REIMAGINING THE UNIVERSITY IN A STUDENT-CENTRIC WORLD
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IN BRIEF
Changes to the regulatory landscape, student and employer expectations, and the technology landscape herald a new era for higher education. For example, the Higher Education and Research Act of 2017 led to the creation of the new Office for Students (OfS) in England, which is intended to promote a greater variety of options and opportunities for students around what, how, and where they study. In the United States, the priorities of the US Department of Education reflect a similar concern for connecting career-related outcomes with the university experience, due to increased student demand and decreasing enrollments (for example, the National Student Clearinghouse Research Center reported an overall decline of 1% in the fall of 2017).

The incoming cohort of Gen Z students constantly and seamlessly blend physical and digital (“phigital”) interactions across their personal, educational, and occupational streams. They have low tolerance for what they perceive to be an inappropriate mix of modes or interaction models that compromise their ability to multi-stream.

Universities have traditionally based the delivery of their teaching and learning mission on a teacher-centric, curriculum-based model. Some forward-thinking universities are now pivoting to a student-centric approach, encompassing both enhanced student choice and a transformed student experience. Student centricity goes well beyond simply having a strong student focus; it fundamentally redefines the “contract” with the student, moving from a promise to deliver a high-quality course experience and related services, to an agreement to plan and deliver a personalized individual learning journey closely aligned to the student’s personal goals. This presents a complex challenge: to transform both the way they interact with students and the way they engage with and deliver education and other services to a student. To achieve this, the university will need to be reimagined and realigned. It will require concerted action across a broad front.

Many schools are reliant on decades-old legacy systems, many of which are either homegrown or customized so heavily that they require a great deal of maintenance and yet often do not reciprocate the effort by providing acceptable levels of value for their users. The cost and disruption of replacing these outdated systems can be substantial. Benefits, particularly with like-for-like replacement, can be minimal. Finding an optimal mix of initiatives to deliver
modern, stable platforms while sustaining forward momentum can be difficult, particularly when the organization is on the cusp of change.

While there is no single optimal model for the future university, and no single plan of action that universities can adopt, we offer four future university archetypes. In addition, we outline the technologies and systems that can help institutions address the challenges of becoming student-centric.

While each university will create a unique future, and take an individual path to getting there, there is significant value in leveraging experience from other institutions. Partnerships with experienced and forward-looking vendors or service providers can also be an excellent way to harness specialist expertise to assist with strategy development and enhance implementation.

KEY MESSAGES

• Putting the student at the center will transform universities.

• There is likely to be significant diversity in university mission and execution across the future higher education landscape.

• Achieving student centricity will require better technology and data-driven insights.

• Partnerships are critical in navigating a path to the future.

PUTTING THE STUDENT AT THE CENTER WILL TRANSFORM UNIVERSITIES

DRIVERS OF CHANGE

DIGITAL NATIVES ARE KNOCKING ON OUR DOORS

The digital-native students entering universities today expect and demand the same kind of personalized digital experience in their use of educational technology that they receive in their consumer technologies, and are often disappointed by the former. For example, if students are accustomed to the ease of interaction with consumer smart assistants (e.g. traffic delays from Siri, reordering school supplies from Alexa), they will want similar features from campus-branded applications: for instance, a voice-activated, AI-enabled virtual assistant, perhaps branded as the campus’s mascot, to facilitate the purchasing of course materials or tell them how many available parking spots are available at the lot closest to their classroom building, along with instructions for navigation to the closest one.

Even the mode of delivering services will be changed; new university entrants blend their physical and digital interactions – from engaging with advisors to watching recorded lectures online – and social learning has permeated all facets of delivery.
While this is a large shift from the traditional, face-to-face university experience, a phigital experience offers students the convenience and personalization they desire, while simultaneously providing universities with greater opportunities to understand and enhance the constituent experience and improve operational efficiencies at the university.

Moreover, the commonality between consumer and educational experience goes beyond their use of technology. Students today think of themselves as “buying” access to a university experience – paying fees, tuition, and course materials – and want to feel like active, rather than passive, participants in a unique journey at a university that fully understands and meets their needs and desires.

GOOD AND TIMELY DATA WILL UNDERPIN OPERATIONAL, EDUCATIONAL, AND STRATEGIC DECISIONS

Student success is predicated on a multitude of factors from within the classroom to across the campus, from ease of registration to access to advisors. A student’s success, in other words, is not determined solely by their experience within the classroom, but also by their holistic experience while enrolled at a university - and beyond university, by being equipped with the tools and skills they need to gain employment and successfully navigate life. Therefore, all relevant data and interaction history needs to be available to both the student and the relevant staff member, in order for options to be evaluated and outcomes to be facilitated and tracked. For institutions, data beyond the transactional data warehouse is needed to face the challenges of increasing efficiency and effectiveness in the face of internal budgetary pressures and external challenges, such as the increasing debate over the lifetime value of a post-secondary degree. Recognition of this is seen in universities’ strong investment intentions in analytics to improve insight and application of data, and in CRM systems which capture “soft” data on the status of the overall student relationship. Ovum’s 2018 ICT Enterprise Insights survey found that 58% of universities rank both CRM and analytics among their top three projects.

AI is starting to interact directly with students in information provision and advisement. If this trend continues, we can soon expect intelligent agents to be suggesting individual learning pathways to students, based on machine learning correlations of the thousands of students that have gone before.

“We can soon expect intelligent agents to be suggesting individual learning pathways to students.”

TRADITIONAL COURSES AND DELIVERY MODELS ARE INSUFFICIENTLY FLEXIBLE TO MEET THE WORKFORCE-DRIVEN DEMANDS OF THE FUTURE

In the past decade, there has been an industry-wide move towards unbundling courses and programs to meet modern student expectations. We foresee that a more personalized educational experience, enabled by the unbundling of courses and subjects, will be an industry-wide shift, as university students want to create the educational path that best befits their academic and career interests. Studies show that modern students are likely to have five substantially different careers in their working lives; as such, they need concrete evidence of the diverse workforce skills and abilities that employers desire.

This focus on linking the learning experience with professional outcomes will shape curriculum design at universities, as new university entrants will want to attend the school – or schools – that enables them to graduate in the most time-efficient fashion with the kind of degree or credential that leads directly to their chosen career. There is a gap between what institutions...
and employers perceive to be job-ready skills. A 2017 study by The Open University reports
that a lack of qualified entry-level employees in the UK will cost businesses £2.2bn yearly to
fill job vacancies. Similarly, the 2018 Job Outlook Survey, published in February 2018 by the US
National Association of Colleges and Employers, found a dramatic disparity between employers' perceptions and recent graduates' perceptions of how well their education had prepared them for work; for example, 79% of students considered themselves to be skilled in oral/written communications, while only 42% of employers agreed.

And as institutions receive greater and more timely insight into the courses and skills that are in greatest demand, their hiring decisions, timetabling, and course content decisions may change (e.g. pacing offerings against immediate market demand, splitting and re-combining traditional offerings, or changing the mix of online/on-campus opportunities), thus impacting both their academic mission and pedagogical approach. In the UK, for instance, the DfE’s 2016 call for evidence revealed that 73% of higher education providers reported interest from students and employers for accelerated two-year degrees.

With the opportunity for students to shop around for the best combination of learning opportunities, institutions have leveraged the benefits of assessment across a student’s body of learning as a key factor, alongside academic quality and the cohort experience, in maintaining student loyalty. The weight of assessing general academic achievement has moved from the demonstration of competence in handling a specific body of knowledge to general competency in acquiring and employing new bodies of knowledge. As well as building a progression in academic competence within a single subject area, the institution has created ways to assess and credit development across all selected areas of study. Employers have embraced this trend, desiring “T” graduates: that is, those with specific skills and knowledge for their initial role, complemented with broad-based skills that facilitate collaboration, flexibility, and innovation.

Given the rapid evolution of roles and the employment market, it would not be unreasonable for students to expect that institutions would deliver, with pinpoint accuracy, the optimum content and learning experiences to meet their personally desired career path.

“A focus on student centricity will take institutions away from an instructor-centric or course-centric model.”
COMPOUNDING THEMES OF CHANGE

We envision that the forward-thinking university will, therefore, take an approach that transcends historical university structures, where data is siloed and interactions and insights are limited across functional boundaries. A focus on student centricity will take institutions away from an instructor-centric or course-centric model to one where the needs of the largest and most important group of constituents, who desire a personalized and consumer-like experience, is foregrounded. To enhance student success, a smarter campus will be needed, enabled by emerging technologies and smarter systems. Together, the changes to course structure, pedagogy, and student and employer expectations will necessitate a change to the culture of the institution as well as its technologies. We see four broad archetypes of student-centric universities emerging.

FUTURE UNIVERSITY ARCHETYPES

What follows is a deliberately provocative look at what might be. While these scenarios are certainly possible, the intention of the discussion is not so much to provide prediction, as to illustrate that market forces are likely to upset the status quo in non-trivial ways. Universities in the US facing declining enrollments are closing or consolidating with other institutions, and it is likely that a similar outcome awaits other institutions unable to adapt to market realities. For world-leading universities and world-leading courses, reputation can be expected to provide some insulation (at least initially) from changing market demand and new entrants alike. For mid-range players, however, the competitive landscape is likely to be fierce.

DYNAMICS THAT COULD DRIVE THE SHAPE OF FUTURE UNIVERSITIES

CHANGING STUDENT AND EMPLOYER DEMANDS WILL TRANSFORM COURSE STRUCTURE

Given the drivers discussed above, there is a significant likelihood that traditional curriculum-led course structures will give way to individual learning pathways delivered with flexible combinations of significantly more atomic learning outcomes.
At one extreme of this dynamic there is a radical shift to pathways structured around individual learning outcomes. At the other, a broad-based, curriculum-driven education reigns supreme.

Two student life-moments drive the agenda:
• I’m finishing school, and need to get started on a rewarding career path.
• My current role has become unsatisfying or unsustainable, and I need new thinking and tools to meet my next career challenge.

ECONOMICS AND REPUTATION WILL CREATE MEGA-INSTITUTIONS OR NICHE PLAYERS
In many education marketplaces worldwide, there are already successful specialist institutions. In some marketplaces, there have been two contending dynamics at play: specific-focus institutions being merged into larger institutions (e.g. Teachers Colleges merging into universities, such as Wheelock College’s planned merger with Boston University in the US) and new niche-player market entrants successfully carving out a market amongst larger institutions (e.g. professional development being delivered by industry bodies rather than universities).

The extremes of this dynamic are large institutions delivering wide-ranging education, and niche players focusing on excellently delivering a single course or specializing in delivering courses to a single professional group.

Another outcome of this dynamic is seen on the global stage: a broad-ranging institution in its local context can also be a category-killer in a specific market more broadly. In pharmacy, for example, the broad-based universities delivering the top five pharmacy courses worldwide are drawing far higher proportions of international students to these courses than their institutional average. Increased online learning is likely to increase the concentration of students in category-killer courses at the expense of less well-regarded offerings.

THE TWO KEY DYNAMICS COMBINE TO COMPEL UNIVERSITIES TO DIFFERENTIATE
Looking at these two dynamics in their various combinations indicates four potential future university archetypes (Figure 1).

ALL CAN BE EXCELLENT, NONE IS NECESSARILY BEST
Each of the four university archetypes has advantages in specific educational marketplaces. We believe all are possible, as are some combinations – particularly those that deliver flexibility in student learning pathways and have a course mix that includes reputation-building, flagship offerings.
SOCIETY BUILDER – A BROAD-BASED MEGA-INSTITUTION

“All things to all people”

The progenitor of the bottom-right archetype is the existing large-university model, which has continued to be popular with those looking for a career-launching, well-rounded education.

A traditional cohort experience remains a key focus, despite extensive use of online learning and collaboration (used either standalone or as a supplement to traditional campus-based education). However, lock-step, large-group delivery is no longer the norm, as the realities of earn-while-you-learn have shifted the balance away from business hours and mass face-to-face delivery of core content. The predominance of flipped classrooms and other new teaching methods has compounded this trend, leaving large lecture halls vacant for a substantial proportion of the week and pushing utilization of smaller formal and informal learning spaces to the limit.

“Focused breadth” has become the watchword of building the academic program as this archetype is most at risk from changing market dynamics. The cost pressures of maintaining a broad palette of course options has amplified the economic issues related to cross-subsidizing offerings with solid academic merit and marginal economic viability. With surplus-generating departments facing increased global competition for enrolments, and the burden of maintaining legacy facilities that are seeing less utilization, the society-builder university is experiencing decreased margins and is focusing on delivering highly efficient administrative processes and services to reduce costs while sustaining academic quality.

EDUCATION SUPERMARKET – AN UNBUNDLED MEGA INSTITUTION

“Everything you need to build a career”

The need for continuously updated job skills and a pragmatic view of the value of qualifications has resulted in course unbundling: a concept enthusiastically embraced by students, who are seeking to build up their education portfolio with the specific skills they need for today and tomorrow. The fragmentation of individual learning journeys has intensified the trend away from lock-step learning, and face-to-face delivery of base information has largely disappeared as flipped classrooms have become the norm, particularly for house-brand products, and the emphasis in human interactions is on applying, rather than simply understanding course material. We foresee prerequisites no longer being the predominant factor in accessing more advanced units of study. While still present, they are one factor in a broader calculation of how likely the student is to successfully complete the unit of study, significantly reducing subject lock-in at later stages of a course.

In a fiercely competitive market, larger institutions have responded with a smorgasbord of topic offerings, which can be flexibly combined into a qualification. This concept is best illustrated by the idea of the “education supermarket” in which “premium products” (the university’s own courses) are complemented by “house brands” (ready-made courseware from an external provider, supported primarily by tutors). Students can assemble a basket of learning products, optimized for their needs and budget.

A key challenge for the education supermarket is in ensuring that the cohort and extra-curricular experiences that contribute to the broader life-skills benefits of attending university are not lost.
CATEGORY KILLER – AN UNBUNDLED NICHE PLAYER

“Singular excellence”

Focusing on a specific industry marketplace, specialized universities are able to tailor unique educational experiences, precisely tailored to an individual’s needs within a limited vocational scope.

This is a reversal of a previous trend of absorbing single-purpose colleges into larger comprehensive institutions, triggered by industry bodies wishing to have a greater say in content and conduct of courses than can easily be facilitated in a mega-institution.

Career-building networking opportunities are a feature of the category killer, as entry-level learners mix with more advanced students and industry-leading guest teachers across the subject offerings. Industry-based learning opportunities complement the learning experience and provide a far more effective selection process than traditional job interviews.

This institution’s success is based on its ability to pinpoint and deliver the exact learning experience needed to advance each student’s next career step, and ensure high employer satisfaction with work-ready graduates.

Maintaining sufficient diversity of viewpoint to provide a broad, stimulating intellectual environment is a challenge for the category killer, as humanities and sciences perspectives are less likely to cross-pollinate in a focused curriculum.

ELITE EXPERIENCE – A BROAD-BASED NICHE PLAYER

“The best for the best”

It is the clientele, rather than the curriculum that is niche for this university archetype. Relationships and reputations are built for life as students interact with others destined for greatness, and with teachers who have already achieved it. While this type of university is perhaps more recalcitrant to change – thanks to reputations founded upon centuries of established excellence – they too must consider the impact of globalization and changing student demographics.

An excellent curriculum and modern teaching methods parallel the cohort experience, as elite millennials are no less wedded to their personal technology, and no more patient with poor delivery, than the rest of their generation. While there will be some vocational focus to the curriculum, the emphasis will be on developing students’ fitness to lead as they pursue career-driven outcomes.

The student pipeline into doctoral programs is especially important for this kind of university, which boasts world-leading research across a broad base.

Access for high-potential, socially disadvantaged students may sharpen as an issue for public elite universities, given the increasing prominence of social media in giving voice to previously unheard themes in the public dialogue.
Underpinning success for all four archetypes are two critical issues: being able to optimize the outcome for each individual student by taking a student-centric approach to all aspects of the relationship, and finding the right external partnerships to complement internal capacity on the change journey.

In the US, the “system” universities have long provided some differentiation across their campuses, encompassing discipline specialization but also differences in their learning approaches and environments. The concept of an umbrella institution, supporting more than one of the archetypes, is certainly possible; however, the implementation would need to deliver efficiencies and flexibility, rather than simply adding extra overheads and constraints.

The recent acquisition of Kaplan by Purdue University may be a precursor to other strategic amalgamations, and not only in the US market. Aggregators are not new to the education market; Coursera and Open Universities Australia, to name but two, offer selected courses from a range of partner institutions with a specific value add, whether it be a common learning platform or mix-and-match degrees from across the partner institutions’ course offerings.

ACHIEVING STUDENT CENTRICITY WILL REQUIRE BETTER TECHNOLOGY AND DATA-DRIVEN INSIGHTS

IMPROVING RELATIONSHIPS AND INTERACTIONS ACROSS CAMPUS

Whichever of the archetypes (or combinations of them) a university chooses, the market is clearly moving toward being more student-centric. Many institutions are moving toward having one platform that consolidates all aspects of the university’s relationship with the student: academic, administrative, and support services. This is customarily an institution-wide CRM implementation that links into core systems such as the student information system (SIS) and learning management system (LMS). However, achieving student centricity will take more than just implementing a CRM system, but will require utilizing technology and accessing data that can improve relationships and interactions across the campus.

“Achieving student centricity will take more than just implementing a CRM system.”

CHARTING A WHOLE-OF-LIFETIME RELATIONSHIP

True student centricity cannot be achieved by even the strongest standalone CRM platform. Many institutions are using advanced CRM systems in the recruiting phase to deliver high levels of engagement and personalized attention to prospective students, alerting them about submission deadlines or sending them targeted messages based on their indicated topics of interest in terms of programs of study, extracurricular activities, etc. Once enrolled, these students often report feeling neglected or out of place as the level of interaction and personalization has dropped away. Disillusionment and disengagement can result. Maintaining a high level of personalized interaction across the entire student lifecycle is an imperative.

We foresee that the most innovative, forward-thinking institutions will ultimately move to a comprehensive system of engagement that thinks beyond the CRM to include key applications like the SIS and LMS to fully manage all of the relationships and data necessary to offer total student support and drive student success. As a result, it is necessary to have integrated solutions across the campus that are able to share data and insights with each other in order to achieve that ever-elusive 360-degree view of the student that will best enable success. This
student lifecycle management should extend to its graduated students, so that the institution can create a more meaningful community of current and former students and improve alumni engagement, advancement, and networking opportunities. In progressing this vision, Ovum’s ICTEI Higher Education survey reports that 49% of institutions are intending to increase their CRM investment, and 53% their analytics investment, in the 2018/19 budget period.

DIGITAL CHANNELS ENHANCE MOST INTERACTIONS
Services that make the most of artificial intelligence (AI) and other technologies that are becoming common in the consumer world, such as intelligent agents, augmented reality (AR), and video, have the potential to dramatically improve institutional services, and thus increase constituent satisfaction and student success. The Higher Education survey indicates that 67% of education institutions are intending to apply AI to CRM in the next 18 months.

Many vendors are embedding automated capabilities into their solutions that have the ability to provide the kind of timely interventions and alerts that can improve the constituent experience. For example, sending out timely automated alerts about approaching registration deadlines or reminders that financial aid forms have not yet been submitted will improve constituent experience and avoid later problems that might result in a student withdrawing from the institution. Similarly, increasing a university’s self-service capabilities will improve the rate at which forms can be accessed and transactions can be processed. While applying to study-abroad programs may previously have been an arduous, paper-based procedure, the creation of a self-service center can dramatically expedite this process and reduce levels of frustration. Chatbots are increasingly assisting and facilitating routine transactions, answering frequently asked questions, and helping facilitate course enrollment. These technologies should be thought of not as replacing human labor, but as improving the quality of the work that can be done, allowing staff to move beyond rote transactions to higher-level and more-qualitative interactions with students.
ALIGNING LEARNING OBJECTIVES WITH STUDENT NEED

New technologies are enabling teaching and learning – the cornerstone of the student’s educational experience – to shift from the traditional instructor-centric model to something that offers greater opportunity for student engagement and interaction. The US has seen an explosion of competency-based education (CBE) in the past decade, which may well translate to the UK. In this learning model, students’ progress towards a degree or certificate is determined by their demonstrated mastery of a skill, rather than by time in seat; this can be a much faster, more efficient process, particularly for those adult learners who have already mastered some of these skills in the workplace. We predict that institutions with a more traditional delivery model will delve more thoroughly into this market (as seen by Southern New Hampshire University’s College for America, or the University of Wisconsin’s Flexible Option).

Such a flexible approach will demand that the LMS and other mission-critical systems become more flexible and configurable to support shorter or non-credit hour based learning models. For example, an LMS supporting CBE will need to be able to release new “modules” of the course after the completion of the previous module, and the ERP will need to be able to support non-credit hour based financial aid. Other tools like VR and AR can allow distance learning to be made immediate and enable students to engage with learning materials in a new, and even hands-on, way. For instance, medical students can “operate” on a virtual body through AR devices, or students in an Ancient Cultures class can “tour” Pompeii, thanks to VR.

Moreover, distance learning courses, an increasing market in higher education, offer students greater flexibility and can often be less expensive than an in-person course. While a key incentive is the ability to learn on their own schedule, response to queries about the learning materials may be delayed, as the instructor may not be able to respond in the timely fashion that the student would like in order to proceed in a timely way, and their progress may thus be delayed. Implementing emerging technologies like chatbots (to provide answers for frequently asked questions) can be a solution. In addition, adaptive learning platforms like CogBooks or Smart Sparrow use machine learning that, after the student assesses their own understanding of the course materials, can provide recommendations for additional learning materials, or supply information in the formats that work best for the student (e.g. more video for the visual learner).

As universities increase their digital engagement, staff must adapt their own roles as well; for instance, instructors should offer opportunities for interaction and engagement in online lectures (perhaps with quizzes or message boards), while libraries should digitize their more in-demand materials to provide convenient access for distance learners.

TECHNOLOGY ENABLES STUDENTS TO TAKE OWNERSHIP OF THEIR EDUCATION EXPERIENCE

As students are increasingly drawn to the notion of having their entire journey across a campus being conveyed in a visual way that’s easily and universally understandable, badging becomes an increasing topic of conversation. Digital badges, which can be stored and displayed via online portfolios, networking sites, and resumes, are embedded with metadata that provides in-depth explanations about the accomplishment, the issuer, and other evidence that allows the reader to verify the achievement. These digital markers can drill down much more precisely into specific academic or extracurricular skills than a resume could. For example, instead of a degree in computer science, a badge indicates the user’s mastery of Java or C++, which is a much more useful data point for a prospective employer. While not common in the UK today, badging is one way in which a skills portfolio, which might not be entirely university-gained,

Badging is one way in which a skills portfolio can be assembled.
can be assembled and presented as evidence of employment readiness. Conversely, IBM has partnered with Northeastern University in the US so that users can put IBM-issued credentials towards three Northeastern master’s degree programs – another demonstration of the ways in which education and professionalization can be complementary processes.

It is not uncommon for students today to transfer from institution to institution or pick up credits from other schools to fulfill their own goals, but as a result, it can be difficult to keep track of their earned credits. Blockchain, with its ability to verify and securely store data, has useful implications for institutions. It can securely protect and prevent transcripts from being altered, so that a prospective employer can immediately verify that the applicant’s qualifications are accurate (a major concern in the hiring process, as one recent study suggests that one out of three applicants have lied on their CV about their academic qualifications – the grades they earned, the major they pursued, and even the college at which they enrolled). Using blockchain as a way to secure and verify academic credentials, even those from different universities or programs, can also cut down on administrative costs for an institution, as they will no longer have to employ excess staff to field employers’ queries about former students’ qualifications. From the student perspective, the shift to trusted, publicly verifiable education records delivers a key element in their life story from the institution’s hands into their own.

ACCESS TO BETTER DATA ENABLES STUDENT CENTRICITY

Most institutions have access to far more relevant and timely data than they are currently leveraging to their benefit – in designing and delivering the academic mission, in relieving the administrative burden for staff and students in an increasingly complex world, and in the efficient operation of their physical and virtual campuses. Using analytics effectively across the campus can provide an institution insight into all facets of its performance, from how its budgets are being spent and allocated to what courses are in greatest demand.

Access to broad streams of granular data is a key enabler of student centricity. Starting from all available data related to a particular student, questions can be asked of how they are performing compared with their peers and whether interventions are needed for this particular student, and can trace the impact of past actions, by both student and staff, on progress toward the agreed goals. This kind of evidence-based, rather than opinion-based, decision-making can transform the individual student’s journey and can also reveal to the institution where policies and traditional practices are hindering, rather than promoting, student success.

Such insights will make the institution more intelligent and more poised to provide the services that will best facilitate student success. For example, learning analytics enable better performance for both staff and students. Dashboards embedded within an LMS can demonstrate to a student their own strengths and weaknesses, as well as how their grades measure against others. Similarly, for the educator, dashboards can provide timely indication of which students need assistance, and which teaching strategies are most effective.
As well as the data available within and across functional solutions such as CRM, SMS, LMS, finance, and HR, data from other sources is proving increasingly valuable. Social data is a key factor in understanding student sentiment and is now critical to everything from marketing to campus center operations. Operational data – from understanding student movement patterns on campus in order to optimize space usage, to programming cleaning operations based on toilet flush frequency – is beginning to deliver cost-effective improvements to the campus experience.

Machine learning technology is enabling better correlation of the different factors contributing to student success and institutional efficiency, providing better targeted information to teacher, student, and administrator alike. Whatever the technology, all gain the kind of real-time insight that can effect change and improve performance.

THE SILOS OF THE PAST DON'T CONTAIN THE SEEDS OF THE FUTURE
Strategic and operational decisions have all too often in the past been decomposed into their constituent stakeholdings – advice obtained and then recombined at each level into what appears to be a seamless fabric. Operational outcomes, likewise, have been delivered by passing requests from hand to hand among affected stakeholders, with each completing their component of the overall task.

While this approach is not ineffective, it is probably not optimal for the future. Technology and other factors change the nature and content of individual roles. Beyond a certain point, the combined impact of successive changes cannot be absorbed within a single department. For instance, changing customer expectations mean that an enquiry management approach that transfers the issue from department to department is no longer acceptable. Many institutions now have a single help-desk operation covering all services – academic, administrative, and technical – and often supporting both students and staff.

Routine tasks will become increasingly automated, with humans no longer touching every transaction. Functional departments will become smaller, designing and troubleshooting processes rather than operating them. Where a person does need to become involved, the requirement to understand the combination of factors that have contributed to the situation, and to design a holistic, and often multifocal, approach to resolving them, will further shift the dynamics away from specific siloed expertise to a broad ability to problem solve. Integration between systems silos, and the ability to develop effective processes that transcend them, will become an even more important capability.

Shifts in process and technologies will likely be mirrored by a change in culture. The most overt factor will be a more intimate alignment of each role with delivering the intended customer experience and contributing the university's strategic agenda.

SMALL, SMART STEPS CAN DELIVER BIG CHANGES
Vision plus strategic incrementalism is often a more effective approach than waiting for agreement on a strategic plan, particularly in a rapidly changing environment. Where a compelling narrative about the direction and value of change exists, and an executive sponsor is prepared to invest effort in inspiring disparate groups to work together or to blaze a diplomatic path forward when difficult decisions emerge, substantial change can be delivered organically.

Universities should focus on
• taking note of an increasingly student- and employer-driven external agenda to adjust their educational offerings and pedagogy, particularly questioning the traditional degree-bundling of learning outcomes
• looking at breadth and focus of educational offering as a key strategic differentiator
This ideal partner will balance experience with higher education applications and processes with expertise in horizontal technologies and change management.

- ensuring the right data is in the right hands in a timely manner to support operations, tactical, and strategic decisions
- bridging, or breaking down, silos that impede timely and efficient thinking and action.

For most streams of activity, given the politics of university change and differences in the readiness of various players, a seemingly unsteady lurch forward will be the path for many institutions as opportunities arise and are seized. Given that the future is anything but crystal clear, this is appropriate behavior, as long as the overall direction is understood and a broad path forward has been identified. The important thing is to get moving and stay moving, headed toward the goal.

A single proviso is attached: there needs to be a mechanism to springboard broader application of individual successes, creating greater coherence in the agenda as it progresses rather than increased fragmentation.
PARTNERSHIPS ARE CRITICAL IN NAVIGATING A PATH TO THE FUTURE

To achieve these seemingly opposing goals, focus on people who will enact positive, well-aligned change within their sphere of influence, and use cross-functional centers of excellence to link people, best-practice processes, and tools (technology) together across traditional boundaries.

There will be expertise beyond the boundaries of the institution that can complement internal competencies. Where the object of change does not have significant competitive impact, universities can share risk and reward by learning from others’ innovations.

Commercial partners can also assist, particularly in implementing new processes or technologies, or leveraging experience gained from previous engagements. Successfully implementing rapid and/or transformational business change is an area that requires specialist expertise. This ideal partner will balance experience with higher education applications and processes with expertise in horizontal technologies and change management. Well-led, externally supported change can also enhance the internal capability to successfully deliver further initiatives.

In looking for partners, whether commercial or institutional, there are several factors that can add significant value:

• Complementarity – the need for the two organizations to have knowledge and capabilities that are mutually beneficial for a true partnership to form. This can take many forms. At one level, a commercial partner could bring deep product and implementation expertise to a university, gained from engaging with its various clients, and in return gain further insights into successful strategy development and business transformation in the education context. Purdue’s acquisition of Kaplan exemplifies a different level of partnership, where the future success of both partners is more intimately bound.

• Collaboration – the willingness to engage at more than a transactional level. In true collaborations, strategic insights flow between the executive levels of the two organizations, joint planning sessions map the path to success rather than simply transmitting requirements and reviewing statements of work, implementation seamlessly leverages the collective skills of both organizations, and – perhaps most importantly – both organizations have a material stake in each other’s success.

Moving to a student-centric focus, which requires a reconfiguration of both the culture and the technology of a university, can be a challenge. But with the right vision and the right partner, the journey from conceptualization, through implementation, to transformation can be more readily achieved – and innovation enabled.

APPENDIX

METHODOLOGY

Developed from Ovum proprietary research. This paper was a joint project in partnership with Cognizant’s Education Practice.
ABOUT THE AUTHORS

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*Principal analyst*

Richard Palmer is a principal analyst in Ovum's Public Sector team, providing research to support clients across the higher education, government, healthcare, and utilities industries.

Joining Ovum in 2017 after 15 years in the higher education sector, Richard has held senior roles at both the University of Melbourne and Monash University, completing his engagement at the latter as interim CIO.

Richard has significant experience in IT strategy, governance, service and project management, cybersecurity, and risk management within higher education. He has led university-wide IT reforms in IT security, service management, governance, organizations, and infrastructure.

His research encompasses emerging issues for technology and business leaders, IT strategy, technology enablement, and digital transformation.

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Joyce Kim, PhD, is an analyst in Ovum's Higher Education team. Joyce conducts primary and secondary research on how higher education institutions use technology. Her role includes writing analyst reports, forecasting IT expenditures across the field of higher education, and providing advising and consulting services to technology vendors.

Joyce joined Ovum's Industry Technology team in July 2017. She came to Ovum with six years of higher education experience in course development, research, and teaching. She has also worked as a copywriter and editor in the travel and tech sectors. Joyce's research interests include how technology solutions, such as student information systems and learning management systems, can improve pedagogy, increase accessibility, and contribute to student success. She is also interested in the rise of competency-based education and other models of online and blended learning for the new traditional student.

Joyce graduated from Boston University with a PhD in English in 2016 and graduated summa cum laude from New York University with a BA in English in 2009.
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