to submit questions or concerns they want addressed by the heads administrators. Another idea is crowdsourcing a competition for innovative student success-related ideas. This engaged approach can be an opportunity to work directly with students to identify barriers and co-develop solutions.

Look for ways to demonstrate a student-centric culture

In an example, the University of North Carolina at Greensboro created a two-hour training course for staff, faculty, and administrators, helping them better understand how to connect students in need to a wide variety of available resources. Those who complete the course receive a sticker to display in their workspace that says "UNCG Cares." This low-cost, easy-to-deliver training program helped reinforce the idea that UNCG is committed to student success and it signaled to students that they are welcome and that there are people available to help them.

Leverage local resources

Effective local resources may already be available for partnership or redeployment. Small tasks such as consulting the local bus timetable when scheduling the classes can make a big difference for commuter students as class schedules become more convenient. Another idea is to track student success metrics. Leveraging a powerful student success dashboard would allow the university's board to digitize and streamline major academic administrative processes, providing students with a more seamless experience in registration, change of majors, overloads, and importing credits from other institutions.

In conclusion, the institutional transformation in the service of student success is both a marathon and a sprint. Although significant work may be required for long-term transformation, campuses can get started in ways that are relatively swift and inexpensive to execute. With millions of enrolled students already at risk of not completing courses, institutions of higher learning urgently need initiatives they can implement right now, to help as many students as possible achieve their educational and life goals.

Read the full article [here](#).

Technological and Physical Infrastructures



Technological and Physical Infrastructures

When discussing how to improve student success, a common solution that arises is the obvious need to invest in technology. In order to understand its limitations, we recommend reading this complementary article entitled “Five essential principles for improving student outcomes: Student success for higher education”. Some key principles mentioned in this article to help presidents and provosts move forward and improve outcomes are:

- Action taken is as important as the analytical insight
- People investments are as important as technology investments
- Improving student success does not mean a reduction in quality

In this chapter, it is essential to mention the cutting-edge technology under the spotlight. Some of the emerging technologies are: Artificial Intelligence (AI); Digital reality; Blockchain; Learning analytics; and API Economy.



Artificial Intelligence (AI):

The application of human-like thinking in technology is a large driver of innovation in the EdTech space. Here are four key applications for AI in education that have gained traction in the last two years:

1. Improved efficiencies in research

Cognitive insights will enable greater quality of research.

2. Gaining insights in class

Using AI and analytics to proactively identify improved students' learning experience and outcomes.

3. Customized learning

Adaptive learning technologies will enable personalization at scale.

4. AI combined with AR/VR

Utilizing complex data to construct realistic environments and simulated agents that react to user actions.

Digital reality definition:

Augmented Reality and Virtual Reality (AR/VR) technology. Digital reality blends AR/VR technologies with the Internet of Things (IoT) and other immersive/spatial technologies. IoT involves a network of connected devices that brings users, devices, and data together. The combination of this with AR/VR delivers unique and innovative user experiences that blur the line between the physical and digital worlds. These are the potential applications of digital reality for education providers:

1. Classrooms in the digital reality

Enhances remote learning and uses smart technologies to improve interactions within the classroom.

2. Combination with AI

Immerses users in a digital world that mimics our own.

3. Smart Campuses

Smart, connected devices, from the grounds to the classroom, enhances the ability to monitor and interact with a campus, and provides time and location-based information that is contextual and personalized.

Blockchain:

Enables the storage of information on a secure, permanent, historical ledger, which can be both public or private. The predominant benefit of a blockchain is that it provides a fraud-free way of transferring and authenticating information. The potential applications of blockchain for education providers:

1. Trustworthy accreditation

Allow for a more trustworthy representation of educational achievement.

2. Secure databases

Student records that hold private information are kept private from malicious users.

3. Secure payments

Providers can use blockchain payment systems to ensure they receive compensation for their work, and can subsequently reduce their expenditure on payment disputes or legacy systems.

Learning analytics: Education providers will be able to analyse learning data to draw insights into how individual students learn. Providers then have the opportunity to personalize their learning offerings; tailoring them to the learning styles and preferences of individual students. The potential applications of learning analytics for education providers:

1. Course curriculum design

Provide insight into the performance of, and attitudes towards, curriculum design.

2. Student prediction

May be able to predict student outcomes, and subsequently provide timely proactive support.

3. Tailored marketing

Insights can be used to increase recruitment and retention efforts.

API Economy:

Application Programmer Interfaces (APIs) enable diverse applications, platforms, and systems to connect and share data with each other. The use and management of APIs in this manner is referred to as the API Economy, and has the potential to drive efficiencies, growth and innovation. The potential applications of the API Economy for education providers are:

1. Efficient scaling

A centralized developer portal for the university community to design bespoke systems and data sets that can be scaled across the University.

2. New revenue streams

Core assets can be reused, shared, and potentially monetized through APIs, extending the reach of existing services and providing new revenue streams.

3. Enhanced partnerships

Resources could be shared with education and industry partners to create a seamless experience for students and researchers.

Technological and Physical Infrastructures at Deloitte

When it comes to technology, Deloitte is joining forces with powerful industry players to bring essential tools to the sector. One example is the partnership with Workday to support the journey of leading colleges and universities into the Student cloud.

Deloitte understands the higher education sector and cloud-enabled transformation and offers one-stop access to the skills and experience needed to help redesign business processes, deploy Workday Student effectively, and expand its value proposition. Our qualifications are:



A global Workday practice, with experience across Workday Student, Workday Financials, Workday HCM, Workday Grants Management, and Workday Adaptive Planning.



A leading higher education practice, with extensive experience in effecting change within large, complex research institutions.



Innovative thinking and creative problem-solving from employees who have strong higher education backgrounds, some of whom have previously served as registrars, CFOs and CIOs.



In-depth technical skills for integrating Workday Student with other on-premise and cloud-based ERP systems as well as for extending the platform with analytics and advanced digital technologies, such as visualization, machine learning, and robotic process automation.



A thorough approach to change management to help prepare institutions and their users for new business processes, a new user experience with Workday, greater access to information, and streamlined operations.



A multi-disciplinary approach that combines industry-specific knowledge with functional capabilities across strategy and operations, risk management, financial advisory, tax, shared services, and cyber security.



Proprietary, industry-specific methodologies, tools and accelerators, such as Candidate360, and AI-enabled insights & analytics tool for enrolment management in modern universities.



The capacity to transform administrative processes across the student lifecycle, giving decision-makers greater ability to access and analyze data and proactively engage students at the moments that matter most.

More information regarding the service, can be found [here](#).

Higher Education and the Pandemic: New Markets Business Models



Higher Education and the Pandemic: New Markets Business Models

The coronavirus pandemic has upended business as usual for colleges and universities. Not only have campuses shifted to remote learning almost overnight, but institutions are also suddenly grappling with grave financial challenges as economies may now face what looks to be a major recession. The most immediate challenge for many institutions involves cash flow. As institutions lose student fees, parking fees, dining outlet sales, and other auxiliary revenues, they also face unexpected expenses, including partial refunds on fees, rooms, and board, and the need to scale virtual engagement modalities. To ensure continuity in the short term, some institutions will likely need to rapidly restructure their operations. Also, compounding the cash flow challenge is the uncertainty surrounding enrolment. If students are unable to return to campus, colleges and universities could face unanticipated and historic attrition from students who are either unsatisfied with

their distance-learning experience or whose ability to afford tuition in the current economic climate will be inhibited; others may simply decide to stay closer to home in uncertain times. Even well-resourced institutions will find it hard to forecast enrolment for future academic years. For institutions that were already financially stressed or who were operating from a deficit position before the pandemic, short-term unanticipated expenses and longer-term enrollment declines will likely threaten their solvency, potentially forcing some urgent restructuring.

Taking into account the global pandemic, there are several trends emerging in Higher Education:

1.Reopening Plans:

Development of initial in-person campus plans, robust testing and tracing protocols, and recent pivoting of re-entry plans due to coronavirus spread.

2.On Campus Investments:

Substantial expenses on the increase in residential capacity to maintain social distancing, as well as IT and facilities investments in response to instruction changes.

3.Beyond Fall 2020 Planning:

Development of future changes to term-times, funding of large capital projects, administrative overhead contraction, and incorporating enforceable pledges and student codes.

4.Future Trends:

Scalable cost-effective COVID testing, potential consolidation of universities and academic programs due to enrollment challenges, and increases in online instruction.

In addition to mitigating immediate impacts related to COVID 19, several pre-existing trends and pressures on the industry were either augmented due to the pandemic, or remain a key focus for the industry at large.

These are some examples of the focus in different countries:

Canadá

- Student experience
- International Student Recruitment
- Workforce
- Fiscal sustainability
- Revitalizing the curriculum

India

- Lack digital platforms and content
- Accessibility
- Course content altered
- Financial constraints

Denmark

- Space management
- Reduction in public funding
- Research funding
- Disruption of public and private sector businesses

US

- Testing on campus
- Planning for space
- Student enrollment
- Financial sustainability
- Lack of certainty on funding
- Workforce planning

UK

- Approach to testing on Campus
- Student numbers and planning
- Decreasing commercial income
- Approach to Jvs and overseas entities
- Approach to reskilling and apprenticeships
- Financial sustainability
- Lack of certainty on funding and workforce planning



Furthermore, we present some of the Global Higher Education trends and opportunities:

Plan for enterprise risk and resiliency	Institutions stand to gain from a stress-tested risk and resiliency plan – including a strong leadership team and change management approach. They revisit the “supply chain” implications of third-party relationships.
Respond to shifting student demand	Changes in international and domestic student demand will require universities to become more innovative in how they attract and retain students.
Drive decisions using data and analytics	There is likely to be an increased emphasis on decision-making based on accurate and comprehensive data as the value of an education, especially in the liberal arts, becomes more quantifiable.
Rethink administration and operations	Institutions should evaluate the administrative apparatus of the institution (core vs. context) to determine what is mission-critical and seek opportunities for operational efficiency.
Assess financial health	Accelerate discussions regarding medium-to-longer term financial health. If institutional mergers are likely/ eventual, preparations should begin.
Curate the student experience	The in-person, residential modality of many higher education institutions is unique. Assess how to preserve – or adapt – the student experience or “sense of belonging” that often drives enrolment and student success.
Invest in academic digitization	The quick shift to virtual course delivery will impact the educational experience. There is an opportunity for institutions to set or rise the bar on what a high-quality blended or online model can look like.
Prioritize diversity and inclusion	The shift to virtual learning has highlighted inequalities in access to education. Institutions should gather insights into how heightened barriers to access and affordability may shape their target markets.
Revisit the academic portfolio	The perceived value of a degree will likely shift. Advanced technical and agrarian skills may become more favorable than liberal arts as the vocational outcomes of education take center stage. Academic portfolios will likely shift to support this demand.
Bolster relationships with private sector	Align expectations of workforce skills, roles, and responsibilities with the evolving needs of students and society.

New Markets Business Models

To further study new markets and business models for the higher education sector, Deloitte Center for Higher Education Excellence researched how state universities can survive—and thrive—in a new era and presented five new models for state university success. The study was based on the United States market but should be considered when looking at different markets.

All of these proposals are plausible and attainable, but not without considerable introspection and change. These are the studied models: The Entrepreneurial University; The Sharing University; The Experiential University; The Subscription University; and The Partnership University.

Find more about these models and read the full article [here](#).

Resources:

- “Helping to deliver a higher degree of student success”, 2018
- “The future(s) of public higher education”, 2018
- “Student success by design”, 2019
- “The impact of predictive analytics in higher education”, 2017
- “Helping to deliver a higher degree of student success” 2020
- “Elevating cybersecurity on the higher education leadership agenda”, 2018

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