

Digital strategies in UK higher education: making digital mainstream

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Report by Nick Skelton, commissioned by Jisc January 2023

Foreword

Higher education is at a pivotal point as universities shift from recovering from the pandemic to resetting their institutions for increasingly uncertain times.



Challenges such as the economic crisis and constraints of resourcing, alongside the impact of COVID-19 on staff wellbeing, mean it has never been more important to invest in digital.

This time of challenge and disruption means that universities are revisiting their strategies for digital. This report provides a snapshot of how universities are developing, implementing and evaluating the impact of their digital strategies.

Our research shows that there is a spectrum of digital maturity. For some universities, digital is embedded throughout corporate strategies and is a cornerstone of every aspect of university life. For others, distinct digital strategies unify technology's role in supporting the student, staff and researcher experience and all the underpinning business processes.

At Jisc we know how important it is to invest in a university's technical infrastructure to ensure a secure and reliable digital environment. However, investment in staff is also paramount. Supporting leaders with their evolving understanding of the possibilities of digital technologies, together with continued support for developing the digital capability, confidence and resilience of staff, are equally important to realise digital transformation. Institutions are increasingly looking to add specific digital skills to their boards, creating new board positions focused on digital transformation and success, and filling either through elevation of existing digital leadership or recruitment.

This report, along with our framework for digital transformation, highlights the opportunities for transforming the student experience. It provides insights into how universities are taking forward their digital strategies, as well as exploring the critical success factors for their implementation. It features ten senior leaders outlining their visions for digital and what they are putting in place to drive forward change – whether that be technical, cultural or pedagogical. We look to the future and suggest some scenarios for how digital may change and expand provision. We also offer some prompts for those tasked with developing a digital strategy.

We hope this inspires, challenges and supports your thinking on taking forward digital transformation within your university, and we look forward to working with you as you progress with your digital visions.

Liam Earney, managing director higher education and research, Jisc

4 | Introduction: the need for strategic digital approaches

Universities that get to grips with the digital and data-driven future will succeed. Universities that do not will find it harder and harder to operate cost effectively and efficiently, to recruit and retain the best students and to ensure the best possible student experience.

Ben Barry, director of digital services, University of Wolverhampton

Introduction: the need for strategic digital approaches

Digital technologies play a central role in all core business areas of higher education (HE) organisations.

Taking a strategic and organisation-wide approach to adopting, implementing and developing digital technologies is critical in underpinning the long-term success and sustainability of universities.

In 2020, Universities UK, Jisc and Emerge Education, together with technical partner Salesforce, developed a long-term digital strategy framework (losad, 2020). It aimed to help university leaders build on their rapid response experiences during the pandemic. Now, in 2023, how are UK universities articulating their digital strategies? The picture is varied. Some are creating specific digital transformation strategies, while others are incorporating digital across existing strategies.

Jisc commissioned this work to develop a better understanding of the current state of digital strategies in UK HE, and how Jisc can best help universities with ambitions to use digital in transforming their activities.

We interviewed ten digital leaders from UK universities with a range of roles and responsibilities, from vice-presidents to IT directors. We also reviewed written strategies from other universities and attended conferences and events across the sector where digital strategy was a key theme. We obtained an international perspective through reviewing research into digital transformation from EDUCAUSE and others. This report is intended as a snapshot of the UK HE sector at this point in time. It describes the aspirations universities have for the future, but also the realities of where they are right now, the challenges they face and what they know they need to put in place.

Most universities have undertaken several stages in their digital journey. In some cases the journey has been sparked by a strategy; in others it has been a response to specific localised problems, such as moving from analogue to digital content or improving operational efficiencies (Reinitz, 2020).

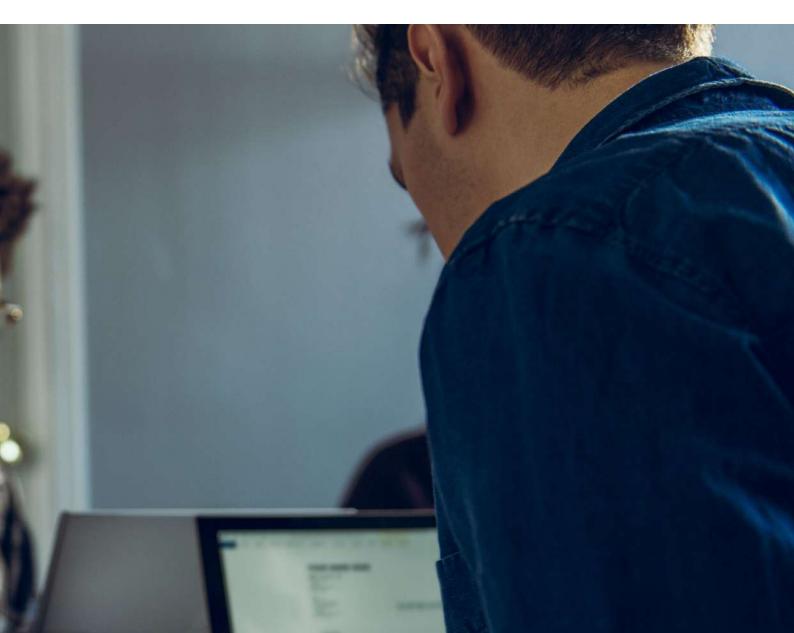
HE organisations have invested substantially in changes to business processes. On the educational technology side, there has been a focus on the management of education, rather than on education itself. When first introduced, the virtual learning environment (VLE) offered many pedagogical opportunities, but in practice it was the administrative functionality, such as for the submission and distribution of coursework, that made the VLE an indispensable tool. Where, pre-pandemic, some universities had responded to students' need for greater flexibility, such as by offering recorded lectures, they generally positioned the digital experience as ancillary to the in-person experience.

In 2020, the pandemic changed everything. Universities went wholly online, achieving within weeks what might previously have taken years. For a while the only experience of education was a digital experience. But the quickest way to carry out this emergency switch to remote learning was to take what had been delivered in person and mirror it online, without always rethinking pedagogy to take full advantage of the medium.

Across the sector, staff made incredible efforts to do the best for their students. But varying investment in digital before COVID-19 meant that some universities were better prepared than others. In many institutions, staff had used the VLE as an adjunct to in-person teaching, such as a repository to distribute presentations and handouts. Feedback from students highlighted that lecturers stored and organised material in the VLE differently, making information difficult to find (Jisc, 2020). In contrast, other universities had already invested staff time in rewriting and restructuring learning material and had produced resources that engaged students online. The universities with this in-house experience had a head start in providing the best digital education for their students.



During the early days of the pandemic, universities saw the impact of digital poverty on learning. Students experienced challenges around accessing technologies and connectivity, and in finding appropriate spaces to study. The Office for Students (Office for Students, 2020) and Jisc (Maguire, Dale and Pauli, 2020) highlighted the need for universities to strengthen their response to digital poverty by providing additional funding or means to reduce digital poverty as a barrier to students accessing higher education. This challenge is increasingly evident in 2022 as we encounter a cost of living crisis likely to worsen student poverty (Dickinson, 2022a). There is a spread of digital maturity across the sector. As we move forward from the pandemic, many universities are looking to learn from those institutions which have pioneered digital learning for many years. Digital offers benefits too important to ignore. It can offer greater resilience in response to disruptions. It can provide greater flexibility, so students can access education that fits with their lives. It can bring in additional revenue for the university, through short courses and fully online programmes. But the digital journey is not easy. It requires universities to be realistic about where they already are, the journey they are on, and the resources needed to reach their goals.



Adopting a strategic transformational approach

Many universities describe an ambition for digital transformation. EDUCAUSE defines digital transformation as: "a series of deep and coordinated culture, workforce and technology shifts that enable new educational and operating models and transform an institution's operations, strategic directions, and value proposition."

Adopting a new approach to digital should acknowledge and build on the successes of previous strategic approaches to technological development, innovation and implementation. Digital transformation is about improving the culture and business models of an institution, moving on from a focus on specific technologies, digitisation and localised processes.

Within a university, the concept of digital transformation can be influenced by who is leading the conversations and the terminology being used. Developing a shared understanding of terminology is a significant aspect of engaging all stakeholders with the concept.

At Keele University, chief information officer (CIO) and university librarian Dan Perry avoids using the word transformation at all:

"I didn't want to make this digital thing a huge thing, a huge new strategy. Transformation is a dangerous doubleedged sword. There may be areas where we will make very substantial changes, where we transform. But Keele University has been doing education since 1949! I will build on that, not transform that." The US company EAB has been researching digital transformation for some years. Even after the acceleration brought on the sector by COVID-19, EAB describes genuine digital transformation in HE as frustratingly elusive.

EAB classifies many HE digital initiatives as 'innovation theatre': pockets of technology in individual areas, which don't scale beyond the individual department. At its best, innovation theatre can make a difference, although only for a small group of stakeholders. At its worst, innovation theatre is the result of starting with a new technology and then casting around for a business reason to apply it.

Where can we find true digital transformation within HE? Transformation most readily arises where there is a genuine need and obvious benefit.

For academic staff and students, digital transformation could look like new online postgraduate programmes, with a mix of asynchronous and live learning, providing flexibility with multiple start dates per year. Programmes might be constructed from modules that can also be taken as standalone options or in different sequences (micro-



credentials). Some students might choose their own modules from a variety of different programmes, personalising their curriculum.

For professional services staff, digital transformation may be a flexible digital workplace that allows them to work productively from anywhere, on or off campus. This might combine collaboration technology (eg Microsoft Teams), agreed etiquette and ways of working (collaborative document editing), and new cultures (assessing staff by their outputs rather than the time spent at their desks).

Developing a shared sector-wide understanding of digital transformation may be challenging, but we can concentrate on what is helpful within it:

- Across the sector, universities are keen to make meaningful change throughout the whole of their organisations
- Technology offers opportunities for new higher education business models, operating with greater flexibility beyond the previous constraints of the physical campus and academic calendar
- Successful digital change doesn't focus on technology, it is about people and changes to cultures and working practices

Digital change requires resources and investment in technology, people and skills. But when planning and resourcing digital we must not make digital transformation a single, huge multi-million programme, with unrealistic expectations. Digital should not be a great monolith. Digital strategies are best implemented as a collection of joined-up smaller initiatives, which can be scaled up and replicated. If the institutional corporate strategy is clear, small initiatives will contribute to a shared strategic ambition, moving the university forward.

Jisc is currently working with sector bodies and experts to develop a framework for digital transformation and a maturity model toolkit that will help higher education organisations consider where they are in relation to a range of aspects. These include strategic vision and planning, developing cultures and partnerships for innovation, business processes and operations, staff development and reward. It aims to help higher education organisations consider how their digital environment supports positive work, research and learning experiences, and fosters a sense of belonging and wellbeing. 10 | How does digital fit alongside other institutional strategies?

My best advice for a college or university with digital transformation ambitions is to recognise that the path to digital transformation (Dx) is a journey and needs to be recognised as such. More than just a metaphor, this approach means that you need to assess where you are realistically, plan for the trip, begin with the end in mind, and start the journey with a view toward flexibility and an expectation that it may not be a straight path. This is why we created the EDUCAUSE Dx Journeymap, which takes you through the three phases we've identified to create a plan and put it into motion.

John O'Brien, president and CEO of EDUCAUSE

How does digital fit alongside other institutional strategies?

Some universities will develop a specific digital strategy but, for others, digital is a theme within the corporate strategy or it may be incorporated into all existing strategies.

There is no 'one size fits all' when it comes to digital strategy/ies. Digital depends on the context of each organisation, who is responsible for initiating and leading it and how far the whole organisation becomes engaged and involved in achieving the organisation-wide vision for digital transformation.

When Dan Perry joined Keele University, the IT service was technology focused. Dan didn't want to write a technology strategy. To make the point, and shift the focus of his team, he renamed the department 'Information and digital services'.

What goes into a digital strategy? For Dan, a digital strategy needs to cover people, technology and culture. But above all, it needs to connect to the university's institutional/ corporate strategy. Keele University's strategy has three broad themes: education, research and community/region. So the digital strategy is structured accordingly, explaining how digital will support each area. A digital strategy also needs to show how it can enhance what makes an institution distinctive. For Keele, this is the university campus and community, so digital campus is the fourth theme in the university's digital strategy.

At Loughborough University, director of IT services Vipin Ahlawat agrees that digital connects directly to the institution's corporate strategy. Vipin wants to avoid the idea that digital is standalone. Instead, he will work with other areas of the university to ensure that they integrate digital. Digital will be woven into core plans.

Oliver Davy is the chief digital officer at the University of Derby. Oliver believes that the best institutional strategies assume the existence of digital capabilities and weave them seamlessly into the overall objectives. So, he says, if you must write a **digital strategy**, make it your final digital strategy. This final digital strategy may be necessary to create missing institutional capabilities, but thereafter those capabilities should be fully exploited in all other areas of the university.

In contrast, at the University of Greenwich, Paul Butler, director of IT and library services, has led the creation of three digital strategies over the last ten years. There is continuity through the strategies: gradually building the foundations, getting them right, and then moving on to building value for the university. The University of Greenwich's digital strategy 2022-2030 coincided with a new vicechancellor and a new university strategy. So the digital strategy was developed as one of six sub-strategies within the new university strategy. The sub-strategies were all linked to each other and launched at the same time. The digital sub-strategy does not belong only to the IT department, it belongs to everyone. An IT strategy board with representatives from across the university has shared ownership and collective responsibility for the strategy.

What components do you need for digital success?



What does a university need to be successful in digital?

Certain common themes emerged repeatedly in the interviews:



1. Robust and secure technology infrastructure, regularly upgraded and improved



2. Effective processes for managing investment and change



3. Strong stakeholder engagement and customer focus



4. Digitally aware executive leadership



5. Development of all stakeholders' digital skills and capabilities



6.Evidence-based centres of expertise in digital research and education.



1. Robust and secure technology infrastructure, regularly upgraded and improved

City, University of London has an ambitious digital agenda, but in its initial approach to digital transformation it is prioritising "fixing the basics": systems, infrastructure and data.

City is not alone. Across the sector, many institutions still need to improve their essential infrastructure. Network, power and data centre failures can cause interruptions to service for many hours. Investment is needed to ensure resilience and reliability of the infrastructure.

If organisations have not got the basics of technology right, they don't have the credibility to move forward. The last infrastructure outage, or the last IT change programme that failed to deliver benefit, casts a shadow over the next bid for investment. Universities that want world-class services need to build them on world-class infrastructure, and recognise that infrastructure is an essential enabler.

The answer could be to look at the basics and the transformational simultaneously:

- Put investment into basic infrastructure. This includes pervasive wifi so students can study across campus and in halls of residence, cloud file storage and collaboration tools so that staff can work as easily from home as on site, and multi-factor authentication to reduce cyber attacks
- In parallel, start some more transformational digital initiatives, initially small in scope and resources. See which of these do well, and meet real needs, invest in them further and iteratively refine them

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2. Effective processes for managing investment and change

For a successful digital strategy, universities may need to reconsider the role and remit of their "IT department".

Technology is more than a distinct professional service, it now crosses all areas of institutional activity. This is most clearly seen within digital education teams, who are often headed by an academic staff member, and occupy what has been described as a third space between academic functions and professional functions. Digital is at the heart of research, education and the student experience.

How we think about technology is changing.

- In the IT era there was a focus on processes. Technology was seen as a cost centre, albeit one that delivered efficiencies (cost savings) elsewhere
- In the digital era there is a focus on business models and customer outcomes. For this, technology needs to be seen as a target for investment, where the investment will unlock greater value (higher income) elsewhere

Chris Condron, chief digital officer at University of the Arts London (UAL), joined the HE sector in 2021. Chris highlights a difference between HE and other sectors:

"Often the HE sector sees digital primarily as a cost, not a builder and deliverer of value. You can see this in budgets, and in reporting lines, with IT often reporting into finance. Seeing technology primarily as a cost centre will continue to hold HE back in the digital world." Most universities operate through a traditional project and programme management approach, using the PRINCE2 framework. Chris describes how this is supposed to work:

"Often, projects carry out extensive analysis to produce a thorough scope and business case for investment. The decision passes up the organisation until it reaches a board, often without technologists. The board approves a capital or project sum, but little or no ongoing operational funding. The project launches, often disappointingly, with little resource planned to improve it once it is live and in the hands of real users."

Traditional project management techniques may be a good fit for managing a construction project, where the resulting building could have a life of many decades. They are a poor fit for digital projects, where both technologies and user requirements change frequently.

Instead, digital initiatives work well when they are small and often and when the first version is released early and then improved using iterative feedback from users.

Chris Condron says:

"Digital puts the users and their needs at the heart. It is a circular and iterative process, based on talking with people. At no point do we know everything. It is an ongoing process – operational expenditure heavy rather than capital expenditure heavy. We just iterate to make it better. An approach that brings users and technologists closer together. It is realistic, human, open to compromise."

The University of Greenwich has a two-tier approach to budgeting digital projects. The most significant and expensive initiatives still require a full, detailed business case, approved through the usual structures. But there is also an annual strategy fund, used to resource smaller initiatives and approved through a lightweight process. This helps the university to be agile, responding quickly to opportunities.

Aligning IT with other functions: the rise of hybrid IT departments

Where should an IT/digital service sit within a university? With which other services should it align? There is no single answer to this, it will depend on the priorities of the institution. Hybrid departments, which do far more than traditional IT, appear to be on the rise.

At Keele University, CIO and university librarian Dan Perry does not see himself as a technologist. He says, "digital is not about tin and wires". For Dan, digital is about how Keele innovates and transforms in support of the key themes in the university strategy: education, research, plus the local community and region. Digital is a fundamental enabler of the academic mission of the university. At Keele, it makes sense that IT is aligned with the library, an undoubted academic function, and takes a leadership role in the new Digital Society Institute that has research at its core.

Similarly, at the University of Greenwich, where Paul Butler is director of information and library services, the university's learning and teaching support team recently moved to become part of the information and library services directorate.

At Derby, chief digital officer Oliver Davy highlights the value of a team with different skills and qualifications:

"I have people with teaching qualifications in what was traditionally an IT department. These people make it easier to improve usability, drive digital adoption and produce high-quality learning resources."

3. Strong stakeholder engagement and customer focus

Digital systems, tools and services support a range of work, research and learning practices across a university, all of which generate and use a huge amount of data.

Collecting and analysing this data can help with understanding staff and student expectations and experiences, and is one important aspect of gathering stakeholder input and feedback. Involving all stakeholders in shaping digital strategy and engaging with implementation plans to achieve a shared vision is critical to help leaders make informed and sustainable digital decisions.

At UAL, Chris Condron says:

"We need to put the user (students and staff), and their needs, at the heart of our services. More so than a single important person's opinion, including the chief digital officer! Governance and senior stakeholders have a role to play in great service development, but it's essential we build users into the design and also ongoing development of the services we provide."

Keele University's CIO, Dan Perry, says that he "didn't want decisions coming from 50-year-old men!" Dan and other senior leaders may have hunches and opinions about what will work, but these may be incorrect. Instead of relying solely on opinions, he wants to base decisions on evidence. So Keele has digital student focus groups. A staff member runs facilitated focus groups with different groups of students. If services can be improved, eg if a service doesn't work on a mobile phone, or a new service is needed, the students make this very clear. At Derby, CDO Oliver Davy thinks similarly. Oliver believes that we need to concentrate on what we can prove works – what users respond to and use – as evidenced by surveys and other data. We can then run this efficiently, with a repeatable process. Oliver says:

"We don't want to get into the 'it depends'. When you get into 'it depends' you call a meeting, and then that's when the resources required for digital learning balloons."

James Cale, director of digital services at University of Wales Trinity Saint David (UWTSD), has established a digital strategy monitoring group to review and monitor progress on the digital strategy. There are representative members from students, staff and external representatives. The group uses data from existing surveys (eg the National Student Survey – NSS), as well as the Jisc digital experience insights survey for students, to monitor student experiences and expectations of technology.



4. Digitally aware executive leadership

A critical factor for successful digital transformation is having digitally capable senior leaders. Many universities are appointing a board member with digital expertise to drive forward digital transformation.

Senior leaders need to be able to:

- Contribute to an inspiring digital vision that aligns with organisational principles and goals
- Build digital partnerships and networks across the organisation
- Model good digital practice

- Work with all appropriate stakeholders to make the digital vision a reality through wise investment and effective planning
- Support the development of a digital culture
- Support the development of a digitally capable organisation
- Support flexible and adaptive responses to the impacts of digital transformation

Some senior leaders will need training, mentoring or support to feel confident enough to be able to do all of these.

"Having a digitally savvy top leadership team – that is, a team in which more than half of the executive members are digitally savvy – makes a huge difference. Our latest research shows that large enterprises with digitally savvy executive teams outperformed comparable companies without such teams by more than 48% based on revenue growth and valuation." Weill and Shah, 2021

In 2020, the University of Leeds appointed Professor Simone Buitendijk as vice-chancellor. Simone has ten years of interest in and experience with digital education. Leeds now also has a deputy vice-chancellor (student education), who previously led a centre for innovation in learning and technology, plus three deans for digital transformation, and a digital education academic lead for each faculty.

Leeds is a large university with 40,000 students. Even accounting for this, the investment into digital education at Leeds is substantially beyond that elsewhere. The Digital Education Service at Leeds has grown from a small team to a critical function with more than 100 staff. These are professional staff, some with learning and teaching qualifications, supporting academic staff to assist the digital transformation of the university.

The University of Leeds digital education service annual report shows that, by 2021, the service had helped increase engagement with the Leeds virtual learning environment (110 million page views), deliver 116 online short courses to more than two million learners, and launch two fully online degrees.

The service has three priorities:

- Enhance the digital education experience of Leeds' taught students and postgraduate researchers, on campus and online
- Grow the university's fully online education portfolio of degrees, sub-degree qualifications and short courses, helping generate revenue for the university
- Work in partnership with global universities and technology partners to co-create open, community-based, sustainable online education that supports lifelong learning aligned to the university's research strengths
 University of Leeds Digital Education Service Strategy, July 2021

"Digital transformation is at the heart of the University of Leeds strategy. There is complete senior buy-in, commitment to resource, empower, engage and support colleagues and teams to harness technological progress delivering locally anchored global impact." Professor Arunangsu Chatterjee, dean of digital transformation, University of Leeds.

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5. Development of all stakeholders' digital skills and capabilities

All staff and students need to become digitally fluent to work and learn effectively in a digital environment.

An organisation-wide digital capability framework and plan can ensure that this critical factor for success is not marginalised or allocated to one team. It relates to staff recruitment, training and development, retention, recognition and reward. It also links to organisational wellbeing and sustainability and to creating a positive working and learning environment that can attract high-quality staff and students.

James Cale is director of digital services at University of Wales Trinity Saint David (UWTSD). In 2020, when the pandemic hit, UWTSD rapidly deployed new technology, specifically Microsoft Teams, as a platform for remote teaching and collaboration. But how could it move from short-term, reactive work, to a long-term digital education approach?

UWTSD identified a skills gap and lack of digital confidence among staff. UWTSD already had the technology. What it needed was to give people the skills, ability and confidence to use the technology. Its strategy would focus on people, not technology.

UWTSD created:

- A digital learning and teaching standards document: a conceptual framework which sets out a pedagogical approach for blended learning at UWTSD
- A digital skills website for staff and students. This used Jisc's building digital capability discovery tool, a self-assessment reflective tool, to help staff and students evaluate their current digital capabilities. Having established a current skill level from the discovery tool, the website guided staff to relevant learning resources to help develop skills further²

Developing capability takes time and effort, a big ask when many university staff already feel overstretched. Putting skills development at the heart of a digital strategy helps to make it clear that this is a shared organisational priority, instead of a responsibility sitting on the shoulders of individual staff members.

2 Further information about the work of UWTSD is available from the Jisc case study, Freeing students and staff from the confines of the classroom.



6. Evidence-based centres of expertise in digital research and education

Some of the universities in this study have well established academic digital research institutes, such as the Centre for Research in Digital Education at the University of Leeds, which works alongside the professional digital education service. Others, like UWTSD, do not have a digital research centre, but have an ambition to create one.

Keele University has KIITE, the Keele Institute for Innovation and Teaching Excellence, which designs and underpins the Keele curriculum. The university also recently launched the Keele Digital Society Institute. This is an interdisciplinary institute, intended to bring together the university's existing digital research and practice, regardless of discipline, to produce impact at scale. How does a centre of expertise in digital help broader strategy? It offers a depth of experience within the institution, which can inform the institution's own strategy. It can help to join up and amplify the impact of digital, across research, teaching and all the university's missions. It can provide a rigorous evidence base, a knowledge of what works. This helps the institution do the right thing and smooths the adoption process, as academic staff are more likely to accept change when it comes from a well-researched evidence base.



There is an argument that the whole model of universities in the UK is wrong. We are still wedded to a three-year model, building up progressive knowledge over time. The professional and regulatory bodies are very traditional. The student funding model is very traditional. Compare this to the US, where the way credits work leads to a different way of learning, a more flexible way.

Students want to fit learning around their professional, working lives. UK universities are based on a stereotypical full-time Oxbridge-style view of what a university should be. But if a student wants to pause for a semester due to non-university work, why shouldn't they? The problem at the moment is that it is difficult to break away from the constraints in the current system.

Professor Susannah Quinsee, vice-president (digital and student experience) City, University of London

How might digital shape HE over the longer term?

What might higher education look like in ten years? Predicting the future is always challenging, even more so in today's changing global landscape.

A good way to do it is to embrace a sentiment from speculative fiction writer William Gibson: "The future is already here – it's just not evenly distributed". We can spot where the future has already arrived, and the direction trends are moving in.

Digital transformation strategies often take a long-term view and require considerable 'futures thinking'. From our conversations we identified these current trends, which we predict will influence the universities of 2030:

- Digital technology eases established constraints on the university: space (the campus) and time (the weekly timetable and annual cycle of the academic calendar). Some activities will shift from live to ondemand, creating capacity and providing more convenience
- Through the easing of previous constraints, operations can be more resilient, universities can offer greater flexibility to students, and research can become more collaborative, across multiple research groups, disciplines and institutions

- The university will attract a wider population of students, including more part-time and mature students, who may return repeatedly for short courses and programmes over many years
- There will be a new focus on specific measures to create community, replacing some of the incidental community building that occurs when people come together at the same place and time

Theme	Implications
Campus space	Space requirements on campus will change, with fewer large lectures and more space for small group teaching and self-study.
	Large, in-person lectures will be reserved for plenary events with prestigious guest speakers. These create a sense of occasion and bring the cohort together. Other 'information delivery' lectures will be replaced with short video lectures, interviews and podcasts, available on demand for students to study at a time that suits them.
	Collaborative small group teaching through workshops and seminars will be conducted as live, synchronous events on campus (alongside online synchronous and asynchronous collaboration activities).
	There will be less need for traditional tiered lecture theatres, more need for flat spaces suitable for group work, and more need for study spaces where students can access on-demand educational resources.
Online and international	Some programmes will be offered entirely off-campus and online, particularly at postgraduate level where students are less likely to want the traditional campus experience.
	For some universities, online learning will be an important part of international expansion. However, the online learning marketplace is competitive, and simply offering online programmes does not make every university a global university. Each institution has a certain brand radius, from within which most of its students are drawn. Expansion may come by launching a carefully selected subset of academic programmes online, which play to an institution's existing strengths.
Timetable and academic cycle	Universities will start to break away from the traditional annual cycle of the academic year and tyranny of the timetable.
	The notion of 'contact hours' will shift to a broader consideration of academic 'presence' (White, 2020) – eg staff offering live text chat, recorded audio-visual feedback, as well as in-person live sessions.
	Some institutions will switch to block teaching (Jackson et al, 2020), with students completing each module as an intensive block, rather than a few hours each week stripped over a semester.
	In some disciplines modules will be redesigned so that they can be taken in any order. Postgraduate courses will have two or three entry dates each year.
Resilient to disruption	Universities will be more resilient and flexible, able to operate even in case of pandemic disease, war, and other global crises.
	For example, the emergency switch to remote learning in response to the COVID-19 pandemic.

Theme	Implications
Flexible and on demand	More learning materials will be available on demand, for students to study at a time which suits them. A simpler timetable will make it easier for students to choose their own academic pathways.
	Many students will still study traditional programmes, but those who want flexibility will be able to put modules together from a larger range of disciplines, carrying out personalised, interdisciplinary study ³ .
Collaborative research at scale	Research will be conducted by academic teams of multiple research groups, institutions and disciplines: 'team science'.
	Multi-group research already occurs, but typically each research group will be responsible for specific work packages focusing on a part of the problem. With new collaboration tools and working practices, teams can be assembled and managed to look at the bigger picture.
	Researchers will use a combination of standard business software (eg Microsoft Teams) and specialist research platforms (eg Octopus), to organise their work, share data and publish research findings almost as they happen.
Long-term relationships with increasingly diverse students	A growing number of lifelong learning students will start to displace the stereotype of the 'traditional' 18-year-old, full-time, on-campus student.
	These new students will be mature, in employment, with family lives and caring responsibilities, studying part-time. Studying at university will be only one of many competing aspects in their lives.
	Universities will cultivate a genuinely long-term relationship with their students, encouraging them to return for short digital courses to refresh and extend their skills. Whether a student is satisfied enough to become a repeat customer will become a key metric. Revenue from alumni purchasing digital courses will exceed charitable donations from alumni.
Focus on community-	The idea of university as a community of scholars will regain new importance ⁴ .
building	There will be fewer opportunities for some of the traditional, incidental community building occasions and venues (such as queues in corridors before lectures, café chats). To replace the opportunities which arose incidentally there will need to be a new explicit emphasis on building community in both physical spaces and digital forums.
	Researchers want to network successfully in digital spaces and meet new partners for research collaboration. There will be a renewed emphasis on orientation and induction for new students, to help them develop a sense of belonging and access peer support.

3. Eg the Open University's Open Programme: open.ac.uk/library/digital-archive/exhibition/222
4. Community is one of the three overarching themes in the latest strategy for the University of Leeds: https://spotlight.leeds.ac.uk/strategy/

Prompts to create your own digital strategy

A good corporate strategy offers a clear vision and helps an organisation make choices about what to focus on.

Each university has its own characteristics and attracts a distinct population of students. For example, if one university sees opportunities to create short online courses for continuing professional development, it does not follow that all institutions would want to pursue the same market.

Some universities have already integrated digital strategies into their corporate strategy and have a well-established sense of direction. Other universities will want to use the enforced change of the pandemic as a prompt to develop a new digital strategy, to ensure they have clarity on what they will and will not do in the coming years.

When creating a digital strategy for your own institution, or embedding digital into existing strategies, it may help to consider the questions overleaf.

Some of these questions are taken from the Jisc/ Emerge Education report **Digital at the core: A 2030 strategy framework for university leaders,** (losad, 2020) which contains many other helpful prompts to consider.



Where do we focus our attention and resources?

- What is our attitude to digital: is our main priority operational resilience and business continuity; enhancing the university's mission; or major changes to our business model?
- How could digital enhance the unique selling point and reputation of our institution?
- How can digital improve learning, teaching and assessment?
- How can digital drive our research forward?
- How can digital improve our links to the local region, or our global presence?
- In which of these areas do we want to be a digital exemplar for the sector, and where do we want to follow?
- How do we provide an inclusive experience for students with different needs (eg digital poverty, disabilities, part-time, carers and international students)?
- How do we make sure our organisational practices, buildings and technologies are environmentally sustainable?

How do we gather data, to know what is needed?

- How do we baseline our existing digital maturity and capability?
- How do we gather the expectations and experiences of our staff, students and other stakeholders, to ensure we truly understand requirements for the digital systems they use?
- How do we unlock the data insights sitting within different IT systems to improve decision-making?

What do we need to put in place for successful digital change?

- Which internal processes and governance structures need to change so that we can track the performance of our digital strategy, and respond to new opportunities in an agile way?
- How do we improve the digital capabilities and confidence of all our staff?
- How do we ensure the wellbeing of staff and students working and learning in a digital environment?
- Is there sufficient digital awareness among the executive team and the board for them to make informed decisions in strategic digital areas, to inspire and model good practice?
- Should we have a centre of expertise in digital practice within the organisation, with an evidence base to know what works?
- What would our IT infrastructure and core systems look like if we started afresh today?

I often subscribe to the view that you shouldn't have a digital strategy, any more than you would have an electricity strategy. What matters is how digital supports the pillars of the university strategy. But sometimes it is useful to have a digital strategy, and a member of the top team with digital responsibility, so that there is something for digital to coalesce around.

Professor Susannah Quinsee, vice president for digital and student experience, City, University of London



Conclusion: making digital mainstream

Following the pandemic, universities are driving forward digital transformation by changing cultures, working practices and business models to benefit the university missions for education and research. Developing longterm digital transformation strategies is a focus for many organisations right now.

There will come a point when digital will no longer be a focus for our attention. Digital technology is already becoming standard and pervasive in the environment. Rather than technology being seen as other, it will become mainstream.

To reach this stage, universities need appropriate, reliable and secure technologies and networks, which work effectively to support a wide range of operations. Investment in technology is critical but universities also need to invest to improve the digital capabilities, skills and confidence of their staff and students. This includes basic competence in using digital tools and techniques, as well as more advanced and specialised digital capabilities for learning, research or specific job roles. A digitally capable organisation is crucial for ensuring success of digital transformation strategies.

In reality, there is a spread of digital maturity within most universities, from small instances of innovation projects or initiatives that have yet to be proved before becoming mainstream to organisation-wide implementations that are the result of strategic leadership. There is room for both as higher education organisations continue to respond to external pressures. However, the pace of change can have a significant impact on how well people in organisations adapt and accept new practices. Peter Bryant, associate dean (education) at the University of Sydney Business School wrote a blog post in January 2021 that discussed the snapback - the tendency for people to want to 'return to normal' after their experiences during the early stages of the pandemic. In his post he offers examples of the challenges of online exams and the desire to return to in-person teaching. Two years later, the UK HE sector is trying to balance the potential that digital pedagogy offers for many with government pressure to return to wholly face-to-face teaching (The Education Hub Media Officer, 2022; Dickinson, 2022b).

Technology will improve and build on the functions of universities, not replace them. Education and research are fundamentally human activities and the people that engage with them need to be supported and nurtured to make the most of the opportunities these activities bring. Digital technology has the potential to amplify human interactions, over time and distance, so people can study, work and research together, in new, flexible ways. Successful universities will understand, embrace and use digital at the core of their mission.

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Example digital strategies

If you are looking to create your own digital strategy, the following documents may provide useful examples of different approaches:

- University of Derby Technology-Enhanced Learning Strategy 2017-2021
- University of Greenwich Digital Strategy 2022-2030
- University of Leeds Digital Transformation Strategy 2020 2030
- University of Wales Trinity Saint David Digital Strategy 2021-2023
- University of Wolverhampton Digital Strategy to 2025

Further reading

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