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Do Universities need to Change?

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If you work or have an interest in higher education you will be aware of how this field is changing. In this first of our two papers we consider **some of the challenges you may be facing** and look at some of the **different strategies that are being adopted to ensure ongoing success**. Our second paper will investigate in more detail how technology could be used to support these strategies.

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SOON YOUR IPHONE WILL BE OLDER THAN A-LEVEL STUDENTS!

Gone are the days when eager undergraduates arrived at University, thankful to have a grant and grateful to any passing academic for simply pointing them in the general direction of the library or the labs. Today's students are fee paying customers, with high expectations of service and value for money, while the number of academic institutions and routes to qualification have multiplied to offer a far broader choice in where and how they can choose to spend their money.

The Apple iPhone is now over 11 years old. This generation of applicants have grown up sharing data across social networks, and have an expectation that advanced technology will be an integral part of their ongoing education. With shrinking demographics of the population of student age in Europe overall (1) and intense competition for fees, Universities have told us they are under increasing pressure to keep pace with new technologies that underpin the academic experience, and to actively manage the student experience, whilst continuing to balance their books in a challenging economic environment. In this paper we consider some of the challenges you may be facing and look at some of the different strategies that are being adopted to ensure ongoing success.

In the first part of this paper we focus on student experience and in the second we consider wider challenges around academic talent and operational sustainability.

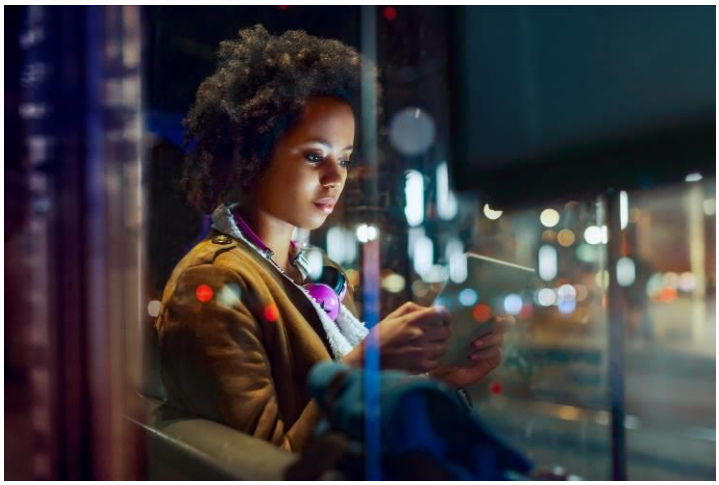
THE STUDENT EXPERIENCE

CHALLENGE: ATTRACTING AND ENGAGING THE BEST STUDENT TALENT

A University starts to interact with students long before enrolment at the start of the academic year and attracting high quality candidates has always been a key concern. Traditionally, Universities have formed links with particular schools and colleges, and run events, courses and joint projects to build relationships and affiliations.

Building a strong student talent pipeline is something that commercial industries, in particular in the technology space, have invested in heavily. Microsoft for example, have for some time been building close relationships with academic institutions, creating online talent communities enabled by software that includes aspects of customer relationship and content management, and have used this relationship for talent profiling and job matching. By segmenting their talent communities, they are able to deliver tailored messages and share interesting information, creating virtual community 'spaces' that engage end users and are self-sustaining. This enables them to tailor the candidate experience to meet the unique needs of that community. This 'relationship recruiting' approach creates a pipeline not just for specific existing openings, but encourages working professionals to spend time on the talent community sites, a source of engaged talent for the future. There is the opportunity for Universities to exploit technology based solutions to help 'level the playing field' within the academic world – any potential candidate with online access can participate – not just those who attend an institution with strong links into Higher Education.

The challenge of finding the best student talent, regardless of background and opportunity, as opposed to the 'best prepared talent' remains a concern across Higher Education. Universities are increasingly required to report on their inclusivity in terms of economic background, gender, race and disability and are running initiatives aimed to address shortfalls. Some students clearly have access to more materials and support in helping them prepare for University interviews. This is a challenge that some Universities are addressing by providing online support to school students and potential candidates to share information about the discipline, answer frequently asked questions, provide links to other sources of information, and share challenges and debate.



This is of particular relevance for vocational subjects, such as medicine, engineering, and law, which may not be taught in schools. Sites such as i-want-to-study-engineering.org (2) provide guidance, problems to solve, and supporting videos and solutions to help students prepare for interview, and ensure the interview itself is less of an ordeal.

During our discussions with Universities they have all identified that using technology to identify and attract the most talented students and using interactive technology to deliver the syllabus is a priority, however their stages in the process of addressing this

challenge are very varied.

Big data, or the collection and analysis of large sets of data to identify trends, has been used in commercial industries for some time. Amazon, Netflix and Starbucks are all companies that use information to drive decision making and, perhaps more controversially, are able to identify which elements of the data they should collect to base decisions on. For example Netflix know that Adam Sandler is popular in Latin America, Starbucks can identify when they can open two coffee shops on the same street without compromising their profitability while Amazon use their information to focus on their customer service (3). All the Universities we have spoken have been performing some level of data analysis on their information. The next step is to take their data on applications, admissions, student performance and outcomes to help support students, manage staff and make better strategic decisions about sourcing of students and academics, course offering, placements and investments.

Many Universities now run 'Student Experience Boards', focused on enhancing and optimising their student interaction. The next steps for the student experience is building this relationship before the student has joined. We've all received countdown emails from holiday companies to help build our interest and tempt us to purchase extras. Proactive communications like this could boost your enrolment process by keeping in touch with students who have received offers but have not yet enrolled. Some Universities, keen to make their enrolment accessible during clearing are now using chatbots to maximise their ability to interact with students. Technology gives you the opportunity to use information about your potential students to proactively campaign for their enrolment prior to this clearing process. Students themselves will often set-up social networks to get to know each other and to network prior to the start of term – clearly there is an appetite to engage from the point of acceptance, which Higher Education needs to embrace and capitalise on.

CHALLENGE: NEW APPROACHES TO DELIVERING LEARNING

Research has found that after the library, provision of technology on campus was most important to students, and Universities have the opportunity to personalise their student experience (4). The Universities we have spoken to have highlighted that they see Student Portals as key to proactively supporting their student population and many are discussing their plans for future investment in this technology. Digital technology provides the opportunity to

'open up' information stored across campuses and this can be used to build a positive interactive relationship with students. These methods increase time spent between faculty staff and students, enable more rapid responses to questions and provision of feedback, and promote cooperation and debate between students.

Technology is also being used to assess progress. This enables faculty to more rapidly identify any challenge areas and look to provide feedback and support to students. This has the dual benefit of improving the education provided, and reducing any potential financial impact of students dropping out. The ability to interactively track and measure student performance also supports the more accurate use of future success predictors in a competitive market. In addition it provides a route to evidencing and protecting the value of a University's qualifications. It's important to keep pace with innovation to ensure relevance. However, solutions need to support a meaningful relationship with students that sustains the experience of University study. A clumsy or poorly implemented effort will not be adopted by tech savvy students.

The three or four year education campus-based model is increasingly being challenged. With the ability to offer secure learning that is no longer based on attendance at lecture theatres, it is time to think about how Universities can provide an education to an expanding global audience, who use technology to interact as part of their daily activities. Master's Degree providers are leading the way with online learning, as their students are often combining further education with employment. Studyportal are offering 5,539 online Masters Degrees and 2,019 through blended learning (6). Online bachelor programmes are also becoming a more popular choice for those not wishing to be limited by their geography. Developing online and blended learning programmes will ensure relevance and accessibility for today's students.

In China 87.7% of their commercial organisations use real time WeChat to run their businesses in comparison to the relatively slow, 'traditional' interactions by email. Such tools may be relevant in supporting and promoting academic debate (5). A secure learning account and online management of learning opens up geographical boundaries and increases the potential student base. This is a timely opportunity for Higher Education, particularly at a time when students are restricting their personal choice due to the impact of fees and wider concerns about the affordability of higher education. Questions many Universities are now asking include: Is there a future for our paper based library? Will it convert into an online learning hub in the future? How will we support online working – for example providing University devices, or following a 'bring your own device' model? What tools will we use to deliver an online learning experience?

CHALLENGE: ADAPTIVE LEARNING

Arthur W. Chickering and Stephen C Ehrmann were ahead of their time. Their famous quote '*Learning is not a*

spectator sport' is actually followed by the lesser known sentence '*Students do not learn much just sitting in classes listening to teachers, memorising pre-packaged assignments, and spitting out answers…..*'(8). Technology brings with it the potential to create an immersive, exciting educational experience. Adaptive learning is one such approach. This uses algorithms to manage interactions with the student, identifying the needs of that student, and providing customised learning activities and resources to address them. This is a complex solution, based on elements from computing, AI, psychology, psychometrics and education.

Georgia State University Center for Teaching Excellence and Learning in the USA, is at the forefront of this development. They are already piloting online adaptive solutions that are used both on campus and offsite (9). Their Adaptive Learning Courseware adjusts to the personalised learning needs of the students. The courseware uses assessments to adjust which information is delivered to students, and provides automated and predictive course feedback to instructors as well as students to help guide instruction and self-directed study. There is opportunity for Universities to use this technology to create a personalised student experience.

ACADEMIC TALENT AND OPERATIONAL SUSTAINABILITY

CHALLENGE: THE COMPETITION FOR ACADEMIC TALENT

To remain competitive in the academic marketplace the focus on recruiting, retaining and developing talented academic staff is crucial. The brand of the University and the opportunity for cross institution collaboration and career development are key drivers in the absence of the standard commercial model for rewarding capability and performance. Competition is considerable and Universities need to consider providing a framework for developing and retaining research talents from the University's graduate and PhD programmes onwards. Performance systems with self-assessment and peer review for research and clarity regarding career paths ensures a management focus on talent and career development and perhaps more importantly a route for academics to

discuss career progression.

In 2016-17 there were 206,870 academic staff employed at Universities and 212,840 non-academic staff (9). The ratio of support staff to academic staff continues to increase. The continued focus on the operation costs of Universities further drives the need for development of talent within the professional services functions. This group are able to drive digital transformation, maximise productivity and effectively manage indirect cost through focus on automating and streamlining processes, to ensure funding is available for teaching and research is maximised. These types of activities are commonly addressed within the Commercial sector, and again there is benefit in reviewing ideas and innovations and considering how these might be applied within Higher Education.

CHALLENGE: IMPROVING VALUE FROM EXISTING TANGIBLE AND INTANGIBLE ASSETS

Any opportunities to enhance revenue should be considered. One approach many Universities have used to great effect is to make extend the use of their campus facilities to generate revenue. When facilities are taking 23% of your OPEX making these assets work a little harder makes sense. Conferences, summer schools and visitor rentals are all used to generate income during the long summer break.

Other assets may be less tangible. A carefully nurtured Alumni network can help develop the future employability of graduates. Having a high percentage of graduates placed successfully in employment enhances the reputation of any Higher Education body, encouraging further applicants. Further, alumni may be instrumental in raising funds and providing donations to academic bodies, both to fund research and to help maintain operations. Many commercial organisations, in particular in the professional services sector, have invested significantly in building and maintaining their alumni networks.

Initiatives include maintaining alumni details from point of exit, engaging through regular e-bulletins sharing topical articles and discussions of interest, running specific alumni events involving industry and thought leaders, and launching initiatives which allow alumni to contribute socially. These networks take time to build up, but can pay dividends in the long term and provide multiple opportunities to Higher Education to retain and build on their relationships with students and employees alike.

CHALLENGE: THE COMPETITION FOR FUNDING

In 2015-16 nearly 46% of academic budgets came from fees (9) ensuring the competition for students remained fierce. For example the teenage population in the UK will decline steeply between 2015 and 2020. This is balanced by an increasing demand from the EU and the rest of the world. For example, UCAS reports for 2018 that applications from the EU increased by 6% after a dramatic fall in 2017. However, by far the biggest increase

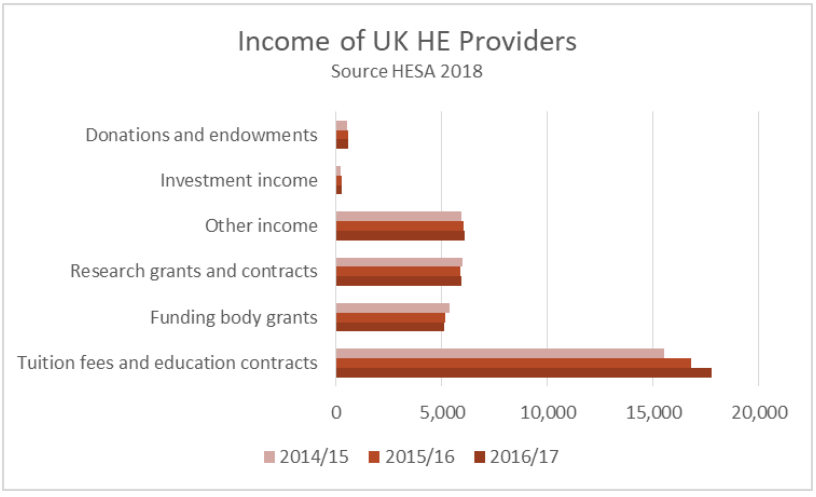
came from applicants outside the EU with an increase of 12%. When examining the HESA Income Report Summary opposite we can see the ability to appropriately attract and track funding grants is a core requirement as it drives 31% of overall funding. However government funding of grants is declining as the reduction in Higher Education budgets are passed through to the sector.

Universities who are reliant on grants for large proportions of their funding are understandably uneasy of the impacts of Brexit. Some institutions have set up branch campuses outside the UK and those that don't have a presence are starting to invest in Europe.

What can we learn from Universities in the USA, where student self-funding is a relatively mature approach? The Times Higher Education Magazine highlights that Moody's Bond Rating agency has moved University ratings from stable to negative. One hundred private Universities have closed since 2009 and a further 40 have merged since 2000. The key reason for this decline is that revenue is not keeping up with operating expenses. Innovation and change is needed to manage this equation. It seems likely that we can expect to see this trend emerging in the UK. 55% of UK University operating expenses are committed to teaching and research (9), including the cost of staff. Initiatives that provide greater transparency of costs, and help manage them more effectively should be considered. There are also opportunities to review current spend in technology, and infrastructure, as well as facilities such as libraries and museums. However it can be difficult to initiate these conversations in an academic environment, where 'cost management' may be interpreted as compromising the quality of the education provided.

CHALLENGE: FLEXIBLE STAFFING MODELS

Academic institutions are facing multiple challenges around their staff management process which are often expensive and manual. One or two year contracts relating to research grants are to be expected (9) however the wider influence of global markets, financial pressure, changing student expectations and the change in expectations of staff themselves is also influencing the approach to staffing.



As part of this approach Visiting Lecturers continue to be important to the operation of the University. Some are employed for a short period of time to deliver teaching or meet research agendas. Others may be Lecturers that already have a permanent position at another University, who spend a short time lecturing or researching at another University by mutual agreement of both institutions. It is important that Universities continue to offer opportunities for visiting lecturers, for academics to

develop their research in new directions, develop their careers and also increase the profile of the hosting University. National and international alliances open up opportunities for collaborative research and provide access to cross institution projects and the associated grants.

Universities we have spoken to have cited that, operational management of these Visiting Lecturers poses a real challenge. Problems include: their intermittent presence on site; the need for them to reflect the culture and values of the institution in which they are teaching or researching; the management of their hours worked and their pay entitlements which adds further complexity to an environment where many academic staff are expected to perform multiple roles on differential pay scales. For example an academic may be responsible for both hosting a lecture and marking exam papers, however the monetary value for these tasks may be different. All staff, academic or not, expect to be able to easily record the hours they have worked, onsite or offsite and get paid correctly for their work.

Some universities are using technology that provides the ability to record and approve time remotely and track hours worked. This is ensuring accurate remuneration for work done, and more importantly replacing existing heavily manual processes. In the longer term a collaborative approach to the management of Visiting Lecturers by professional services functions at Universities could jointly address this challenge to deliver further savings.

Gaining access to insightful data is therefore a key requirement for Universities as well as commercial organisations. The ability to understand what is happening within the institution is transformational. If you are an employee of the university you need to be able to access information relevant to your role including monitoring project spend, student income, expenses approval and grant management information. Data can be analysed to understand for example which courses generate the most interest, the most revenue and best results. There needs to be a single version of the truth – critical spend can no longer be managed through Excel files maintained in local campuses and schools. The reliance on fees and grants means that Universities should no longer just have month and year-end financial reports – with only an understanding of spend after the fact. The most advanced Universities are running “what if” scenarios around finance, workforce and student numbers to help ensure that the long-term strategy is on track.

The tracking of grants through online project management capability that feeds into Finance and HR systems gives academics and other parties involved in the research dynamic information on the status of their grant and the tracking essential for audit.

CHALLENGE: COST MANAGEMENT

The debate over whether a University should be regarded and run as a business remains a controversial one. Regardless of perspective, audit and reporting regulations require a business-like approach if compliance is to be maintained. However, as shown in the spend summary below there needs to be a careful balance between the maintenance of the unique

learning experience against cost management and cyclical budgets.

University Spending Explained Source:Universities.ac.uk	% of total expenditure
Teaching and Research	55.7%
Libraries, IT and museums	8.7%
Running the university	8.0%
Financial support to students and outreach	4.0%
Student and staff facilities	3.4%
Maintaining campuses	11.7%
Accommodation and conferences	5.2%
Other expenditure	3.3%

All Sectors have considered reducing costs and achieving an improved service through the centralisation, sharing, or outsourcing of professional services functions such as HR, Finance and IT. Yet many academic institutions are still focussing on a non-sustainable, 'salami-slicing' approach to cost cutting in an attempt to preserve traditions of academic life. If a university has not started thinking about shared services, or has not already streamlined their internal processes and upgraded their technology solutions, then this is clearly an area that requires exploration.

Commercial organisations have maximised their interactions with Business Process Outsourcing organisations for decades (since the late 1990's) in particular in ICT and Facilities Management. With standard approaches in place the opportunities to remove indirect costs through collaboration and releasing funds to further invest in the direct, 'customer' facing elements of the university it is worth consideration. If sharing services with other academic institutions still seems a step too far, an alternative to reducing total cost of ownership is to review on premise IT solutions, and consider investment in cloud based solutions to replace onsite, maintenance intensive systems. Understanding where there could be improvement is the first, critical step of managing costs and the Association of University Procurement Officers (AUPO) are well placed to use data to manage the cost of commodities and potentially demonstrate the value of collaboration across Universities through reinforcing managed spend. A common, collaborative procurement framework would enable Universities to assess the services that they are receiving or providing against the costs of delivery to ensure that each University is always spending more on instruction and research than on anything else.

Information on the cost of professional services functions and the maintenance of asset intensive campuses is not commonly shared. Whilst providing Higher Education Statistics Agency (HESA) reports can be a resource intense activity for those institutions that have not yet automated the process, there is an opportunity to work with the agency to identify data that already exists. This in turn can be used to drive benchmarking and identify strategic, sector wide approaches to managing costs.

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